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Prepared For:

City of Santa Paula
200 Tenth Street
Santa Paula, CA 93060

Santa Paula West Business Park Specific Plan

Environmental Impact Report



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Prepared for:

City of Santa Paula
Planning Department
200 South Tenth Street
Santa Paula, CA 93060

November 2016

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EXECUTIVE SUMMARY

The Santa Paula West Business Park Specific Plan (“Specific Plan”) is composed of 53.81 acres (“Project Site”) within the City of Santa Paula’s (“City’s”) 125-acre West Area 2 designation. West Area 2 was included as an expansion area in the City’s General Plan, which was approved by the City of Santa Paula in 1998. This section provides information on the background of the Project, as described in **Section 2.0, Project Description**, assessed in this Environmental Impact Report (EIR), and a summary of the information in this EIR identifying the potential environmental impacts of the Project and the measures identified to mitigate these impacts.

ES.1 DESCRIPTION OF THE PROPOSED PROJECT

Project Location

The City of Santa Paula is located in Ventura County, directly north of State Route (SR) 126 and the Santa Clara River, west of the City of Fillmore, and east of the City of San Buenaventura in the Santa Clara River Valley. Regional access to Santa Paula West is provided by SR 126.

The 53.81-acre Project Site is area near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The Project Site is bound to the north by Telegraph Road; to the south by SR 126; to the east by existing industrial and commercial development in the current City limits; and to the west by the Adams Barranca and agricultural operations. The Project Site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way. Local access is provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

Environmental Setting

The Project Site is situated within the Transverse Ranges physiographic province of California. The primary faults, folds, mountains, and valleys of this region are all aligned in an east–west direction. This province is a tectonically active region, with high rates of uplift, folding, and sedimentation.

The Project Site is located approximately 0.6 miles northwest of the Santa Clara River, which generally runs in an east–west direction south of the Project Site. The foothills of the Topatopa Mountains are to the north.

A variety of land uses surround the Project Site. Telegraph Road, which bounds the site along the north, is a two-lane roadway approximately 50 feet wide. North of Telegraph Road within the City limits are residential uses, consisting of a single-family residential neighborhood accessed from Country View Court opposite the western portion of the Project Site, and a mobile-home residential community accessed from Valencia Way opposite the eastern portion of the Project Site.

The southern portion of the Project Site is bound by SR 126, a four-lane freeway that runs east–west. South of SR 126 are agricultural operations and water storage basins. These agricultural lands contain row crops, avocados, and citrus, and extend to the Santa Clara River, which runs east–west along the base of South Mountain. A limited number of single-family residential units lie within some of the agricultural properties.

Along the east, the Project Site flanks the west and south boundaries of a light industrial area located immediately east of Beckwith Road and north of the VCTC railroad tracks. Beckwith Road is a two-lane road that separates the Project Site from the industrial uses to the east. The light industrial uses are within the City of Santa Paula limits, and include office and warehouse buildings that house Cornerstone Molds and Machining, other related offices, and the Church of Christ–Buenaventura. The industrial properties also contain a construction equipment storage and maintenance facility operated by United Site Services.

The Adams Barranca is adjacent to the Project Site on the southwest and contains areas with riparian vegetation. Immediately west of Adams Barranca are agricultural operations consisting of orchards and a limited amount of livestock. Single-family residences are located within these agricultural operations.

ES.2 SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN

Section 16.25.020 of the Santa Paula Municipal Code (SPMC) identifies this area as SP-6, West Area 2, with a land use designation of Mixed Use Commercial/Light Industrial. The Specific Plan would maintain the Commercial/Light Industrial (C/LI) and Light Industrial (LI) designations over the development portion of the Project Site. Adams Barranca along the western portion of the Project Site would be designated as Passive/Open Space, as described in Chapter 16.25 of the SPMC. The development standards for the C/LI and the LI zones that have been adopted by the City of Santa Paula are incorporated into the Specific Plan. All development within the Project Site would be required to adhere to the standards of the Specific Plan.

The Specific Plan is organized into six sections that address topics such as physical layout, development standards and design guidelines important to the planning of this area, as well as the required topics per the California Government Code for specific plans.

Land Use Plan

The Specific Plan includes a Land Use Master Plan, which provides for the land use designations of Commercial Light Industrial and Open Space/Passive. The corresponding zoning designations of C/LI, LI and Open Space/Passive would be established within the Specific Plan-Zoning Implementation Plan.

These land use and zoning designations will allow for the development of a mixture of light manufacturing, research and development, professional offices, and supporting commercial uses, consistent with the C/LI and LI zones of the City of Santa Paula’s Zoning Ordinance. These uses are allowed in the C/LI and LI zones.

A summary of the land uses in the Specific Plan is provided in **Table ES-1, Summary of Land Uses in Approved Specific Plan.**

**Table ES-1
Summary of Land Uses in Approved Specific Plan**

Land Use	Acres	Percent of Project Site
Commercial/Light Industrial (C/LI)	41.96	78.0
Roadways (approximate)	6.95	12.9
Open Space/Passive	4.90	9.1
Total Gross Area	53.81	100

Source: Santa Paula West Specific Plan (May 24, 2016).

Circulation Network

The Specific Plan includes a Circulation Master Plan that provides a framework and standards for road development to ensure a safe and adequate system of vehicular, pedestrian, and bicycle circulation. The vehicular circulation system consists of public roadway access from Telegraph Road, Beckwith Road, and Faulkner Road that would provide direct access to the Project Site driveways.

Telegraph Road fronts the property to the north and is the principal arterial that would serve the Project. Primary north–south access to the Santa Paula West Business Park would be provided by Beckwith Road from Telegraph Road; and east–west access would be from Faulkner Road. Beckwith Road would be improved south from Telegraph Road into the Project. Under one option, the Beckwith Road improvements would include an at-grade railroad crossing providing access south of the railroad right-of-way and connect to Faulkner Road. The proposed Faulkner Road extension would parallel SR 126 and serve as an access point to the development. A second option would not include the Beckwith railroad at-grade crossing for public use. In this case, the crossing would be gated on the north and south sides, and only provide emergency access and Faulkner Road would provide access to portions of the Project Site south of the railroad right-of-way, while Beckwith Road would provide access to the parcel north of the railroad right-of-way. All street sections would be constructed according to City radius, crown, curb, and

pavement specifications. In addition, all streets designed as interior streets would be privately maintained.

Development Standards

The Specific Plan Development Standards direct the style of development and aesthetic character of the Business Park, and ensure a consistent use of signage, landscaping, and other design features. As part of the Development Standards, the Santa Paula West Business Park Specific Plan, SP-6, includes the following components that regulate future development within the Project Site: Zoning Standards and Architectural Design.

The businesses allowed within the Project Site will be low-intensity manufacturing, research and development, and professional offices, as well as limited commercial uses mainly to serve the employees of the businesses of the park.

The architectural design theme of the Business Park is high-quality Contemporary Tuscan. This style integrates historical Italian Tuscan features with modern materials and details. This architecture is typified by simple and strong exterior massing, a primarily symmetrical 2-story appearance, pyramid-shaped tiled roof accents, entry porticos, arches, columns, and metal accents. Warm shades of red, yellow, green, brown, and grey are natural earth tones that represent Tuscan colors. The design theme would be consistent on all building elevations.

Open Space

The Adams Barranca, located along the western boundary of the Project Site, would be zoned Open Space/Passive in the Specific Plan. A 64-foot-wide roadway for the extension of Faulkner Road through the Business Park would be dedicated to the City and would allow for integration of the Business Park with the existing developments to the east.

The Adams Barranca, SR 126, and parking lots would create a separation of between 50 and 100 feet from the agricultural areas to the west and south.

Infrastructure Plan

The Specific Plan includes an infrastructure plan establishing the network of on- and off-site infrastructure construction requirements to support development of the Specific Plan. These include infrastructure to support potable water delivery, wastewater pipelines, a storm drain system, electricity and natural gas, and other facilities. The development the Santa Paula West Business Park will require the extension of existing infrastructure and services into the Specific Plan area. The Project includes construction of an on-

site recycled water distribution pipeline system that could connect to the City's recycled water system and be used to irrigate the greenbelt and other on-site landscape irrigation areas.

ES.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A summary of the potential environmental impacts of the Project and the features of the Project and the measures identified to mitigate these impacts is provided below for each topic addressed in this Draft EIR.

Table ES-2, Summary of Project Impacts, below, summarizes the significance of the impacts of the Project based on the information and analysis in **Section 4.0** of this Draft EIR.

**Table ES-2
Summary of Project Impacts**

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Aesthetics			
<p>Construction activities within the Project Site and off-site improvements, such as along Beckwith Road and Faulkner Road, could potentially be visible from SR 126 and Telegraph Road and other vantage points that currently have views of these areas. Additionally, the construction timeframe would occur over approximately 10 years and would alter the existing open space character of the Project Site from immediate surroundings.</p>	<p>Potentially significant</p>	<p>The impact is on a temporary basis and there are no mitigation measures.</p>	<p>Potentially significant and unavoidable on a temporary basis</p>
<p>The Project would provide for the development of commercial and light industrial uses, along with roadways and open space across the 53.81-acre Project Site. Building heights would be consistent with the 1- to 2-story buildings having similar uses to the east of the Project Site, with a maximum building height of 35 feet and 45 feet for commercial/light industrial and industrial uses, respectively. Views of the agricultural fields from the SR 126 would be replaced with views of commercial and industrial uses related to the Project. Scenic aspects of the Project Site of the Project Site also include the agricultural lands and Adams Barranca west of the Site. While implementation of the Project would result in the loss of views of the</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>existing agricultural lands in the immediate foreground with the addition of structures, circulation system, and supporting infrastructure, the urbanized appearance is similar to the adjacent uses and more distant scenic vistas views of the Santa Clara River Valley would not be significantly altered upon the development of structures on the Project Site. Therefore, the Project would result in less than significant adverse impacts to scenic vistas.</p>			
<p>The Project would incorporate various open space/passive uses into the Project design to preserve the visual quality of Adams Barranca, would not remove visually important trees or geologic features, and since the segment of SR 126 that is adjacent to the Project Site is not eligible for designation, implementation of the Project would not damage scenic resources within a designated state scenic highway.</p>	<p>Less than significant</p>	<p>No mitigation measures required.</p>	<p>Less than significant</p>
<p>The existing visual character and quality of the Project Site is predominantly agricultural in nature, with ancillary agricultural facilities, row crops, and orchards. Due to the Project Site’s relatively low and flat elevations, many off-site vantage points of the Project Site are obstructed by existing structures and buildings. However, development within the Project Site can be seen from vantage points that are located immediately adjacent to the Project Site, such as those along SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road. Furthermore, while</p>	<p>Potentially Significant</p>	<p>No mitigation measures.</p>	<p>Significant and unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>elevations of the Project Site would remain relatively flat and at low elevations, and although the Specific Plan development standards will be required to ensure a consistent and compatible aesthetic character with the developments to the east, the existing open space and agricultural character of the Project Site would substantially change. The altered views from the public viewpoints that immediately surround the Project Site are considered significant and unavoidable.</p>			
<p>The Project would result in a potential for increases glare from within the Project Site during the day from reflective surfaces, and an increase in artificial light during the night. Given that minimal outdoor lighting is currently emitted from the Project Site, these impacts related to the additional nighttime light and glare from the Project are considered to be potentially significant.</p>	<p>Potentially significant</p>	<p>AES-1: Before the City issues grading permits, the applicant must prepare and submit a Lighting Plan to the City of Santa Paula Planning Director for approval that identifies the types of shielding that will be used for outside lighting.</p> <p>All exterior night lighting installed on the Project Site shall be of low-intensity, low-glare design, and hooded to direct light directly downward onto the area being lighted to prevent spillover onto adjacent parcels. Shielding must be included to eliminate uplighting. Exterior lighting fixtures must be kept to the minimum number and intensity needed to ensure public safety. These lights shall be dimmed after 10:00 PM to the maximum extent practical without compromising safety. Upward directed exterior lighting is prohibited.</p>	<p>Less than significant</p>
<p>Agricultural Resources</p>			
<p>According to the FMMP Important Farmland Map for Ventura County, there are approximately 44.20 acres of prime farmland and 4.88 acres of farmland of statewide importance on the site (total of 49.08 acres). Implementation of the Specific Plan would result in the conversion of the 49.08 acres of both prime farmland and important farmland to urbanized uses.</p>	<p>Potentially significant</p>	<p>A-1: Before approval of a grading permits that will convert prime farmland as designated on the Department of Conservation’s most recent State Important Farmland Map, the applicant must record an agricultural conservation covenant, in a form approved by the City of Santa Paula, on other prime farmland currently under agricultural production within the City of Santa Paula’s Area of Interest.</p> <p>The area of the conservation covenant shall be based on the production value of the prime farmland being taken out of production. The production value shall be determined as the annual</p>	<p>Significant and unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		average of the total crop value for the four-year period prior to the issuance of a grading permit. The conservation covenant shall provide for an equivalent amount of acreage to provide for the same production value on the prime farmland being lost (e.g., if one acre of prime farmland being converted produces \$500,000 of crops per year, then an agricultural covenant shall be placed on one-half [½] acre of land producing \$1,000,000 per year.	
<p>The County zoning designation for the Project area is Agricultural Exclusive (A-E) Urban Reserve for land currently in agricultural use. The Specific Plan area would be zoned Commercial/Light Industrial and Light Industrial in accordance with the Specific Plan’s Zoning Implementation Plan and consistent with the City’s Municipal Code for these designations. The development of a variety of manufacturing, research and development, office, and commercial uses that would be allowed under the Specific Plan would be compatible with the proposed City’s General Plan designations. There are no Williamson Act contracts preserving agricultural that govern any parcels within the Project area.</p>	Less than significant	No mitigation measures required.	Less than significant
<p>The Project Site would be zoned C/LI (Commercial Light Industrial) and LI (Light Industrial) for areas that would be developed under the Specific Plan. The Adams Barranca and related detention basin used for flood control would be preserved with an Open Space/Passive zoning designation. The Project Site is not zoned as forestland or timberland, and there is no timberland</p>	No impacts	No mitigation measures required.	No impacts

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
production within the vicinity of the Proposed Project.			
The Project does not include any loss of forestland or conversion of such forestland to any other designations.	No impacts	No mitigation measures required.	No impacts
<p>As stated previously, approximately 49 acres of the 53.81-acre Project Site are under agricultural cultivation and would be taken out of production as a result of implementation of the Specific Plan. Existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of State Route (SR) 126, and near the western boundary of the Specific Plan area, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126. The Specific Plan would not readily accommodate outdoor recreational activities for the general public or provide residential habitation components. As such, residential and general public exposure to dust, noise, and odors associated with nearby farming activities is considered less than significant. Therefore, based on the nature of the Project and design features to reduce any conflicts with adjacent agricultural land, potential impacts related to the conversion of off-site farmland to nonagricultural uses would be less than significant.</p>	Less than significant	No mitigation measures required.	Less than significant
Air Quality			
The proposed Project will not increase the amount of housing within the Specific Plan	Less than significant	No mitigation measures necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>area, as no residences are planned to be built. The project employment increase would be approximately 1,510 employees and would not result in SCAG projections being exceeded. Therefore, as growth under the Specific Plan is not expected, the Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County. Therefore, impacts regarding consistency with applicable air quality are considered less than significant.</p>			
<p>Construction activities associated with the construction of uses allowed with the Specific Plan would exceed VCAPCD threshold for ROG and NOx throughout the entire construction period and would be considered potentially significant.</p> <p>The construction emissions analysis was conducted for Year 2020, which was identified as the worst-case year due to the overlapping construction activities of paving and architectural coating. ROG emissions from architectural coating exceeded the significance threshold.</p>	<p>Potentially significant</p>	<p>AQ-1: During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD (including without limitation, to VCAPCD Rule 50 (Opacity) and Rule 51 (Nuisance):</p> <ul style="list-style-type: none"> • On-site vehicle speed shall not to exceed 15 miles per hour (the Project Site will contain posted signs with the speed limit). • All on-site construction roads with vehicle traffic shall be watered periodically; • Streets adjacent to the Project reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust. • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust (contact the VCAPCD meteorologist for current information about average wind speeds). 	

		<ul style="list-style-type: none"> • All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. • The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. <p>These control techniques shall be indicated on Project grading plans. The Applicant and/or its contractor shall be responsible for implementing these measures and compliance with this measure will be subject to periodic site inspections by the City.</p> <p>AQ-2: Project grading plans shall show that for the duration of construction, ozone precursor emissions from construction equipment vehicles must be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer’s specifications, to the satisfaction of the City Engineer. Compliance with this measure will be subject to periodic inspections of construction equipment vehicles by the Public Works Department.</p> <p>AQ-3: All trucks that will haul excavated or graded material on site shall comply with California Vehicle Code Section 23114 with special attention to subsections 2311(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.</p> <p>AQ-4: A comprehensive Fugitive Dust Control Plan shall be developed by the Applicant and approved by the VCAPCD before the applicant commences grading and excavation operations. The Plan shall include all feasible, but environmentally safe, dust control methods. If a particular dust control method is determined or believed not to be feasible, or if it would conflict with other regulations, justification for not including the subject method shall be provided at the time the Fugitive Dust Control Plan is submitted to the VCAPCD. The Plan shall identify all fugitive dust sources, the means by which fugitive dust from each identified source will be minimized, and the schedule of frequency that each dust control method will be applied for each identified source.</p>	
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Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>AQ-5: The construction contractor shall adhere to VCAPCD Rule 74.2 (Architectural Coatings) for limiting volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements.</p>	
<p>The Project would generate average daily operational emissions that exceed the thresholds of significance recommended by the VCAPCD for ROG. Many of the measures that the VCAPCD recommends to reduce the significant operational impacts are features of the Project. The off-site transportation demand management (TDM) fund is a mitigation measure that can be used by project proponents for projects and program that exceed the ROG and NOx significance thresholds. The City of Santa Paula utilizes this program to mitigate the significant air quality impacts of projects with its jurisdiction. While impacts will be reduced with mitigation, they will remain significant and unavoidable.</p>	<p>Potentially significant</p>	<p>AQ-6: Use low emission water heaters for residential, retail, and commercial water heating (Emissions reduction of 11 percent for ROG and 9.5 percent for NOx).</p> <p>AQ-7: Construct pedestrian and transit friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, and bikeways and or lanes. Sidewalks and bikeways should be landscaped with trees (an approximately 4 percent emissions reduction).</p> <p>AQ-8: Provide shuttle/minibus service between the Project commercial and industrial land uses and the Project retail land uses and the Santa Paula downtown area during the lunchtime period (11:00 AM to 2:00 PM).</p>	<p>Significant and unavoidable</p>
<p>According to the VCAPCD, if an individual project results in air emissions of criteria pollutants that exceed VCAPCD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. By applying VCAPCD's cumulative air quality impact methodology, implementation of the Project would result in an increase of ROG, an ozone precursor, and NOx, such that significant cumulative impacts would occur.</p>	<p>Potentially significant</p>	<p>AQ-12: The Applicant and/or its contractor must plant and maintain shade trees to reduce heat build-up on structures.</p> <p>AQ-13: The Applicant and/or its contractor shall prepare a TDM for review and approval by the City and VCAPCD, before the City issues building permits. The plan shall incorporate reasonable and feasible measures to reduce Project-related traffic and vehicle miles traveled. At minimum, the TDM Program shall include the following measures:</p> <ul style="list-style-type: none"> • Provision of connections to identified adjacent City or regional trails. • Provision of adequate way-finding features to direct pedestrians and bicyclists to nearby Project and City destinations, such as school, retail, and civic facilities. 	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Accordingly, cumulative impacts would be potentially significant.</p>		<ul style="list-style-type: none"> • Provision of homeowner information packets prior to close of escrow, identifying local and regional nonvehicular transportation options, and providing homeowners with basic information regarding telecommuting options. • Provision of adequate setbacks and design features such that the proposed future enhancement of commuter rail opportunities is not hindered by Project design. • Construction of pedestrian- and transit-friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, bikeways, or lanes. Sidewalks and bikeways should be landscaped with trees. • Perform a traffic light synchronization study on streets impacted by Project development to reduce vehicle queuing time. <p>The Project shall offset the increase in daily emission over the 25 pounds of reactive organic compounds and nitrogen oxides per day either through the purchase of emission offsets or through the in-lieu fees shall be paid to fund off-site TDM facilities or services, if such a program has been established at that time. These fees can reduce emissions from non-Project-generated motor vehicle trips by funding programs to promote ridesharing, public transit, and bicycling. The amount of this financial contribution should be calculated on a pro-rate basis as determined to be equitable by the VCAPCD, and in accordance with the VCAPCD Guidelines. These fees should be paid prior to the issuance of building permits by the County. The applicant shall demonstrate the availability of the offsets or contribution to fund off-site TDM services to the VCAPCD through a contract or other agreement with the offset source(s), which binds the reduction to the Project.</p> <p>AQ-14: The Applicant and/or its contractor shall install EPA-certified wood-burning stoves or fireplace inserts. If this is not feasible, then the installation of a ceramic coating on the</p>	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		honeycomb inside a catalytic combustor must be utilized or the use of natural gas fireplaces may be used as a feasible alternative.	
All but one study area intersection is projected to operate at LOS D or better. This intersection is a freeway ramp and there are no sensitive receptors located within close proximity so as to be affected by vehicle emissions at this intersection. The closest residence is located approximately 200 feet east of the freeway ramp. Consequently, the Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.	Less than significant	No mitigation measures necessary.	Less than significant
An HRA was prepared to determine whether diesel particulate emissions from construction under the Santa Paula West Specific Plan will cause significant impacts to nearby sensitive receptors. In comparison to the 10 in 1 million threshold level, carcinogenic risks do not exceed the level posing no significant risk. Therefore, impacts are less than significant.	Less than significant	No mitigation measures necessary.	Less than significant
An evaluation of the potential noncarcinogenic effects was also conducted. Results of the analysis demonstrate that construction of the Project will not generate any significant air quality impacts with regards to emissions of toxic air contaminants.	Less than significant	No mitigation measures necessary.	Less than significant
Grading will include earth-moving activities during the grading phase that will cut soil and use as fill at the Project site. These activities could be considered conducive to disturbing the <i>Coccidioides immitis</i> spores if they are present. The fungus is not likely to be found in	Potentially significant	AQ-9: To the extent feasible, construction employees shall be hired from local populations, since it is more likely that they have been previously exposed to the fungus and are therefore immune. An individual is quite likely to be affected by valley fever if he or she lives in an area where the fungus is prevalent. A person (or animal) with a positive test has had a valley fever infection and has	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>soil that has been or is being cultivated and fertilized. Furthermore, the construction activities will be required to conform to Rule 403 to control fugitive dust, along with other rules, that will prevent significant dust. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a significant improvement in PM10 control efficiency. However, impacts related to exposure of people of Valley Fever during construction may be potentially significant.</p>		<p>developed immunity to the fungus and therefore, will never contract valley fever again.</p> <p>AQ-10: During periods of high dust in the grading phase, crews must use respirators in accordance with California Department of Occupational Safety and Health regulations.</p> <p>AQ-11: The operator cab of area grading and construction Equipment must be enclosed and air-conditioned.</p>	
<p>The uses allowed by the Santa Paula West Business Park Specific Plan do not include any operations that require large amounts of hazardous materials. Accordingly, the Project will not result in a significant impact with respect to use of hazardous materials during long-term operations.</p>	<p>Less than significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than significant</p>
<p>The types of industrial activities that would occur with the Project are not known at this time, but would be evaluated at the time that permits to construct and operate are applied for from the APCD. Therefore, the potential impacts associated with objectionable odors will be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than significant</p>
<p>The Project would not have a cumulatively considerable contribution to this impact with respect to conflicting with or obstructing the implementation of the applicable air quality plan.</p>	<p>Less than significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than significant</p>
<p>Cumulative development activity within the City of Santa Paula would continue to</p>	<p>Less than significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the city is not expected to cause a significant impact associated with construction activities.</p>			
<p>Because Ventura County is currently in nonattainment for ozone, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Therefore, the emissions generated by the Project would be cumulatively considerable and are a significant and unavoidable impact.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measures AQ-6-8 and AQ 12-14.</p>	<p>Significant and unavoidable</p>
Biological Resources			
<p>Southern California black walnut (<i>Juglans californica</i>) is the only special-status plant species that was documented or determined to have a high likelihood of occurring within the Project Site. A total of 19 individual trees are located along the perimeter of the Project Site, mainly along the southwest boundary within the riparian habitat of the Adams Barranca and along the SR 126 right-of-way along the southeast boundary of the Project Site. Therefore, impacts to special-status plant species (e.g. black walnut) are considered potentially significant.</p>	<p>Potentially significant</p>	<p>BR-1 Before issuance of a grading permit, the Applicant must identify on grading plans, the locations of any protected trees (such as the Southern California black walnut, <i>Juglans californica</i>) and must include a report pertaining to preserving the tree(s) that could be affected by the grading activity. The report shall be prepared by a tree expert and shall evaluate the subdivider's proposals for protected tree preservation, including avoiding grading, land movement, or other activity within the drip line of any protected tree. Prior to grading, the drip line must be fenced to prevent earthmoving equipment from inadvertently entering the drip line. In the event protected tree cannot be avoided, then the Applicant must provide a tree report in accordance with the City's Tree Protection Ordinance and must provide for the replacement or relocation of any protected trees that are to be removed, or would be subject to landmoving or grading within its drip line.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Invasive exotic species introduced as landscaping could be dispersed by stormwater, wind, or wildlife, or by various other means to natural habitats in the area, including Adams Barranca and other downstream water bodies, such as the Santa Clara River. Impacts from the introduction of invasive exotic landscape plants could be potentially significant.</p>	<p>Potentially significant</p>	<p>BR-2 Before issuance of a grading permit for development within the Specific Plan area, a landscaping and irrigation plan must be prepared and must incorporate the planting of native vegetation and use of water conserving irrigation. The landscaping and irrigation plan must be prepared by a licensed landscape architect, and use native plant and tree species. The landscape and irrigation plan must be submitted to the City of Santa Paula Planning Department for review and approval.</p> <p>Nonnative plants or vegetation must be avoided in future development areas. The landscaping plans within common areas of development areas must include appropriate provisions to prevent other invasive plant species from colonizing remaining natural areas. These provisions must include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) the monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species must be determined by a qualified botanist.</p> <p>For areas adjacent to Adams Barranca riparian corridors, the plan must provide for adequate landscaping to reduce indirect impacts including attenuation of noise and reduction of nighttime lighting and glare.</p>	<p>Less than significant</p>
<p>The Southwestern willow flycatcher breeds in dense riparian habits along rivers and streams, and almost all southwestern flycatchers breeding habitat is within close proximity of water or saturated soils. The Project includes construction activity that could result in a temporary impact to the species if members are foraging or in the unlikely event they nest near the Project Site</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure BR-2.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>at the time of construction. Therefore, impacts are considered potentially significant.</p> <p>The Project is consistent with the recovery plan for this species because if southwestern willow flycatchers are located on site, they would not be permanently impacted. Although, the Project would result in potentially significant impacts to the southwestern willow flycatcher, mitigation measures are included within this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed.</p>			
<p>The least Bell's vireo was not observed during the Project surveys; however, Adams Barranca provides potential habitat for the species. Impacts are considered potentially significant in the unlikely event this species nests on site or in the immediate vicinity and is subject to disturbance from construction activity.</p> <p>The Project is consistent with the recovery plan for this species because the least Bell's vireo habitat present on the site would not be impacted. The Project would result in potentially significant impacts to the least Bell's vireo. However, mitigation measures are included within this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure BR-2.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
to habitat for least Bell’s vireo individuals in the Santa Clara River Watershed.			
The development of the Project Site would increase the number of nighttime light and glare sources on the site. Light and glare can “spillover” into adjacent open space areas, increasing the level of light currently experienced there. Nighttime light can disturb breeding and foraging behavior and can potentially alter foraging and breeding behavior of nocturnal birds, mammals, and invertebrates, which is considered a potentially significant impact.	Potentially significant	Implementation of mitigation measure BR-2 .	Less than significant
No active bird nests were observed at the time of survey; however, suitable nesting habitat is present within the avocado orchard, ornamental trees within the Project area, and adjacent trees to the Project Site and within Adams Barranca. However, impacts to nesting birds may be potentially significant.	Potentially significant	BR-3 To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special-status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove.</p> <p>BR-4 If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the qualified biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.</p>	
<p>The Project includes the dedication of Open Space for the areas identified as Mixed Willow Riparian, and no development would occur within the Mixed Willow Riparian habitat area, potential impacts to vegetation communities are considered less than significant.</p>	<p>Less than significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than significant</p>
<p>The avocado orchard within the Project Site and the ecotone between the agricultural fields and Adams Barranca provides forging habitat for the American badgers, as they are most abundant in the drier, open stages of most shrub, forest, and herbaceous habitats</p>	<p>Potentially significant</p>	<p>BR-5 The Applicant shall retain a qualified biologist (approved by the City of Santa Paula) to survey the Project Site for the presence of the American badger no earlier than 1 day prior to any grading activity. In particular, the survey shall include an examination of the fallow agricultural field in the eastern portion of the site that will be impacted during project implementation.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>with friable soils. Development under the Specific Plan could result in the loss of American badger habitat. Impacts are considered potentially significant.</p>		<p>If American badger is located on site, potential loss of individual animals shall be mitigated through one of the following: (1) an on-site passive relocation program, through which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for 1 week to confirm badger usage has been discontinued, and hand excavation and collapse of the burrow to prevent reoccupation; or (2) active trapping and relocation of badgers to suitable off-site habitat by a qualified biologist and in coordination with the CDFW, as approved by the City and CDFW.</p>	
<p>The Pallid bat was not observed during the Project surveys, Adams Barranca provides foraging and roosting habitat for the species. Construction under the Specific Plan could result in potentially significant impacts to pallid bats.</p> <p>The Hoary Bat was not observed during the Project Surveys, however, Adams Barranca provides foraging and roosting habitat for the species. This species is not expected to breed in Adams Barranca but may use the habitat for roosting, and the agricultural areas of Project Area for foraging.</p>	<p>Potentially significant</p>	<p>BR-6 To avoid impacts to the Pallid bat (<i>Antrozous pallidus</i>) and the Hoary Bat (<i>Lasiurus cinereus</i>), the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities. Thirty days before ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys in accordance with standard protocols to determine if roosting western red bats are present in the construction zone or within 300 feet of the construction zone. Roosting bat surveys shall be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees and large shrubs in which this species is known to roost. Any bats found outside of the breeding season (May through August) shall be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 300 feet of the roost, shall be postponed or halted</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site shall be established in the field with flagging, fencing, or other appropriate barriers. Construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of these bat species.</p>	
<p>Development under the Specific Plan would require the removal of the agricultural drainage ditch that bisects the Project Site and is considered State Waters pursuant to the Fish and Game Code and the Clean Water Act. Other state and federal jurisdictional waters (i.e., those within Adams Barranca) would be preserved through an Open Space dedication and prevention of construction activities within the Barranca.</p>	<p>Potentially significant</p>	<p>BR-7 Before the issuance of a grading permit for areas that require state permits, the applicant shall coordinate with the CDFW to verify the impact to state-protected waters and associated vegetation on the Project Site. A Streambed Alteration Agreement (SAA) must be obtained, and mitigation measures recommended by the CDFW as part of the SAA shall be implemented. The SAA shall be provided to the City prior to issuance of a grading permit.</p> <p>The Applicant must mitigate for impacts to jurisdictional waters as administered by the CDFW jurisdiction by restoring habitats within those jurisdictions acceptable to the resource agency. Habitat must be mitigated onsite or within the same watershed, if feasible.</p> <ul style="list-style-type: none"> • The mitigation site(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas. • The mitigation area shall provide procedures to prepare soils in the mitigation area, provide detailed seeding/planting mixtures, provide seeding/planting methods, and other procedures that will be used for successful re-vegetation. • Impacts to jurisdictional waters shall be avoided to the extent feasible in the design phase of the Project. 	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<ul style="list-style-type: none"> • Maintenance and monitoring requirements shall be established, including quarterly and annual monitoring reports to CDFW. <p>BR-8 Prior to the issuance of a grading permit for areas that require state or federal permits, the applicant and/or its contractor shall coordinate with the Army Corps of Engineers (ACOE) to verify the impact to federally regulated waters on the Project Site. A Nationwide Permit (NWP) shall be obtained and mitigation measures recommended by the ACOE and National Marine Fisheries, as part of the NWP shall be implemented. The NWP shall be provided to the City prior to initiating construction of the bridge crossing Santa Paula Creek.</p> <p>Areas determined to be federally regulated by the ACOE shall also fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB), and a Clean Water Act Section 401 Water Quality Certification (401 Certification) will be required from the RWQCB for impacts to those areas.</p> <p>BR-9 For impacts to Regional Board jurisdiction, the Applicant shall:</p> <ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio) on site; or • Provide a one-time in-lieu fee to a Regional Board–approved mitigation bank and/or in-lieu fee program within the Santa Clara River Watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1.27 acres of Regional Board jurisdiction; or • A combination of on-site and/or off-site compensatory mitigation options, as described above. <p>BR-10 As mitigation impacts to CDFW jurisdiction, the Applicant shall:</p> <ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio acres of CDFW jurisdiction for loss of State Waters; or 	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<ul style="list-style-type: none"> • Provide a one-time in-lieu fee to a CDFW-approved mitigation bank and/or in-lieu fee program within the Santa Clara River watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1:1 CDFW jurisdiction area; or • A combination of on-site and/or off-site compensatory mitigation options, as described above. 	
<p>Alteration of state-protected waters and associated riparian vegetation would require the acquisition of a Fish and Game Code Section 1602 SAA from the CDFW. Due to the high habitat value that drainages and swales are known to provide for wildlife and because these areas are under the jurisdiction of the CDFW, the proposed removal of these waters is considered a potentially significant impact.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measures BR-7, BR-8, BR-9, and BR-10.</p>	<p>Less than significant</p>
<p>Development under the Project can be expected to increase human activity near Adams Barranca, which could result in an increase in the frequency of human encroachment into the Barranca when compared to existing conditions. The Open Space designation of the Specific Plan, upland buffers from the riparian area and development under the Project, and the Project characteristics that would provide predominantly indoor daytime work areas would minimize any potential for increase human disturbance to the Adams Barranca. Therefore, indirect impacts from human encroachment would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The Specific Plan is designed to include stormwater infiltration and treatment. This</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>includes low-impact development (LID) best management practices (BMPs) to ensure that the Project does not result in adverse effects to water quality in the Adams Barranca or the Santa Clara River. The Santa Paula West Business Park Specific Plan Drainage Master Plan will provide storm drains and runoff directed to an on-site detention basin for passive treatment of runoff from the Project driveways and other hard surfaces. Overall, the BMPs and the Project Design Features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all applicable federal, state, and local water quality rules and regulations in order to effectively minimize the Project’s impact on water quality. Accordingly, impacts would be less than significant.</p>			
<p>Adams Barranca, located along the western border of the Project Site is could provide a wildlife movement corridor with linkage between the foothills of the mountains north of the City and the Santa Clara River. No historical or active raptor nests or communal roosts exist at the Project Site or within 100 feet of any area that is or will be subject to development within the Project Site. Raptors are mobile species with generally large home ranges, they are capable of compensating for the loss of small acreages of foraging habitat in a local area by moving to other suitable foraging habitats. Therefore, development of</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
the Project would not eliminate significant raptor foraging areas or limit raptors' access to food resources, making potential impacts to raptors due to the development of the Project less than significant.			
The Project includes the dedication of approximately 4.9 acres (9.1 percent) of the Project Site as Open Space along the western boundary to preserve and provide a buffer area from the Adams Barranca. Therefore, the Project is consistent with the City General Plan Conservation and Open Space Element because it provides for the protection the City's natural resources, and impacts would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Cultural Resources			
While a majority of the Project Site consists of younger Holocene alluvial soils, older Pleistocene alluvial deposits are presumed to underlie these younger soils. Because these depths of older alluvial soils are unknown, there is a moderate to high potential for development-related earthmoving activities and unauthorized fossil collecting within older alluvium on the Project Site to result in the loss of scientifically important fossil remains, currently unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data.	Potentially significant	CUL-1: Should unexpected paleontological resources be discovered during any ground-disturbance activities greater than 10 feet below existing grade of Project Site, work in the immediate area of the discovery shall be halted and the City shall require an assessment by a qualified paleontologist to determine the significance of the find.	Less than significant
The Project Site consists in majority of younger alluvial soils, which are considered to have low potential of containing significant paleontological resources. At shallow depths,	Potentially significant	Implementation of mitigation measure CUL-1 .	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>the younger alluvium is considered too young to contain remains old enough to be considered fossilized. As a result of the unlikelihood of significant fossil resources being found within these younger soils, ground-disturbing activities of less than 10 feet below the current grade of the Project Site are anticipated to have low potential to impact any paleontological resources.</p>			
<p>The nearest formal cemetery to the Project Site is the Pierce Brothers Santa Paula Cemetery, which is located approximately 1.4 miles northeast of the Site at 380 Cemetery Road. No known sites containing human remains exist within the Project area. However, currently unknown human remains potentially could be discovered during the construction of future projects within the Specific Plan. Project construction would require ground-disturbing activities, including grading and excavation, and the presence of construction equipment. These construction activities could potentially result in the discovery of previously unrecorded human remains, including Native American burials. Impacts related to construction would be limited to the construction area for each individual project within the Specific Plan</p>	<p>Potentially significant</p>	<p>CUL-2: In the event of a discovery of human bones, suspected human bones, or a burial, during ground-disturbing activities, all excavation in the vicinity must halt immediately and the area of the find protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bones are human, the Ventura County Coroner must be notified before additional disturbance occurs. The construction contractor must ensure that the remains and vicinity of the find are protected against further disturbance until the Coroner has made a finding with regard to PRC 5097 procedures, in compliance with Health and Safety Code Section 7050.5(b). If it is determined that the find is of Native American origin, the City will comply with the provisions of PRC Section 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).</p>	<p>Less than significant</p>
<p>A majority of the Project Site has been extensively farmed with various row crops and orchards, which has continually disturbed the surface of the soils. While the Project Site does not contain any known sensitive archaeological resources within the</p>	<p>Potentially significant</p>	<p>CUL-3: In the event that previously unidentified archaeological resources are discovered during building construction, the contractor must cease work in the immediate area and the City Planning Director shall be contacted. An independent qualified archaeologist, retained by the City at the expense of the applicant,</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
disturbance area, the general Santa Clara River Valley is considered sensitive, and there is potential for unknown resources to be uncovered by activities, such as grading, that disturb the ground surface.		must assess the significance of the find and make mitigation recommendations.	
The historic resource evaluation report concludes that while the development of the Project would result in an adverse impact by eliminating elements that contribute to a historic district, this impact would not cause a substantial change in the significance of the Santa Clara Valley rural historic district. Given the large size and complex nature of the historic district, the loss of a single employee residence and associated fields would not reduce the integrity of the historic district such that it could no longer convey historic significance. The Santa Clara Valley rural historic district would remain eligible for the NRHP and the CRHR. Therefore, the impact resulting from the Project would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Geology and Soils			
The Specific Plan area is neither located within an established Alquist-Priolo Earthquake Fault Zone, nor is it crossed by a known active fault. The risk of loss, injury, or death associated with surface rupture of a known earthquake fault is considered very low, and impacts will be less than significant.	Less than significant	No mitigation necessary.	Less than significant
The Specific Plan area could be subject to strong ground shaking in the event of an earthquake originating along one of the faults	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>listed in Table 4.6-1 (or another active or potentially active in the Southern California area, such as the San Andrea Fault). Construction allowed by the Specific Plan will be required to comply with the version of the CBC in effect at the time individual building permits are obtained. The Project will not expose residents to unknown safety issues associated with seismicity (including ground shaking), and potential impacts are less than significant.</p>			
<p>Most of the Project Site lies within a liquefaction hazard zone, an area where the historic occurrence of liquefaction or groundwater conditions indicate a potential for ground displacements as a result of liquefaction, as designated by the State of California and the City of Santa Paula. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. Seismic settlement could occur on the site and is thus considered a potentially significant impact.</p>	<p>Potentially significant</p>	<p>G-1: Additional explorations must be performed at the tentative tract map and grading plan review stages of the development planning. The purpose of the explorations would be to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement.</p>	<p>Less than significant</p>
<p>The topography of the project area is relatively flat and has no landforms where a landslide could form. Therefore, the potential for impacts from earthquake-induced landslides or other landslides (except lateral spread landslides) is considered less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The native topsoil and alluvial soils in the annexation area may be moderately susceptible to erosion. Construction activities would comply with erosion control requirements, including grading and dust control measures, imposed by the City pursuant to grading permit regulations. After construction, the project may result in a limited degree of soil erosion effects from vegetated areas. However, in accordance with NPDES requirements, the project would be required to have a Standard Urban Stormwater Mitigation Plan (SUSMP) in place during the operational life of each development within the Specific Plan. While BMP design features would be developed with more refined engineering for each development prior to implementation of the above requirements, impacts associated with erosion and sedimentation are considered potentially significant.</p>	<p>Potentially significant</p>	<p>G-2: Detailed, design-level geotechnical investigation reports for all future subdivision and other discretionary development approvals must be submitted to the Public Works Director, or designee, for approval. In addition, grading plans and geotechnical reports prepared by a licensed Engineering Geologist (approved by the Public Works Director) must be provided to the Public Works Director, or designee, before the City issues grading building permits for individual development projects within the Project Site. Requirements for the geotechnical reports and compliance are described below.</p> <ul style="list-style-type: none"> • The Engineering Geologist must make recommendations to address any seismically induced settlement within portions of the Project Site. In particular, seismically induced settlement must be addressed in the western parts of the Project Site, where preliminary geotechnical investigations determined that the area may experience up to several inches of seismically induced settlement in the event of strong ground motion. • The Engineering Geologist must inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with construction specifications, and make site-specific recommendations for grading, drainage installation, and foundation design, as appropriate. • The Public Works Director, or designee, must ensure that all soils and engineering report recommendations are incorporated into the project engineering and construction plans, including soils tests to ensure that it meets the soil classifications assumed in the soils reports, and that soils meet the CBC requirements. • All Project plans as determined necessary by the Public Works Director, or designee, including Grading and Construction Plans, must be reviewed and stamped by a 	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>Project soils engineer and submitted to the Public Works Director, or designee, for review and verification that all requirements are incorporated before the City issues grading or construction permits.</p> <ul style="list-style-type: none"> The Applicant and/or contractor must retain a licensed soils engineer acceptable to the Public Works Director, or designee, to review all construction plans for consistency with the soils reports and to monitor on-site grading and construction to ensure the conditions at the Project Site do not substantially change the requirements of report recommendations for design-level geotechnical investigations. The project soils engineer must monitor grading and construction activity and report observations to the Public Works Director, or designee. The Public Works Director, or designee, will conduct field inspections as needed. 	
<p>Expansive soils units may be found in the Qht deposits that could cause damage to foundations and walls due to repeated drying and wetting (shrink and swell). Therefore, geologic, soils, and geotechnical impacts would be potentially significant.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure G-2 and:</p> <p>G-3: The final grading and erosion control plan shall be designed to minimize erosion. The plan shall include, but not be limited to, the following:</p> <p>Best management practices (BMPs), such as temporary berms and sedimentation traps (such as silt fencing, straw bales, and sand bags), shall be installed in association with project grading. The BMPs shall be placed at the base of all cut/fill slopes and soil stockpile areas where potential erosion may occur and shall be maintained to ensure effectiveness. The sedimentation basins and traps shall be cleaned periodically, and the silt shall be removed and disposed of in a location approved by the City.</p> <p>Nonpaved areas shall be revegetated or restored (i.e. geotextile binding fabrics) immediately after grading and installation of utilities to minimize erosion and to re-establish soil structure and fertility. Revegetation shall include drought-resistant, fast-growing</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>vegetation that would quickly stabilize exposed ground surfaces. Alternative materials rather than reseeded (e.g., gravel) may be used, subject to review and approval by the City.</p> <p>Runoff shall not be directed across exposed slopes. All surface runoff shall be conveyed in accordance with the approved drainage plans.</p> <p>Energy dissipaters or similar devices shall be installed at the end of drainpipe outlets to minimize erosion during storm events.</p> <p>Grading shall occur during the dry season (April 15 to November 1) unless a City-approved erosion control plan is in place and all erosion control measures are in effect. Erosion control measures shall be identified on an erosion control plan and shall prevent runoff, erosion, siltation, and tracking of mud and soil onto City streets. All exposed graded surfaces shall be reseeded with ground cover vegetation to minimize erosion. Graded surfaces shall be reseeded within four (4) weeks of grading completion, with the exception of surfaces graded for the placement of structures. These surfaces shall be reseeded if construction of structures does not commence within four (4) weeks of grading completion.</p> <p>Site grading shall be completed such that permanent drainage away from foundations and slabs is provided and so that water shall not pond near proposed structures or pavements.</p>	
Greenhouse Gasses			
<p>All industrial land use projects that exceed 10,000 MTCO₂e per year would be considered potentially significant under the screening threshold. The estimated Project operational GHG emissions with project design features would be 6,674.83 MTCO₂e per year, which would not exceed the screening threshold. In addition, the proposed Project would generate approximately 1,510 job opportunities and would achieve a project-level efficiency target of 4.4 MTCO₂e per</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>service population. This would be below the 4.8 MTCO₂e per service population threshold. Potential impacts would be less than significant based on the screening threshold.</p>			
<p>The Specific Plan would incorporate measures that reduce GHG emissions compared to a conventional project of similar size and scope. The Project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of a building’s life cycle. These designs would increase the structures energy efficiency, water efficiency, and overall sustainability. These measures and features are consistent with existing recommendations to reduce GHG emissions. In addition, the Project would result in less than significant impact. Therefore, the Specific Plan would not conflict with the 2008 Scoping Plan and the 2014 Updated Scoping Plan.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Given the Specific Plan’s consistency with state and county GHG emission reduction goals and objectives, the Specific Plan’s contribution to the cumulative impact of greenhouse gas emissions would not be cumulatively considerable and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (i.e., the 2014 Updated Scoping Plan). Similarly, related projects would also be anticipated to comply with these same emissions reduction goals and objectives.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Therefore, cumulative impacts with respect to greenhouse gas emissions would be less than significant.			
Hazards and Hazardous Materials			
Spills or leakages encountered during construction and hauling would be temporary and would be required to be remediated in accordance with the State and local regulations for hazardous waste cleanup. As such, impacts from the use and handling of hazardous materials would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
If the railroad is commissioned for service within the future, any transport of hazardous materials would comply with US Department of Transportation (USDOT) Federal Railroad Administration (FRA) safety regulations. Therefore, the probability of an accident involving the transport of hazardous materials within proximity to the Project Site is considered to be unlikely. Impacts would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
During construction of the Project, delivered materials to the site could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. The event of a spill or release related to these hazardous materials could cause a short-term threat of exposure to nearby schools and residential areas along SR 126 and W. Telegraph Road. Therefore, the Project would have potentially significant impacts related to the transport of hazardous materials during construction activities.	Potentially significant	<p>HM-1: Prior to demolition and construction activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that an asbestos survey has been conducted on any buildings and irrigation pipelines that are to be demolished or removed from the Project Site. If asbestos is found, the Applicant shall follow all procedural requirements and regulations of the VCAPCD Rule 62.7 to properly dispose of all on-site ACM's before general demolition activities commence.</p> <p>HM-2: Prior to demolition and any renovation activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that a lead-based paint</p>	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>survey has been conducted at all existing buildings located on the Project Site. If lead-based paint is found, the Applicant shall follow all OSHA procedural requirements and regulations for its proper removal and disposal before general demolition activities commence.</p> <p>HM-3: Prior to disposal, all fluorescent light fixtures within the existing buildings shall be inspected for PCB content labels throughout demolition of the Project Site.</p> <p>HM-4: Pole-mounted transformers, light ballasts, or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal. All equipment found to contain PCBs must be removed and disposed in accordance with all applicable local, State and Federal regulations including but not limited to California Code of Regulations Title 22, 40 CFR Part 261, and EPA 40 CFR. Utility Plans prepared as part of building permit review must include notes requiring inspection and plan for removal and disposal.</p>	
<p>The Project Site has been historically used for agricultural uses for more than 75 years, it is possible that residual pesticides may be exposed during grading and excavation activities. The limited Phase II ESA conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate of every condition within the Project, and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on site. Therefore, potential impacts related to the presence of hazardous substances would be potentially significant.</p>	<p>Potentially significant</p>	<p>HM-5: In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or designee, for approval as required before continued work in the area.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The Project Site has historically been used for agricultural production. However, any new development occurring on any of these documented hazardous materials sites would have to be preceded by remediation and cleanup under the supervision of the State DTSC or other regulatory agency (as deemed appropriate) before construction activities could begin, if such actions have not already occurred. In addition, these listed areas are down gradient from the Project Site, so exposure to contaminants from migration through surface water or groundwater flow from the contaminated zones is not expected. Therefore, potential for contamination of the Project Site from off-site contamination sources is considered less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The Project Site is not within 0.25 miles of an existing school. The Project would involve the use of hazardous materials on site typical of industrial-type uses. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards. Therefore, impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The Project Site contained two historical ASTs and one UST. These historical tanks have either been abandoned or removed from the Project Site as of 2005. Sources of contamination were identified within the areas of the ASTs and UST; however, these areas on the Project Site have been cleaned up and remediated and are not considered an</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>environmental concern. Due to the regulatory status of hazardous materials incidents at the facility (e.g., closed case), the distance between the facility and the site, or the hydrogeologically cross-gradient location from the site, and given that site reconnaissance did not reveal the presence of hazardous chemicals, on-site impacts related to nearby hazardous materials sites are considered less than significant.</p>			
<p>The Specific Plan is not located within any of the three Safety Zones as established by the Ventura County Airport Land Use Commission (ALUC) within their Comprehensive Land Use Plan (CLUP). Therefore, the Specific Plan would not conflict with the requirements set forth in the Ventura County ALUC or the City's General Plan. Impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>No portion of the Specific Plan is within a private airstrip other than the Santa Paula Airport. Implementation of the Project would result in less than significant impacts related to the exposure of employees or visitors to hazards from plane accidents due to the proximity of any private airstrips.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Construction activities of the Project may require the closure of vehicle travel lanes. The City's designated evacuation routes are along SR 126 and SR 150. While, SR 126 runs along the southern boundary of the Project Site, construction activities of the Project are not anticipated to interfere with access to the</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
roadway or interfere with operation of the County’s Hazard Mitigation Plan. Emergency access and potential traffic access impacts would less than significant.			
The Specific Plan area has the potential for residents and employees to encounter human-made and natural hazards, which could cause undue hardship to residents and employees. The working population within the Specific Plan would be made aware of such disaster plans through public education and outreach activities. In addition, the Project would comply with the SPFD’s recommended standards for emergency accessibility and circulation. Thus, the Project’s operational impacts on the implementation of the Ventura County Hazard Mitigation Plan would be considered less than significant.	Less than significant	No mitigation necessary.	Less than significant
The Specific Plan is located not within a CAL FIRE designated LRA or SRA. As the Project would not expose employees or visitors to any increased risks to fire hazards on the site, impacts are considered to be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Hydrology and Water Quality			
Pollutants such as soil, sediments, and other substances associated with construction activities (e.g. oil, gasoline, grease, and surface litter) could be present in stormwater runoff from the site. Through compliance with the SWRCB and USEPA permits and SWPPP	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
requirements, potential impacts to water quality during Project construction would be less than significant.			
The development of the Project would increase the amount of impervious surfaces on the Project Site, which has the potential to increase runoff within the Project Site. The BMPs and the project design features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all applicable federal, state, and local water quality rules and regulations to effectively minimize the Project’s impact on water quality. Accordingly, impacts would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
The Project will not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, the Specific Plan would incorporate design features such as bioswales, bioretention cells, infiltration trenches and permeable pavement to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge. Therefore, impacts would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Site-clearing and grading operations have the greatest potential for discharging sediment downstream during storm events. The Project would be required to develop a site-specific	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>SWPPP in accordance with the NPDES Program General permits authorized under the Clean Water Act for Construction Activities. Adherence to the SWPPP and implementation of standard BMPs during construction would reduce the potential for increased siltation, erosion, and hazardous material spills. Through compliance with the SWPPP and standard BMPs, potential erosion and siltation, potential impacts will be less than significant.</p>			
<p>The operation of the Specific Plan will contain a number of features to reduce the amount of runoff that will occur within the Specific Plan area, and limit the amount and rate of surface water flow downstream of the Specific Plan. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, potential impacts are considered less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The Specific Plan would not substantially alter drainage patterns within the Project area. The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. Peak flows would not exceed existing conditions, so there would not be</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
adverse effects downstream. Therefore, impacts are considered less than significant.			
The Project incorporates detention basins sized to treat 10 percent of the Q50 (50-year storm event) from the storm drain system consistent with the Ventura County SQUIMP guidelines. The proposed detention basins would be incorporated into the underground storm drain system, preventing any sedimentation to occur. Consequently, impacts related to water quality would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
To reduce the discharge of expected pollutants during grading and other construction activities, such as sediment into receiving waters during construction, the Project Applicant will be required to prepare a SWPPP consistent with the Ventura County NPDES permit and the Technical Guidance Manual for Storm Water Quality Control Measures to minimize or eliminate the discharge of pollutants into receiving waters. The design features would comply with all NPDES permit requirements and no significant impacts to water quality will result.	Less than significant	No mitigation necessary.	Less than significant
The Specific Plan would not introduce new housing into the area. Therefore, impacts to housing within a 100-year flood hazard area would be considered less than significant.	Less than significant	No mitigation necessary.	Less than significant
The new channel design would have the capacity to handle flows that overtop the bank on the east side and the water that ponds due to the undersized culvert at SR	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>126. The channel also has a debris catchment area at the railroad bridge with a second culvert under the railroad bridge to accommodate peak flows rerouted due to the debris. A geotextile would be used in the channel to stabilize the soil for high velocities. Accordingly, impacts would be less than significant.</p>			
<p>The Specific Plan does not propose any residential land uses. Therefore, no new residential uses would be located in the flooding hazard zone. As such, impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The Project Site is approximately 12 miles inland from the Pacific Ocean and is approximately 230 to 350 feet above mean sea level (amsl). There are no lakes, ponds, or dams adjacent to the Project Site. Therefore, the risk that the Project Site would be inundated by a seiche is considered negligible, and impacts associated with tsunamis or seiches would be less than significant. The proposed parallel channel and debris basin are incorporated into plans to improving the Adams Barranca. In addition, no on-site stormwater would be directed to the Adams Barranca. Therefore, impacts associated with mudflows would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
Land Use			
<p>The Project would not physically divide the existing community of Santa Paula or any smaller enclaves outside the City limits. The Project would not create incompatible land</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
use relationships between the Project site and existing off-site uses, and as a result of would not disrupt, divide, or isolate existing neighborhoods or communities. Therefore, impacts related to dividing an established community would be less than significant.			
The Project would be consistent with the County of Ventura General Plan and Non-Coastal Zoning Ordinance, the Santa Paula General Plan and SPMC, the 2016 SCAG RTP/SCS, and with Ventura LAFCo. Therefore, the project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project and impacts would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
The Specific Plan includes a dedication of Open Space/Passive uses over 4.9 acres that includes the Adams Barranca and buffer areas on the western portion of the Project Site. This dedication would preserve the habitat and natural community as envisioned in the City's Open Space and Conservation Element of the General Plan. Therefore, impacts related to habitats conservation or natural community conservation plans would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Noise			
Construction noise could exceed construction noise thresholds for the County with an increase of greater than 3 dB(A) at residences located within the agricultural operations to the west. There is a residence located near the northwest boundary of the Project Site	Potentially significant	<p>N-1: Stationary construction equipment, such as pumps, generators, or compressors, shall be placed as far from noise sensitive uses as feasible during all phases of project construction.</p> <p>N-2: All construction equipment shall be equipped with appropriate mufflers in good working condition.</p>	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>within 75 feet that would be subject to construction noise in excess of 65 dB(A) for exterior areas. Therefore, construction noise impacts to residences to the west are considered potentially significant.</p>		<p>N-3: Before any site activity, the contractor shall be required to submit a material haul route plan to the City of Santa Paula and Ventura County for review and approval. The contractor shall ensure that the approved haul routes are used for all materials hauling, to minimize exposure of sensitive receivers to potential adverse noise levels from hauling operations.</p> <p>N-4: During all site preparation, grading and construction, the construction contractor shall locate all stockpiling and vehicle staging areas away from existing residences, to the extent feasible.</p>	
<p>An increase of 3 dB(A) or greater in traffic noise levels that occurs from Project-related activities would be considered significant if the resulting noise levels that occurs from Project-related activities would exceed the City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels. These roadway systems do not experience an increase in noise levels of 3 dB(A) or greater. In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road extension and would not cause an increase of 3 dB(A) or greater due to Project-related activities. Therefore, the Santa Paula West Specific Plan Area would not result in noise impacts in the local and regional street system. Impacts along these roadway systems are considered less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Predicted noise levels at 50 feet from the railway centerline to the southern boundary would be approximately 69.4 dB(A). Due to its proximity to the rail road track, uses allowed</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
within the southern boundary of the Project Site are not sensitive to that estimate level.			
Assuming noise levels at 69.4 dB(A) within 50 feet from the railway centerline, interior noise could be reduced to 44.4 dB(A), below the General Plan noise threshold of 45 dB(A). Therefore, potential interior noise within the proposed development would be considered less than significant.	Less than significant	No mitigation necessary.	Less than significant
The surrounding land uses within 25 feet of the Project Site include the scattered residential uses immediately to the west. The construction near this portion of this site may include some earthwork and grading activities. While offsite surrounding land uses may experience vibration events, these would not be frequent and impacts would be considered less than significant.	Less than significant	No mitigation necessary.	Less than significant
Ground-borne vibration typically attenuates rapidly as a function of distance from the vibration source. Furthermore, the majority of the Project's operational-related vibration sources, such as mechanical and electrical equipment, would incorporate vibration attenuation mounts, as required by the particular equipment specifications. Therefore, operation of the Project Site would not increase the existing vibration levels at off-site surrounding uses; and as such, vibration impacts associated with operations would be less than significant.	Less than significant	No mitigation necessary.	Less than significant
Given vibration from the railroad track would not be constant and would be approximately	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
50 feet from the track, uses allowed within Santa Paula West Specific Plan Area would not be susceptible to these conditions. Therefore, impacts would be considered less than significant.			
The noise that could be generated from within the Specific Plan area and mobile source noise impacts would not substantially increase the ambient noise conditions in the surrounding area. Any permanent increase in ambient noise levels is considered less than significant.	Less than significant	No mitigation necessary.	Less than significant
Average daily trips associated with construction activities would not result in a doubling of trip volume along study-area roadways. Given that it takes a doubling of average daily trips on roadways to increase noise by 3 dB(A), the noise-level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and nearby roadways that are within the area (unincorporated County of Ventura) would be less than 3 dB(A), and potential impacts will be less than significant.	Less than significant	No mitigation necessary.	Less than significant
There are no commercial aircraft in operation at the airport. The general aircraft travel pattern is south of the City, with a required approach and departure altitude of 1,500 feet. Noise levels for the Airport, where most of the flight activities occur, are below 60 dB(A). Thus, people residing, attending school, or working within the future land uses of the Specific Plan area would not be exposed to excessive noise due to the aircraft travel	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>pattern. Therefore, implementation of the Specific Plan would result in less than significant impacts related to noise generated by the Santa Paula Airport.</p>			
<p>All the stationary sources would be required to provide shielding or other noise-abatement measures so as not to cause a substantial increase in ambient noise levels. Moreover, due to distance, it is unlikely that noise from multiple cumulative projects would interact to create a significant combined noise impact. As such, it is not anticipated that a significant cumulative increase in permanent ambient noise levels would occur and, therefore, the impact would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Public Services</p>			
<p>Fire Protection and Emergency Medical Services</p>			
<p>The Specific Plan will result in an increase in the need for services from existing Santa Paula Fire Department facilities, equipment, and staff personnel. Under the terms of the Development Agreement, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection facilities and personnel costs. No new facilities would be required to serve the Project Site as a result of the implementation of the Specific Plan. As such, mitigation is not required.</p> <p>the SPFD will review all future building plans and require adequate fire-flow pressure and flow rates through automatic fire sprinkler</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>systems, fire hydrants, and other design features where appropriate (as required by appropriate federal, state, and local fire code and building code requirements. As such, potential impacts with regard to fire-flow requirements will be less than significant.</p>			
Police Services			
<p>Development of the Specific Plan would increase the demand for services and resources provided by the Santa Paula Police Department. The Project would not require construction of new or expanded police protection facilities, project-related police protection impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
Public Schools			
<p>No new residential zoning or new residential development is proposed; the Project would not generate new housing with residents who would have a need for public school facilities. Therefore, the Project would not significantly impact the local school districts.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
Parks and Recreation Facilities			
<p>The Project does not include any new residential zoning or any new residential development projects, it would not result in an increase in the residential population that could visit the City’s parks and recreation facilities. Project impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Other Public Services			
<p>Annexation of the Project area would shift all local government services to the City of Santa Paula. There would be increased demand for a variety of City resources, especially during the development planning, permitting, and inspection phases, and much less so thereafter. All services can be provided from the City's existing administrative facilities. No new governmental facilities would need to be constructed to administer governmental services for the Project area, there would be no environmental impacts related to public facilities construction projects.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
Transportation and Traffic			
Existing with Project with Beckwith Road			
<p>If Beckwith Road is extended south to Faulkner Road, 10th Street and Harvard Boulevard intersection is forecast to operate at LOS D during the AM peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due</p>	<p>Significant and unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.	
<p>If Beckwith Road is extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is forecast to operate at LOS D during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>TRA-1 This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane. Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.</p>	<p>Less than significant</p>
<p>If Beckwith Road is extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way is expected to operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>TRA-2 This intersection could be mitigated to LOS C or better by installing a traffic signal. A peak-hour signal-warrant analysis is provided in Appendix D of the Traffic Impact Analysis and indicates that the installation of a traffic signal would be warranted under existing plus project conditions during the PM peak hour. Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.</p>	<p>Less than significant</p>
<p>If Beckwith Road is extended south to Faulkner Road, Beckwith Road and Telegraph Road is expected to operate at LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>TRA-3 This intersection could be mitigated to LOS C or better by installing a traffic signal and reconfiguring the westbound approach. A peak-hour signal-warrant analysis is provided in Appendix E and indicates that the installation of a traffic signal would be warranted under existing plus project conditions. The westbound approach can be restriped to provide one right-turn lane, one through lane, and one left-turn lane (a reconfiguration of the existing two-way left-turn lane). With the development of the Santa Paula West Business Park, Beckwith Road will be widened to full City standards, which provide</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>for a 64-foot roadway within an 84-foot right-of-way. With the additional roadway width, the northbound approach could be widened from its current single-lane configuration to provide one left-turn lane and one shared through/right-turn lane. With this configuration as mitigation, the intersection would operate at LOS C or better under existing plus project conditions.</p> <p>Since the impacts at this intersection are project-related impacts (rather than cumulative impacts to which the project would contribute), the Project applicant shall be responsible for providing 100 percent of these mitigation improvements.</p>	
Existing with Project without Beckwith Road			
<p>If Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-1.</p>	<p>Less than significant</p>
<p>If Beckwith Road is not extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way would operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than significant</p>
<p>If Beckwith Road is not extended south to Faulkner Road, Beckwith Road and Telegraph Road would operate at LOS D during the PM</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-3.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>			
Other Impacts with Project			
<p>The freeway segments currently operate at LOS C or better in both directions. Based on the significance threshold for the Los Angeles County CMP, the Project does not operate at LOS F after the addition of project traffic and the Project does not cause a net increase in traffic demand of 2 percent of capacity or more. Therefore, the Project would result in less than significant impacts to freeway and multilane segments.</p>	Less than significant	No mitigation necessary.	Less than significant
<p>An analysis was completed to comply with the monitoring requirements found in the Ventura County Transportation Commission's (VCTC) 2009 VCCMP. The analysis indicated that these facilities would operate at LOS C or better during both peak hours under the Existing plus Project scenario and cumulative base plus project conditions in the year 2031. Therefore, impacts to the VCCMP would be less than significant.</p>	Less than significant	No mitigation necessary.	Less than significant
<p>The nearest airport is the Santa Paula Airport, located to the southeast of the Project Site. The Project Site is not located within any of the various safety zones established by the Comprehensive Land Use Plan (CLUP), nor is it within the Safety Zone, which includes the</p>	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Inner Safety Zone (ISZ), the Outer Safety Zone (OSZ), and the Traffic Pattern Zone (TPZ), as provided in the City’s General Plan Safety Element. Therefore, the Project would result in a less than significant impact to air traffic patterns or safety risks.</p>			
<p>The internal circulation network would be constructed in compliance with the Santa Paula Municipal Code and would not contain dangerous design features (e.g., sharp curves, dangerous intersections) and would be designed to accommodate traffic of the Project, including any delivery trucks related other commercial vehicles related to the uses allowed under the Specific Plan. Implementation of the Project would result in less than significant impacts related to roadway design features and incompatible uses.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>No changes are proposed that would impact emergency access. In addition, as required by the City’s Fire Code all individual building permit applications will include a review by the SPFD to ensure adequate setbacks between structures are maintained and that all sides of a building can be accessed by emergency personnel and emergency equipment. Impacts with regard to emergency accessibility would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The City’s General Plan includes goals to ensure that City residents have alternative transportation opportunities, such as transit, bikeways, and pedestrian routes. Therefore,</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
impacts to public transit, bicycle, or pedestrian facilities would be less than significant.			
Cumulative Base Conditions			
Under future conditions without the Project, 10th Street and Harvard Boulevard is expected to operate at LOS E during the AM Peak hour and LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.	Significant and unavoidable
Under future conditions without the Project, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is expected to operate at LOS E during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-1 . This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the	Significant and unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.	
Under future conditions without the Project, Peck Road and SR 126 EB On/Off Ramps/ Acacia Way is expected to operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-2 .	Less than significant
Under future conditions without the Project, Faulkner Road and SR 126 WB On/Off Ramps is expected to operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	TRA-4 This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach The westbound approach can be restriped to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two lanes, this improvement would require coordination with and approval by Caltrans. Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.	Less than significant
Cumulative with Project with Beckwith Road			
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The	Significant and unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.	
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-1 . This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.	Significant and unavoidable
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and SR 126 EB On/Off Ramps/Acacia Way would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-2 .	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Faulkner Road and SR 126 WB On/Off Ramps would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-4.</p>	<p>Less than significant</p>
<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Beckwith Road & Telegraph Road would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-3.</p>	<p>Less than significant</p>
<p>Cumulative with Project without Beckwith Road</p>			
<p>Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn</p>	<p>Significant and unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.	
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS F during the AM Peak hour and LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-1 . This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.	Significant and unavoidable
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-2 .	Less than significant
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Faulkner Road and SR 126	Potentially significant	Implementation of mitigation measure TRA-4 .	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Westbound On/Off Ramps would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.			
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Beckwith Road and Telegraph Road would operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially significant	Implementation of mitigation measure TRA-3 .	Less than significant
Other Cumulative			
Of the 10 directional freeway segments selected for analysis, all are projected to operate at LOS E or better during both the AM and PM peak hours under cumulative base conditions. As defined in the VCCMP, the minimum desirable level of service on freeway segments is LOS E. Therefore, no freeway segments would be significantly impacted due to cumulative development.	Less than significant	No mitigation necessary.	Less than significant
Utilities			
Wastewater			
The treated effluent from the Project will not exceed applicable requirements, and the Project's potential impacts related to wastewater treatment are less than significant.	Less than significant	No mitigation necessary.	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Water and recycled water pipeline construction impacts would be less than significant because they would be required to comply with the City’s noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation. In addition, no new or increased severity of impacts would occur as a result of the Project.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The new WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2.0 mgd, so there is unused capacity at the facility to accept the incremental addition of 0.026 mgd that is anticipated from occupancy of the Specific Plan area. Therefore, the Project would have less than significant impacts to wastewater treatment capacity within the City.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>As concluded in the Sanitary Sewer Technical Report, the Project site sewer system will be in accordance with the City of Santa Paula design guidelines. The Santa Paula West sewer system is in agreement with the design flows anticipated within the City’s Wastewater Master Plan for this development. Also, the main backbone, will have additional capacity before reaching 50% pipe utilization of 253 gpm (0.564 cfs) for future connections and therefore there would be no impacts.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Completion of proposed Project improvements would convey most of the wastewater flow to the POC along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project's contribution to cumulative wastewater system and treatment impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Stormwater</p>			
<p>The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under State Route (SR) 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. The detention basins will significantly reduce peak runoffs downstream by storing the peak event flows and lagging their release after the storm peak. The Project's proposed design features and drainage plan would not result in an increase in stormwater runoff from the site or exceed stormwater drainage requirements established by the USACE, VCWWD, or City. Impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Water			
<p>Water demand from the Project represents 0.81 percent of City's total projected urban water demand in 2017, and decreasing to 0.65 percent in 2037.</p> <p>The 2010 UWMP Update projects total water demands for the Santa Paula Business Park through 2035 and demonstrates that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands. Therefore, there would be no impacts to available water supplies and no new or expanded entitlements are needed.</p>	Less than significant	No mitigation necessary.	Less than significant
<p>The Specific Plan's demand for water use would meet the projected development demands within the City. Therefore, the cumulative increase in water demand of related projects and build-out of the City pursuant to the General Plan is considered less than significant.</p>	Less than significant	No mitigation necessary.	Less than significant
Solid Waste			
<p>As provide by the SPMC, Section 50.140, Construction and Demolition Diversion, demolition and construction must divert 50 percent of waste tonnage from landfills. Separate calculations and reports are required for the demolition and construction portion of projects involving both activities. Impacts related to construction solid waste generation are considered potentially significant.</p>	Potentially significant	<p>SW-1 Before issuance of a demolition permit or construction permit, the applicant must implement waste reduction and recycling programs to divert construction solid waste from the area landfill. A construction recycling plan must be submitted and approved by the Director of Public Works. A final report as to the amount recycled must be provided to the Director of Public Works at the completion of construction activities documenting the waste reduction efforts conducted, including a listing of solid waste diversion amounts, and the amount of waste sent to landfills. The report must also document how the construction contractor complied with applicable state and local statutes and regulations to reduce and recycle solid waste generated during construction.</p>	Less than significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The proposed Project would account for less than 1 percent of the Toland Road Landfill permitted daily capacity. Additionally, the Project would account for less than 1 percent of the maximum permitted daily capacity for Chiquita Canyon Sanitary Landfill and Simi Valley Landfill & Recycling Center. However, the Chiquita Canyon Sanitary Landfill is only permitted through 2019. While there would be a substantial increase in generated solid waste on the Project Site, adequate landfill capacity appears to be available within the City and nearby landfills. Solid waste generated during construction and operation of the Project would be required to comply with all federal, state, and local statutes and regulations to reduce and recycle solid waste. Therefore, impacts would be less than significant.</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>The proposed Project would comply with AB 939 and AB 231 and the City's Construction and Demolition Diversion section of the Municipal Code, which states that demolition, construction, and remodeling shall divert 50 percent of waste tonnage. However, given that future landfill capacity may not be ensured through the life of the development of the Specific Plan, for many years after occupancy, impacts to solid waste would be potentially significant.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure SW-1.</p>	<p>Less than significant</p>
<p>The City would utilize the Toland Road Sanitary Landfill until the landfill reaches capacity. At the time Toland Road Sanitary</p>	<p>Less than significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Landfill closes, the City would utilize the capacity of the five remaining landfills previously used for solid waste disposal. The combined remaining capacity of the five landfills is estimated to last for 95 years, or an average of 19 years.</p> <p>As such, cumulative impacts would be less than significant because the six landfills discussed above have sufficient capacity for decades to service the development of the Specific Plan and other development requiring solid waste disposal.</p>			

1.0 INTRODUCTION

1.1 BACKGROUND

The West Area 2 expansion area consists of 125 acres on the west end of the City of Santa Paula (“City”) that will be added to the 68 acres that was included in the General Plan’s 1978 Sphere of Influence (SOI).

The Santa Paula West Business Park Specific Plan (“Specific Plan”) is a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of 53.81 acres of the West Area 2 portion of the City of Santa Paula General Plan. The Specific Plan and other off-site improvements to support the Specific Plan development are collectively referred to as the Project.

The Specific Plan was prepared to implement the City’s plan for a portion of West Area 2 in accordance with the requirements of the California Government Code (Sections 65450 through 65457) and Chapter 16.216 of the City of Santa Paula Development Code. As such, the Specific Plan establishes the regulations, programs, and procedures required to implement the General Plan’s goals and polices for this expansion area of the City. The Specific Plan also serves to facilitate development within the Project Site as a master-planned business park that includes a variety of light industrial and commercial uses.

The Specific Plan is designed to streamline the entitlement process within the Specific Plan area (“Project Site”) and provide guidelines for development and City review. The Specific Plan would be implemented by the City of Santa Paula, and may be amended or augmented under the City’s Specific Plan amendment procedures.

This Project is described in detail in **Section 2.0**, Project Description.

1.2 PURPOSE OF THE EIR AND LEGAL AUTHORITY

All projects within the State of California are required to undergo environmental review to analyze the environmental impacts associated with implementation of the project in accordance with the California Environmental Quality Act (“CEQA”).¹ An environmental impact report (EIR) provides information to assist a lead agency in considering environmental effects when making decisions on a proposed project.

This EIR, which has been prepared in accordance with the State CEQA Guidelines, identifies and discusses potential proposed Project-specific and cumulative environmental impacts that may occur should this proposed Project be implemented. The intent of this EIR is to (1) be an informational document that serves to inform public agency decision makers and the general public of the potential environmental impacts of the Project; (2) identify possible ways to minimize or avoid any potential significant impacts, either

1 Public Resources Code, sec. 21000, et seq.

through mitigation or the adoption of alternatives; and (3) disclose to the public required agency approvals.

The principal use of an EIR is to provide input and information to the comprehensive planning analysis undertaken for this proposed Project. Given the role of the EIR in this planning and decision-making process, it is important that the information presented in the EIR be factual, adequate, and complete. The standards for adequacy of an EIR, defined in Section 15151 of the State CEQA Guidelines, are as follows:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure.

1.3 PUBLIC AND AGENCY REVIEW OF THE DRAFT EIR

This Draft EIR is subject to a 45-day public review period starting from the date of the Notice of Availability (NOA). Copies of this Draft EIR have been sent to the State Clearinghouse, Responsible Agencies, agencies that have commented on the Notice of Preparation (NOP), and all other interested parties that have requested notice and copies of the Draft EIR. A complete distribution list is included in **Appendix 1.0** of this Draft EIR.

Interested individuals, organizations, responsible agencies, and other agencies can provide written comments to:

City of Santa Paula
Planning Department
970 Ventura Street
Santa Paula, California 93060
Contact: Janna Minsk, AICP, Planning Director

Comments may also be sent by facsimile to (805) 933-8793 or by e-mail jminsk@spcity.org. Please put "Santa Paula West Business Park Specific Plan EIR" in the subject line.

Agency responses should include the name of a contact person within the commenting agency.

In addition, the Draft EIR is available on the City's website at <http://www.ci.santa-paula.ca.us/>.

1.4 NOTICE OF PREPARATION (NOP) AND RESPONSES TO THE NOP

On August 29, 2014, the City of Santa Paula circulated a Notice of Preparation (State Clearinghouse Number [SCH] 2014081104) of an EIR for review and comment by the public and responsible and reviewing agencies. The 30-day NOP review period ended on September 29, 2014. A copy of this NOP is provided in **Appendix 1.0**. Written comments received by the City on the NOP are also provided in **Appendix 1.0**.

The City also held a public scoping meeting to provide an additional opportunity for comments on September 9, 2014 at 6:30 PM at Santa Paula City Hall, 970 Ventura Street, Santa Paula, CA 93060.

1.5 ORGANIZATION OF THE EIR

A description of the organization of this EIR and the content of each section is provided below to assist the reader as a source of information about the Project. Sections of the EIR following this introduction are organized as follows.

Section ES, Executive Summary, presents a concise summary of the environmental information, conclusions, and analysis in this EIR.

Section 1.0, Introduction, provides information on the background of the Project, CEQA process, and organization of the EIR.

Section 2.0, Project Description, presents a detailed description of the Project, including identification of all discretionary actions requiring approval to allow the implementation of the Project.

Section 3.0, Related Projects, describes the related projects in the City that provide the basis for cumulative analyses and lists recent past, present, and reasonably foreseeable probable future projects.

Section 4.0, Environmental Impact Analysis, contains analysis of the existing conditions, impacts of the Project, and cumulative impacts, and provides mitigation measures (if applicable) in each environmental issue.

Section 5.0, Alternatives, discusses alternatives to the proposed Project that have been developed and analyzed to provide additional information on ways to avoid or lessen the impacts of the proposed development. The alternatives include the “No Project Alternative” as required by State CEQA Guidelines, along with other alternatives.

Section 6.0, Effects Not Found to be Significant, presents information used by the City to determine why certain environmental effects of the proposed Project were found not to be significant and are not evaluated in detail in this EIR.

Section 7.0, Growth-Inducing Impacts, contains a discussion of the potential for the proposed project to remove impediments to growth, foster economic growth, result in a precedent-setting action, and develop or encroach on isolated open space.

Section 8.0, Significant Irreversible Environmental Changes, includes a discussion of significant irreversible environmental changes that would be caused by the proposed project should it be implemented with a brief description of potentially irreversible uses of nonrenewable resources that would result from the project.

Section 9.0, Organizations and Persons Consulted, lists persons involved in the preparation of this Draft EIR or who contributed information.

Section 10.0, References, lists the principal documents, reports, maps, and other information sources reviewed or referenced in the preparation of this EIR.

Appendices to this EIR include technical information and other materials used in the preparation. Appendices in this EIR are as follows:

- 1.0 Notice of Preparation and Comments
- 4.3 Air Quality and Greenhouse Gas Emissions Model Output
- 4.5 Cultural Resources
- 4.6 Preliminary Geotechnical Investigation Report
- 4.8 Phase I Environmental Site Assessment
- 4.9 Adams Barranca Existing Condition Hydrology Study and Preliminary Hydrology Report for Santa Paula West Business Park
- 4.11 Noise Monitoring and Roadway Noise Modeling Datasheets
- 4.13 Traffic Impact Analysis Study
- 4.14 Draft Water Supply Assessment & Water Supply Verification Report for the Proposed Santa Paula West Business Park Specific Plan Project

2.0 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The Santa Paula West Business Park Specific Plan (“Specific Plan”) is a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of a portion of the West Area 2 of the City of Santa Paula General Plan. The Specific Plan and other off-site improvements to support the Specific Plan development are collectively referred to as the Project.

The Specific Plan would guide future land use development on approximately 53.81 acres of the City’s 125-acre West Area 2 designation. West Area 2 was included as an expansion area in the City’s General Plan, which was approved by the City of Santa Paula (“City”) in 1998. This designation allows for a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The land uses envisioned within the Specific Plan will be a mix of low-intensity industrial (such as light manufacturing or research and development), professional offices, and supporting commercial businesses. These uses are allowed in the Commercial/Light Industrial and Light Industrial zones.

The Specific Plan was prepared to implement the City’s plan for a portion of West Area 2 in accordance with the requirements of the California Government Code (Sections 65450 through 65457) and Chapter 16.216 of the City of Santa Paula Development Code. As such, the Specific Plan establishes the regulations, programs, and procedures required to implement the General Plan’s goals and policies for this expansion area of the City. The Specific Plan also serves to facilitate development within the Project Site as a master-planned business park that includes a variety of light industrial and commercial uses.

The Specific Plan is designed to streamline the entitlement process within the Specific Plan area and provide guidelines for development and City review. The Specific Plan would be implemented by the City of Santa Paula, and may be amended or augmented under the City’s Specific Plan amendment procedures.

2.2 PROJECT OBJECTIVES

The following Project objectives are based on the overall intent of the City’s General Plan and the existing physical, environmental, demographic, and market conditions:

1. Help revitalize the existing built environment and economic climate of the City by permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula;

2. Provide for light industrial and commercial uses that complement existing uses adjacent to the Project area; and
3. Provide suitable sites for Light Industrial and commercial buildings that meet the needs of the community but which are not presently available in the City of Santa Paula.

2.3 PROJECT LOCATION

The City of Santa Paula is located in Ventura County, directly north of State Route (SR) 126 and the Santa Clara River, west of the City of Fillmore, and east of the City of San Buenaventura in the Santa Clara River Valley. The regional location is shown in **Figure 2.0-1, Regional Location Map**. Regional access to Santa Paula West is provided by SR 126.

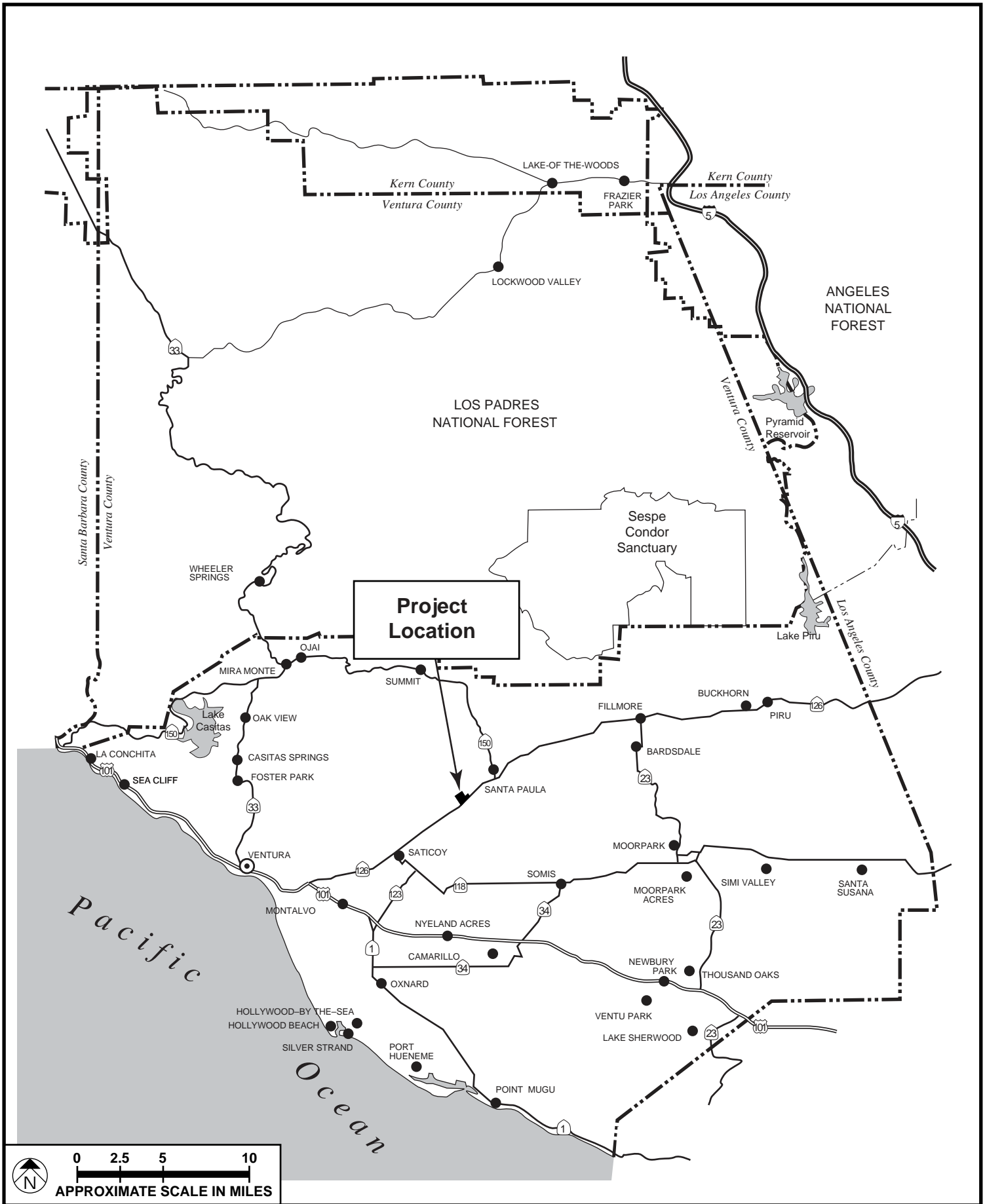
The Project Site is a 53.81-acre area near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The Project Site location is shown in **Figure 2.0-2, Project Location Map**. The Project Site is bound to the north by Telegraph Road, to the south by SR 126, to the east by existing industrial and commercial development in the existing City limits, and to the west by the Adams Barranca and agricultural operations. The Project Site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way. Local access is provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

The Project Site includes five Assessor Parcels, identified as Assessor Parcel Nos. (APNs) 098-0-010-150, 098-0-010-160, 098-0-010-190, 098-0-010-180, and 098-0-020-040.

2.4 EXISTING GENERAL PLAN AND ZONING DESIGNATIONS

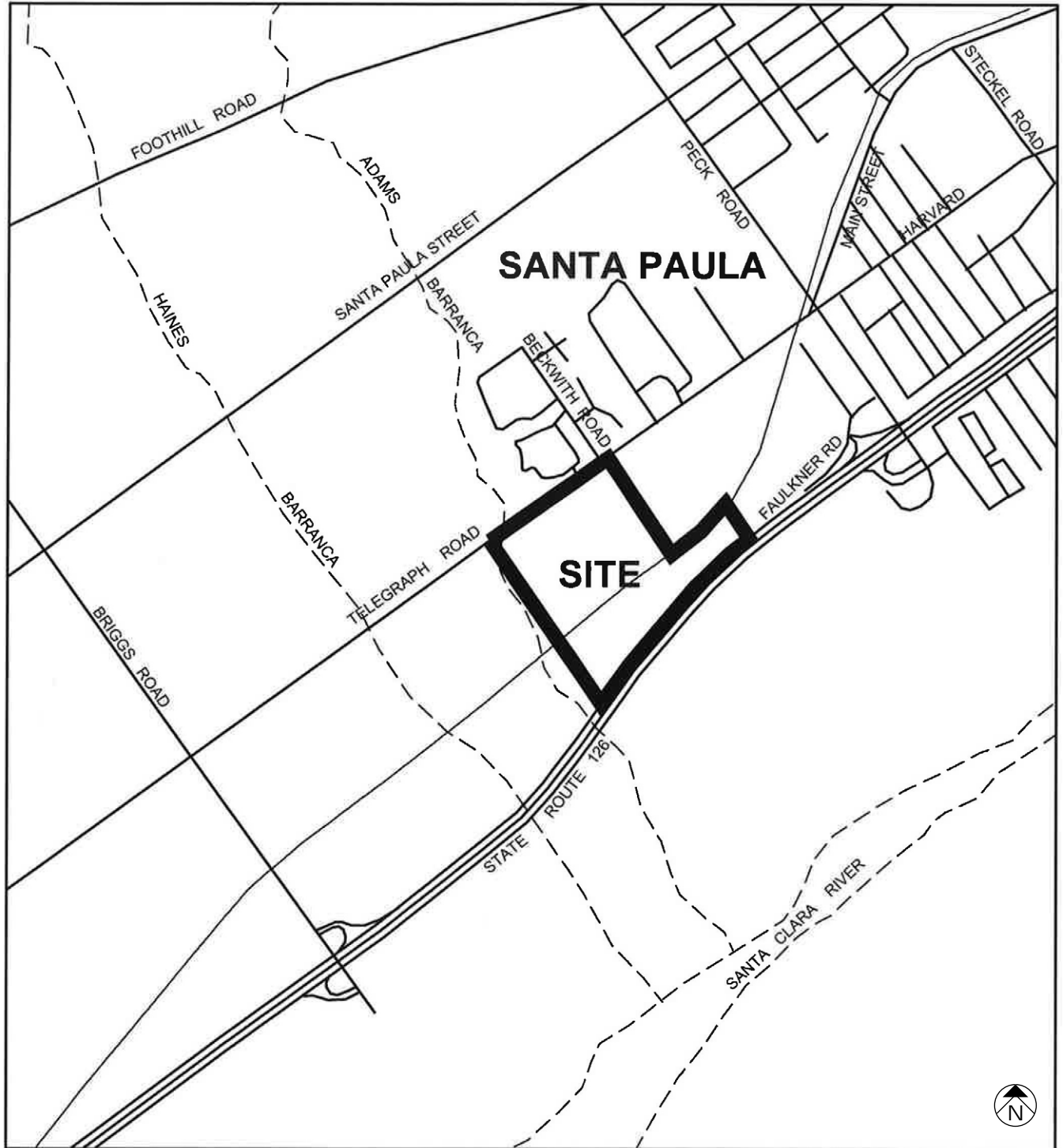
The Project Site is currently within the County of Ventura jurisdiction and has a County General Plan Land Use designation of Agricultural—Urban Reserve and a County Zoning Designation of Agriculture. It is currently zoned AE-40 (Agricultural Exclusive, 40-acre minimum parcel size) in the Ventura County Noncoastal Zoning Ordinance. The Project Site is also within the Local Agency Formation Commission (LAFCo) SOI for the City of Santa Paula and the City of Santa Paula CURB (City Urban Restriction Boundary).

The City of Santa Paula General Plan designates the Project Site as part of the West Area 2 Expansion Area. The West Area 2 Expansion Area is a 125-acre area along the western portion of the City boundary. The City's General Plan Land Use Element currently designates the Project Site for Mixed-Use Commercial/Light Industrial uses (C-LI). Section 16.25.020 of the Santa Paula Municipal Code (SPMC) identifies this area as SP-6.



SOURCE: Meridian Consultants – 2015

FIGURE 2.0-1



SOURCE: Jensen Design and Survey – May 2016

FIGURE 2.0-2

2.5 ENVIRONMENTAL SETTING

2.5.1 On-site Characteristics and Uses

The Project Site exhibits limited topographic variation and contains no natural slopes, rock outcrops, or other geological formations. The topography of the Project Site slopes gently, generally from north to south, with the highest elevation in the northern portion at approximately 250 feet above mean sea level (amsl) near Telegraph Road, and its lowest elevation at approximately 226 feet amsl near the boundary with SR 126.

An aerial view of the Project Site is provided in **Figure 2.0-3, Aerial View of the Project Site**, and shows the site's main physical features. Approximately 49 acres of the 53.81-acre Project Site are currently used for agricultural production. The Project Site has undergone extensive surface grading and leveling as part of the ongoing agricultural operations. There are several unpaved roads throughout the Project Site providing access to the existing agricultural operations. As noted earlier, the VCTC railroad right-of-way, containing railway tracks, bisects the Project Site. The southwest portion is bound by the lower reaches of the Adams Barranca, an improved channel that runs generally north–south.

The Project Site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land in the northeastern portion of the site and herbs on approximately 12.3 acres within the southeastern portion of the site. Approximately 4.5 acres of the Bender Farms portion of the Project Site consists of agricultural operations maintenance equipment storage facilities, offices, and other ancillary uses, such as packing facilities and related farming materials. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land that make up roughly the western half of the Project Site.

2.5.2 Surrounding Characteristics and Uses

The Project Site is situated within the Transverse Ranges physiographic province of California. The primary faults, folds, mountains, and valleys of this region are all aligned in an east–west direction. The Transverse Ranges are a tectonically active region, with high rates of uplift, folding, and sedimentation.

The Project Site is located approximately 0.6 miles northwest of the Santa Clara River, which generally runs in an east–west direction south of the Project Site. The foothills of the Topatopa Mountains are to the north.

A variety of land uses surround the Project Site. Telegraph Road, which bounds the site along the north, is a two-lane roadway approximately 50 feet wide. North of Telegraph Road within the City limits are residential uses, consisting of a single-family residential neighborhood accessed from Country View Court

opposite the western portion of the Project Site, and a mobile-home residential community accessed from Valencia Way opposite the eastern portion of the Project Site.

The southern portion of the Project Site is bound by SR 126, a four-lane freeway that runs east–west. South of SR 126 are agricultural operations and water storage basins. These agricultural lands contain row crops, avocados, and citrus, and extend to the Santa Clara River, which runs east–west along the base of South Mountain. A limited number of single-family residential units lie within some of the agricultural properties.

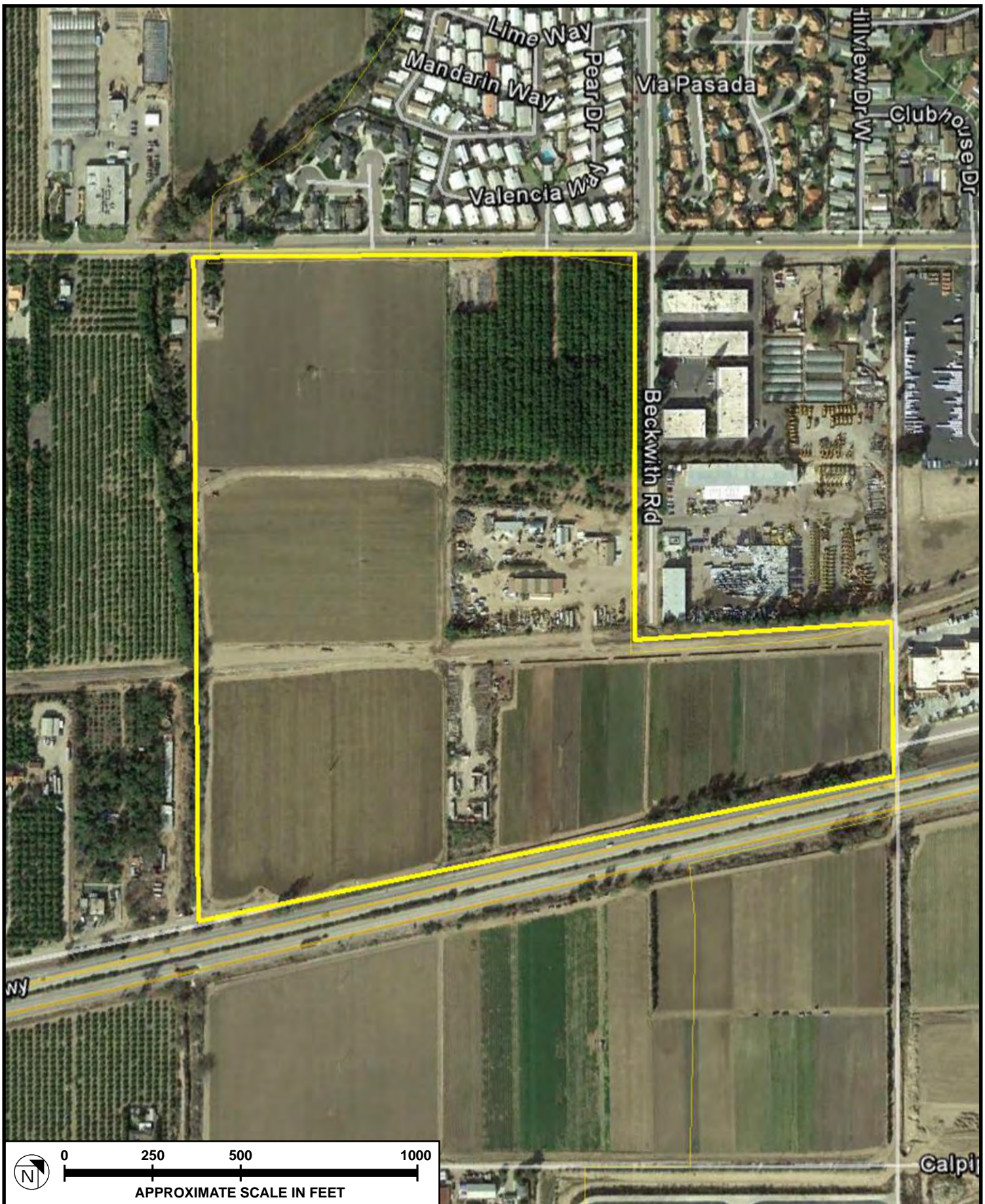
Along the east, the Project Site flanks the west and south boundaries of a light industrial area located immediately east of Beckwith Road and north of the VCTC railroad tracks. Beckwith Road is a two-lane road that separates the Project Site from the industrial uses to the east. The light industrial uses are within the City of Santa Paula limits, and include office and warehouse buildings that house Cornerstone Molds and Machining, other related offices, and the Church of Christ–Buenaventura. The industrial properties also contain a construction equipment storage and maintenance facility operated by United Site Services.

The Adams Barranca is adjacent to the Project Site on the southwest and contains areas with riparian vegetation. Immediately west of Adams Barranca are agricultural operations consisting of orchards and a limited number of livestock. Single-family residences are located within these agricultural operations.

2.6 SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN

Section 16.25.020 of the SPMC identifies this area as SP-6, West Area 2, with a land use designation of Mixed-Use Commercial/Light Industrial. The Specific Plan would maintain the Commercial/Light Industrial (C/LI) and Light Industrial (LI) designations over the development portion of the Project Site. Adams Barranca along the western portion of the Project Site would be designated as Passive/Open Space, as described in Chapter 16.25 of the SPMC. The development standards for the C/LI and the LI zones that have been adopted by the City of Santa Paula are incorporated into the Specific Plan. All development within the Project Site would be required to adhere to the standards of the Specific Plan.

The Specific Plan is organized into six sections that address topics such as physical layout, development standards and design guidelines important to the planning of this area, as well as the required topics per the California Government Code for specific plans.



SOURCE: Google Earth – 2015

FIGURE 2.0-3

2.6.1 Land Use Plan

The Specific Plan includes a Land Use Master Plan (**Figure 2.0-4, Land Use Master Plan**), which provides for the land use designations of Commercial Light Industrial and Open Space/Passive. The corresponding zoning designations of C/LI, LI and Open Space/Passive would be established within the Specific Plan Zoning Implementation Plan (**Figure 2.0-5, Zoning Implementation Plan**).

These land use and zoning designations will allow for the development of a mixture of light manufacturing, research and development, professional offices, and supporting commercial uses, consistent with the C/LI and LI zones of the City of Santa Paula's Zoning Ordinance. These uses are allowed in the C/LI and LI zones. A list of the uses that are permitted is included in Table 2.2 of the Specific Plan.¹

Figure 2.0-6, Conceptual Site Plan, shows the estimated lot configuration for the Specific Plan, which is designed to create campus-like groupings of professional, administrative, and high technology research and manufacturing uses, accompanied by limited commercial activities to support these uses. The sizes of the proposed parcels and roadway layout is planned to achieve orderly and logical circulation among the light industrial and office uses of the Specific Plan area. Estimated building footprints are also shown.

The Adams Barranca, located along the western boundary of the Project Site, would be zoned Open Space/Passive in the Specific Plan. A 64-foot-wide roadway for the extension of Faulkner Road through the Business Park would be dedicated to the City and would allow for integration of the Business Park with the existing developments to the east.

The areas along the VCTC railroad right-of-way would be improved with landscaped screening along the railroad corridor, and an existing at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road.

The Adams Barranca, SR 126, and parking lots would create a separation of between 50 and 100 feet from the agricultural areas to the west and south.

A summary of the land uses in the Specific Plan is provided in **Table 2.0-1, Summary of Land Uses in Approved Specific Plan**.

¹ *Santa Paula West Business Park Specific Plan, SP-6 West Area 2, Table 2.2, Permitted Uses in the Santa Paula West Business Park Specific Plan (amended May 24, 2016).*

**Table 2.0-1
Summary of Land Uses in Approved Specific Plan**

Land Use	Acres	Percent of Project Site
Commercial / Light Industrial (C/LI)	41.96	78.0
Roadways (approximate)	6.95	12.9
Open Space / Passive	4.90	9.1
Total Gross Area	53.81	100

Source: Santa Paula West Specific Plan (October, ,2016).

2.6.2 Development Standards and Design Guidelines

The Specific Plan Development Standards direct the style of development and aesthetic character of the Business Park, and ensure a consistent use of signage, landscaping, and other design features. The standards also ensure that the Santa Paula West Business Park (a) has a clear identity and sense of place; (b) meets the needs of the future owners or tenants; (c) provides a harmonious and pleasing environment for uses and activities; and (d) establishes standards to achieve and maintain a harmonious development identity and level of quality.

Zoning Standards

The businesses allowed within the Project Site will be low-intensity manufacturing, research and development, and professional offices, as well as limited commercial uses mainly to serve the employees of the businesses of the park.




SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-4


M H/P

TELEGRAPH ROAD

LEGEND

 Railroad (RR Overlay Zone - Not a Part)
200,122 S.F. = 4.59 Acres

 C/LI (Commercial / Light Industrial)
1,264,982.4 S.F. = 29.04 Acres

 LI (Light Industrial)
562,795.2 S.F. = 12.92 Acres

 Open Space/Passive
165,528 S.f.=4.9 Acres

COUNTY AG

COUNTY AG

C/LI

C/LI

RAILROAD RW (NOT A PART)

C/LI

C/H

FAULKNER ROAD

STATE ROUTE 126

BECKWITH ROAD

PROPOSED ST. B



0 175 350 700

APPROXIMATE SCALE IN FEET

SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-5



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-6

Table 2.0-2, Development Standards, lists the site design standards that govern lot size and dimensions, lot coverage (including Floor Area Ratio), setbacks from the lot lines, and building heights.

**Table 2.0-2
Development Standards**

Design Factor	C/LI	LI
Minimum size for industrial subdivision	5 acres	5 acres
Minimum lot size	6,000 sq. ft.	10,000 sq. ft.
Minimum lot width	60 ft.	60 ft.
Minimum lot depth	80 ft.	100 ft.
Floor-area ratio	0.35	0.35
Front yard setback (minimum)	10 ft.	10 ft.
Side yard interior setback (minimum)	0 ft.	0 ft.
Side yard street side setback (minimum)	10 ft.	10 ft.
Rear yard setback (minimum)	0 ft.	0 ft.
Lot coverage (maximum)	80 %	85 %
Building height (maximum)	35 feet	45 feet

Source: Santa Paula Business Park Specific Plan, 7.

Notes: ft. = feet; sq. ft. = square feet.

Architectural Design

The architectural design theme of the Business Park is high-quality Contemporary Tuscan. An illustration of Contemporary Tuscan is depicted in **Figure 2.0-7, Architectural Theme**. This style integrates historical Italian Tuscan features with modern materials and details. This architecture is typified by simple and strong exterior massing, a primarily symmetrical 2-story appearance, pyramid-shaped tiled roof accents, entry porticos, arches, columns, and metal accents. Warm shades of red, yellow, green, brown, and grey are natural earth tones that represent Tuscan colors. The design theme would be consistent on all building elevations.

2.6.3 Circulation Network, Access, and Parking

The Specific Plan includes a Circulation Master Plan that provides a framework and standards for road development to ensure a safe and adequate system of vehicular, pedestrian, and bicycle circulation. The Circulation Master Plan is provided in **Figure 2.0-8, Circulation Master Plan**.

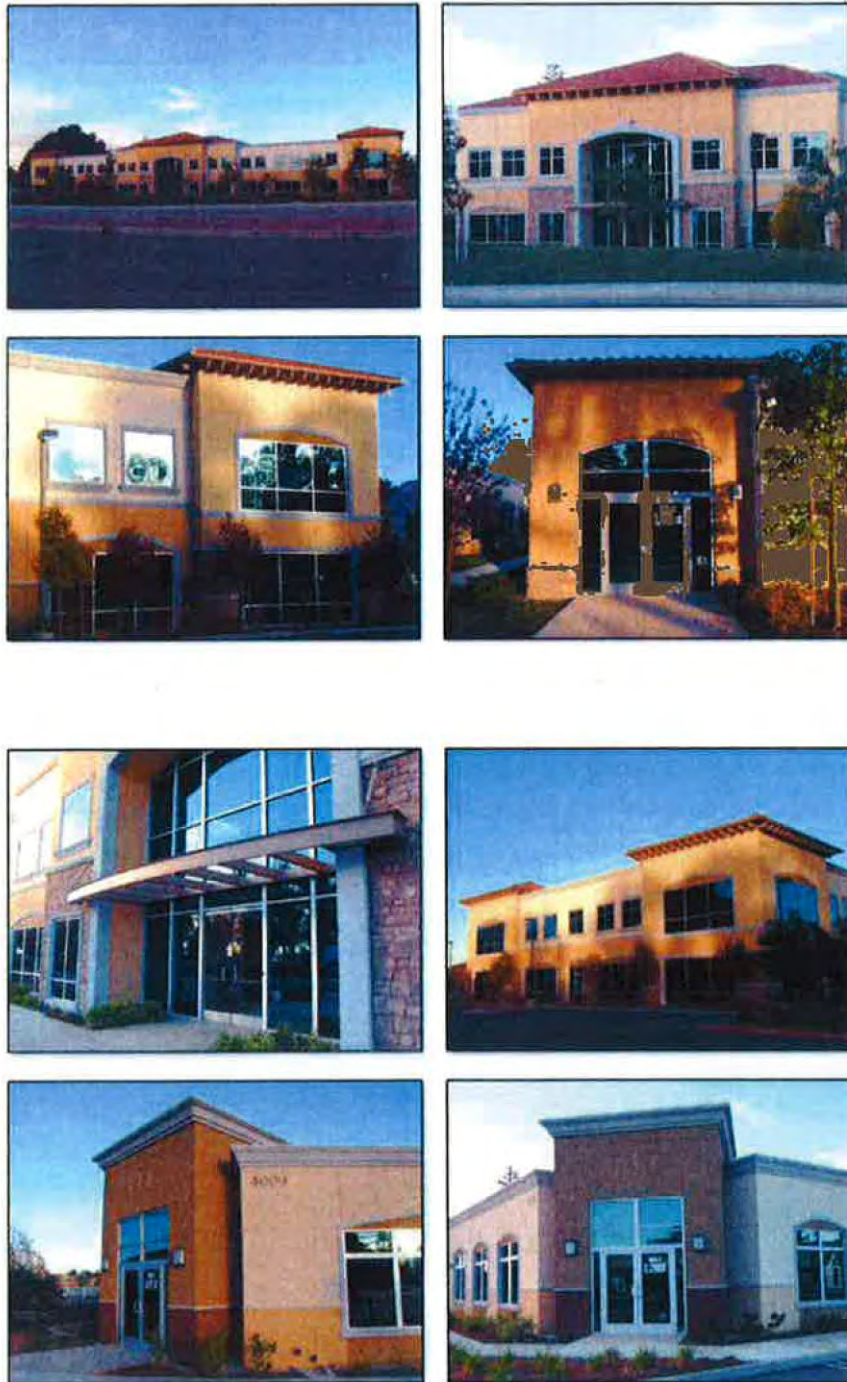
The vehicular circulation system consists of public roadway access from Telegraph Road, Beckwith Road, and Faulkner Road that would provide direct access to the Project Site driveways. Telegraph Road fronts the property to the north and is the principal arterial that would serve the Project. Primary north–south

access to the Santa Paula West Business Park would be provided by Beckwith Road from Telegraph Road; and east–west access would be from Faulkner Road. Beckwith Road would be improved south from Telegraph Road into the Project. Under one option, the Beckwith Road improvements would include an at-grade railroad crossing providing access south of the railroad right-of-way and connect to Faulkner Road. The proposed Faulkner Road extension would parallel SR 126 and serve as an access point to the development. A second option would not include the Beckwith railroad at-grade crossing for public use. In this case, the crossing would be gated on the north and south sides, and only provide emergency access and Faulkner Road would provide access to portions of the Project Site south of the railroad right-of-way, while Beckwith Road would provide access to the parcel north of the railroad right-of-way. All street sections would be constructed according to City radius, crown, curb, and pavement specifications. In addition, all streets designed as interior streets would be privately maintained.

Parking regulations and standards ensure that the Specific Plan contains sufficient off-street parking and loading facilities for the uses proposed, and that these off-street parking and loading areas enhance and preserve the appearance, character, and value of the Business Park.

All vehicle off-street parking and loading facilities planned for and constructed within the Specific Plan would comply with the City of Santa Paula Development Code, Chapter 16.46, Off-Street Parking and Loading. All the requirements of these regulations and standards apply and include the following:

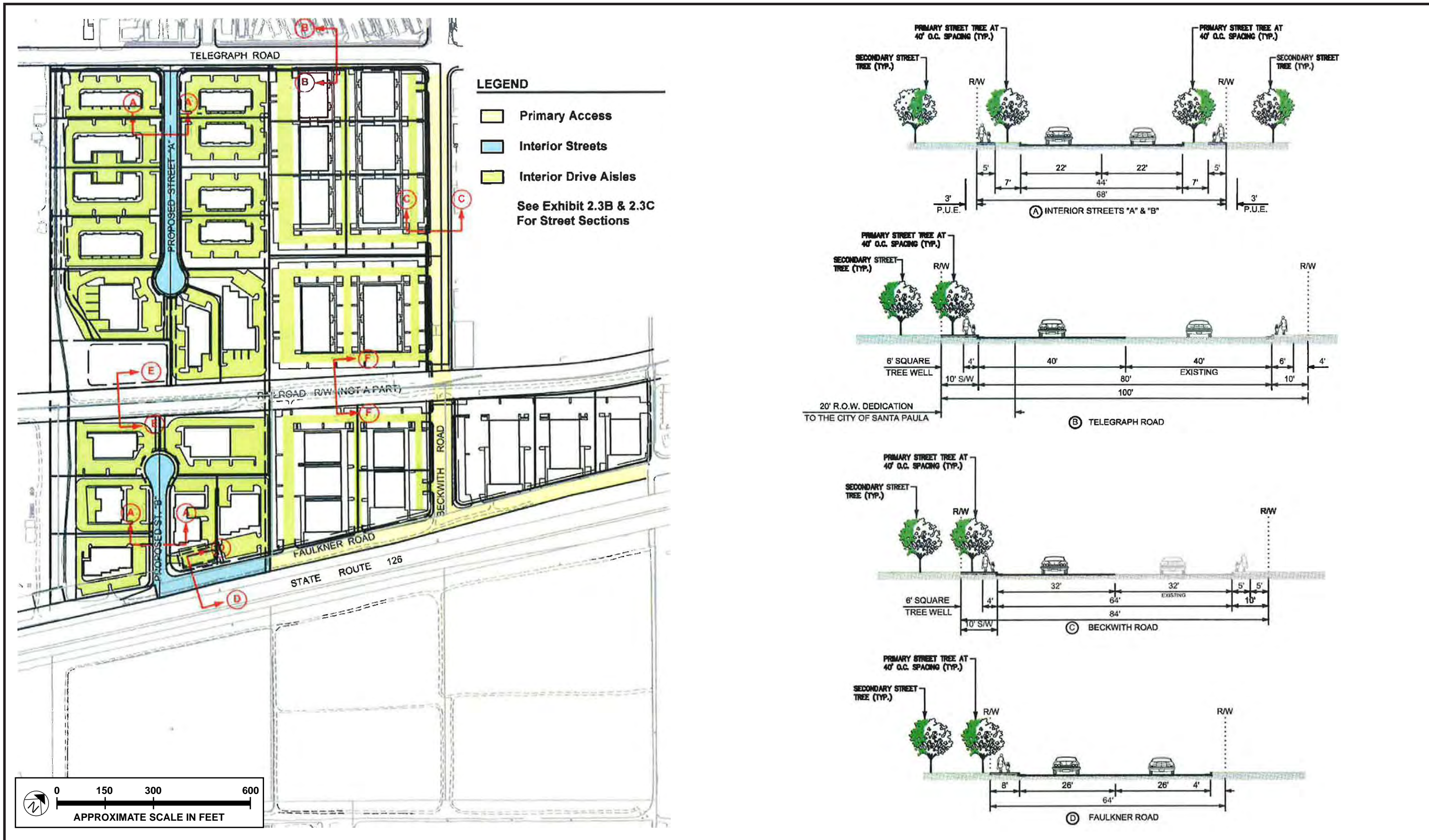
- Vehicle off-street parking
- Handicapped parking
- Design standards for parking areas
- Parking area landscaping
- Parking areas paving and construction standards
- Off-street loading and unloading areas



SOURCE: Johnson Muller Architects – 2016

FIGURE 2.0-7

Architectural Theme



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-8

2.6.4 Landscaping and Signage

Landscaping

The Landscape Master Plan, as shown in **Figure 2.0-9, Landscape Master Plan**, was developed to meet the landscape standards of the City of Santa Paula and consists of ornamental and erosion control plants and man-made exterior elements. There are three distinctive landscape zones within the Specific Plan area. Each of these zones has individual characteristics that further solidify the overall landscape master plan:

Streetscape Landscaping: Landscape elements within the streetscape zone include sidewalks, irrigation, street lighting, project entry signage (where applicable), and landscaping. Telegraph Road, Beckwith Road, and Faulkner Road would incorporate a formal pattern of primary street trees with sidewalks. Streetscapes would be installed as part of the improvement for each street.

Site Landscaping: Site landscaping includes all elements within an individual parcel, excluding parking lots. This zone should meet the needs of each individual tenant and have a greater degree of design flexibility while still meeting the drought-tolerant overall concept. Design elements within these areas would include landscape amenities, site lighting, regulatory and directional signage, service area screening, and side and rear property-line treatment.

Parking Area Landscaping: Parking lot landscaping requirements would be specified per City Code requirements and City of Santa Paula Parking Regulations and Standards for parking lot design.

The development and landscaping of bioswales and detention basins are incorporated into the Business Park landscape design to manage and capture on-site stormwater.

All tree, shrub, vine, and ground cover species must be selected from the Specific Plan's plant list. All planted landscape areas within the Business Park would have irrigation systems that are fully automatic and employ the latest low-volume water conservation design criteria. No overspray of irrigation water onto walkways, common-area hardscape areas, or any architectural walls would be allowed.

Signage

All signs would comply with the Specific Plan sign requirements and the City of Santa Paula Development Code. Signs are grouped into the following categories: Canopy Signs, Projecting Signs, Monument Signs (Site Identity and Tenant/Multi-Tenant Identity), Wall and Window Signs, and Freeway-Oriented Signs. The intent of the Sign Program is to produce uniform standards and continuity, consistency, and overall harmony with the visual quality of the Business Park. Illustrative examples of signage that would occur as part of the Project are included in **Figure 2.0-10, Master Sign Plan**.

2.6.5 Utilities

The Project Site is within the City of Santa Paula for domestic water services. The development the Santa Paula West Business Park will require the extension of existing infrastructure and services into the Specific Plan area.

The Specific Plan includes an infrastructure plan establishing the network of on- and off-site infrastructure construction requirements to support development of the Specific Plan. These include infrastructure to support potable water delivery, wastewater pipelines, a storm drain system, electricity and natural gas, and other facilities.

Water Supply and Delivery System

Water supply for irrigation on the Specific Plan area has been historically supplied from an on-site well that overlies the Santa Paula Basin. The existing well, developed in approximately 1940, is owned and operated by McGaelic Group and Bender. For purposes of future conditions, this on-site well has run its design life. The existing well would be utilized for construction water as the Project Site is graded, in accordance with the Specific Plan, and then would be abandoned pursuant to State and local regulations.

Water main pipelines are currently located in the streets surrounding the Project Site, within Faulkner Road and Telegraph Road. The Specific Plan domestic water system would operate entirely within the City's 200 Zone, and would receive water via connections with the existing 10-inch diameter main pipeline water pipeline in Telegraph Road and via the existing 12-inch main line located at the end Faulkner Road at Todd Lane. These connections are consistent with the City's Potable Water System Master Plan, as shown in **Figure 2.0-11, Domestic and Recycled Water Master Plan**.

From the water system point of connection (POC), a new 12-inch line will be installed north through the Project. The proposed distribution system will be composed of 8- through 12-inch mains. The water mains located in Beckwith Road, Road A, and Faulkner Road will be publicly owned and maintained by the City, while the remaining on-site domestic water and fire lines will be maintained by the Applicant.

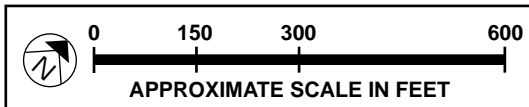
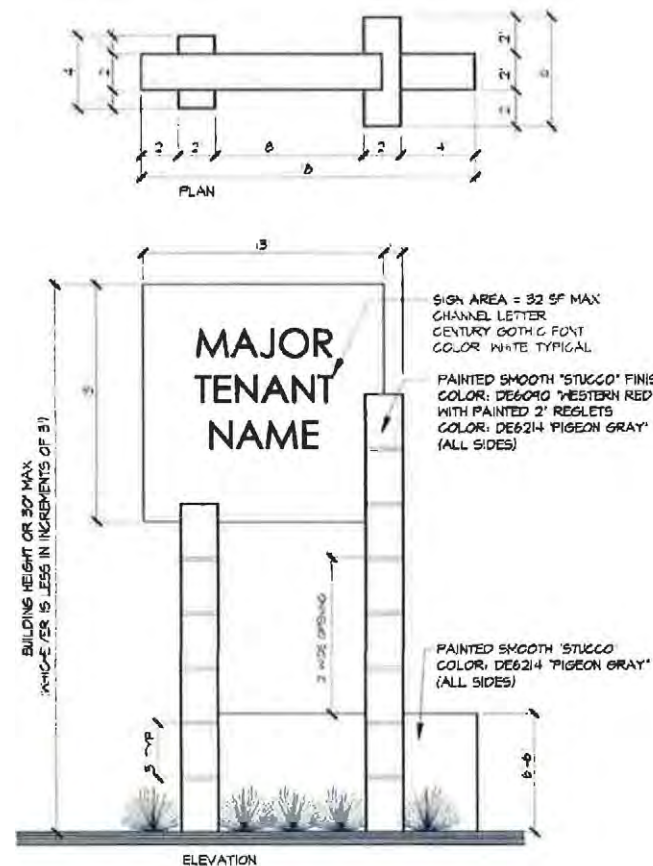
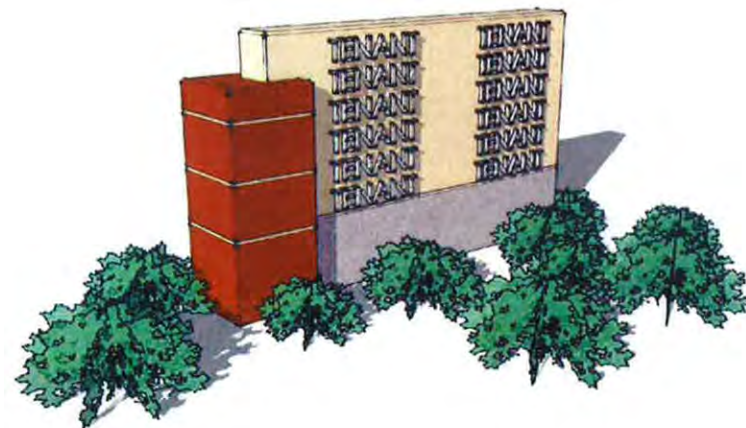
Recycled Water Plan

Currently there are no recycled water systems in the Project vicinity. According to the City's Potable Water System Master Plan (amended October 2005), the City will develop a recycled water system conveyance plan that includes a line in Telegraph Road. As such, the Project includes construction of an on-site recycled water distribution pipeline system that could connect to the City's recycled water system and be used to irrigate the greenbelt and other on-site landscape irrigation areas.



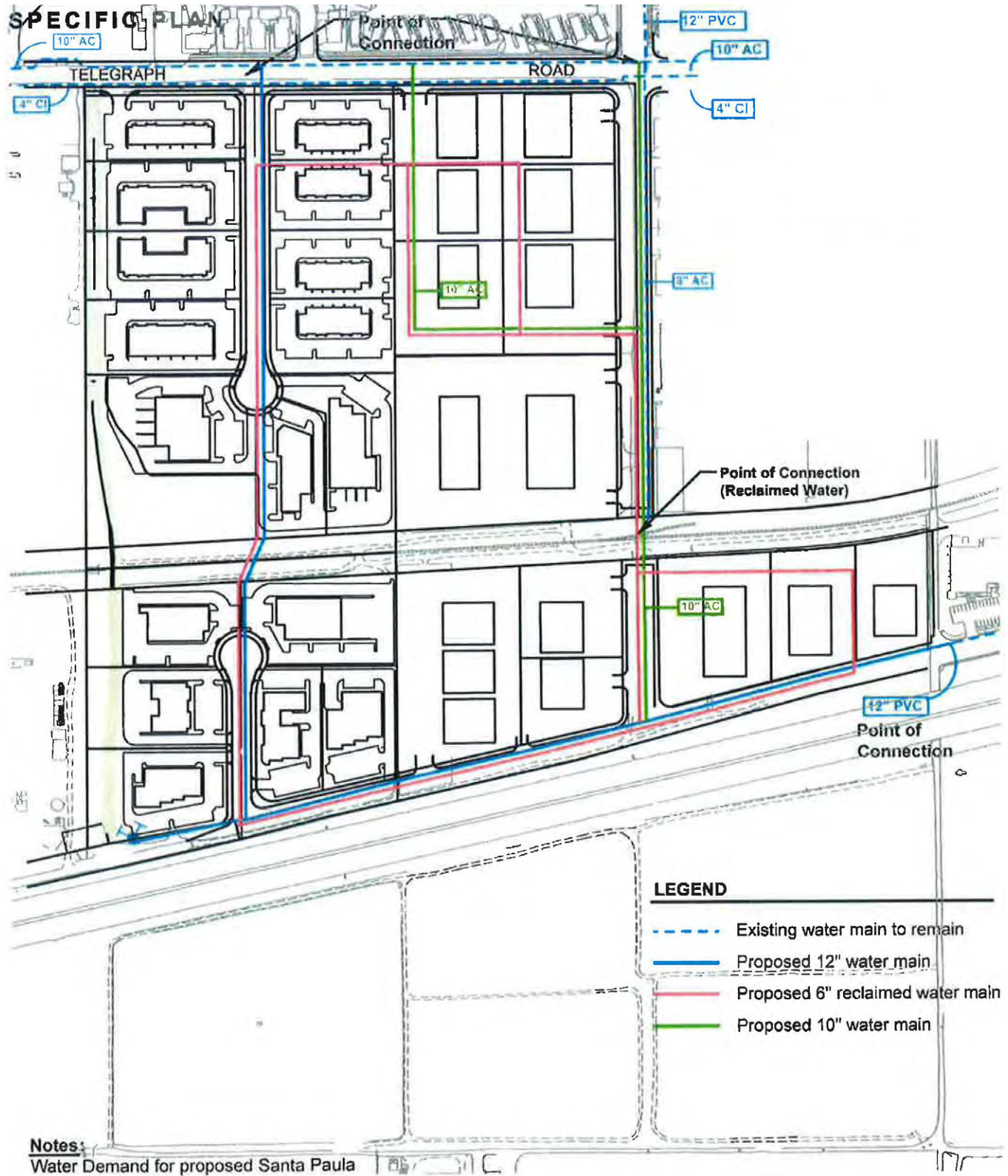
SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-9



SOURCE: Jensen Design and Survey – October 2016

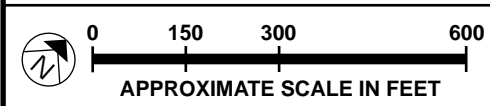
FIGURE 2.0-10



LEGEND

- - - Existing water main to remain
- Proposed 12" water main
- Proposed 6" reclaimed water main
- Proposed 10" water main

Notes:
 Water Demand for proposed Santa Paula West Specific Plan only.



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-11

The Project's recycled water system would operate via a proposed 12-inch distribution main constructed in Telegraph Road, within the City limits. This terminus would become the main POC for the Project. The distribution system would comprise 6-inch mains from the POC of the City's recycled water system. Anticipated demand for recycled water in the Business Park is estimated to be 13 acre-feet per year (afy). A preliminary recycled water site plan layout is presented in **Figure 2.0-11**.

Wastewater

The City's Wastewater System Master Plan (amended June 2012) addresses the provision of wastewater collection facilities to serve the Specific Plan area. The wastewater infrastructure system is shown in **Figure 2.0-12, Sewer System Master Plan**.

While no sewer system currently exists within the Project area, the City's *Wastewater System Management Plan* identifies a new off-site mainline that will need to be completed prior to implementation of the Project. These improvements would bring the Project's POC for sewer service to the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Project Site. **Figure 2.0-11** identifies the Project sewer lines, directions of sewerage flow, and POCs, as well as the proposed lift station. The proposed lift station would be required to move wastewater to the higher elevations that slope towards the north across the Project Site.

Electricity

Southern California Edison Company (SCE) provides electricity to the City of Santa Paula. SCE would service and maintain the Project area's electrical facilities. New local-serving electrical lines would be placed underground. All conduits would be with full encasement. The Specific Plan includes energy conservation-related design standards to reduce electric energy consumption.

Gas

The Southern California Gas Company (SCG) provides natural gas in Santa Paula. SCG serves much of Southern California with a network of transmission and distribution lines. An existing 12-inch, high-pressure supply line runs east-west in Telegraph Avenue. This line feeds pressure-reducing stations supplying the City. Major distribution lines run from these stations. These, in turn, branch into the network of smaller gas mains in all of the streets. Service connections would be provided and maintained throughout the Specific Plan area as needed.

Telephone

Telephone service and maintenance to the area is provided by Verizon. Telephone facilities would be located underground within the streets' rights-of-way. No overhead telephone facilities would be permitted.

Cable

Cable television is provided in the area by Time Warner Cable. This company would serve the Santa Paula West Business Park Specific Plan area. Cable television facilities would be located underground within public rights-of-way or in easements on private property.

Solid Waste

Solid waste collection services are provided in the City of Santa Paula by a private solid waste collection company and disposed of at the Toland Road Landfill, operated by the Ventura Regional Sanitation District.

The City participates in a curbside recycling program, which includes the recycling of glass (food and beverage containers), metal (aluminum cans, etc.) and plastic. Curbside pickup of paper, cardboard, and yard trimmings is provided. Additionally, periodic community drop-off events give residents opportunities to dispose of large items, household hazardous waste, and motor oil and filters.

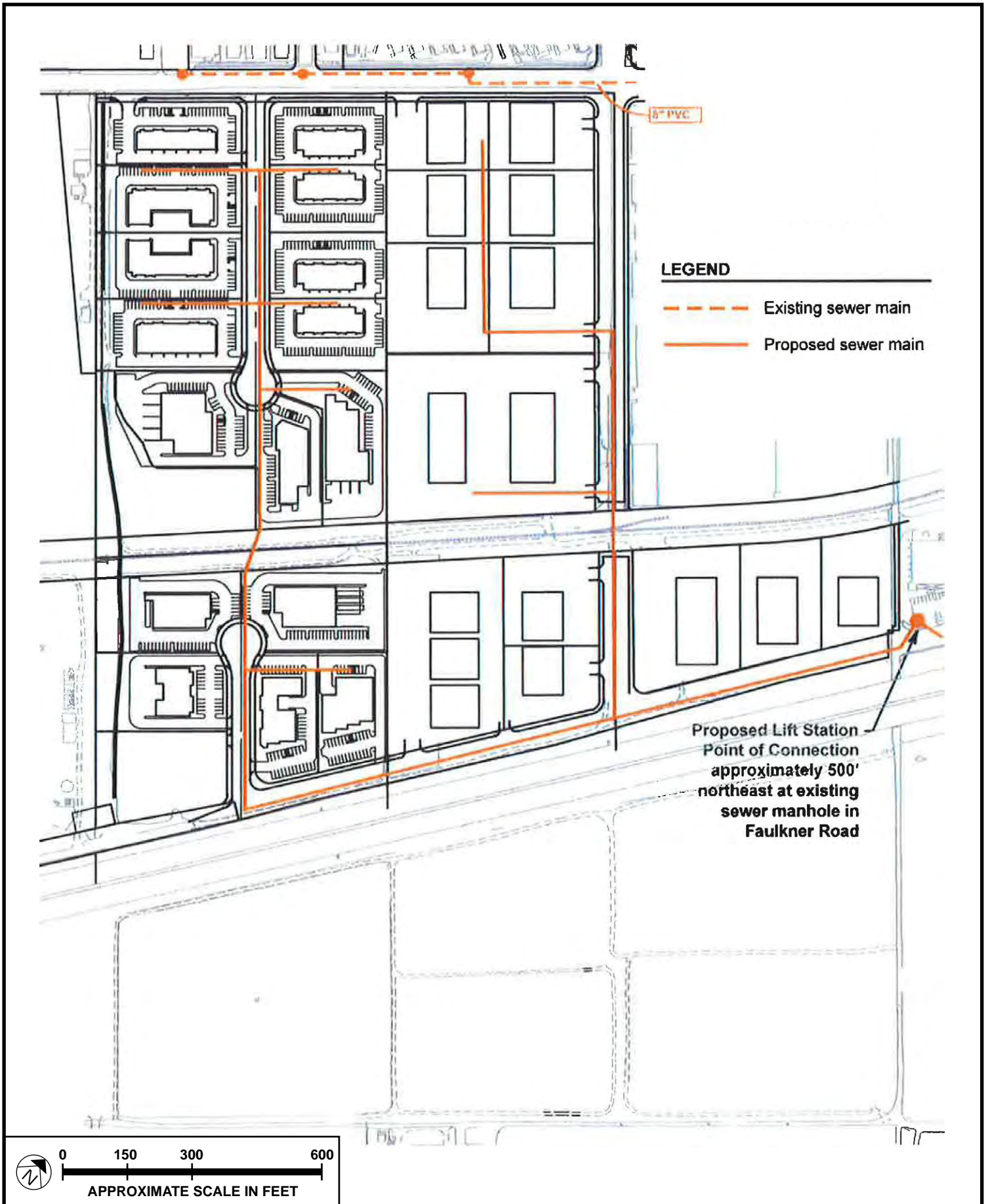
The proposed street network and street types provide multiple routes for collection vehicles to access the various blocks, buildings, and uses in the Project Site. In addition to street access, many blocks feature alley access, both as an alternative route and as a collection point not in conflict with on-street parking. Accordingly, each street type anticipates and accommodates such service needs through its sectional configuration and performance characteristics (e.g., curb radii, intersection spacing, and paved width).

Solid waste and recycling enclosures, illustrated on **Figure 2.0-13, Solid Waste and Recycling Enclosures**, would be appropriately placed throughout the Santa Paula West Business Park.

2.6.6 Grading and Drainage

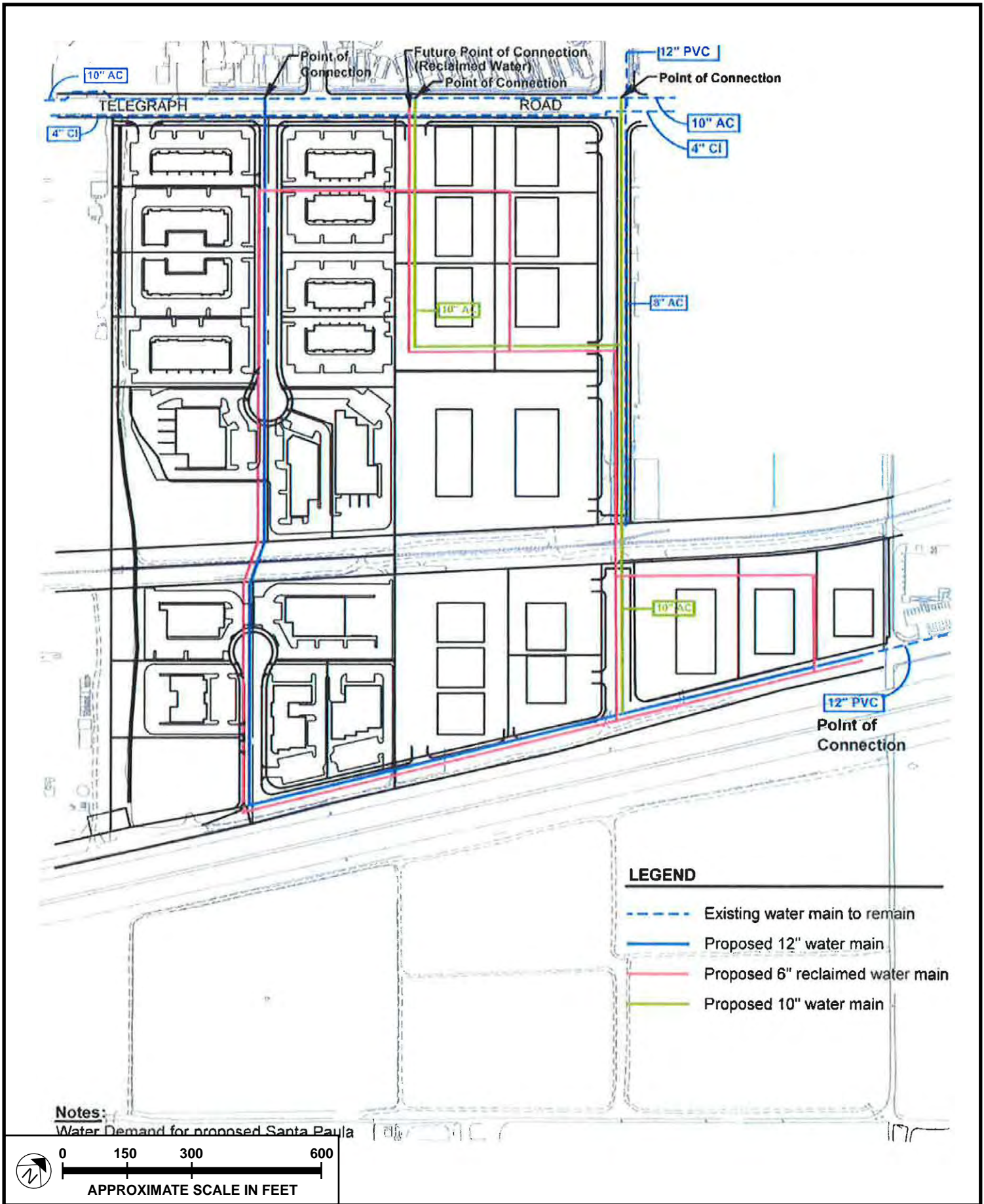
Conceptual Grading Master Plan

The Specific Plan includes a Grading Master Plan for the earthwork needed to support development of the Project. The Grading Master Plan is shown in **Figure 2.0-14, Grading and Drainage Master Plan**. The Grading Master Plan provides for the cut and fill grading of the Project Site into a roughly 2 percent



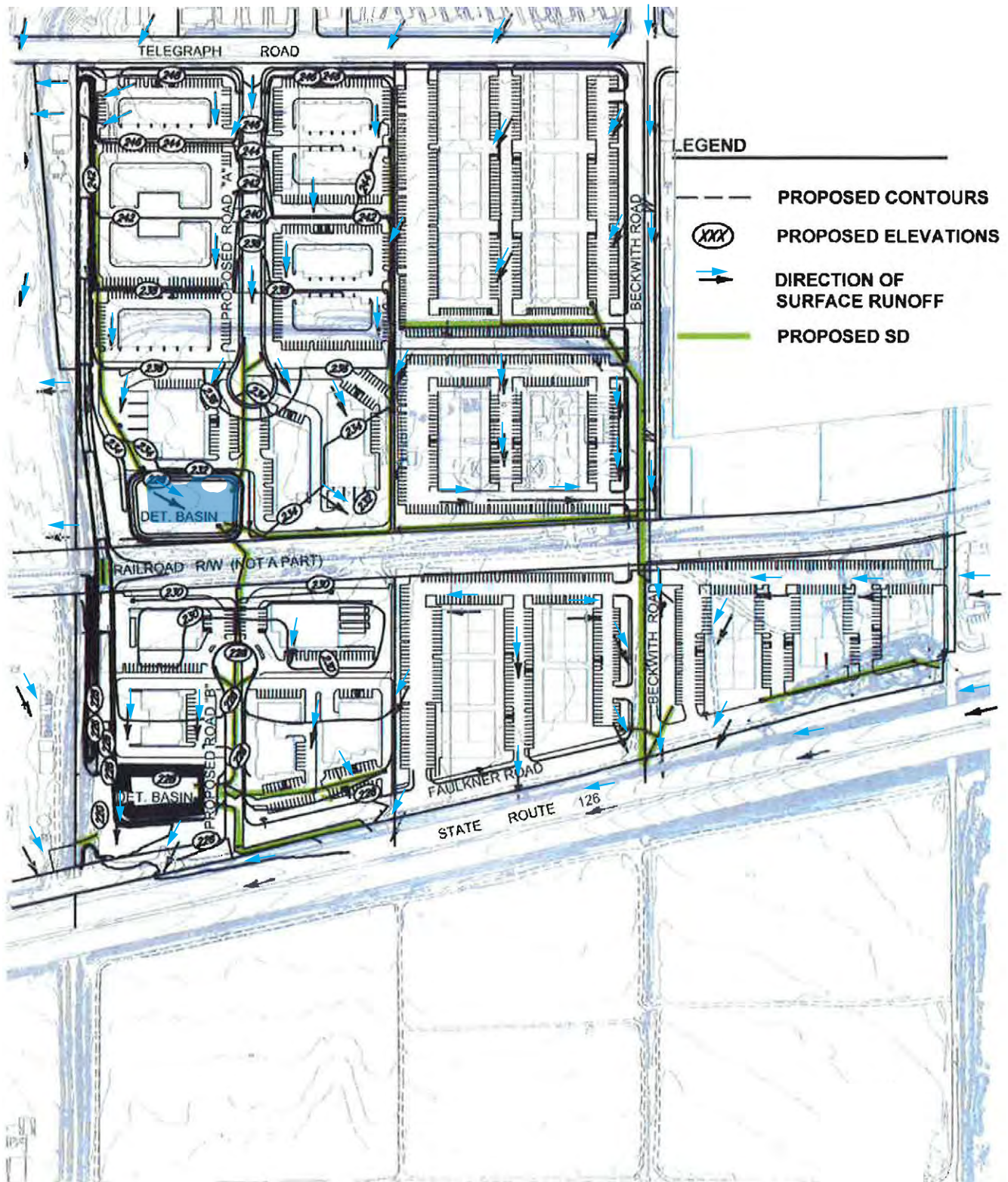
SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-12

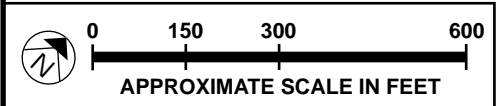


SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-13



- LEGEND**
- PROPOSED CONTOURS
 - (XXX) PROPOSED ELEVATIONS
 - DIRECTION OF SURFACE RUNOFF
 - PROPOSED SD



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-14

land gradient overall, which would maintain the existing gradient from north to south. Cut and fill grading will be conducted using on-site soils with an overexcavation and recompaction depth of approximately 6 feet. Grading will also raise portions of the Project Site above the flood hazard elevation, with up to 6 feet of fill to be placed along the western boundary near Adams Barranca. Grading over the Project Site includes an estimated 80,000 cubic yards of cut and 179,000 cubic yards of fill, requiring the import of approximately 99 cubic yards of soil. The finished grade of the Project Site will maintain the existing 2 percent maximum gradient, and yield roadways and blocks in the lower areas generally within the 0.5 percent to 2 percent gradient range.

Six-foot-high fencing, such as chain link with screen cloth, will be placed along the perimeter of each construction site during the development of individual parcels to limit potential impacts of construction dust.

Drainage Master Plan

The Project Site is located within the greater Santa Clara River watershed, and is tributary drainage to the Santa Clara River. Currently a portion of the Specific Plan area is located in a floodplain per FIRM 06111C0779E, the result of Adams Creek overtopping its banks during a 100-year storm event. This flooding is caused by a lack of capacity within the channel, a lack of capacity at the SR 126 undercrossing, and debris issues at the Railroad Bridge.

The existing gradients of the land are such that the Project Site is divided up into two major separate drainage subareas on the north and one on the south. These areas comprise a total drainage area of approximately 50 acres.

On-site Storm Drain System, Infiltration, and Flood Control

The Project design includes a Drainage Master Plan to control stormwater runoff from within the drainage areas that affect the Project Site. The Project includes a series of storm drain pipelines, detention basins, and a trapezoidal channel that will run along the Adams Barranca. One acre of land within the Specific Plan boundary has been set aside for detention basins totaling approximately 6 acre-feet of volume for detention and retention requirements. The basin along Adams Barranca will include debris catchment facilities to reduce debris from storm flows that have caused problems at the railroad culvert and the Caltrans culvert in this channel. These detention basins will serve dual roles of flood protection and water quality enhancement. The trapezoidal channel will be approximately 6 feet in depth, with a 15-foot bottom width and 2:1 side slopes that will accommodate flood waters in a large storm event and protect the buildings on site; in addition, the channel will remove a portion of the property from the floodplain

through a Letter of Map Revision with FEMA. The new channel would join with the existing Adams Barranca at the railroad crossing and the SR 126 crossing.

The new channel design has the capacity to handle flows that overtop the bank on the east side and the water that ponds due to the undersized culvert at SR 126. The channel also has a debris-catchment area at the railroad bridge, with a second culvert under the railroad bridge to accommodate peak flows rerouted due to the debris. A geotextile fabric would be used in the channel as an erosion control measure to stabilize the soil during high velocities of runoff.

The Drainage Plan for the Specific Plan is presented in **Figure 2.0-15, Storm Drain Plan**. Storm drain facilities would be sized to meet City of Santa Paula standards and accommodate the increased runoff generated by the increase in impervious surfaces. The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream.

Detention basins would significantly reduce peak runoffs downstream by storing the peak-event flows and lagging their release after the storm peak.

2.7 GENERAL PLAN AMENDMENT, REZONE, AND ANNEXATION

As previously discussed, the City of Santa Paula General Plan designates the Project Site as part of the 125-acre West Area 2 Expansion Area near the western portion of the City boundary. The City's General Plan Land Use Element currently designates the Project Site for Mixed-Use Commercial/Light Industrial uses (C-LI). Section 16.25.020 of the Santa Paula Municipal Code (SPMC) identifies this area as SP-6.

The Project would implement the City's plans for a portion of the West Area 2 Planning Area as defined in the Santa Paula General Plan. The Project includes a series of related actions including jurisdictional reorganization (annexation), a General Plan Amendment (to the Land Use Element), and the adoption of a Specific Plan and rezoning for the Project area.

The Project Site is also within the LAFCo SOI for the City of Santa Paula and the City of Santa Paula CURB. If approved by LAFCo, jurisdictional reorganization would remove the Project from the unincorporated territory of the County once the annexation is recorded. Accordingly, the County of Ventura General Plan Land Use designation of Agricultural—Urban Reserve and the County zoning designation of AE-40 (Agricultural Exclusive, 40-acre minimum parcel size) would be removed.

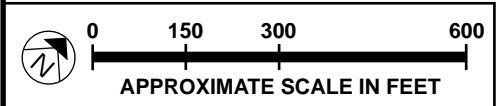


Notes:

- Detention and storm water treatment to be provided on a phased basis, dependent on build-out.
- If the first phase of development is different from what is identified here, then storm drain is subject to city engineer approval.
- Storm drain for subsequent phases will be subject to city engineer approval.

LEGEND

- Existing storm drain
- Proposed storm drain



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2.0-15

Storm Drain Plan

2.8 DEVELOPMENT TIMEFRAME

Development of the Project is anticipated to occur over approximately 10 years or as market conditions allow. For purposes of the analysis within this Environmental Impact Report (EIR), development is expected to begin in 2017 and be completed by 2027. Construction would occur continuously during this 10-year period but would generally occur based on market and economic conditions to provide for orderly development.

2.9 PERMITS AND APPROVALS

Development of the Project will require approvals from both the City of Santa Paula and other agencies.

City of Santa Paula

The City of Santa Paula, as Lead Agency, will require the following approvals, permits, and actions to implement the proposed East Gateway Project:

- General Plan Amendment for the West Area 2 Expansion Area
- Specific Plan Approval
- Development Agreement
- Master Vesting Tentative Map

Other Public Agencies

- Annexation to the City of Santa Paula from LAFCo
- Encroachment Permit by the California Department of Transportation for the construction of roadway and utility improvements in the State right-of-way
- California Public Utilities Commission Approval of a Formal Application for an at-grade crossing of the VCTC railroad

3.0 RELATED PROJECTS

3.0 RELATED PROJECTS

Related projects are other projects near the Project Site that may, in combination with the Santa Paula West Business Park Specific Plan and other related improvements, result in the potential for cumulative impacts. As shown in **Table 3.0-1, Related Projects**, the list of related projects used in this Environmental Impact Report (EIR) includes all the projects identified on the City of Santa Paula Planning Department's Development Activity List, including proposed projects located within the City's sphere of influence. The location of these related projects and expansion areas are identified on **Table 3.0-1** and mapped in **Figure 3.0-1, Location of Related Projects**. An estimated total of 1,781 residential units and 1,022,772 square feet of commercial and industrial facilities and 16 motel units (not including this Project) is pending, approved, under construction, or built. In addition, a total of 7,657 acres of expansion area is proposed for annexation into the City's boundaries.

The cumulative impact analysis for each environmental issue addressed in **Section 4.0, Environmental Impact Analysis**, is based on this list of related projects, as applicable, as well as growth anticipated under the City of Santa Paula General Plan.

**Table 3.0-1
Related Projects**

Project No.	Location	Category	Size	Status
Residential Land Uses				
1	Cliff Drive and Forrest Drive	Single-family units	19 du	Plan check
2	840 N 10th Street—Ridgeview at Vista Glen	Single-family units	75 du	Completed
3	NW corner of Foothill and Peck Road	Single-family units	79 du	Proposed
4	815 Montclair Drive	Single-family unit	1 du	Approved
5	838 Montclair Drive	Single-family unit	1 du	Completed
6	220 W Main Street	Assisted-living apartment units	20 du	Completed
7	812/820 E Santa Barbara Street	Assisted-living apartment units	6 du	Completed
8	Santa Anna Street/Larmon Loop	Condominiums	2 du	Plan check
9	Cemetery and Santa Paula Street	Single-family units	8 du	Under Construction
10	615 E Harvard Boulevard	Apartments	6 du	Completed
		Live/work units	6 du	
11	1445 E Main Street	Live/work units	9 du	Approved
		Motel	16 rooms	
		Restaurant	500 sq. ft.	
12	125 Oak Street	Multifamily units	8 du	Approved
13	327 Acacia Road	Multifamily units	6 du	Proposed
14	3615 Ojai Road	Single-family unit	1 du	Plan Check
15	East Area 1 ^a	Single-family units	1,100 du	Approved
		Multifamily units	400 du	
19	Hallock Drive	Commercial office (w/dwelling unit)	1 du	Completed
20	1170 Montebello Street	Airport hangars and upper-level condo dwellings	37 units	Approved
30	250 S Hallock Drive	Mixed-use warehouse (w/dwelling unit)	7,800 sq. ft. + 1 du	Under Construction
Total residential units			1,786 du	
Commercial Land Uses				
16	101 W Harvard Boulevard	Auto dealership	N/A	Completed
17	310 S Palm Avenue	Retail – Coffee shop	1,798 sq. ft.	Completed
18	100-106 Calavo Street	Commercial and light industrial	N/A	Proposed
19	Hallock Drive	Commercial office (w/dwelling unit)	N/A	Completed

Project No.	Location	Category	Size	Status
11	1445 E Main Street	Live/work units Motel Restaurant	9 du 16 rooms 500 sq. ft.	Approved
15	East Area 1 ^a	Commercial	215,000 sq. ft.	Approved
Total commercial			217,298 sq. ft.	
Industrial Land Uses				
20	1170 Montebello Street	Airport hangars and upper-level condo dwellings	72,162 sq. ft.	Approved
21	324 Santa Maria Street	General Industrial (Tentative Map 5428)	571,370 sq. ft.	Under construction
22	8 Wright Taxiway	Airport hangar	N/A	Under Construction
23	957 Calpipe Road	General industrial (Calpipe I)	13,500 sq. ft.	Completed
24	957 Calpipe Road	General industrial (Calpipe II)	44,000	Under Construction
25	801/853 Corporation Street	General industrial lot merger and expansion	4,104 sq. ft.	Completed
26	905 Corporation Street	Waste disposal operation business	N/A	Completed
27	126-140 Santa Barbara Street	Manufacturing	139,700 sq. ft.	Completed
28	12th Street	Outdoor storage yard w/office	N/A	Under Construction
29	18201 E Telegraph Road	Private self-storage facility	80,755 sq. ft.	Proposed
30	250 S Hallock Drive	Mixed-use warehouse (w/dwelling unit)	7,800 sq. ft. + 1 du	Under Construction
15	East Area 1 ^a	Light industrial	25,000 square feet	Approved
Total industrial			805,474 sq. ft.	
Infrastructure				
31	N-NW of Steckel Drive/Anacapa Terrace	Water-storage tank	N/A	Completed
32	1483 Ojai Road	Wireless telecommunications facility	N/A	Completed
33	Citywide	Crosstown pipeline	N/A	Completed
Total infrastructure			N/A	
City Expansion Areas^b				
34	Fagan Canyon	Outside the northwestern portion of City boundary	2,173 acres	TBD
35	Adams Canyon	Outside the northwestern portion of City boundary—adjacent to Fagan Canyon	5,413 acres	TBD

Project No.	Location	Category	Size	Status
36	West Area 2 ^c	Outside the southwestern portion of City boundary—north and south of SR 126	71 acres	Proposed
Total expansion area			7,657 acres	

Source: City of Santa Paula Planning Department (2016); City of Santa Paula General Plan, “Land Use Element” (2013); and Fehr & Peers, East Area 1 Traffic Study (May 2014).

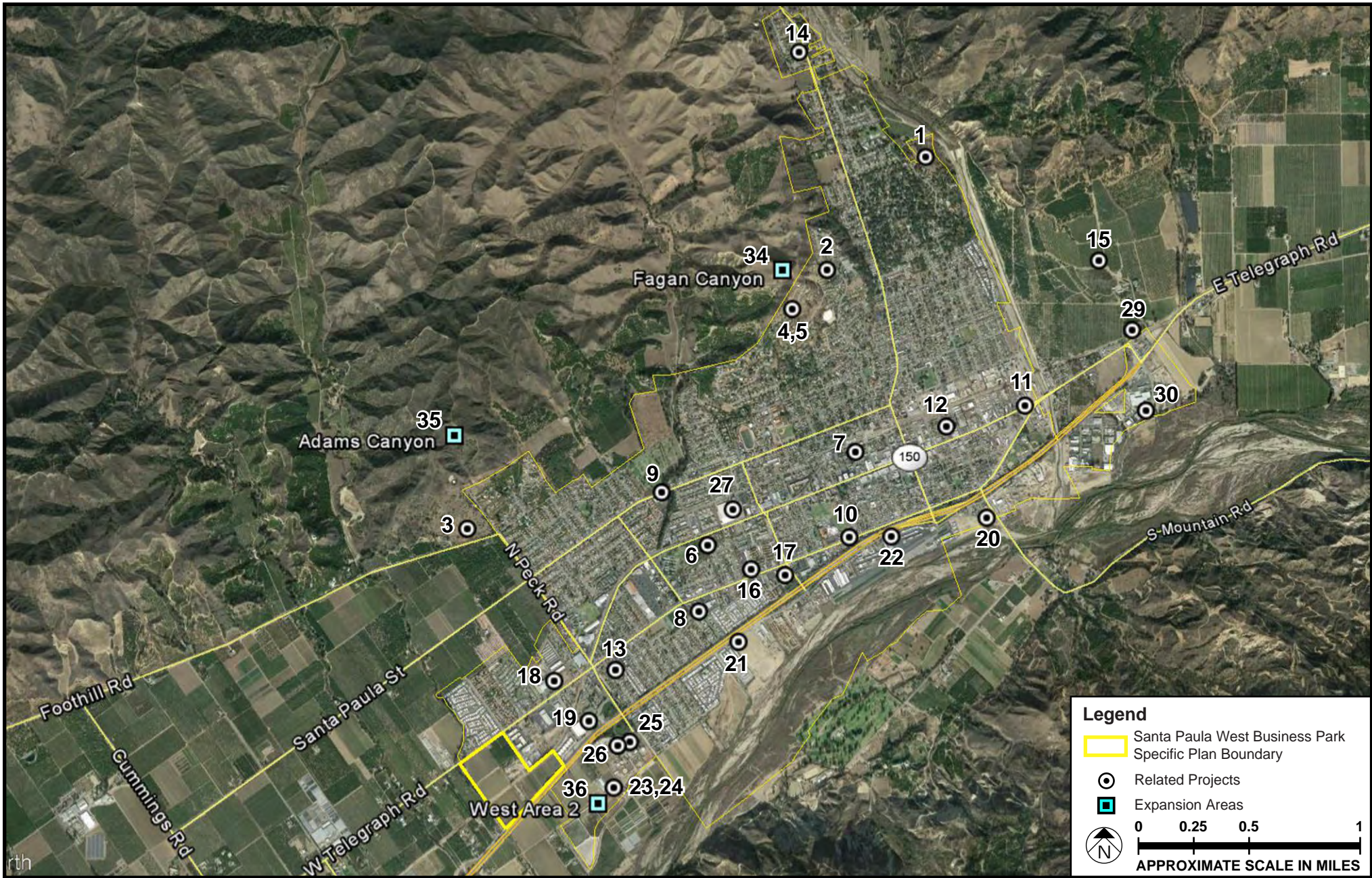
Abbreviations: du = dwelling units; sq. ft. = square feet

N/A = not available

^a Project is a part of the approved 2008 East Area 1 City Expansion Area. The 501-acre site is currently annexed within the City’s boundaries.

^b It should be noted that various related projects may be located within expansion areas. For the purposes of this table, the expansion areas were separated by total acreage proposed for annexation into the City.

^c The Santa Paula West Business Park Specific Plan is located within the West Area 2 Expansion Area. The approximately 54-acre Project Site has been deducted from the total acreage of this Expansion Area to represent the total additional acreage proposed for annexation into the City’s boundaries.



SOURCE: Google Earth - 2014; Meridian Consultants, LLC - 2014

FIGURE 3.0-1

4.1 AESTHETICS

This section describes the existing aesthetic characteristics of the Santa Paula West Business Park Specific Plan area (“Project Site”) and its surrounding areas and analyzes the potential aesthetic impacts of future development under the Specific Plan. The analysis considers the visual character and quality, scenic resources, and sources of light and glare. The analysis is based on site reconnaissance, which included photographic documentation and review of the Specific Plan development standards and design guidelines. The information and analysis in this section are also based on review of the County of Ventura General Plan, the Santa Paula General Plan and General Plan FEIR, and the Santa Paula Municipal Code (SPMC).

4.1.1 EXISTING CONDITIONS

Local Setting

The City of Santa Paula is located within the Santa Clara River Valley of Ventura County. The City is bordered on the north by the Topatopa Mountains, including the Santa Paula Ridge and the Los Padres National Forest beyond, and on the south by the South Mountain summit within the Oak Ridge of the Santa Susana Mountains. The Santa Clara River runs generally east–west along the southern boundary of the City. The surrounding mountains and Santa Clara River provide a natural backdrop for the Santa Clara River Valley.

The existing visual character of the City of Santa Paula is a mixture of developed and undeveloped landscapes, reflecting its transition from an agricultural heritage to suburban development. The City of Santa Paula contains a centralized downtown along Main Street, with a decreasing intensity of development toward the edges of the City. State Route (SR) 126, a raised four-lane divided highway, runs approximately parallel to the Santa Clara River through the southern portion of the City. Most of the City area lies north of SR 126. Areas surrounding the City lie within the unincorporated County of Ventura. The City streets are generally arranged in a grid pattern. The built environment consists of a range of housing, commercial, and industrial uses. Most buildings are 1 or 2 stories in height, with a limited number of 3-story structures. Areas immediately surrounding the City consist of wide expanses of agriculturally cultivated lands, including avocado and citrus orchards and row crops; natural open space; rolling foothills; and rugged mountain ridges at the higher elevations north and south of the Santa Clara River.

The Project Site is located in the western portion of the City of Santa Paula, between SR 126 immediately to the south and Telegraph Road immediately to the north. The Santa Clara River is located approximately 3,000 feet to the south.

Visual Character and Quality of the Specific Plan Area and Surroundings

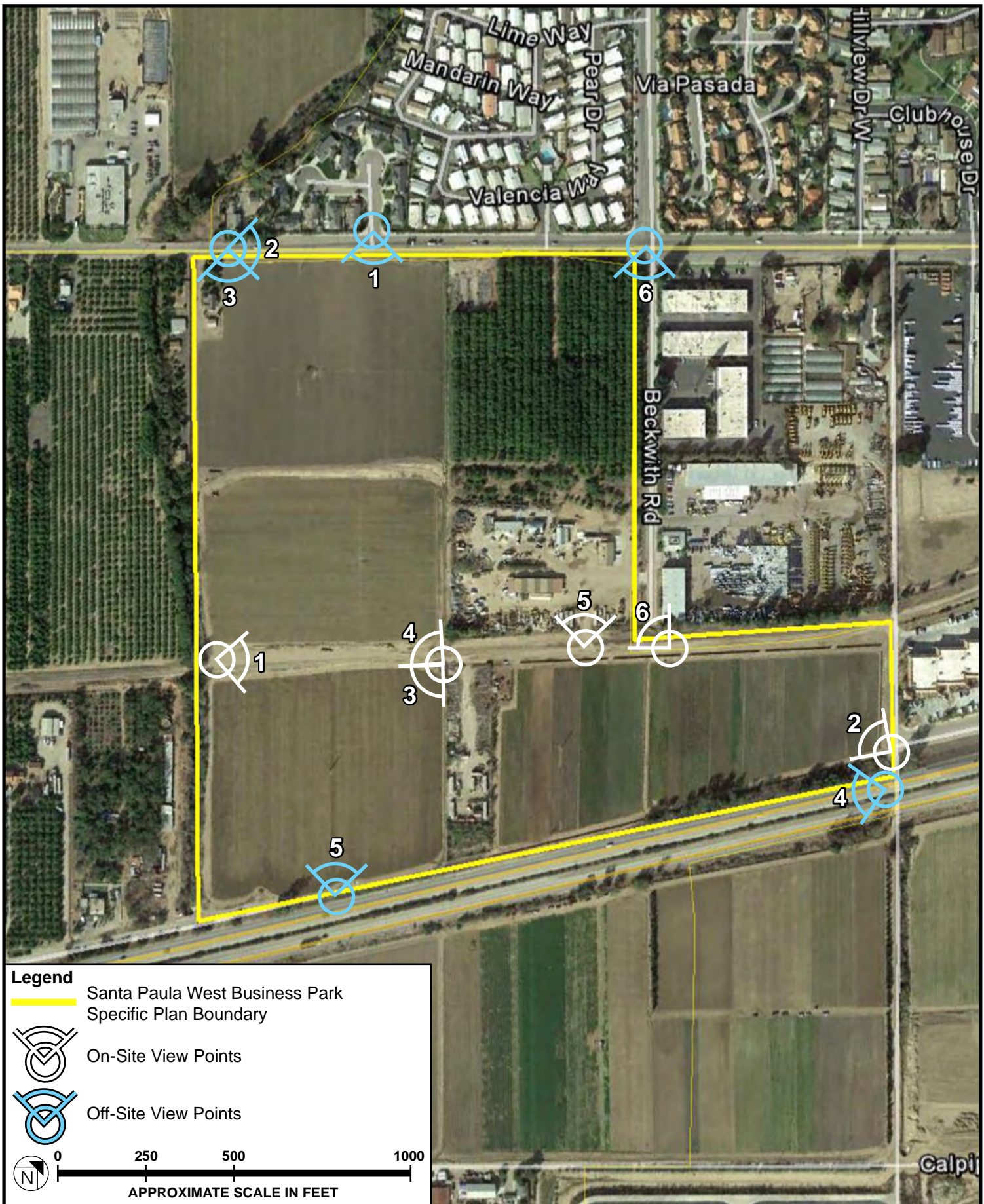
On-Site Visual Character and Quality

The Project Site is approximately 53.81 acres and is near the southwestern portion of the City limits, within the County of Ventura. At the western boundary of the City, the Project Site is at the urban interface between urbanized City development to the east and north, and the County agricultural lands to the west and south.

The Project Site is cultivated in agricultural production and is relatively flat due to past grading activity to support agricultural production and operations. It contains little or no unaltered natural features. The Project Site also contains agricultural support facilities, such as offices, packing areas, and equipment maintenance and storage facilities. There is also a single-family residential unit located in the northwest portion near Adams Barranca and Telegraph Road. Several unpaved roads have been graded throughout the Project Site, thereby providing access to the existing agricultural operations. The Ventura County Transportation Commission (VCTC) railroad right-of-way, containing railway tracks, bisects the Project Site. The southwest portion is bound by the lower reaches of the Adams Barranca, an improved channel that runs generally north–south. The channel has been altered from its natural course through past agricultural grading on both sides. The Barranca is lined with earthen berms that are vegetated with riparian trees and shrubs. The topography of the Project Site is gently sloping, generally from north to south; with the highest elevation in the northern portion near Telegraph Road, approximately 250 feet above mean sea level (amsl), and the lowest elevation of approximately 226 feet amsl near its boundary with SR 126. There is minimal topographic variation between the elevations of the Project Site and surrounding areas. The Project Site lies at a lower elevation relative to SR 126, which is raised on pilings

Figure 4.1-1, Viewpoint Locations, provides an aerial photograph of the Project Site and the immediate surroundings. **Figure 4.1-1** also includes indicator locations from which on-site photographs were taken; these are described further below.

Figures 4.1-2, On-Site Views, provide photographs of the Project Site from various vantage points. As shown in **On-Site View 1** in **Figure 4.1-2a**, the Ventura County Transportation Commission (VCTC) railroad corridor transects the Project Site in an east–west direction. The Project Site is currently being utilized for active agricultural operations for avocado orchards, various herbs, and row crops. Agricultural operations consist of relatively flat, graded, and cultivated lands with a limited amount of structures. As discussed in **Section 4.2, Agricultural Resources**, approximately 9.2 acres of the Project Site are dedicated to avocados, 12.3 acres are dedicated to herbs, and 27.5 acres are dedicated to various row crops.



SOURCE: Googole Earth – November 2014

FIGURE 4.1-1



On-Site View 1: Looking east from the western boundary of the Project Site across the VCTC railroad corridor.



On-Site View 2: Looking west across the Project Site showing the existing herb crops located along Todd Lane.

SOURCE: Googole Earth – November 2014

FIGURE 4.1-2a

As can be seen in **On-Site View 2** in **Figure 4.1-2a**, the area of the Project Site south of the VCTC railroad corridor and adjacent to Todd Lane and SR 126 contains herb crops, which cover roughly 33 percent of the Project Site. **On-Site Views 3 and 4** in **Figure 4.1-2b** show the plowed lands used for the production of various row crops, which represent roughly 50 percent of the Project Site. The remainder of the Project Site consists of citrus and avocado orchards on the northeastern portion, which cover roughly 17 percent of the Project Site.

As shown in **On-Site Views 5 and 6** in **Figure 4.1-2c**, ancillary facilities to support agricultural operations, such as a maintenance yard, packing and processing facilities, offices, and farmworker housing, have been constructed over approximately 4.5 acres of the Project Site. Many of these facilities are located within the central portion of the Project Site on both sides of the VCTC railroad corridor. Most of the structures are visible intermittently along SR 126 and Telegraph Road. Because the majority of the Project Site is cultivated for agricultural production, there is minimal occurrence of natural vegetation. Various shrubs and tree species serve as a buffer between the southern boundary of the Project Site and SR 126, as well as within the vicinity of the VCTC railroad corridor that runs through the Site.

Specific Plan Area Visibility from Surrounding Areas

Given the elevations of the Project Site, its visibility is generally limited to the immediate surroundings, and it is relatively inconspicuous from off-site viewpoints in the more distance areas of the City and County. Photographs are provided of existing views of the Project Site from off-site locations within the City of Santa Paula and surrounding areas. As noted earlier, **Figure 4.1-1** illustrates the locations from which the off-site photographs were taken. As shown in **Figures 4.1-3, Off-Site Views**, surrounding areas consist of an array of developed lands with residential neighborhoods, agricultural operations, and light industrial/commercial facilities. Public views of the Project Site from the surrounding areas are limited to the north, south, and east. In particular, the public viewshed containing the Project Site is found along SR 126, Telegraph Road, Beckwith Road, and Todd Lane. From the west, the generally flat terrain with extensive agricultural operations, including orchards and the windrows of trees along the Adams Barranca block views of the westerly boundary of the Project Site from the west. In various views in **Figure 4.1-3**, the building height outlines, as projected by the Specific Plan, are denoted by a red line.

Views from the North

Views of the Project Site from the north are only limited by intervening avocado orchards at the corner of Telegraph Road and Beckwith Road; however, most views along Telegraph Road offer a direct line of sight to the Project Site. Intermittent views of the Project Site can be seen from the adjacent residential properties. **Off-Site View 1** in **Figure 4.1-3a**, offers an expansive middle-distant view of the Project Site as it would be seen by a person entering Telegraph Road from the residential neighborhood. From this view,

the South Mountains are clearly visible across the Project Site with minimal obstructions. The existing orchards, row crops, and structural facilities are visible along the northern boundary of the Project Site, as shown in **Off-Site View 2** in **Figure 4.1-3a**. The farmworker housing unit and storage shed are distinctive identifiers of the Project Site's western boundary and are visible along W. Telegraph Road, as shown in **Off-Site View 3** in **Figure 4.1-3b**.

Views from the South

Views toward the Project Site from the south are limited to the public road rights-of-way along SR 126. Given the gradual elevation changes within the western area of the City and the location of the Project Site relative to prominent public thoroughfares, the extent of the public viewshed containing the Project Site is fairly limited.

On the generally level terrain of the Project Site's immediate surroundings, features of the built environment (e.g., buildings, walls, and landscaping) have typically resulted in physical barriers of sufficient heights to block views of the Site from most nearby public streets.

When traveling westbound along SR 126, as shown in **Off-Site View 4** in **Figure 4.1-3b**, there are certain viewpoints of the Project Site that are blocked by vegetation (e.g. trees and brush); however, gaps in the vegetation allow the Project Site to enter public view along SR 126. The view of the Project Site is fleeting because people would have to turn to look north as they pass the area. Views of the Project Site from the eastbound approach are, for the most part, also blocked by the vegetation that makes up the central divider of SR 126. In addition, the views from the eastbound approach are directed more southeasterly, toward South Mountain and away from the Project Site on the opposite side of the raised highway.

As shown in **Off-Site View 5** in **Figure 4.1-3c**, distant views of the Topatopa Mountains are prominent when looking north across the Project Site. A mixture of low-scale structural forms and textures, masses of trees and shrubbery, poles and overhead lines, street pavement, dirt surfaces, and distant hillsides in the background are seen within the public right-of-way along SR 126.

Little visual connectivity exists between the Project Site and the Santa Clara River or mountains south of the City because of the raised elevation and width of SR 126, and the relatively flat terrain with existing intervening landscaping.



On-Site View 3: Looking southwest across Project Site toward the South Mountains.



On-Site View 4: Looking northwest across the Project Site showing the existing plowed lands used for row crops.

SOURCE: Googole Earth – November 2014

FIGURE 4.1-2b



On-Site View 5: Looking north from the Project Site along the VCTC railroad corridor showing the existing agricultural operations.



On-Site View 6: Looking northwest on the Project Site showing the existing agricultural operations.

SOURCE: Googole Earth – November 2014

FIGURE 4.1-2c



Off-Site View 1: Looking southeast along Country View Court from the adjacent residential community north of the Project Site.



Off-Site View 2: Looking southeast along W Telegraph Road from the northwestern corner of the Project Site.

SOURCE: Googole Earth – November 2014

FIGURE 4.1-3a



Off-Site View 3: Looking south from W Telegraph Road from the northwestern corner of the Project Site showing the South Mountains.



Off-Site View 4: Initial views of the Project Site from the east when traveling westbound on SR 126.

SOURCE: Googole Earth – November 2014

FIGURE 4.1-3b



Off-Site View 5: Looking northwest along SR 126 and across Faulkner Road toward the Project Site.



Off-Site View 6: Looking southeast toward the Project Site at the corner of W Telegraph Road and Beckwith Road.

SOURCE: Google Earth – November 2014

FIGURE 4.1-3c

Views from the East

Views of the Project Site from the east are generally accessed along Beckwith Road and Todd Lane, which are adjacent to the boundary of the Site on both sides of the VCTC railroad corridor. While views are obstructed by landscaping trees found at the corner of W. Telegraph Road and Beckwith Road, as shown in **Off-Site View 6** in **Figure 4.1-3c**, direct views of the Project Site are available at the end of Beckwith Road. From this view, a service/contractor storage yard, ancillary facilities for the agricultural operations, and an office structure can be seen on the Project Site. These existing structures are approximately 1 story in height and do not significantly obstruct views across the Site towards the South Mountains.

General Plan Scenic Viewpoints and Scenic Highways

Scenic Highways

The County of Ventura General Plan identifies SR 126 as an eligible county scenic highway.¹ The City of Santa Paula's General Plan Conservation and Open Space Element identifies SR 126 and SR 150 as man-made scenic resources.² SR 126 offers sweeping 360-degree views of the higher elevations of the surrounding mountains from throughout the travel corridor. Views include portions of the Topatopa Mountains and Santa Paula Peak to the north, and the South Mountain to the south. Where openings in landscaping or structural development along the right-of-way occur, wide-ranging views of agricultural lands are also available along the corridor, predominantly occurring outside the City's limits. As described previously, a majority of the Project Site is visible from SR 126. This is due to the minimal landscaping, vegetation, and power lines that would obstruct views when seen from a moving vehicle.

Scenic Resources

Scenic resources within the County of Ventura are identified to be the viewsheds of County lakes and scenic highways. The County of Ventura General Plan does not identify any scenic resources on or adjacent to the Project Site.³ However, the City of Santa Paula identifies scenic resources on and adjacent to the Project Site, including Santa Paula Creek, Santa Paula Canyon, barrancas, the hillsides east of the City, agricultural lands, and SR 126. The City also recognizes SR 150 and other various roadways (e.g., Foothill Road and Twelfth Street south of SR 126) as scenic routes. In addition, California's Scenic Highway Program classifies SR 126 and SR 150 as "eligible state scenic highways."⁴ However, only the portion of SR 126 that extends from SR 150 to the Interstate 5 (I-5) north of Castaic in Los Angeles County is so designated. In addition to views from SR 150, Foothill Road, and Twelfth Street being blocked by

1 County of Ventura, *General Plan*, "Resources Appendix," (2011).

2 City of Santa Paula, *General Plan*, "Conservation and Open Space Element," (1998).

3 County of Ventura, *General Plan*, "Resources Appendix," (2011).

4 California Department of Transportation, Scenic Highway Program, "Eligible (E) and Officially Designated (OD) Routes" (2013), <http://www.dot.ca.gov/hq/LandArch/scenic/cahisys.htm>.

intervening terrain, vegetation, and the developed surroundings, the Project Site is located on the westerly boundary of the City and is not visible from these scenic routes.

Existing Sources of Light and Glare

Sources of illumination from within the Project Site are limited to common low-intensity outdoor lighting fixtures that are focused on immediate illumination of driveways, parking, and outdoor storage areas within the farmworker housing areas. Sources of light may also include the light emanating from the windows of farmworkers' houses. The building exteriors are finished with wood, concrete, and other nonreflective materials. Off-site sources of illumination include streetlights, light fixtures, and light emanating from windows in the residential areas to the north, and light industrial/commercial uses to the east of the Project Site. Headlights from vehicles on adjacent roadways, and particularly from vehicles traveling on SR 126, are additional sources of light in the area.

4.1.2 REGULATORY SETTING

The County of Ventura and City of Santa Paula provide regulations related to visual resources, scenic resources, and light and glare. However, as the Project Site is proposed for annexation by the City of Santa Paula, the analysis in this EIR only considers goals and policies from the City's General Plan.

State

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state with "enjoyment of aesthetic, natural, scenic and historic environmental qualities."⁵

The California Scenic Highway Program was created by the California Department of Transportation (Caltrans) to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The state laws governing the Scenic Highway Program are found in the Streets and Highways Code, Sections 260–284.⁶ SR 126 is designated as an "eligible designated route" for the segment between SR 150 and I-5.

5 California Public Resources Code Section 21001(b).

6 California Streets and Highways Code Section 260-284.

City of Santa Paula General Plan⁷

Scenic resources in the overall Santa Paula planning area are identified in the Conservation and Open Space Element of the City of Santa Paula General Plan. These scenic resources include both natural and developed resources.

The aesthetic qualities of the City of Santa Paula vary as widely with the topography and the built environment. The proximity of the distinct landforms from the mountains to the river valley, the agricultural fields that border the City, and the historic downtown buildings provide an exceptional scenic environment for the area.

It is important to conserve both natural and developed land areas that are high in scenic value. The Conservation and Open Space Element serves not only to identify these resources, but also to provide policies that will conserve and enhance the resources for future generations.

The Conservation and Open Space Element identifies the following inventories:

Natural Scenic Resources

- Santa Clara River
- Santa Paula Creek
- Fagan Canyon
- Santa Paula Canyon
- Barrancas
- Mountains to the north and south
- Hillsides to the east
- Agricultural lands

Developed/Man-Made Scenic Resources

- SR 126 (eligible state scenic highway)
- SR 150 (eligible state scenic highway)
- City scenic routes: Foothill Road; State Highways 126 and 150; Twelfth Street south of the highway
- Historic districts
- In-town scenic drive

⁷ As the Project Site is proposed for annexation from the County of Ventura into the City of Santa Paula, only goals and policies of the City's General Plan are considered within this analysis.

- Open space of agricultural lands
- Open space of city parks
- Views of the town from the hillsides

Additionally, the Conservation and Open Space Element identifies opportunities and constraints associated with the West Area 2 Expansion Area, which includes the Project Site, regarding conservation of scenic resources, such as the Adams Barranca. The scenic resources of the Santa Clara River Valley, SR 126 and SR 150, and agricultural lands surrounding the Project Site should be maintained throughout the development of the Santa Paula West Specific Plan Project. Architectural standards are established to ensure that development of the Project Site complements the existing small-town character of the City of Santa Paula.

The Conservation and Open Space Element's goals, objectives, and policies for preservation of scenic resources include:

Goals

Goal 10.1 Scenic views and vistas, tree-lined streets, open spaces, natural areas, ridgelines, and land forms should be preserved.

Objectives

Objective 10(a): Use a variety of land use planning tools to preserve scenic resources.

Policies

Policy 10a.a: The mountains surrounding Santa Paula are an important asset that should be protected for the view and open space.

Policy 10b.b: Preserve viewing opportunities in canyon areas as development proceeds.

4.1.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guideline (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on aesthetic resources if it would:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?
- Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area?

4.1.4 PROJECT IMPACTS

Temporary Construction Impacts

Construction activities within the Project Site and off-site improvements, such as along Beckwith Road and Faulkner Road, could potentially be visible from SR 126 and Telegraph Road and other vantage points that currently have views of these areas. Additionally, there would be off-site improvements along SR 126 for the connection of Beckwith Road to the extended Faulkner Road. Development of the Specific Plan would occur over a 10-year period or as market conditions allow. Construction activities would include various site preparation, vegetation removal, and grading activities. As the Project Site is relatively flat and is at relatively low elevation, grading activities would include the import of approximately, 99,000 cubic yards of soil to raise portions of the western areas above flood elevations from Adams Barranca flows. Finished grades not substantially also the existing be contours and would result in slightly reduced differences in elevations over the Project Site. The infrastructure improvements, such as water and sewer pipelines, and roadways would be constructed to meet the needs of the development as it progresses over time.

Construction activities would entail site grading and contouring to establish building pads, roadway configurations, and drainage features such as basins and weirs. Views during construction may include earthwork, buildings at various stages of construction, and a wide range of construction equipment and materials. While buildings are under construction, framing, scaffolding, and cranes may be visible from off site during construction of the upper stories. Also during construction, mechanical equipment, material stockpiles, staging areas, and trash bins could temporarily degrade the visual quality of the Project Site at adjacent ground-level vantage points. The extent to which the construction of the Project's

buildings would affect the field of view and result in changes in visual character would be temporary and would not block views to a degree that would exceed view blockage of buildings once completed, which, as discussed below, will not substantially block views of existing prominent visual resources. In addition, the Project Site is currently graded and cultivated, requiring use of heavy equipment and disturbed ground surfaces on a routine basis. However, as the construction timeframe would occur over approximately 10 years and would alter the existing open space character of the Project Site from immediate surroundings, these visual impacts from construction would be potentially significant and unavoidable on a temporary basis.

Threshold: Have a substantial adverse effect on a scenic vista?

As previously discussed, views from SR 126 are of scenic vistas throughout the City's planning area as provided in the Santa Paula General Plan Conservation and Open Space Element. As noted, scenic aspects in the Project Site include agricultural lands; Adams Barranca on the west boundary of the Project Site; open spaces in the foreground and middle-ground views; and the background views of foothills and slopes rising to the Santa Paula Ridge on the north. Scenic aspects of the Project Site include the agricultural lands and Adams Barranca west of the Site. These existing views of the Project Site from SR 126 are considered scenic views, as identified by the City's General Plan. However, West Area 2 is an expansion area along the City's western boundary; as such, it provides for the expansion of the City-built land uses to occur within close proximity to other developments in the west part of the City limits.

Development in accordance with the Specific Plan would result in an expanded urban fringe on the westerly limits. The Project would provide for the development of commercial and light industrial uses, along with roadways and open space across the 53.8-acre Project Site. Building heights would be consistent with the 1- to 2-story buildings having similar uses to the east of the Project Site, with a maximum building height of 35 feet and 45 feet for commercial/light industrial and industrial uses, respectively.

Passengers within vehicles traveling eastbound on SR 126 have northeasterly directed views of the urbanized middle distant horizon of the City directly east and north the Project Site. Most prominent views from eastbound SR 126 are directed southerly toward the Santa Clara River and South Mountain. Passengers traveling westbound on SR 126 would have fleeting views across the Project Site between SR 126 landscape-screening vegetation. However, views would be mostly directed northwesterly toward the more expansive agricultural lands and the foothills of the Santa Paula Ridge north and west of the Project Site as vehicles travel high rates of speed (65 miles per hour) past the Project Site.

As described above, south-oriented views of South Mountain are currently available from Telegraph Road and its intersecting north-south streets (Country View Court) across the undeveloped portions of the

Project Site. As shown in **Off-Site View 1** in **Figure 4.1-3a**, build-out of the Specific Plan with 35- and 45-foot-tall structures, along with associated landscaping, would partially obstruct southerly street level views across the Site toward South Mountain. However, the upper reaches of South Mountain will be largely maintained, although the views may become somewhat channeled by landscaping.

The more panoramic vistas that take in a sweeping breadth of the mountains and foothills forming the river valley and vistas overlooking the lower man-made and natural horizon features of the area would not be blocked through development under the Specific Plan. Rather, more immediate foreground and middle-distant open views across the Project Site would be replaced with structures. Landscaping within the Project Site could channel some views from the immediate surroundings. However, as previously stated, this development would add an anomalous element to the viewshed because it would occur on the urban fringe of the City near existing light industrial and residential areas.

Adams Barranca is visible as a distinctive linear open space element adjacent to the western boundary of the Project Site, and would be preserved in open space as part of the Specific Plan land use designation for that area.

While implementation of the Project would result in the loss of views of the existing agricultural lands in the immediate foreground with the addition of structures, circulation system, and supporting infrastructure, the urbanized appearance is similar to the adjacent uses and more distant scenic vistas views of the Santa Clara River Valley would not be significantly altered upon the development of structures on the Project Site. Therefore, the Project would result in less than significant adverse impacts to scenic vistas.

Threshold: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Project Site exhibits limited topographic variation and contains no natural slopes, rock outcrops, or other geological formations. SR 126 is not designated a state scenic highway, but it is considered an eligible scenic highway. However, the Santa Paula General Plan Conservation and Open Space Element identifies the Adams Barranca, agricultural lands, and views from SR 126 (an eligible state scenic highway) as scenic resources. The Project involves the removal of the row crops on the Site and would convert these agricultural lands to light industrial and commercial structures, in addition to a circulation system and supporting infrastructure.

There are no existing structures on the Project Site that have historical significance; thus, the Project would not damage any historic buildings considered visual resources. Besides vegetation within Adams Barranca, the Project Site currently contains minimal natural vegetation, which is mostly limited to scatter

weeds on the perimeter of the tilled agricultural fields, some ornamental trees locate near the agricultural facilities adjacent to Beckwith Road, and a row of trees (eucalyptus and others) in the southeast corner near the SR 126 right-of-way. Other vegetation consists of the avocado trees in approximately the northeast quadrant of the Project Site. The scattered weeds, ornamental landscape trees, and orchards would be removed with implementation of the Specific Plan, while trees at the eastern corner of the Site along SR 126 would be largely maintained as a visual screen. The trees that are removed would be replaced with landscaping according the landscape plan provided in the Specific Plan. The trees to be removed do not in and of themselves represent significant visual features of the Project Site.

The Specific Plan would dedicate 3.65 acres of the Site for open space/passive uses, including various landscaping and the development of bioswales and detention basins. These open space/passive uses would provide for a greenway open space buffer between the Adams Barranca on the western boundary of the Project Site, as well as a small buffer along the northern portion of the VCTC railroad corridor. The landscaping that would be incorporated throughout the Project Site would also provide additional buffers between the Site and SR 126 and W. Telegraph Road.

Since the Project would incorporate various open space/passive uses into the Project design to preserve the visual quality of Adams Barranca, would not remove visually important trees or geologic features, and since the segment of SR 126 that is adjacent to the Project Site is not eligible for designation, implementation of the Project would not damage scenic resources within a designated state scenic highway. Therefore, the Project would result in less than significant impacts to scenic resources.

Threshold: Substantially degrade the existing visual character or quality of the site and its surroundings?

The existing visual character and quality of the Project Site is predominantly agricultural in nature, with ancillary agricultural facilities, row crops, and orchards. The agricultural character of the Project Site is viewed from SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road.

Direct views of the Project Site from Beckwith Road also include the on-site ancillary facilities for the agricultural operations, and an office structure. This area contains open storage of materials and equipment. The Project would remove these features and replace this view with the light industrial and commercial uses allowed under the Specific Plan. These existing structures are approximately 1 story in height and do not significantly obstruct views across the Site towards the South Mountains.

The Specific Plan contains design features that take into account the character of the surroundings. The Project includes development standards for frontage, building types, architecture, thoroughfares, and landscape to ensure that the implementation of the business park is harmonious with the scale of existing buildings in the City of Santa Paula. These design features would ensure that the Project is consistent with

height, density, and elevation of the surrounding land uses to the light industrial uses located east of the Project Site, and overall would have a similar aesthetic character. Building heights would not exceed 45 feet, and lot coverage of building footprints would be between 80 and 85 percent; a minimum 10-foot setback would be required for lot frontage and where buildings are located along streets. The design standards set forth in the Specific Plan are intended to guide the future development under the Specific Plan and include the following purpose and intent:

- Create a clear identify and sense of place;
- Ensure a consistent use of building materials, landscaping, colors, and other design features;
- Provide a harmonious and pleasing environment for all contemplated uses and activities; and
- Guide the development process, including qualitative aspects of how buildings, landscaping, and permitted operation by tenants and owners will develop.

In addition to incorporating similar development standards as existing developments to the east of the Site, the Project would include standards in grading, building design, lighting design, and landscape design, as well as a sign program.

The Specific Plan includes design guidelines that will direct the style and aesthetic character of the individual parcel development and ensure a consistent use of building materials, landscaping, colors, and other design features of the buildings. Site design guidelines will provide provisions for driveways, service and loading areas, refuse collection, screening of mechanical equipment, aesthetic features of wall and fences, undergrounding of utilities (such as electrical lines), and enclosures for mailboxes, along with other guidelines.

The Project includes a buffer of open space/passive uses along the western boundary of the Site, which would preserve the visual appearance of Adams Barranca.

Due to the Project Site's relatively low and flat elevations, many off-site vantage points of the Project Site are obstructed by existing structures and buildings. However, development within the Project Site can be seen from vantage points that are located immediately adjacent to the Project Site, such as those along SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road. Furthermore, while elevations of the Project Site would remain relatively flat and at low elevations, and although the Specific Plan development standards will be required to ensure a consistent and compatible aesthetic character with the developments to the east, the existing open space and agricultural character of the Project Site would substantially change. The altered views from the public viewpoints that immediately surround the Project Site are considered significant and unavoidable.

Threshold: Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area?

Implementation of the Project would permanently change the visual character of the Project Site from agricultural lands to developed urban uses. The Project would result in a potential for increases glare from within the Project Site during the day from reflective surfaces, and an increase in artificial light during the night.

The Project's development standards establish the types of materials that can be used for various types of structures on the Project Site; reflective, glare-producing materials are prohibited. Daytime sources of glare would include the sun reflecting off glass windows of structures and vehicles. Glare produced from these sources would be brief and intermittent. Therefore, impacts related to glare would be less than significant.

The Project's nighttime sources of light would include outdoor lights, such as mounted lights and lighted signs on the buildings, parking lot lighting, interior building lights, and headlights of vehicles. Given that minimal outdoor lighting is currently emitted from the Project Site, these impacts related to the additional nighttime light and glare from the Project are considered to be potentially significant.

With the implementation of **Mitigation Measure AES-1**, the outward and upward migration of nighttime light would be minimized to avoid adverse impacts to nighttime views near the Project Site. **Mitigation Measure AES-1** would reduce impacts to a level that is less than significant.

4.1.5 CUMULATIVE IMPACTS

As provided in **Section 3.0, Related Projects**, there are numerous pending development projects Citywide that would contribute to the urbanization of the City, thus collectively changing the overall aesthetic character of the City. These areas have been predominantly identified in the Santa Paula General Plan as appropriate areas for growth. The remainder of the West Area 2 Expansion Area, which includes the Project Site, is proposed for annexation and development of light industrial and commercial uses. On the east side of the City, the East Gateway Specific Plan was approved in 2012 and entails the development of a mixture of retail, service and light industrial, and office uses throughout a 94.5-acre span on the eastern edge of the City. Full buildout of the East Gateway Specific Plan would transition the eastern edge of the City from a more rural setting to one with more urbanized development, especially along the main corridors, such as SR 126. Additionally, the East Area 1 Specific Plan Amendment on the eastern portion of the City will include the development of various residential, commercial, light industrial, commercial, and civic uses across a 501-acre area. In the foothills to the north of the City, there are two potential expansion areas that could accommodate large residential subdivisions: Adams Canyon and Fagan

Canyon. These potential future developments would occur on agricultural lands and open space at the outer limits of the City.

In combination with the Project, all of these related projects previously mentioned would change the visual character of the area over time from a more rural setting to one with more urbanized development, especially along the main travel corridors, such as SR 126. The cumulative development would transform the visual character of the City by reducing the amount of open space within the City limits and expanding the urban visual character. However, implementation of the Project and related projects would be consistent with the City's General Plan. The General Plan establishes measures—such as design standards, open space protection, and appropriate buffering and setbacks—that are designed to mitigate potential visual impacts within the City. These measures would allow for expansion within the City while minimizing potential impacts to the City's existing visual resources. While the Santa Paula West Business Park Specific Plan would include various open space and would not affect the Adams Barranca, the development would contribute (albeit to a lesser degree) to the cumulative changes in visual character of the City in combination with the other relatively large scale related projects. Therefore, as with the Project, impacts related to the views and visual character of the City as a result of the Specific Plan amendment, are considered cumulatively considerable, and significant and unavoidable.

4.1.6 MITIGATION MEASURES

The following mitigation measure would reduce the Project's potentially significant impacts to less than significant:

AES-1: Before the City issues grading permits, the applicant must prepare and submit a Lighting Plan to the City of Santa Paula Planning Director for approval that identifies the types of shielding that will be used for outside lighting.

All exterior night lighting installed on the Project Site shall be of low-intensity, low-glare design, and hooded to direct light directly downward onto the area being lighted to prevent spillover onto adjacent parcels. Shielding must be included to eliminate uplighting. Exterior lighting fixtures must be kept to the minimum number and intensity needed to ensure public safety. These lights shall be dimmed after 10:00 PM to the maximum extent practical without compromising safety. Upward directed exterior lighting is prohibited.

4.1.7 RESIDUAL IMPACTS AFTER MITIGATION

The Project would result in the conversion of agricultural resources and open space to a built visual character. Impacts to scenic views and visual resources would be considered less than significant. Loss of the on-site agricultural character would be significant and unavoidable. In regard to impacts related to light and glare, implementation of **Mitigation Measure AES-1** would reduce impacts to less than significant.

4.2 AGRICULTURAL RESOURCES

This section analyzes the potential for the Santa Paula West Business Park Specific Plan, (“Specific Plan”) to affect agricultural resources located within or near the Specific Plan area (“Project Site”). The analysis describes the existing agricultural resources located on and immediately surrounding the Specific Plan area, potential environmental impacts, recommended mitigation measures to help reduce or avoid identified impacts, and the level of significance of adverse impacts after mitigation.

Information presented in this section is primarily derived from site investigations conducted in 2015, the Santa Paula General Plan, and Important Farmland Inventory Mapping on record with the County of Ventura Resource Management Agency.

4.2.1 ENVIRONMENTAL SETTING

The proposed Project is in Ventura County, within the Sphere of Influence (SOI) and City Urban Restriction Boundary (CURB) for the City of Santa Paula. The proposed Project is also located within the Area of Interest of the City of Santa Paula, as defined by the Ventura Local Agency Formation Commission (LAFCo); and is designated as an Expansion Area as defined in the City’s General Plan.¹

4.2.1.1 Ventura County Agricultural Production

In terms of productivity per acre, Ventura County is one of the leading agricultural areas in the nation. The combination of fertile soil and mild climate allows high-value crops to be planted year-round. Per the Ventura County Annual Crop and Livestock Report for 2014, the estimated gross value for Ventura County agriculture for 2014 was \$2,137,033,000.² This is an overall increase of 2.0 percent, or \$42,118,000, from 2013.

The leading crops in Ventura County are shown in **Table 4.2-1, Leading Crops in Ventura County 2014.**

1 City of Santa Paula, *General Plan*, “Land Use Element” (1998). LU-24.

2 County of Ventura, *Ventura County’s Crop & Livestock Report 2014* (2015). <http://www.farmbureauvc.com/new/assets/pdf-forms/2014-CropReport.pdf>.

Table 4.2-1
Leading Crops in Ventura County 2014

Rank	Crop	Acreage in Production	Value
1	Strawberries	11,630	\$627,964,000
2	Lemons	14,926	\$269,428,000
3	Raspberries	4,629	\$240,662,000
4	Nursery stock	3,326	\$180,499,000
5	Celery	11,003	\$152,153,000
6	Avocados	19,709	\$127,978,000
7	Tomatoes	466	\$72,207,000
8	Peppers	4,352	\$67,269,000
9	Cut flowers	736	\$47,615,000
10	Kale	1,898	\$35,932,000

Source: County of Ventura, *Ventura County's Crop & Livestock Report 2014 (2015)*.

Ventura County currently has a total of 95 registered organic growers, with a total of 7,232 acres in Organic production.³ Organic farming is defined by the United States Department of Agriculture (USDA) as “a production system that is managed to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity.”⁴ The federal Organic Foods Production Act of 1990 and the California Organic Products Act of 2003 set forward guidelines and standards that must be followed by any grower, handler, processor, wholesaler, or retailer who wish to sell or advertise their product as “organic.”

4.2.1.2 City of Santa Paula

Agriculture plays a central role in Santa Paula's economy. Approximately 33,719 acres within Santa Paula's Area of Interest are devoted to agriculture, which is about 78 percent of the total acreage within the Area of Interest.⁵ More than half (57 percent) of this acreage is used as grazing and pasture land. The remaining 43 percent of the area is generally used for growing crops, including avocados, lemons, oranges, other orchard crops, and row crops.⁶

3 County of Ventura, *Ventura County's Crop & Livestock Report 2014 (2015)*.

4 United States Department of Agriculture, *Organic Production/Organic Food: Information Access Tools*, <http://www.nal.usda.gov/afsic/organic-productionorganic-food-information-access-tools>.

5 City of Santa Paula, *General Plan, "Conservation and Open Space Element"* (1998), p. CO-8.

6 City of Santa Paula, *General Plan, "Conservation and Open Space Element"* (1998), p. CO-8.

Most of the land surrounding the current City limits has a long history of agricultural use. Within the Area of Interest, 196 parcels totaling 13,570 acres are under contracts for the California Land Conservation Act (LCA), also known as the Williamson Act. The LCA is a voluntary land conservation program adopted by the California Legislature in 1965 and administered by the County of Ventura since 1969 to help preserve the supply of agricultural land in the County through agricultural LCA contracts. This is about 40 percent of all the agricultural acreage in the Area of Interest. However, almost all of this area is outside the City's 2015 SOI. No land within the existing City limits is under LCA contract, and only 94 acres within the City's 2015 SOI are under contract. Within the City's proposed expansion areas, portions of West Area 2 are under contract, mostly consisting of citrus groves near the Santa Clara River.⁷

West Area 2

The agricultural industry has been entrenched in areas just west of the City for well over 100 years and agriculture is one of the most important facets of the local economy. The Land Use Element calls for no urban expansion beyond Adams Barranca to the west to maintain these areas in agriculture and to maintain the physical buffer between Santa Paula and the neighboring City of Ventura. Most of the parcels west of the City and east of Adams Barranca are not under an LCA contract. One large parcel in lemon production (located south of SR 126) is under an LCA contract. Consequently, LCA contracts do not present a significant constraint to future planning efforts affecting this area. Much of the productive agricultural land in the Santa Clara River Valley west of the current City limit is either considered prime farmland or farmland of statewide importance. Most of this area west of the City limits is prime farmland, including nearly all of the area south of the freeway and east of Adams Barranca. Based on the State's Important Farmlands Inventory system, such prime farmland has the highest potential for continued agricultural use.⁸

Furthermore, the Santa Paula–Ventura Greenbelt—the first greenbelt in Ventura County—was adopted in 1967 to maintain the land generally between the Franklin Barranca and Adams Barranca in agricultural production. As such, Adams Barranca represents the eastern reaches of the Santa Paula–Ventura Greenbelt; none of the area east of the Adams Barranca is in the Ventura–Santa Paula Greenbelt.⁹

7 City of Santa Paula, *General Plan, "Conservation and Open Space Element"* (1998), CO-8.

8 City of Santa Paula, *General Plan, "Conservation and Open Space Element"* (1998), CO-37.

9 Ventura County Board of Supervisors, Ordinance No. 4338 (February 2006).

Soils

The suitability of soils for agricultural use depends on many factors, including fertility, slope, texture, drainage, depth, and salt content. As with most soils in the Santa Paula area, the Project Site soils are highly suitable for agriculture because of their high mineral content, good drainage, and loamy quality.¹⁰

Soils within the City of Santa Paula are of the Pico-Metz-Anacapa association. Soils of this association are located on level to moderate slopes; are very deep, well-drained sandy loam; and are very deep, somewhat excessively drained loamy sands. Along the Santa Clara River, soils are of the riverwash–sandy alluvial land–coastal beaches association, which tends to be located on level to gentle slopes. These soils are excessively drained to poorly drained, with material consisting of stratified sand, gravel, and cobbles.¹¹

Constraints to Agricultural Production

Avocado trees are becoming increasingly difficult to grow commercially because of the presence in the baseline soil of the fungus *Phytophthora cinnamomi* (more commonly referred to as “root rot”), which cannot be eliminated. While *Phytophthora cinnamomi* has been studied for more than 60 years, no definitive elimination measures have been found. The fungus is very difficult, if not impossible, to control.

Several strategies to control the fungus have been used. These include:

- **Clean nursery strategies:** The best control for avocado root rot is to prevent introduction of the fungus into the orchard, caused by the purchasing of already infected plants from nurseries. Nurseries are aware of the infectious root rot, and those certified by the local government or local growers have taken steps to control the spread of the disease.
- **Selecting low-hazard sites:** Sites that are typically associated with root rot include the following: soil with poor drainage, high clay content, high water tables, hard pans, or clay pans; or where water pools after irrigation or rainfall.
- **Planting on mounds in more hazardous sites:** Planting on mounds on sites that are already infected with root rot would provide young trees a well-drained soil to become established in before they encounter the more hazardous surrounding soil.
- **Prevention strategies:** Groves should be fenced to protect them from human and animal traffic. The movement of soil and water from diseased groves into healthy ones should be prevented. Boxes of copper sulfate would be placed at the property entrance, and all workers and visitors would be prompted to dust their shoes with the copper sulfate before entering. Diversion furrows should be

10 City of Santa Paula, *General Plan, “Conservation and Open Space Element”* (1998), p. CO-10.

11 City of Santa Paula, *General Plan, “Conservation and Open Space Element”* (1998), p. CO-10.

dug to divert rainwater that passes through the diseased grove away from the healthy grove, and also to isolate healthy groves from diseased ones.

- **Using resistant rootstocks:** Breeding and selection programs around the world have identified rootstocks with a high degree of tolerance to root rot. Rootstocks that are resistant to the disease must be clonally propagated so that they all contain the same genetic identity. This process has the greatest possibility of successfully controlling avocado root rot in the long run.
- **Avoiding over- or underirrigation:** It is difficult to manage irrigation of avocado to benefit the avocado and not *Phytophthora cinnamomi* because avocado roots are very shallow and sensitive to drying. Overwatering an area that is already infested by the disease would only exacerbate the situation because avocado trees already damaged from the disease have fewer roots and less water intake. Overwatering would cause the disease to spread to other areas of the site that are not already infected.
- **Applying fungicides:** Two fungicides have been very successful at reducing avocado root rot: metalaxyl and fosetyl-Al (Aliette). Application of either of these two fungicides would thus help reduce avocado root rot.
- **Treating with gypsum and adding organic mulches:** The use of both methods adds needed nutrition to the soil for the consumption of the avocado trees. The trees would be vigorous and healthy and less susceptible to root rot.

Another major impact on agriculture in Ventura County is the introduction of invasive species, the presence of which can have an impact on the success and sustainability of crops. The Asian citrus psyllid is a pest that acts as a carrier, or vector, spreading huanglongbing (HLB), a devastating disease of citrus trees. This bacterial disease, which is transmitted to healthy trees by the psyllid after it feeds on infected plant tissue, has already decimated the citrus industry in Florida. The pest and disease have arrived in Ventura County, and HLB has also been found in neighboring Los Angeles County.

4.2.1.3 Project Site

The Project Site is designated as Agricultural–Urban Reserve (40-acre minimum) in the Ventura County General Plan¹² and is designated for agricultural uses with the zoning designation Agricultural Exclusive (A-E).¹³ Approximately 49 acres of the 53.81-acre Project Site are currently used for agricultural production, which is farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. As shown in **Figure 4.2-1, Farmland Inventory Map**, farmlands on the Project Site have been designated on the State Important Farmland

12 Ventura County General Plan, General Plan Land Use Map (April 2010). http://www.ventura.org/rma/planning/pdf/plans/General_Plan_Land-Use_Map.pdf

13 Ventura County Non-Coastal Zoning Ordinance, sec. 8104-1.2.

Map to include approximately 44.20 acres of prime farmland, 4.88 acres of farmland of statewide importance, and 4.48 acres of urban and built-up land.¹⁴ None of the parcels within the Project Site is within a Williamson Act contract.¹⁵

In addition to active agricultural operations, approximately 4.5 acres of the Project Site consists of a maintenance yard and storage for farm equipment and packing crates, along with a single-family worker residence. An additional small single-family residence and storage shed are located along Telegraph Road on the western corner of the Project Site.

Adjacent Land Uses

Adjacent agricultural production occurs east, south, and west of the Project Site and is within the County of Ventura jurisdiction. The County of Ventura General Plan land use designation for adjacent agricultural lands to the east, south, and west is Agriculture (40-acre minimum). In addition, the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) Important Farmland Map designates adjacent lands to the north as Farmland of Statewide Importance, and adjacent lands to the east as prime farmland and farmland of statewide importance. Existing agriculture to the north includes citrus and avocado orchards; operations to the east include orchards and row crops along with ancillary facilities, such as packing house and a limited number of interspersed resident or farmworker housing units.

Beyond the Project Site boundary to the north are a variety of industrial uses within the City of Santa Paula, including cornerstone Molds and Machining and United Site Services. The Santa Paula Animal Clinic is located to the northeast of the Project Site. The Adams Barranca, which is adjacent to the Project Site on the southwest, contains areas with riparian vegetation. Finally, single-family residences located within Santa Paula City limits across Telegraph Road are located to the northwest of the Project Site.

4.2.2 REGULATORY SETTING

The preservation of agricultural activities and soils is an explicit goal of the USDA and the California DOC. Agricultural activities are broadly defined and include activities such as ranching. Agricultural soils are limited nonrenewable resources that are usually confined to a location. However, not all agricultural activities occur on soils classified as appropriate for agriculture, and not all soils rated as excellent farming

14 California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, "Ventura County Important Farmland 2012" (2012). <ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2012/ven12.pdf>

15 Department of Conservation, Division of Land Resource Protection, Williamson Act Program, Map: Ventura County Williamson Act FY (Fiscal Year) 2013/2014. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/Ventura_13_14_WA.pdf.

soils are used for crop production. Generally, policies implemented to preserve agriculture are aimed at either protection of the space or protection of the soil.

4.2.2.1 State

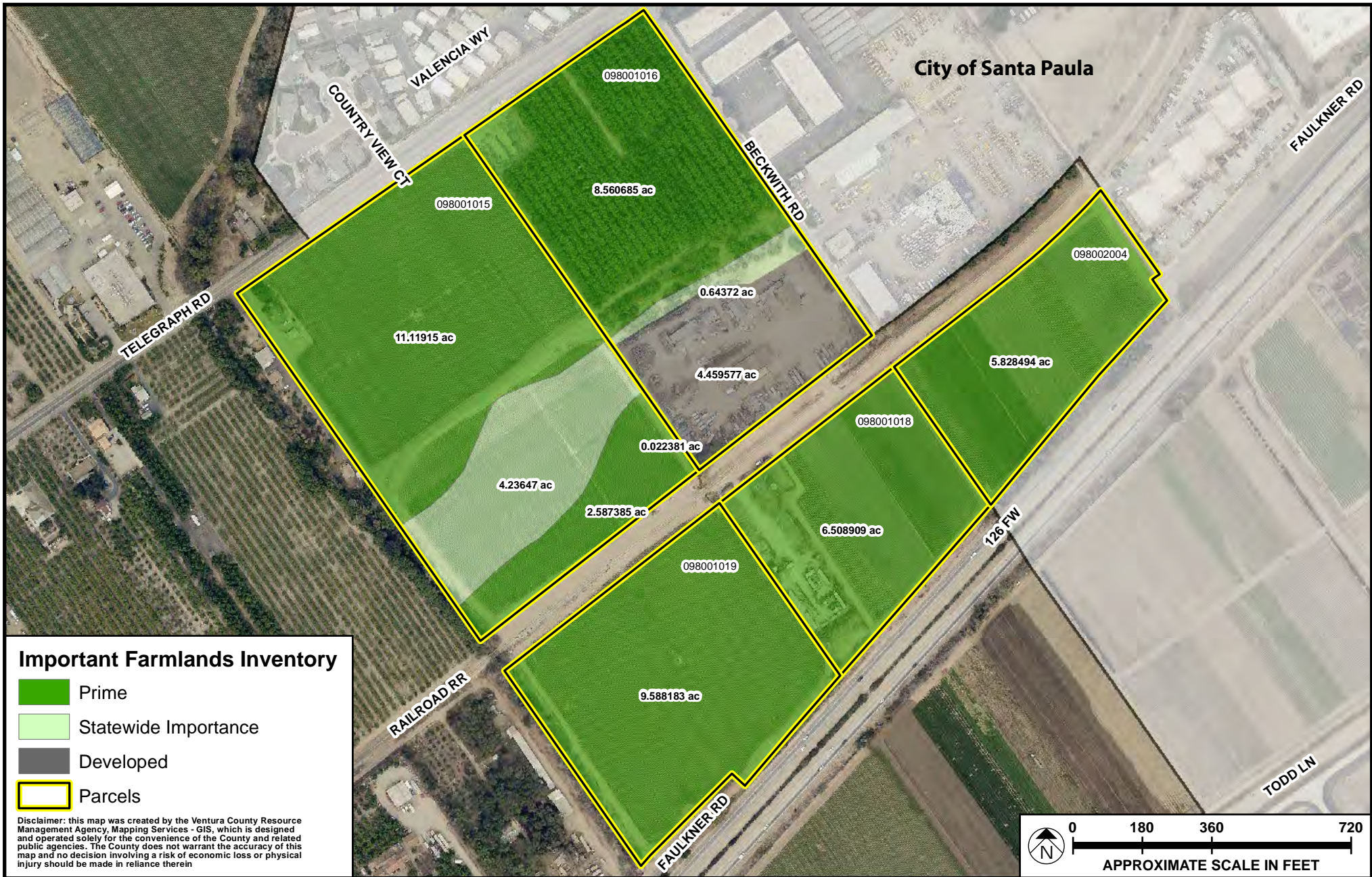
California Department of Conservation

The California Department of Conservation (DOC), Division of Land Resource Protection, and the FMMP produce maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is categorized according to soil quality and irrigation status. The maps are updated every 2 years through the review of aerial photographs, a computer mapping system, public review, and field reconnaissance.

FMMP's study area is contiguous with modern soil surveys developed by the USDA. A classification system that combines technical soil ratings and current land use is the basis for the Important Farmland Maps of these lands. Most public land areas, such as national forests and Bureau of Land Management holdings, are not mapped.

The minimum land use mapping unit is 10 acres unless otherwise specified. Smaller units of land are incorporated into the surrounding map classifications. To most accurately represent the Natural Resources Conservation Service (NRCS) digital soil survey, soil units of 1 acre or larger are depicted in Important Farmland Maps.

The FMMP utilizes the following categories to designate farmland:



SOURCE: Ventura County Resource Management Agency Information Systems - 2014

FIGURE 4.2-1

Prime Farmland (P)

Farmlands with the best combination of physical and chemical features are able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years before the mapping date.

Farmland of Statewide Importance (S)

Farmlands similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years before the mapping date.

Unique Farmland (U)

Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years before the mapping date.

Farmland of Local Importance (L)

Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land (G)

Land on which the existing vegetation is suited to the grazing of livestock.

Urban and Built-up Land (D)

Land occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Other Land (X)

Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as other land.

Water (W)

Perennial water bodies with an extent of at least 40 acres.

Williamson Act

The California Land Conservation Act, also known as the Williamson Act, was established with the basic intent of encouraging the preservation of the state’s agricultural lands in view of increasing trends toward their “premature and unnecessary” urbanization.¹⁶ The act enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural and open space uses. In return, landowners receive reduced property tax assessments. These reduced rates are much lower than normal because they are based on farming and open space uses rather than on full-market value of the land. Local governments receive an annual subvention of forgone property tax revenues from the state via the Open Space Subvention Act.¹⁷

The California Department of Conservation, under the Farmland Security Zone Act passed in 1998, allows individual counties to establish an additional program for farmlands to enter into contract with the State to receive a benefit similar to Williamson Act contracts. The Farmland Security Zone Act is a 20-year, self-renewing contract that allows property owners with qualifying parcels to receive an additional 35 percent in tax savings above that which is received under the Williamson Act contract.

4.2.2.2 County of Ventura

Ventura County has adopted various programs designed to support and preserve agriculture. Agricultural preservation has been integrated into the County’s overall land use planning strategy and is a reciprocal beneficiary of many interagency regional land use planning and resource conservation programs. The principal interagency programs include the Guidelines for Orderly Development; several existing greenbelt agreements between cities and the County; and the various regional water programs.

The Ventura County Board of Supervisors also adopted a Right to Farm Ordinance intended to protect the farming community from developments that would inhibit its ability to continue agricultural production.¹⁸ Such things as agricultural wind machines, odors, dust, and noise are the subjects of nuisance complaints by adjoining property owners. The Right to Farm Ordinance is intended to make a new purchaser of property aware that existing agricultural operations inherently have noise, odor, and other potentially

16 California Government Code, sec. 51200-51297, California Land Conservation Act.

17 California Government Code, sec. 16140-16154, Open Space Subvention Act.

18 Ventura County. “Division 8, Chapter 1 of the Ventura County Ordinance Code.” Ventura County Non-Coastal Zoning Ordinance. 2003.

annoying activities that are associated with accepted agricultural operations. The Right to Farm Ordinance is part of the Ventura County Coastal and Non-Coastal Zoning Ordinances.¹⁹

The County's Save Open Space and Agricultural Resources (SOAR) initiative was approved by the County Board of Supervisors on November 3, 1998. The County SOAR Ordinance requires countywide voter approval of any change to the Ventura County General Plan involving the Agricultural, Open Space, or Rural land use map designations; or any change to a General Plan goal or policy related to those land use designations.²⁰

General Plan

Ventura County is one of the principal agricultural counties in the State. Ventura County has adopted a number of programs designed to preserve farmland. These programs include:²¹

- The Agricultural land use designation, which establishes a 40-acre minimum parcel size and A-E zoning;
- Participation in greenbelt agreements and the Guidelines for Orderly Development with the cities that seek to prevent urban encroachment into agricultural areas;
- Widespread use of Land Conservation Act contracts to provide tax rate reductions as an incentive for maintaining agriculture;
- Participation in numerous water resource development and conservation programs to ensure long-term availability of water for agriculture.

The Ventura County General Plan provides goals and policies intended to preserve agricultural land uses within the County as a nonrenewable resource.²²

Agricultural Policy Advisory Committee

The Ventura Agricultural Policy Advisory Committee (APAC) was established by the Ventura County Board of Supervisors in 1976. Each of the five elected Supervisors appoints one member of the agricultural community to serve on the APAC. The APAC reviews Land Conservation Act Program applications; zoning and building regulations affecting agriculture; and all matters having direct, indirect, and cumulative

19 Ventura County Non-Coastal Zoning Ordinance. Sec. 8183-4.1 and 8114-2.1.1.

20 County of Ventura, "SOAR Measure 'B' Ordinance" (1998), http://157.145.215.100/rma/planning/pdf/ordinances/soar_measure_b_ord.pdf.

21 Ventura County, *General Plan*, "Goals, Policies and Programs" (last amended June 28, 2011), 19.

22 Ventura County, *General Plan*, "Goals, Policies and Programs" (last amended June 28, 2011), 19–20.

effects on the county's agricultural economy, and serves in an advisory capacity to the Board of Supervisors.

APAC has also developed a number of policies to reduce land use conflicts between urban and agricultural areas. The County of Ventura Agricultural/Urban Buffer Policy requires that new development constructed adjacent to agricultural land include a 300-foot setback to new structures and sensitive uses on the nonagricultural property unless a vegetative screen is installed. With a vegetative screen, the buffer/setback is a minimum of 150 feet.²³ Additionally, a reinforced 8-foot chain-link fence with top bar is required on applicable urban developments to deter pilferage and vandalism of crops, with placement nearest the agricultural side.²⁴

The Ventura County Agricultural Commissioner, as a member of the Board of Supervisors, is responsible for enforcing local ordinances, state laws and regulations, and federal laws and regulations governing the agricultural industry. The Ventura County Agricultural Commissioner administers programs including pest detection, pesticide use enforcement, land use planning, fruit and vegetable standardization, crop inspection, and crop statistics. In addition, the Commissioner is mandated to promote and protect the production, sale, and distribution of food, feed, and horticultural crops while ensuring that a clean environment is conserved, workers' health and safety are protected, and a safe, economical, and abundant food supply is preserved.

Agricultural Commissioner's Office Urban Buffer Guidelines

The Ventura County Agricultural Commissioner's Office has developed guidelines to address the interface between urban development and existing agricultural uses.²⁵ The purpose of these guidelines is to protect the public health, safety, and welfare of the residents of Ventura County and protect the economic viability and long-term sustainability of the Ventura County agricultural industry.

These guidelines assist in preventing and/or mitigating conflicts that may arise at the agricultural-urban interface. The guidelines should be applied where urban structures or ongoing nonfarming activities are permitted adjacent to land (1) in crop or orchard production, or (2) classified by the California Department of Conservation Important Farmland Inventory as prime, statewide importance, unique, or local importance farmland.

23 County of Ventura, *Agricultural/Urban Buffer Policy* (July 19, 2006).

24 County of Ventura, *Agricultural/Urban Buffer Policy* (July 19, 2006).

25 Ventura County, Agricultural Commissioner, *Agricultural/Urban Buffer Policy*, revised July 19, 2006.

Briefly, County of Ventura Agricultural/Urban Buffer Policy includes the following provisions for new development:

- New dwellings, nonagricultural work sites and ongoing outdoor public activities potentially conflict with agricultural operations.
- A buffer/setback and fencing are therefore needed on these sites when they are developed adjacent to the qualifying agricultural land.
- A 300-foot setback to new structures and sensitive uses is required on the nonagricultural property unless a vegetative screen is installed.
- With a vegetative screen the buffer/setback is a minimum of 150-feet.
- A reinforced 8-foot chain-link fence with top bar is required on applicable urban developments to deter pilferage and vandalism of crops. Placement is nearest the agricultural side. If the agricultural field has a fence, the requirement may be satisfied.
- A mature height of 15 feet or more is required for trees.

The following uses are acceptable within 300 feet of agriculture:

- Parking lots and garages
- Landscaping/hardscape
- Storage sheds or open storage
- Greenhouse structures with venting away from the nonagricultural area
- Wooden or chain-link fencing
- Some types of livestock, such as range cattle or sheep (other livestock only as approved by APAC)
- Roads and drainage facilities
- Farmworker dwelling where notification between farmer and occupants can easily occur prior to spraying
- Low human-intensity uses as approved by APAC
- The following uses are acceptable within 150 feet of agriculture with a vegetative screen (shelter belt):
- All uses acceptable within 300 feet
- Front yard setbacks
- Hiking, bike, or bridle paths

Agriculture preservation has been integrated into the County's overall land use planning strategy and is a reciprocal beneficiary of many interagency regional land use planning and resource conservation

programs. The principal interagency programs include the Guidelines for Orderly Development, several existing greenbelt agreements between cities and the County, and the various regional water programs.²⁶

Greenbelt Agreements

Nine of Ventura County's 10 cities, the Ventura LAFCo, and the County have adopted greenbelt agreements between jurisdictions to further the objectives of the County's Guidelines for Orderly Development by preserving agriculture and open space between urban areas. The underlying purpose of a greenbelt is to establish a mutual agreement between cities regarding the limit of urban growth for each city. Annexation is discouraged within a greenbelt. Any change to those boundaries would require mutual consent between the cities and LAFCo. LAFCo will not approve a proposal from a city that is in conflict with any greenbelt agreements unless exceptional circumstances are shown to exist.²⁷

Santa Paula has a greenbelt agreement with the neighboring Santa Clara River Valley cities of Ventura and Fillmore. As previously mentioned, the Santa Paula–Ventura Greenbelt—the first greenbelt in Ventura County—was adopted in 1967 to maintain the land generally between the Franklin Barranca and Adams Barranca in agricultural production. However, no northern or southern boundaries were established under this agreement. In accordance with Ventura County Ordinance No. 4338 (adopted February 2006), the amended boundaries of the Santa Paula–Ventura Greenbelt consist of approximately 27,884 acres of unincorporated territory. The greenbelt is bound on the north and south by the Areas of Interest boundaries for the Cities of Ventura and Santa Paula; on the east by the City of Santa Paula's SOI and parcel lines; and on the west by the City of Ventura's SOI and the eastern boundary of the Hillside Voter Participation Area, and parcel lines.²⁸ To ensure consistency, these greenbelt boundaries would be adjusted accordingly in the event of any approved expansions or reductions of the City of Santa Paula or City of Ventura SOIs.²⁹

Ventura Local Agency Formation Commission

The Ventura LAFCo was formed and operates under the provisions of state law, specifically what is now known as the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code Section 56000 et seq.).³⁰ State law provides for LAFCOs to be formed as independent agencies in each county in California. LAFCOs implement state law requirements and state and local policies relating to boundary changes for cities and most special districts, including SOIs; incorporations;

26 Ventura County, Agricultural Commissioner, Agricultural/Urban Buffer Policy, revised July 19, 2006.

27 Ventura Local Agency Formation Commission, "Commissioner's Handbook: Policies of the Ventura LAFCo" (November 2013).

28 Ventura County Board of Supervisors, Ordinance No. 4338 (February 2006).

29 Ventura County Board of Supervisors, Ordinance No. 4338 (February 2006).

30 Ventura Local Agency Formation Commission, "About Us" (2014). <http://www.ventura.lafco.ca.gov/about-us/>.

annexations; reorganizations; and other changes of organization. In this capacity, the Ventura LAFCo is the boundary agency for cities and most special districts in Ventura County.

LAFCo will approve a proposal for a change of organization or reorganization which is likely to result in the conversion of prime agricultural or open space land use to other uses only if the Commission finds that the proposal will lead to planned, orderly, and efficient development. A proposal for a change of organization or reorganization leads to planned, orderly, and efficient development only if all the following criteria are met:³¹

- (a) The territory involved is contiguous to either lands developed with an urban use or lands that have received all discretionary approvals for urban development.
- (b) The territory is likely to be developed within 5 years and has been rezoned for nonagricultural or open space use. In the case of very large developments, annexation should be phased wherever possible.
- (c) Insufficient nonprime agricultural or vacant land exists within the existing boundaries of the agency that is planned and developable for the same general type of use.
- (d) The territory involved is not subject to voter approval for the extension of services or for changing general plan land use designations. Where such voter approval is required by local ordinance, such voter approval must be obtained prior to LAFCo action on any proposal unless exceptional circumstances are shown to exist.
- (e) The proposal will have no significant adverse effects on the physical and economic integrity of other prime agricultural or open space lands.

4.2.2.3 City of Santa Paula

General Plan

The Conservation and Open Space Element³² notes that agriculture has historically been important to the economy of Santa Paula, and this importance continues today. As the area urbanizes, commercial agriculture is very slowly being replaced by other land uses. The presence of prime agricultural soils in the planning area is a natural resource that must be conserved to provide opportunities for ongoing and expanded agricultural operations.

The Conservation and Open Space Element³³ provides the following goals, objectives, and policies that are applicable to agricultural lands within the Project area:

31 Ventura Local Agency Formation Commission, "Commissioner's Handbook: Policies of the Ventura LAFCo" (November 2013).

32 Santa Paula General Plan, Conservation and Open Space Element, p. CO-4.

33 Santa Paula General Plan, Conservation and Open Space Element, p. CO-45.

Agriculture and Soils

Goals

- Goal 3.1 Preserve and protect viable agricultural lands and operations within the City and the expansion areas.
- Goal 3.2 Development should be compatible with and have minimal adverse impacts upon agriculture and natural resources and should not be wasteful of scarce land.
- Goal 3.3 Urban expansion should be directed away from the most productive agricultural areas.

Objectives

- Objective 3(a) Encourage low-intensity land uses and/or barriers near agricultural lands.
- Objective 3(b) Encourage the use of land for agricultural operations.
- Objective 3(c) Include areas for agriculture in the City's land use plan.

Policies

- Policy 3.a.a Preserve viable agriculture and prime agricultural lands as a greenbelt and buffer around the City.
- Policy 3.b.b Erosion of soils should be controlled and prevented during agricultural use, during storms and especially during the construction phase of new development.
- Policy 3.c.c Develop a transfer of development rights program that provides for easements for the preservation of agricultural land areas within the City's Area of Interest.

4.2.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the CEQA Guidelines (Environmental Checklist Form) lists the following thresholds under which a project may be deemed to have a significant impact on agricultural resources if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
- Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- Result in the loss of forestland or conversion of forestland to non-forest use?
- Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?

4.2.4 PROJECT IMPACTS

Threshold: **Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

The City of Santa Paula follows the CDC's FMMP in identifying the conversion of state-defined prime soils and soils of statewide importance as an impact to agricultural resources. The FMMP Important Farmland Map for Ventura County identifies a total of 44.20 acres of prime farmland and 4.88 acres of farmland of statewide importance on the site (total of 49.08 acres). The Project Site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land, and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. Other areas contain the agricultural ancillary uses, such as packing facilities and equipment storage and maintenance yards, and are designated as developed.

Implementation of the Specific Plan would result in the conversion of the 49.08 acres of both prime farmland and important farmland to urbanized uses.

The loss of 49.08 acres of farmlands is considered a significant and unavoidable impact.

Threshold: **Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

The County zoning designation for the Project area is Agricultural Exclusive (A-E) Urban Reserve for land currently in agricultural use. The Specific Plan area would be zoned Commercial/Light Industrial and Light Industrial in accordance with the Specific Plan's Zoning Implementation Plan and consistent with the City's Municipal Code for these designations. The development of a variety of manufacturing, research and development, office, and commercial uses that would be allowed under the Specific Plan would be

compatible with the proposed City's General Plan designations. There are no Williamson Act contracts preserving agricultural that govern any parcels within the Project area.

The Project does not include any new residential dwellings or outdoor public activities that would be directly adjacent to ongoing agricultural activities, or would front on active agricultural uses. Additionally, Adams Barranca, which contains steep slopes and a thicket of vegetation, provides a separation buffer between land containing agricultural land use and zoning designations to the west and the Project allowed light industrial and commercial uses.

The Project would not conflict with existing land use and zoning designations and would provide appropriate buffers to the west along the Adams Barranca along the Santa Paula/San Buenaventura Greenbelt. Therefore, potential impacts related to consistency with zoning and Williamson Act contracts would be less than significant.

Threshold: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Forest land is defined as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.

"Timberland" is defined as land, other than land owned by the federal government and land designed by the board as experimental forest land, that is available for and capable of growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species must be determined by the board on a district basis.

"Timberland production zone" (TPZ) is defined as an area that has been zoned pursuant to Government Code Section 51112 or Section 51113³⁴ and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in Government Code Section 51104(h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone."

34 Government Code, ch. 6.7, Timberland, sec. 51112 and 51113.

The Project Site would be zoned C/LI (Commercial Light Industrial) and LI (Light Industrial) for areas that would be developed under the Specific Plan. The Adams Barranca and related detention basin used for flood control would be preserved with an Open Space/Passive zoning designation.

The Project Site is not zoned as forestland or timberland, and there is no timberland production within the vicinity of the Proposed Project. Therefore, there would be no impacts related to timberland.

Threshold: Result in the loss of forestland or conversion of forestland to non- forest use?

As described previously, the Project does not include any loss of forestland or conversion of such forestland to any other designations. No impacts would occur.

Threshold: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?

On-Site Agriculture

As stated previously, approximately 49 acres of the 54-acre Project Site are under agricultural cultivation and would be taken out of production as a result of implementation of the Specific Plan. This includes approximately 9.2 acres of avocados, 12.3 acres of herbs, and 27.5 acres of other miscellaneous row crops. These areas would be developed with an office/industrial/business park that includes a variety of manufacturing, research and development, professional office, and limited commercial uses. Development under the Specific Plan would result in the loss of 49 acres of land currently under agricultural cultivation, of which 44 acres consists of prime farmland, and approximately 5 acres consists of farmland of statewide importance. This farmland conversion is considered a significant and unavoidable impact.

Adjacent Agriculture

As stated previously, existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of State Route (SR) 126, and near the western boundary of the Specific Plan area, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126. SR 126 includes a transportation corridor that is approximately 160 feet wide and is raised above the existing grades of the Project Site and agricultural land to the south. There is no land use connectivity between the Project Site and these agricultural lands. Furthermore, portions the agricultural lands south of SR 126 are also within the City's CURB and the West Area 2 Expansion area, which would allow for future planning for similar light industrial uses as would occur under the Santa Paula West Specific Plan.

The Santa Paula/San Buenaventura Greenbelt, which consists predominantly of Agriculture land, is located to the west of the Project area outside of the existing City limits. At the interface of the Project and this greenbelt, the Specific Plan Open Space designation of 3.8 acres includes a linear open space area along the west boundary that would be used as a greenway for biological protection, passive recreation, and flood control. In addition, a vegetative screen, based on standards established by the Agricultural Commissioner's County of Ventura Agricultural/Urban Buffer Policy (as revised on July 19, 2006), will be implemented as part of the Specific Plan to further separate the Specific Plan development from the agricultural uses to the west. The Project does not include any new residential dwellings or outdoor public activities that would be directly adjacent to ongoing agricultural activities, nor would it front on active agricultural uses. This separation would reduce the potential for incidents of vandalism, pilferage, trespassing, and complaints against standard legal agricultural practices to adjacent agricultural uses. Furthermore, the light industrial and commercial uses that serve the light industrial facilities are not considered sensitive uses as the occupants would be within enclosed structures and typically on-site during working hours only. The Specific Plan would not readily accommodate outdoor recreational activities for the general public or provide residential habitation components. As such, residents and general public exposure to dust, noise, and odors associated with nearby farming activities is considered less than significant. Therefore, based on the nature of the Project and design features to reduce any conflicts with adjacent agricultural land, potential impacts related to the conversion of off-site farmland to nonagricultural uses would be less than significant.

4.2.5 CUMULATIVE IMPACTS

Cumulative and growth-inducing impacts will likely result from the conversion of farmland to urban uses countywide as the increase in the number of dwelling units, population, and employment continues to 2020. Within the unincorporated area of Ventura County, any project that would result in the direct and/or indirect loss of agricultural soils is considered as having a contribution to a significant cumulative impact. Although the Ventura County General Plan contains policies and programs that serve to partially mitigate the cumulative impact, the impact cannot be reduced to a less than significant level. Therefore, the loss of prime farmland within the Project area and within Ventura County is considered a significant and unavoidable impact.

Implementation of the Project would reduce avocado, herb, and row crop production locally and within the County. The loss of approximately 49.08 acres would represent a fraction of a percent of the 93,376 acres of agricultural land harvested in the County in 2014. Of the 23,012 acres of avocado and cilantro harvested in the County in 2014, the Project would represent approximately 0.20 percent. However, the Project would contribute to the conversion of agricultural lands in the County to nonagricultural uses.

Implementation of the General Plan would result in a long-term commitment to nonagricultural uses in areas that currently support prime soils, particularly within the flatland expansion areas (West Area 2 and East Area 2). Since developed or proposed land uses within the expansion areas would occur over most prime and statewide important farmland, it is assumed that all prime soils within these areas could be impacted or rendered infeasible for further agricultural production. The loss of high-quality agricultural soils, while only a small percentage of the total prime and statewide importance agricultural land in Ventura County, is considered both individually and cumulatively significant.

4.2.6 MITIGATION MEASURES

The City of Santa Paula does not propose to require implementation of agricultural mitigation for projects within the Santa Paula West Business Park Area. This determination is made based on the following reasons:

1. The City of Santa Paula recognized the loss of this agricultural land with the designation of the site for development in the General Plan. The Project Site is identified in the General Plan as a part of the West Area 2 Expansion Area. The City's General Plan Land Use Element currently designates the Project Site for Mixed-Use Commercial/Light Industrial uses.
2. The preservation of other existing agricultural land through purchase of conservation easements does not mitigate the loss of the land in question. The only way to mitigate the loss would be to preserve the land in question by preventing development.
3. The City has neither an established program under which agricultural mitigation fees could be collected and dispersed nor any policy to require such a program.
4. The cost of such agricultural mitigation is not considered economically feasible. This impact has been found to be significant and unavoidable, and a statement of overriding considerations will be adopted for approval of the Project.

4.2.7 RESIDUAL IMPACTS AFTER MITIGATION

Implementation of the Santa Paula West Specific Plan would result in the conversion of Prime Farmland and Important Farmland, and cultivated farmland. The conversion of these lands cannot be fully mitigated with conservation elsewhere and would result in significant and unavoidable adverse impacts to agricultural resources. Other agricultural impacts would be less than significant.

4.3 AIR QUALITY

This section evaluates potential air quality impacts of the Project. The ambient air quality of the local and regional area is provided along with the federal, state, and local air pollutant standards. Various federal, state, regional, and local programs and regulations related to anticipated air quality impacts are also discussed in this Section. Emission calculations and air quality modeling completed for the Project are contained in **Appendix 4.3, Air Quality and Greenhouse Gas Emissions Model Output**.

4.3.1 EXISTING CONDITIONS

Air Pollutants

Air pollutant emissions within Ventura County are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack at a facility. Area sources are widely distributed and include sources such as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, parking lots, and some consumer products.

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as on road or off road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircrafts, ships, trains, and self-propelled construction equipment.

Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles. The main sources of pollutants near the Project Area include mobile emissions generated from on-road vehicles. Traffic-congested roadways and intersections have the potential to generate localized high levels of carbon monoxide (CO). Localized areas where ambient concentrations exceed state and/or federal standards are termed CO “hotspots.”

The US Environmental Protection Agency (USEPA) is the federal agency responsible for setting the National Ambient Air Quality Standards (NAAQS). The air quality of a region is considered to be in attainment of the NAAQS if the measured ambient air pollutant levels are not exceeded more than once per year, except for ozone, particulate matter (PM10), and fine particulate matter (PM2.5) and those based on annual averages or arithmetic mean. The NAAQS for ozone, PM10, and PM2.5 are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The California Air Resources Board (CARB) is the state agency responsible for setting the California Ambient Air Quality Standards (CAAQS). Air quality of a region is considered to be in attainment of the CAAQS if the measured ambient air pollutant levels for ozone, CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), PM10, PM2.5, and lead are not exceeded, and all other standards are not equaled or exceeded at any time in any consecutive 3-year period.

While volatile organic compounds (VOCs) are not considered to be criteria pollutants, they are widely emitted from land use development projects and participate in photochemical reactions in the atmosphere to form O₃. Therefore, VOCs are relevant to the Project and are of concern in the Air Basin. The criteria air pollutants relative to the Project and of concern in the Air Basin are briefly described as follows:

- **Ozone (O₃).** O₃ is a gas that is formed when VOCs and nitrogen oxides (NO_x), both byproducts of internal combustion engine exhaust and other sources, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- **Volatile organic compounds (VOCs).** VOCs are compounds comprised primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to form secondary air pollutants, including ozone. VOCs are also referred to as reactive organic compounds (ROCs) or reactive organic gases (ROGs). VOCs themselves are not “criteria” pollutants, however, they contribute to the formation of O₃.
- **Nitrogen dioxide (NO₂).** NO₂ is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). NO₂ is also a byproduct of fuel combustion. The principle form of NO_x produced by combustion is NO, but NO reacts quickly to form NO₂, creating the mixture of NO and NO₂ referred to as NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_x is only potentially irritating. NO₂ absorbs blue light, the result of which is a brownish-red cast to the atmosphere and reduced visibility.
- **Carbon monoxide (CO).** CO is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during winter mornings, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, and motor vehicles operating at slow speeds are the primary source of CO in the Air Basin, the highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- **Sulfur dioxide (SO₂).** SO₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO₂ oxidizes in the atmosphere, it forms sulfates (SO₄).
- **Respirable particulate matter (PM₁₀).** PM₁₀ consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM₁₀, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM₁₀ is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.
- **Fine particulate matter (PM_{2.5}).** PM_{2.5} refers to particulate matter that is 2.5 microns or smaller in size. The sources of PM_{2.5} include fuel combustion from automobiles, power plants, wood burning,

industrial processes, and diesel-powered vehicles such as buses and trucks. These fine particles are also formed in the atmosphere when gases such as SO₂, NO_x, and VOCs are transformed in the air by chemical reactions.

- **Lead (Pb).** Pb occurs in the atmosphere as particulate matter. The combustion of leaded gasoline is the primary source of airborne lead in the basin. The use of leaded gasoline is no longer permitted for on-road motor vehicles, so most such combustion emissions are associated with off-road vehicles such as racecars that use leaded gasoline. Other sources of Pb include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.

The NAAQS and CAAQS for each of the monitored pollutants and effects on health are summarized in **Table 4.3-1, Ambient Air Quality Standards.**

**Table 4.3-1
Ambient Air Quality Standards**

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard (CAAQS)	Federal Primary Standard (NAAQS)	
Ozone	0.09 ppm, 1-hour 0.070 ppm, 8-hour	0.075 ppm, 8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage
Nitrogen dioxide	0.18 ppm, 1-hour 0.030 ppm, annual	100 ppb, 1-hour 0.053 ppm, annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Carbon monoxide	20 ppm, 1-hour 9.0 ppm, 8-hour	35 ppm, 1-hour 9 ppm, 8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard (CAAQS)	Federal Primary Standard (NAAQS)	
Sulfur dioxide	0.25 ppm, 1-hour 0.04 ppm, 24-hour	75 ppb, 1-hour 0.14 ppm, 24-hour	Bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Respirable particulate matter	50 µg/m ³ , 24-hour 20 µg/m ³ , annual	150 µg/m ³ , 24-hour 50 µg/m ³ , annual	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature birth
Fine particulate matter	12 µg/m ³ , annual	35 µg/m ³ , 24-hour 15 µg/m ³ , annual	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature birth
Lead	1.5 µg/m ³ , 30-day	0.15 µg/m ³ , 3-month rolling	(a) Learning disabilities; and (b) Impairment of blood formation and nerve conduction
Visibility-reducing particles	In sufficient amount such that the extinction coefficient is greater than 0.23 inverse kilometers at relative humidity less than 70 percent, 8-hour average (10 AM–6 PM)	N/A	Visibility impairment on days when relative humidity is less than 70 percent
Sulfates	25 µg/m ³ , 24-hour	N/A	(a) Decrease in lung function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardiopulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; and (f) Property damage
Hydrogen sulfide	0.03 ppm, 1-hour	None	Odor annoyance
Vinyl chloride	0.01 ppm, 24-hour	None	Known carcinogen

Source: SCAQMD, 2012 Air Quality Management Plan, (2012, Table 2-1, p. 2-3). California Air Resources Board, California Ambient Air Quality Standards (CAAQS), <http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm>.

Notes: µg/m³ = microgram per cubic meter; NAAQS = National Ambient Air Quality Standards; ppm = parts per million by volume.

The EPA and CARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered

“unclassified.” Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The status of the Ventura County portion of the Air Basin pertaining to NAAQS attainment is summarized in **Table 4.3-2, National Ambient Air Quality Standard Designations—Ventura County.**

**Table 4.3-2
National Ambient Air Quality Standard Designations—Ventura County**

Pollutant	Designation/Classification
Ozone 8-hour (O3)	Nonattainment
Carbon monoxide (CO)	Unclassified/Attainment
Nitrogen dioxide (NO2)	Unclassified/Attainment
Sulfur dioxide (SO2)	Attainment
Respirable particulate matter (PM10)	Unclassified
Fine particulate matter (PM2.5)	Unclassified/Attainment
Lead (Pb)	Unclassified/Attainment

Source: USEPA, “Region 9: Air Programs, Air Quality Maps,” (December 2015), <https://www3.epa.gov/region9/air/maps/>.

The status of the Air Basin pertaining to attainment with the CAAQS is summarized in **Table 4.3-3, California Ambient Air Quality Standards Designations—Ventura County.**

**Table 4.3-3
California Ambient Air Quality Standard Designations – Ventura County**

Pollutant	Designation/Classification
Ozone (O3)	Nonattainment
Carbon monoxide (CO)	Attainment
Nitrogen dioxide (NO2)	Attainment
Sulfur dioxide (SO2)	Attainment
Respirable particulate matter (PM10)	Nonattainment
Fine particulate matter (PM2.5)	Attainment
Lead (Pb)	Attainment
Sulfates (SO4)	Attainment
Hydrogen sulfide (H2S)	Unclassified
Visibility-reducing particles	Unclassified

Source: California Air Resources Board, “Area Designations Maps/State and National” (December 2015), <https://www3.epa.gov/region9/air/maps/>.

Ambient air quality is determined by the type and amount of pollutants emitted into the atmosphere, as well as the size, topography, and meteorological conditions of a geographic area. The South Central Coast Air Basin (“Basin”) has low mixing heights and light winds, which help to accumulate air pollutants. The average daily emissions inventory for the entire Basin and the Ventura County portion of the Basin is summarized in **Table 4.3-4, Regional Average Emissions in 2012**. As shown, exhaust emissions from mobile sources generate the majority of ROG, oxides and nitrogen (NOx), and CO in Ventura County. Area-wide sources generate the most airborne particulates (i.e., PM10 and PM2.5).

**Table 4.3-4
Regional Average Emissions in 2012**

Emissions Source	Emissions in Tons per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Ventura County						
Stationary Sources	6.8	3.4	2.1	0.2	0.6	0.4
Area-wide Sources	10.9	14.4	1.4	0.1	13.4	3.8
Mobile Sources	15.4	124.0	26.3	0.3	2.2	1.5
Natural Sources	40.4	150.6	2.3	1.2	15.2	12.9
Total Emissions	73.5	292.4	32.2	1.8	31.3	18.5
South Central Coast Air Basin						
Stationary Sources	19.2	12.0	8.4	1.5	2.0	1.1
Area-wide Sources	26.9	31.8	3.1	0.1	36.9	9.0
Mobile Sources	31.1	285.0	59.1	0.5	4.4	2.9
Total Emissions	77.1	328.8	70.6	2.2	43.3	13.0

Source: California Air Resources Board, Published 2013, www.arb.ca.gov/app/emsinv/emseic1_query.php.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOX = sulfur oxide.

Measurements of ambient concentrations of the criteria pollutants are used by the USEPA and the CARB to assess and classify the air quality of each regional air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national and state standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in “attainment” for that pollutant. If the pollutant concentration meets or exceeds the standard (depending on the specific standard for the individual pollutants), the area is classified as being in

“nonattainment.”¹ If not enough data is available to determine whether the standard is exceeded in an area, the area is designated “unclassified.”

The USEPA and the CARB use different standards for determining whether an air basin or county is an attainment area. Under national standards, Ventura County is currently classified as nonattainment area for 8-hour ozone concentrations. Ventura County is in attainment or designated as unclassified for all other pollutants under national standards. Under state standards, Ventura County is designated as a nonattainment area for ozone (O3) and PM10, and an attainment area for all other pollutants.

Existing Local Air Quality

The Ventura County Air Pollution Control District (VCAPCD) monitors ambient air pollutant concentrations through a series of monitoring stations located throughout the County. These stations are located in Thousand Oaks, El Rio, San Buenaventura (two stations), Piru, Ojai, Simi Valley, and on Anacapa Island. In addition, the CARB operated a monitoring station in western Ventura County. The City of Santa Paula is located between El Rio and Piru monitoring stations. The El Rio station measures ambient concentrations of O3, PM10, PM2.5, and NO2. Ambient concentrations of ozone and PM2.5 are measured at the Piru station.

Table 4.3-5, Local Ambient Air Quality—El Rio and Piru Monitoring Stations, identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the El Rio and Piru monitoring stations during the period 2012 through 2014, which the most recent data available from CARB.

1 National Ambient Air Quality Standards (other than ozone, particulate matter, and those based on annual averages or annual mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average above the standard is less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. California Ambient Air Quality Standards for ozone, CO, sulfur dioxide (SO2) (1- and 24-hour), nitrogen dioxide (NO2), PM10, PM2.5, and visibility reducing particles are values that are not to be exceeded. Standards for all other pollutants are not to be equaled or exceeded.

**Table 4.3-5
Local Ambient Air Quality—El Rio and Piru Monitoring Stations**

Pollutant	Standards	Year		
		2012	2013	2014
El Rio Monitoring Station				
Ozone (O3)				
Maximum 1-hour concentration monitored (ppm)		0.082	0.067	0.112
Maximum 8-hour concentration monitored (ppm)		0.065	0.063	0.077
Number of days exceeding state 1-hour standard	0.09 ppm	0	0	1
Number of days exceeding state 8-hour standard	0.070 ppm	0	0	2
Number of days exceeding federal 8-hour standard	0.075 ppm	0	0	1
Nitrogen Dioxide (NO2)				
Maximum 1-hour concentration monitored (ppb)		57.0	40.0	39.0
Annual average concentration monitored (ppb)		7	7	6
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0
Respirable Particulate Matter (PM10)				
Maximum 24-hour concentration monitored ($\mu\text{g}/\text{m}^3$)		56.9	46.7	51.3
Annual average concentration monitored ($\mu\text{g}/\text{m}^3$)		21.0	24.3	*
Number of samples exceeding state standard	50 $\mu\text{g}/\text{m}^3$	0	0	0
Number of samples exceeding federal standard	150 $\mu\text{g}/\text{m}^3$	0	0	0
Fine Particulate Matter (PM2.5)				
Maximum 24-hour concentration monitored ($\mu\text{g}/\text{m}^3$)		30.8	22.2	22.2
Annual average concentration monitored ($\mu\text{g}/\text{m}^3$)		8.7	9.4	9.3
Number of samples exceeding federal standard	35 $\mu\text{g}/\text{m}^3$	0	0	0
Number of samples exceeding state standard	12 $\mu\text{g}/\text{m}^3$	0	0	0
Piru Monitoring Station				
Ozone (O3)				
Maximum 1-hour concentration monitored (ppm)		0.082	0.067	0.112
Maximum 8-hour concentration monitored (ppm)		0.076	0.082	0.082
Number of days exceeding state 1-hour standard	0.09 ppm	0	0	1
Number of days exceeding state 8-hour standard	0.070 ppm	14	3	9
Number of days exceeding federal 8-hour standard	0.075 ppm	1	2	5
Fine Particulate Matter (PM2.5)				
Maximum 24-hour concentration monitored ($\mu\text{g}/\text{m}^3$)		23.8	23.6	23.8
Annual average concentration monitored ($\mu\text{g}/\text{m}^3$)		—	7.5	9.6
Number of samples exceeding federal standard	35 $\mu\text{g}/\text{m}^3$	0	0	0
Number of samples exceeding state standard	12 $\mu\text{g}/\text{m}^3$	0	0	0

Source: California Air Resources Board, Air Quality & Emissions, <http://www.arb.ca.gov/adam/topfour/topfour1.php>

Notes: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air; ppm = parts per million by volume of air.

El Rio station measures ambient concentrations of O3, PM10, PM2.5, and NOx. Piru station measures ambient concentrations of O3 and PM2.5.

*Insufficient data available to determine the value.

Valley Fever

The San Joaquin Valley Fever is an infectious disease caused by the fungus *Coccidioides immitis*. San Joaquin Valley Fever, commonly known as Valley Fever, manifests itself as an infection that enters the body through inhalation of the *Coccidioides immitis* spores that have become airborne when dry, dusty soil or dirt is disturbed by wind, construction farming, or other activities. The Valley Fever fungus tends to be found at the base of hillsides' undisturbed soil. It usually grows in the top few inches of soil, but can grow down to 12 inches. Infection from the fungus is most frequent during summers that follow a rainy winter or spring, especially after wind and dust storms. Valley Fever infection commonly occurs in arid and semiarid areas of the western hemisphere. In Ventura County, the Valley Fever fungus is most prevalent in the County's dry, inland regions.

In its progressive form, Valley Fever may cause a chronic infection of many organs, including the skin, lymph glands, spleen, liver, bones, kidneys, and brain. In its primary form, symptoms appear as a mild upper respiratory infection, acute bronchitis, or pneumonia. The most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. In the remaining 40 percent, symptoms range from mild to severe. Individuals most vulnerable to Valley Fever are agricultural workers, construction and road workers, and archeologists, because they are exposed to the soil where the fungus might be just below the surface.

Sensitive Receptors

Some population groups, such as children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than are others. Sensitive receptors within a 1-mile radius of the Project Site include schools, daycare facilities, recreational parks and places of worship. Sensitive receptors in the vicinity of the Project Site include single-family residences to the north across Telegraph Road, and scattered residences to the immediate west.

Aside from residential units, the following sensitive receptors in the surrounding area were also identified:

Schools

- Blanchard Elementary School, 115 North Pack Road, Santa Paula, 0.46 miles
- Westside Baptist Preschool, 673 West Santa Paula Street, 0.8 miles
- Glen City Elementary School, 141 South Steckel Drive, Santa Paula, 0.89 miles

Daycare Facilities

- Tolley Family Daycare, 15257 West Telegraph Road, Santa Paula, 0.41 miles

Recreational Parks

- Mountain View RV Park, 714 West Harvard Boulevard, Santa Paula, 0.43 miles
- Teague Park, 484 W Harvard Blvd, Santa Paula, 0.74 miles

Places of Worship

- Life Way Baptist Church, 673 West Santa Paula Street, Santa Paula, 0.78 miles
- Church of Christ, 276 West Santa Paula Street, Santa Paula, 1.0 mile

Existing Annexation Area Emissions

The Santa Paula West Business Park Specific Plan (Specific Plan) area is located within the Ventura County LAFCo Sphere of Influence (SOI) for the City of Santa Paula and the City of Santa Paula CURB with frontage along State Route (SR) 126 and Telegraph Road and is bisected by the railroad right-of-way. While it is just west of the Santa Paula City limits (as of 2008), the area is within the City of Santa Paula SOI, and is outside of the Santa Paula – Ventura Greenbelt. Annexation of the Santa Paula West Business Park into the City is planned to occur as part of the Specific Plan approval process.

The Specific Plan area is located west of the City of Fillmore, and east of the City of Buenaventura in the Santa Clara River Valley. It is bound by agriculture to the south, existing industrial and commercial development in the existing City limits to the east, and the Adams Barranca to the west. Regional access to Santa Paula West is provided by SR 126, with local access provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

4.3.2 REGULATORY SETTING

Federal

The USEPA is responsible for the implementation of portions of the Clean Air Act (CAA) of 1970, which regulates certain stationary and mobile sources of air emissions and other requirements. Charged with handling global, international, national, and interstate air pollution issues and policies, the USEPA sets national vehicle and stationary source emission standards, oversees the approval of all state Implementation Plans,² provides research and guidance for air pollution programs, and sets NAAQS.³ NAAQS for the six common air pollutants (ozone, PM10 and PM2.5, NO2, CO, Pb, and SO2) are identified in the CAA.

2 A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain National Ambient Air Quality Standards (NAAQS).

3 The NAAQS were established to protect public health, including that of sensitive individuals; for this reason, the standards continue to change as more medical research becomes available regarding the health effects of the criteria pollutants. The primary NAAQS defines the air quality considered necessary, with an adequate margin of safety, to protect the public health.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA that are most applicable to the Project include Title I, Nonattainment Provisions, and Title II, Mobile Source Provisions.

The NAAQS were also amended in July 1997 to include an 8-hour standard for ozone and to adopt a NAAQS for PM_{2.5}. The NAAQS were amended in September 2006 to include an established methodology for calculating PM_{2.5}, as well as to revoke the annual PM₁₀ threshold. The CAA includes the following deadlines for meeting the NAAQS within the South Coast Air Basin: (1) PM_{2.5} by the year 2014; and (2) 8-hour ozone by the year 2023. Although the deadline for federal 1-hour ozone standard has passed and the South Coast Air Basin has yet to attain those standards, it is continuing to implement the 2007 Air Quality Management Plan (AQMP) to attain these standards as soon as possible.

State

California Air Resources Board

The California CAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. The CARB, a part of the California EPA, is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, the CARB conducts research, sets State ambient air quality standards, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. The CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. **Table 4.3-1** includes the CAAQS currently in effect for each of the criteria pollutants as well as other pollutants recognized by the state. As shown in **Table 4.3-1**, the CAAQS includes more stringent standards than the NAAQS.

The Project Site is located within the SOI and the CURB boundary of the City of Santa Paula with frontage along SR 126, a major east–west route travelled by heavy duty, diesel-fueled vehicles, as well as other motor vehicles, as well as Telegraph Road and is bisected by the railroad right-of-way. Diesel-fueled vehicles are a source of diesel exhaust particulate matter (DPM), which CARB has designated as a toxic air contaminant (TAC). In addition, motor vehicles are a source of other TACs that can contribute to health effects. CARB has determined that health effects are generally elevated near heavily traveled roadways. The CARB *Air Quality and Land Use Handbook* states, “Air pollution studies indicate that living close to high traffic and the associated emissions may lead to adverse health effects beyond those associated with

regional air pollution in urban areas.”⁴ The *Air Quality and Land Use Handbook* cites several studies linking adverse respiratory health effects (e.g., asthma) to proximity to roadways with heavy traffic densities, where the distances between the roadway and the receptors were 300 to 1,000 feet. Other studies suggest that such impacts diminish with distance, and a substantial benefit occurs if the separation distance is greater than 300 to 500 feet.

The *Air Quality and Land Use Handbook*, which is intended to serve as a general reference guide for planning agencies to evaluate and reduce air pollution impacts associated with new projects that go through the land use decision-making process, contains general recommendations that may reduce potential health impacts by establishing a buffer zone or setback between sensitive land uses and sources of TACs. Specifically, with respect to land uses located near freeways and other heavily traveled roadways, CARB recommends that lead agencies avoid citing new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.

Local

Ventura County Air Pollution Control District

The City of Santa Paula is located within the South Central Coast Air Basin (Basin), which includes all of Ventura, Santa Barbara, and San Luis Obispo Counties. The VCAPCD is the agency principally responsible for comprehensive air pollution control in the Ventura County portion of the Basin. To that end, the VCAPCD, a regional agency, works directly with the Southern California Association of Governments (SCAG), the Ventura County Transportation Commission, and local governments, and cooperates actively with all State and federal government agencies. The VCAPCD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

Air Quality Management Plan

The VCAPCD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a series of AQMPs. The most recent of these was adopted by the Governing Board of the VCAPCD in 2008. This AQMP, referred to as the 2007 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high pollutant levels of pollutants in the Basin, to meet federal and state air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. It identifies the control measures that will be implemented to reduce major sources of

4 California EPA, California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, (2005, 8).

pollutants. These planning efforts have substantially decreased the population's exposure to unhealthy levels of pollutants, even while substantial population growth has occurred within the County.

The future air quality levels projected in the 2007 AQMP are based on several assumptions. For example, the VCAPCD assumes that general new development within the County will occur in accordance with population growth and transportation projections identified by County staff.

VCAPCD Rule Rules and Regulations

As stated above, the VCAPCD develops rules and regulations and establishes permitting requirements for specific pollutant sources. These rules and regulations implement the air pollution control strategies of the AQMP. A number of rules, which govern the existing uses within the Santa Paula West site, will also be applicable to the development allowed under the Santa Paula West Business Park Specific Plan. Mainly, VCAPCD Rule 55 for the control of fugitive dust associated with man-made conditions such as disturbed surface areas, bulk material handling, earth moving, construction, demolition, storage piles, unpaved roads, track-out, or off-field agricultural operations. VCAPCD Rule 50, Opacity, and VCAPCD Rule 51, Nuisance, are applicable to emissions generated by construction-related and operational activities. VCAPCD Rules, 50, 51, and 55 are applicable to all development under the Santa Paula West Business Park Specific Plan. Other rules would be applicable to the individual operational sources (such as light industrial use operators) that could occur within the Project Site.

Ventura County Air Quality Assessment Guidelines

Although the VCAPCD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate the air quality issues associated with plans and new development projects within the County. Instead, the VCAPCD has used its expertise and prepared the Ventura County Air Quality Assessment Guidelines to indirectly address these issues in accordance with the projections and programs of the AQMP. The purpose of the Ventura County Air Quality Assessment Guidelines is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties, in evaluating potential air quality impacts of projects and plans proposed in the Basin. Specifically, the Ventura County Air Quality Assessment Guidelines explains the procedures that the VCAPCD recommends be followed during environmental review processes required by CEQA. The Ventura County Air Quality Assessment Guidelines provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The VCAPCD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the County, and adverse impacts will be minimized.

City of Santa Paula

Local jurisdictions, such as the City of Santa Paula, have the authority and responsibility to reduce air pollution through its police powers and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City of Santa Paula is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals.

General Plan

Conservation and Open Space Element

Pursuant to the Government Code, the Santa Paula General Plan Conservation and Open Space Element identified and plans for the open space and natural resources that are available in the Santa Paula planning area and addresses the legal mandates and requirements for natural resources. Air quality is considered a natural resource and goals, objectives, and policies for the protection of air quality are included within the Conservation and Open Space Element.

Municipal Code

The City of Santa Paula Municipal Code (SPMC)⁵ provides regulations to control air emissions by transportation control measures that save vehicle miles driven through alternative modes of transportation that will aid in reducing pollution. This ordinance requires employers of 50 to 99 people to provide information on alternative transportation to work instead of the single occupant vehicle used by most people. Employers of 100 or more workers will have to provide the aforementioned information plus other more substantial measures, such as reserved vanpool spaces, bike lockers, showers, etc.

4.3.3 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines (Environmental Checklist Form), a project may have a significant impact on air quality if it would:

- Conflict with or obstruct implementation of the air quality plan?
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

5 SPMC § 16.108.

- Expose sensitive receptors to substantial pollutant concentrations?
- Create objectionable odors affecting substantial number of people?

In accordance with CEQA and the CEQA review process, the City of Santa Paula assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors, and enforces implementation of such mitigation. However, the City does not have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the City relies upon the expertise of the VCAPCD and utilizes the Ventura County Air Quality Assessment Guidelines as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

The thresholds discussed below are currently recommended by the VCAPCD in the Ventura County Air Quality Assessment Guidelines to translate the State CEQA Guidelines thresholds into numerical values or performance standards.

Criteria to Determine Consistency with the AQMP

For general development projects, the VCAPCD recommends that consistency with the current AQMP be determined by comparing the population generated by the project to the population projections used in the development of the AQMP. Inconsistency with these projections could jeopardize attainment of the air quality conditions projected in the AQMP and is considered a significant impact.

Criteria to Identify a Violation of Air Quality Standards or a Substantial Contribution to an Air Quality Violation

Construction Period Emissions

Construction-related activities are generally short-term in duration, and the VCAPCD does not recommend any thresholds of significance for their associated emissions. Instead, the VCAPCD bases the determination of significance on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by the Ventura County Air Quality Assessment Guidelines are implemented for a project, then construction emissions are not considered significant.

Operational Emissions – Daily Regional Emissions of ROG and NOx

The VCAPCD currently recommends that projects located everywhere in Ventura County outside of the Ojai Planning Area with operational emissions that exceed any of the following emissions thresholds should be considered significant:

- 25.0 pounds per day of ROG
- 25.0 pounds per day of NOx

Criteria to Identify a Cumulatively Considerable Net Increase in Criteria Pollutants

The VCAPCD recommends that any operational emissions from individual projects that exceed the project-specific thresholds of significance identified above be considered cumulatively considerable. These thresholds apply to individual development projects only; they do not apply to the emissions generated by related projects. The VCAPCD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to be used to assess the impacts associated with these emissions.

Criteria to Evaluate the Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

The VCAPCD currently recommends that impacts to sensitive receptors be considered significant when localized CO concentrations at sensitive receptors located near congested intersections exceed the national or state ambient air quality standards. These thresholds would also apply to the contribution of emissions associated with cumulative development.

Toxic Air Contaminants

The VCAPCD significance thresholds for cancer risk is greater than 10 in one million and for noncarcinogenic toxic air pollutants, including chronic (long term) and acute (short term) being greater than 1 in the Hazard Index. Since noncriteria pollutants do not have ambient standards, impacts from TACs may be estimated by conducting a health risk assessment (HRA) to determine if people might be exposed to those types of pollutants at unhealthy levels. The risk assessment process identifies the types and amounts of hazardous substances the project could emit to the environment, estimate worst-case concentrations of project emissions using air dispersion modeling, estimate potential pollutant exposure through inhalation, ingestion, and dermal contact, and characterize potential health risks by comparing worst-case exposure with established significance levels.

San Joaquin Valley Fever

There is no recommended threshold for a significant San Joaquin Valley Fever impact. However, listed below are factors that may indicate a project's potential to create significant Valley Fever impacts:

- Disturbance of the top soil of undeveloped land (to a depth of about 12 inches)
- Dry, alkaline, sandy soils

- Virgin, undisturbed, nonurban areas
- Windy areas
- Archaeological resources probable or known to exist in the area (Native American midden sites)
- Special events (fairs, concerts) and motorized activities (motocross track, all-terrain vehicle activities) on unvegetated soil (nongrass)
- Nonnative population (i.e., out-of-area construction workers)

The lead agency should consider the factors above that are applicable to the project or the project site. The likelihood that the Valley Fever fungus may be present and impact nearby land uses (or the project itself) increases with the number of the above factors applicable to the project or the project site. Based on these or other factors, if a lead agency determines that project activities may create a significant Valley Fever impact, the District recommends that the lead agency consider the “Valley Fever Mitigation Measures,” of the VCAPCD Guidelines. These mitigation measures focus on fugitive dust control to minimize fungal spore entrainment, as well as minimizing worker exposure.

Odors

A qualitative assessment indicating that a project may reasonably be expected to generate odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property (see California Health and Safety Code, Division 26, §41700) will have a significant adverse air quality impact.

4.3.4 PROJECT IMPACTS

Threshold: Conflict with or obstruct implementation of the applicable air quality plan?

The 2007 AQMP, discussed previously, was prepared to reduce the high levels of pollutants within Ventura County, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because there were included in the projections utilized in the formulation of the AQMP.

According to the VCAPCD Guidelines, to be consistent with the AQMP, a project must conform to the local general plan and must not result in or contribute to an exceedance of the City's projected population growth forecast. The proposed Project does not include any new residential uses and would not result in the direct growth of population within the Santa Paula Growth Area.

The VCAPCD's AQMP considers regional population forecasts developed by the Southern California Association of Governments (SCAG). SCAG's most recent population forecast was adopted in 2016 as part of the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. The 2016 SCAG growth forecast projects a SCAG's population projection increase from 29,800 in 2012 to 38,800 by year 2040, and employment increase 7,800 jobs in 2012 to 11,700 jobs by the year 2040.⁶ The proposed Project will not increase the amount of housing within the Specific Plan area because no residences are planned to be built. The project employment increase would be approximately 1,510 employees⁷ and would not result in SCAG projections being exceeded. Therefore, as growth under the Specific Plan is not expected, the Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County. Therefore, impacts regarding consistency with applicable air quality are considered less than significant.

Threshold: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Emissions

The estimated maximum daily emissions during Project construction are listed in **Table 4.3-6, Construction Emissions**. These estimates are based on the expected location, size, and development of the Project. While the project would be developed over a 10-year period, the years modeled represent the worst-case construction years, which would include mass grading and construction of structures on the Project site. The analysis assumes that all the construction equipment and activities would occur continuously over the day and that activities would overlap. In reality, this would not occur, as most

⁶ Southern California Association of Governments, *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

⁷ US Green Building Council, *Building Area Per Employee By Business type*, May 13, 2008, <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>, accessed August 24, 2016.

equipment operates only a fraction of each workday and many of the activities would not overlap on a daily basis.

**Table 4.3-6
Construction Emissions**

Source	Pollutant (pounds/day)					
	ROG	NOx	CO	SOx	PM10	PM2.5
Year 2017						
Unmitigated Maximum	11.59	158.70	118.39	0.26	21.16	13.07
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	No	Yes	—	—	—	—
Mitigated Maximum	6.63	113.66	107.20	0.26	11.59	5.34
Threshold Exceeded?	No	Yes	—	—	—	—
Year 2018						
Unmitigated Maximum	10.64	144.59	112.72	0.26	35.10	13.14
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	No	Yes	—	—	—	—
Mitigated Maximum	6.06	104.78	103.86	0.26	27.45	9.11
Threshold Exceeded?	No	Yes	—	—	—	—
Year 2019						
Unmitigated Maximum	235.41	33.62	42.50	0.08	4.82	2.41
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	Yes	Yes	—	—	—	—
Mitigated Maximum	234.11	24.54	42.78	0.08	4.23	1.91
Threshold Exceeded?	Yes	No	—	—	—	—
Year 2020						
Unmitigated Maximum	235.18	17.01	18.61	0.64	1.55	1.04
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	Yes	No	—	—	—	—
Mitigated Maximum	234.09	12.66	21.16	0.03	1.31	0.86
Threshold Exceeded?	Yes	Yes	—	—	—	—

Source: Refer to Air Quality and Greenhouse Gas Modeling data sheets in **Appendix 4.3**.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOX = sulfur oxide.

As shown in **Table 4.3-6**, construction activities associated with the construction of uses allowed with the Specific Plan would exceed VCAPCD threshold for ROG and NOx throughout the entire construction period. Emissions of ROG are a precursor for the formation of O3. The primary source of ROG emissions is off-gas emissions associated with architectural coating operations. The primary source of NOx, CO, and SOx emissions is from construction equipment exhaust and on-road haul truck trips while the majority of particulate matter emissions would occur as a result of fugitive dust emissions generated during grading and excavation activities. Primary sources of PM10 and PM2.5 emissions would be clearing activities, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth surfaces.

Since construction of the Project will exceed the thresholds for ROG and NO_x, these impacts are considered potentially significant.

Worst Case Construction Emission

The construction emissions analysis was conducted for Year 2020, which was identified as the worst-case year due to the overlapping construction activities of paving and architectural coating. Results of the construction emissions modeling analysis are presented in **Table 4.3-7, Worst-Case Construction Emissions (2020)**. ROG emissions from architectural coating exceeded the significance threshold.

**Table 4.3-7
Worst-Case Construction Emissions (2020)**

Emission Source	Pollutant (pounds/day)					
	ROG	NO _x	CO	SO _x	PM10	PM2.5
Paving						
Maximum	2.61	17.16	14.49	0.02	0.94	0.86
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	No	No	—	—	—	—
Architectural Coating						
Maximum	232.57	2.01	1.85	0.00	0.15	0.15
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	Yes	No	—	—	—	—

Source: Refer to Air Quality and Greenhouse Gas Modeling data sheets in **Appendix 4.3**.

Notes: CO = carbon monoxide; NO_x = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SO_x = sulfur oxide.

Operational Emissions

Operational mobile and area source emissions were calculated using CalEEMod. Mobile source emissions for the increase of daily vehicle trips to and from Project Site were calculated using the trip generation factors specified in the traffic study (**Appendix 4.13**). The model was used to calculate area source emissions from within the light industrial and commercial uses of the Project. Area source emissions would be generated primarily by natural gas combustion by the various land uses of the proposed project. The primary use of natural gas by the proposed land use would be to produce space heating, water heating and other miscellaneous heating, or air conditioning. The area source emissions also take into account the use of gasoline-powered gardening and landscaping equipment for the Project.

The estimated operational emissions are presented in **Table 4.3-8, Operational Emissions**. As shown, the Project would generate average daily operational emissions that exceed the thresholds of significance recommended by the VCAPCD for ROG.

Table 4.3-8
Operational Emissions

Source	Pollutant (pounds/day)					
	ROG	NOx	CO	SOx	PM10	PM2.5
Maximum	29.71	22.93	103.64	0.41	29.44	8.33
VCAPCD threshold	25	25	—	—	—	—
Threshold exceeded?	Yes	No	—	—	—	—

Source: Refer to Air Quality and Greenhouse Gas Modeling data sheets in **Appendix 4.3**.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOX = sulfur oxide.

Many of the measures that the VCAPCD recommends to reduce the significant operational impacts are features of the Project. Most of these measures also address area source and energy source emissions. Mobile and area sources are the primary source of emissions associated with the proposed uses and area source (from generation of energy) are a relatively small component of these emissions.

The off-site transportation demand management (TDM) fund is a mitigation measure that can be used by project proponents for projects and program that exceed the ROG and NOx significance thresholds. This measure applies to commercial, industrial, institutional, and residential projects, and calls for contributing to a city or county mobile source emission reduction fund established specifically to reduce emissions from transportation sources. The amount of funding is commensurate with the amount of emissions that need to be mitigated. Mitigation programs that could be funded through such an off-site TDM fund include (but are not limited to) public transit service, vanpool programs/subsidies, rideshare assistance programs, and off-site TDM facilities. The City of Santa Paula utilizes this program to mitigate the significant air quality impacts of projects with its jurisdiction. While impacts will be reduced with mitigation, they will remain significant and unavoidable.

Threshold: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

According to the VCAPCD, if an individual project results in air emissions of criteria pollutants that exceed VCAPCD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. By applying VCAPCD's cumulative air quality impact methodology, implementation of the Project would result in an increase of ROG, an ozone precursor, and NO_x, such that significant cumulative impacts would occur. Accordingly, cumulative impacts would be potentially significant.

Threshold: Expose sensitive receptors to substantial pollutant concentrations?

Local Carbon Monoxide Hotspots

Motor vehicles are a primary source of pollutants within the Specific Plan area. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO "hotspots." Such hot spots are defined as locations where the ambient CO concentrations exceed the state or federal ambient air quality standards. CO is produced in greatest quantities from vehicle combustion and is usually concentrated at or near ground level because it does not readily disperse into the atmosphere. As a result, potential air quality impacts to sensitive receptors are assessed through an analysis of localized CO concentrations. Areas of vehicle congestion have the potential to create CO hotspots that exceed the state ambient air quality 1-hour standard of 20 ppm or the 8-hour standard of 9 ppm. The federal levels are less stringent than the state standards. Thus, an exceedance condition would occur based on the state standards prior to exceedance of the federal standard.

As provided in **Section 4.13, Transportation and Traffic**, all but one study-area intersection is projected to operate at LOS D or better with the addition of the traffic generated by the Specific Plan. The only intersection that would require further analysis based on VCAPCD standards would be Intersection 10 at Peck Road/SR-126 and On/Off-Ramps/Acacia Way. This intersection is expected to operate at LOS E during the PM peak hour. In addition, this intersection is a freeway ramp and there are no sensitive receptors located within close proximity so as to be affected by vehicle emissions at this intersection. The closest residence is located approximately 200 feet east of the freeway ramp. Consequently, the Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.

Toxic Air Emissions

Construction

An HRA was prepared to determine whether diesel particulate emissions from construction under the Santa Paula West Specific Plan will cause significant impacts to nearby sensitive receptors. PM10 exhaust serves as a surrogate for diesel particulate emissions from off-road construction equipment. Emission estimates and associated construction year were generated from the CalEEMod output data files (provided in **Appendix 4.3**) for the mitigated exhaust PM10 pollutant category. **Table 4.3-9, PM10 Exhaust Emissions by Calendar Year**, lists the maximum daily PM10 exhaust emissions for each calendar year of construction.

Table 4.3-9
PM10 Exhaust Emissions by Calendar Year (pounds)

2017	2018	2019	2020
144.2	290.6	273.8	18.8

Source: Refer to Appendix 4.3

To assess the impact of diesel particulate matter (DPM) emissions on local air quality, dispersion modeling was performed utilizing AERMOD, the preferred regulatory model for simulating near-field Gaussian plume dispersion. The model offers the flexibility of allowing the user to assign initial vertical and lateral dispersion parameters for equipment sources representative of a localized construction fleet. Source treatment outlined in SCAQMD's Localized Significance Threshold methodology was utilized as a guide whereby exhaust emissions from construction equipment were treated as a set of side-by-side elevated volume sources uniformly spaced at 20 meters with a release height of five meters and an initial vertical dimension of 1.4 meters. Meteorological data from the nearby Camarillo Airport Station was used to represent local weather conditions and prevailing winds. To obtain an estimate of chronic exposure, maximum ground level concentrations were produced by incorporating all five years of available data (i.e., 2009–2013). To accommodate a Cartesian grid format, direction dependent calculations were obtained by identifying the universal transverse mercator (UTM) coordinates for each source location. Off-site receptors were uniformly placed along the fence line and at 10- and 50-meter buffers to provide a comprehensive evaluation of the fate and transport of DPM toward sensitive receptor locations.

Carcinogenic

Health risks associated with exposure to carcinogenic compounds can be defined in terms of the probability of developing cancer as a result of exposure to a chemical at a given concentration; the cancer risk is typically expressed in potential excess cancers per million. The Ventura County Air Quality

Assessment Guidelines have established a significance threshold of 10 excess cancers per million for project-level analysis in a health risk assessment (HRA). The California Air Pollution Control Officer's Association (CAPCOA) published a guidance document that provides methodologies that are appropriate for evaluating cancer risks in the context of this HRA.⁸

Carcinogenic risk is estimated using several exposure parameters, including the concentration of the air pollutant, the cancer slope factor, the daily breathing rate, and frequency and duration of exposure. For residential receptors, it is assumed that exposure will occur 350 days per year. As recommended by CAPCOA, a daily breathing rate of 302 L/kg per day was utilized in the cancer risk calculations. Average daily DPM emissions during the 2.55 years of construction were calculated from the CalEEMod output. **Table 4.3-10, Diesel Particulate Carcinogenic Risk** presents the maximum ground-level concentration at the maximum exposed individual receptor (MEIR) location directly west, adjacent to the Project Site, as well as the calculated cancer risk during construction.

**Table 4.3-10
Diesel Particulate Carcinogenic Risk**

Years	Sensitive Receptor		Concentration µg/m ³	Carcinogenic Risk	
	X Location (m)	Y Location (m)		Value	Cancers per Million
2017– 2020	307259.33	3801127.37	0.07455	8.65097E-07	0.87

The carcinogenic risk estimate was predicted to be 8.7×10^{-7} (0.86 in 1 million) at the MEIR location. In comparison to the 10 in 1 million threshold level referenced above, carcinogenic risks do not exceed the level posing no significant risk. Therefore, impacts are less than significant.

Noncarcinogenic

An evaluation of the potential noncarcinogenic effects was also conducted. Under the point estimate approach promulgated in the *Ventura County Air Quality Assessment Guidelines*, adverse health effects are evaluated by comparing the pollutant concentration to its identified Reference Exposure Level (REL). The REL presented in the Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values for diesel particulate was utilized in the assessment. To quantify noncarcinogenic impacts, the hazard index approach was used.

The hazard index assumes that sub threshold exposures adversely affect a specific organ or organ system (i.e., toxicological endpoint). The respiratory endpoint is identified as the only target organ associated

⁸ California Air Pollution Control Officer's Association, *Health Risk Assessments for Proposed Land Use Development Projects* (July 2009).

with diesel particulate exposure. To calculate the hazard index, the pollutant concentration or dose is divided by its toxicity value and summed for compounds affecting the same toxicological endpoint. Where the total equals or exceeds one (i.e., unity), a health hazard is presumed to exist. For chronic exposures, the REL was converted to units expressed in mg/kg/day.

Table 4.3-11, Diesel Particulate Noncarcinogenic Risk present the ground-level concentration at the MEIR, the REL value for DPM, and calculated Hazard Index for chronic noncarcinogenic exposure throughout duration of Project construction.

MEIR Concentration ($\mu\text{g}/\text{m}^3$)	REL($\mu\text{g}/\text{m}^3$)	Chronic Hazard Index
0.07455	5.0	0.015

The Hazard Index calculated for the MEIR during Project construction is 0.015. This value does not exceed the Hazard Index threshold of 1 established by the VCAPCD. Results of the analysis demonstrate that construction of the Project will not generate any significant air quality impacts with regards to emissions of toxic air contaminants.

Valley Fever

Grading will include earth-moving activities during the grading phase that will cut soil and use as fill at the Project site. These activities could be considered conducive to disturbing the *Coccidioides immitis* spores if they are present. The Valley Fever fungus tends to be found at the base of hillsides in undisturbed soil and usually grows in the top few inches of soil. However, due to the historical use of the Project Site for agriculture purposes, involving periodic grading, ripping, excavation, and soil preparation (such as fertilizing) for planning, the soils over most of the Project Site has been disturbed over the top several feet of the soil. Additionally, the fungus is not likely to be found in soil that has been or is being cultivated and fertilized. This is because man-made fertilizers, such as ammonium sulfate, enhance the growth of the natural microbial competitors of the Valley Fever fungus. As such, the likelihood of causing previously undisturbed *Coccidioides immitis* spores to become airborne and cause infection from inhalation is considered minimal.

Furthermore, the construction activities will be required to conform to Rule 403 to control fugitive dust, along with other rules, that will prevent significant dust. Dust control measures are required for all construction activities as standard conditions on grading permits. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a

significant improvement in PM10 control efficiency. However, impacts related to exposure of people of Valley Fever during construction may be potentially significant.

Operations

The uses allowed within Specific Plan area are not anticipated to use hazardous or acutely hazardous materials in appreciable quantities. Any quantifiable stationary source health risks will generally occur within facility boundaries. TACs typically exist at industrial operations or commercial facilities, such as gasoline stations or dry cleaners. However, the airborne release of such TAC emissions from such facilities would be sufficiently small enough. Hazardous substances are regulated under the California Accidental Release Prevention (CalARP) Program. The CalARP Program satisfies the requirements of the Federal Risk Management Plan Program, and contains additional state requirements. The CalARP Program applies to regulated substances in excess of specific quantity thresholds. The majority of the substances have thresholds in the range of 100 to 10,000 pounds. Moreover, significant amounts of hazardous substances will typically be expected at industrial, manufacturing, and complex water or wastewater treatment plant land uses. The uses allowed by the Santa Paula West Business Park Specific Plan do not include any operations that require large amounts of hazardous materials. Accordingly, the Project will not result in a significant impact with respect to use of hazardous materials during long-term operations.

Threshold: Create objectionable odors affecting a substantial number of people?

Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. Commercial and light industrial uses are not typically associated with objectionable odor complaints. Some restaurants may generate odors that nearby residents consider objectionable, but this is largely dependent upon the cooking products that are used, the design of the restaurant ventilation and filtration system, and the sensitivity of the nearby residents. The restaurant kitchen design characteristics are evaluated at the time that the operator of the restaurant is requesting approval of permits from the VCAPCD. The types of industrial activities that would occur with the Project are not known at this time, but would be evaluated at the time that permits to construct and operate are applied for from the APCD. Therefore, the potential impacts associated with objectionable odors will be less than significant.

4.3.5 CUMULATIVE IMPACTS

Cumulative development in the Santa Paula Growth Area is not expected to result in a significant impact in terms of conflicting with or obstructing implementation of the 2007 AQMP. The 2007 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within Ventura County, to return clean air to the region, and to minimize the impact on the economy. Growth considered consistent

with the 2007 AQMP would not interfere with attainment since this growth is included in the projections utilized in the formulation of the AQMP. Consequently, as long as growth in the Santa Paula Growth Area is within the projections for growth identified in the AQMP, implementation of the 2007 AQMP will not be obstructed by such growth. As growth in the Santa Paula Growth Area has not exceeded these projections, this impact would not be cumulatively considerable. Additionally, since the proposed project is consistent with growth projections under the 2007 AQMP, the Project would not have a cumulatively considerable contribution to this impact with respect to conflicting with or obstructing the implementation of the applicable air quality plan.

Cumulative development activity within the City of Santa Paula would continue to implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the city is not expected to cause a significant impact associated with construction activities. Since the proposed project would implement regional mitigation measures during construction, the contribution of the Project to any cumulative air quality impact would not be considerable.

Because Ventura County is currently in nonattainment for ozone, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. With regard to determining the significance of the proposed project contribution, the VCAPCD neither recommends quantified analyses of cumulative operational emissions nor provides methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the VCAPCD recommends that a project's potential contribution to cumulative impacts should be assessed utilizing the same significance criteria as those for project specific impacts. Therefore, this EIR assumes that individual development projects that generate operational emissions that exceed the VCAPCD recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. As discussed previously, operational daily emissions associated with the Project would exceed VCAPCD significance thresholds for ROG and NOx. Therefore, the emissions generated by the Project would be cumulatively considerable and are a significant and unavoidable impact.

4.3.6 MITIGATION MEASURES

The following measures have been identified to mitigate the identified impacts:

Construction Emissions

Grading and Excavation

AQ-1: During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD (including without limitation, to VCAPCD Rule 50 (Opacity) and Rule 51 (Nuisance)):

- On-site vehicle speed shall not to exceed 15 miles per hour (the Project Site will contain posted signs with the speed limit).
- All on-site construction roads with vehicle traffic shall be watered periodically;
- Streets adjacent to the Project reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust.
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day.
- All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust (contact the VCAPCD meteorologist for current information about average wind speeds).
- All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

These control techniques shall be indicated on Project grading plans. The Applicant and/or its contractor shall be responsible for implementing these measures and compliance with this measure will be subject to periodic site inspections by the City.

AQ-2: Project grading plans shall show that for the duration of construction, ozone precursor emissions from construction equipment vehicles must be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications, to the satisfaction of the City Engineer. Compliance with this measure will

be subject to periodic inspections of construction equipment vehicles by the Public Works Department.

AQ-3: All trucks that will haul excavated or graded material on site shall comply with California Vehicle Code Section 23114 with special attention to subsections 2311(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

AQ-4: A comprehensive Fugitive Dust Control Plan shall be developed by the Applicant and approved by the VCAPCD before the applicant commences grading and excavation operations. The Plan shall include all feasible, but environmentally safe, dust control methods. If a particular dust control method is determined or believed not to be feasible, or if it would conflict with other regulations, justification for not including the subject method shall be provided at the time the Fugitive Dust Control Plan is submitted to the VCAPCD. The Plan shall identify all fugitive dust sources, the means by which fugitive dust from each identified source will be minimized, and the schedule of frequency that each dust control method will be applied for each identified source.

Building Construction

AQ-5: The construction contractor shall adhere to VCAPCD Rule 74.2 (Architectural Coatings) for limiting volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements.

Operational Emissions

Area Source Emissions

The Specific Plan would result in significant and unavoidable impacts with regard to ROG. VCAPCD recommends that feasible area source mitigation measures be included in all projects that have been determined to have a significant air quality impact. Consequently, the following measures shall be incorporated or imposed upon the Project.

AQ-6: Use low emission water heaters for residential, retail, and commercial water heating (Emissions reduction of 11 percent for ROG and 9.5 percent for NO_x).

Mobile Source Emissions

AQ-7: Construct pedestrian and transit friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, and bikeways and or lanes. Sidewalks and bikeways should be landscaped with trees (an approximately 4 percent emissions reduction).

AQ-8: Provide shuttle/minibus service between the Project commercial and industrial land uses and the Project retail land uses and the Santa Paula downtown area during the lunchtime period (11:00 AM to 2:00 PM).

Valley Fever

AQ-9: To the extent feasible, construction employees shall be hired from local populations, since it is more likely that they have been previously exposed to the fungus and are therefore immune. An individual is quite likely to be affected by valley fever if he or she lives in an area where the fungus is prevalent. A person (or animal) with a positive test has had a valley fever infection and has developed immunity to the fungus and therefore, will never contract valley fever again.

AQ-10: During periods of high dust in the grading phase, crews must use respirators in accordance with California Department of Occupational Safety and Health regulations.

AQ-11: The operator cab of area grading and construction equipment must be enclosed and air-conditioned.

Long-Term Operations

AQ-12: The Applicant and/or its contractor must plant and maintain shade trees to reduce heat build-up on structures.

AQ-13: The Applicant and/or its contractor shall prepare a TDM for review and approval by the City and VCAPCD, before the City issues building permits. The plan shall incorporate reasonable and feasible measures to reduce Project-related traffic and vehicle miles traveled. At minimum, the TDM Program shall include the following measures:

- Provision of connections to identified adjacent City or regional trails.
- Provision of adequate way-finding features to direct pedestrians and bicyclists to nearby Project and City destinations, such as school, retail, and civic facilities.
- Provision of homeowner information packets prior to close of escrow, identifying local and regional nonvehicular transportation options, and providing homeowners with basic information regarding telecommuting options.
- Provision of adequate setbacks and design features such that the proposed future enhancement of commuter rail opportunities is not hindered by Project design.

- Construction of pedestrian- and transit-friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, bikeways, or lanes. Sidewalks and bikeways should be landscaped with trees.
- Perform a traffic light synchronization study on streets impacted by Project development to reduce vehicle queuing time.

The Project shall offset the increase in daily emission over the 25 pounds of reactive organic compounds and nitrogen oxides per day either through the purchase of emission offsets or through the in-lieu fees shall be paid to fund off-site TDM facilities or services, if such a program has been established at that time. These fees can reduce emissions from non-Project-generated motor vehicle trips by funding programs to promote ridesharing, public transit, and bicycling. The amount of this financial contribution should be calculated on a pro-rate basis as determined to be equitable by the VCAPCD, and in accordance with the VCAPCD Guidelines. These fees should be paid prior to the issuance of building permits by the County. The applicant shall demonstrate the availability of the offsets or contribution to fund off-site TDM services to the VCAPCD through a contract or other agreement with the offset source(s), which binds the reduction to the Project.

AQ-14: The Applicant and/or its contractor shall install EPA-certified wood-burning stoves or fireplace inserts. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor must be utilized or the use of natural gas fireplaces may be used as a feasible alternative.

4.3.7 RESIDUAL IMPACTS AFTER MITIGATION

Impacts related to the consistency with regional plans, such as AQMP, and potential impacts from Valley Fever, are less than significant.

Impacts from the emissions of ROG and NO_x for both construction and operation would still exceed the regional construction emissions thresholds, and impacts at both the Project level and cumulative level will remain significant and unavoidable after mitigation.

4.4 BIOLOGICAL RESOURCES

This section describes the existing biological resources present on the Project Site and assesses the Project's impacts on those resources. The analysis is based on previous regional and area biological studies, the California Natural Diversity Database (CNDDDB), California Native Plant Society Electronic Inventory (CNPS), US Fish & Wildlife Service (USFWS), standard biological literature, field reconnaissance, and focused surveys for sensitive biological resources conducted within the survey area, including identification of jurisdictional drainage features.

4.4.1 EXISTING CONDITIONS

This existing conditions discussion describes the regional setting, Project Site conditions, and the existing and potentially occurring biological resources at the Project Site. Biological resources within the surrounding area are also discussed, when relevant.

Citywide Setting

The natural biological environment within the City of Santa Paula ("City") has generally been highly modified, although some areas still retain significant biological resource value. Much of the region around the City that is available for expansion has not been disturbed by urban development and still supports a diversity of plant and animal life. The canyons and hillsides provide habitats that are distinct from those found in the river valley. The creeks and barrancas that traverse the City lands contribute small, partially natural spaces to urbanized neighborhoods.

The following is a description of the biological communities and species within the City of Santa Paula's Area of Interest—that is, within the City's planning area—that are considered sensitive by recognized resource agencies.

Habitats

Vegetation communities within the planning area include agriculture (primarily citrus and avocado orchards), riparian (Santa Clara River, Santa Paula Creek, and other large drainages), sage scrub (South Mountain and within canyon areas), oak woodland (scattered patches mostly on north-facing slopes at lower elevations) and grassland (primarily grazed lands).

Sensitive habitats that have been reported to occur or have the potential to occur within the planning area are discussed below. The following habitats are considered to be sensitive by the California Department of Fish and Wildlife (CDFW) Natural Diversity Database due to their limited extent and potential for loss:

- southern willow scrub;
- coast live oak riparian forest;
- cottonwood-willow riparian forest; and
- southern walnut woodland.

Southern willow scrub occurs within most intermittent streams and larger drainages such as Santa Paula Creek and the Santa Clara River in locations that are frequently scoured by flood flows. Coast live oak riparian forest occurs in patches along drainages with deep soils and dependable groundwater. Cottonwood-willow riparian forest occurs within Santa Paula Creek and the Santa Clara River (and possibly other larger drainages) in areas of dependable groundwater and less frequent flood scouring. Southern walnut woodland is limited in the planning area to the north-facing slopes along State Route (SR) 150 near Sulfur Springs.

Wildlife

The following summary information, as presented in the Conservation and Open Space Element, is intended to indicate the general habitat preferences of sensitive species that could potentially occur in the Santa Paula vicinity, where suitable habitat is present.

Southern California Steelhead, a federally endangered species, are known to migrate up the Santa Clara River to spawn in Sespe Creek, north of the planning area. Santa Paula Creek historically supported a run of Southern California Steelhead, but channelization of lower Santa Paula Creek and loss of the fish ladder at the Santa Paula diversion site has resulted in the loss of this run.

Other sensitive fish species found in the Santa Clara River include the arroyo chub, which is present throughout the Santa Clara River system, and the Santa Ana sucker, which is limited to the Santa Clara River upstream of Santa Paula. Both of these species were introduced to the Santa Clara River system.

Several sensitive amphibian species have the potential to occur in the Santa Paula area, including the western spadefoot toad, arroyo southwestern toad (a federally endangered species), and the California red-legged frog (a federally threatened species). Suitable California red-legged frog habitat is generally limited to those portions of the Santa Clara River and Santa Paula Creek with dense, shrubby or emergent riparian vegetation closely associated with deep still or slow-moving water. Adult frogs become inactive during the summer (aestivate) when stream flows cease or the creeks dry up. Aestivation habitat may include any landscape feature within 300 feet of riparian habitat, including natural riparian corridors, rocks, downed trees, and thick leaf litter; under structures; and in agricultural features, such as drains, watering troughs, and spring boxes that provide cover and moisture during the dry season.

The southwestern pond turtle is an aquatic reptile that occurs in vegetated, shallow pools within the Santa Clara River and possibly Santa Paula Creek. Other sensitive reptiles include the coast horned lizard, which typically occurs in open areas with sandy, loose soil and abundant ant prey. Horned lizards are most commonly found along drainages and washes.

Many birds of prey (raptors) have experienced population declines associated with the loss of suitable nesting habitat (large trees) due to disturbance by human activity. As a result of the loss of nesting habitat and the notable decreases in population levels, many hawks are listed as sensitive species by the CDFW. The sharp-shinned hawk and northern harrier may forage within the planning area during the winter and during migration, but they are not known to nest in Ventura County.

The loggerhead shrike is a small, predatory bird that prefers open habitats with scattered shrubs, trees, and fences for use as perches. This species feeds primarily on large insects generally found in grasslands, such as grasshoppers. The loss of grasslands and natural perches has resulted in the concentration of loggerhead shrikes along fence lines. This species may occur in the planning area in grasslands and open scrub in the vicinity of fence lines.

The loss of riparian habitats due to channelization for flood control, diversion of water, and conversion to other uses has caused significant declines in the populations of small perching birds that are dependent on riparian habitat for breeding and foraging. The yellow warbler and yellow-breasted chat generally breed in riparian thickets such as southern willow scrub and cottonwood-willow riparian forest. Both of these species have been reported breeding along the Santa Clara River upstream of Santa Paula, and may also breed along Santa Paula Creek, upper Orcutt Canyon, and other larger drainages.

The City's General Plan has historically identified Least Bell's vireo breeds along the Santa Clara River, maintaining about 15 to 20 breeding pairs).¹ This species has been documented to occur in three populations within the planning area: the vicinities of Saticoy Street, Briggs Road, and Timber Canyon Road. However, Least Bell's vireo could be found anywhere along larger rivers and streams within the City's Area of Interest.

Throughout Southern California, the conversion of open grasslands to other uses has led to a decrease in the population of the animals closely associated with this habitat. The San Diego black-tailed jackrabbit prefers open shrub and tree habitats with abundant grasses and forbs. This species could potentially occur within the City's planning area in dense grassy and brushy areas north of Santa Paula and in the vicinity of South Mountain.

1 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998), p. CO-15.

Literature and Database Review

Prior to implementing biological surveys, standard database searches were conducted and reports from previous surveys of the area were reviewed to obtain pertinent information regarding potential special-status species, as well as sensitive natural communities that occur within the Project vicinity. The results of these preliminary database searches provided a basis for addressing the appropriate special-status species within the Project area.

Information about documented special-status plant and animal species that occur within the Project vicinity was obtained from the California Natural Diversity Database (CNDDDB).² The CNDDDB search included the following US Geological Survey (USGS) 7.5-minute quadrangles: Ojai, Santa Paula Peak, Fillmore, Saticoy, Santa Paula, Moorpark, Oxnard, Camarillo, and Newbury Park.

Additional literature and databases referenced include:

- California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California containing species-specific habitat requirements for plant species;³
- *The Jepson Manual: Vascular plants of California*, 2nd ed.;⁴
- A Manual of California Vegetation, 2nd ed.;⁵ and
- eBird website.⁶

Field Surveys

On May 20, 2015, BRC conducted a reconnaissance-level survey of the Project Site and surroundings. The area was methodically surveyed to document the existing conditions, wildlife and plant species present, and plant communities. It is not usually possible to schedule all needed field surveys during the optimum survey period for all the special-status plant and wildlife species known to occur in the region. Therefore, the objective of the field survey was to determine the likelihood of occurrence of any special-status plant or wildlife species based on the presence/absence of suitable habitat and other natural history elements that might predict their occurrence.

The survey conditions and timing of the survey were deemed suitable for determining potential biological constraints for the Project. The biologists recorded all dominant plant species encountered during the

2 California Natural Diversity Database, *Rarefind 5*. Internet. California Department of Fish and Wildlife.

3 California Native Plant Society CNPS. *Inventory of Rare and Endangered Plants of California*, online ed., v8-02. California Native Plant Society, Sacramento, CA. <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed May 2015.

4 Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, eds., *The Jepson Manual: Vascular Plants of California*, 2nd ed. (Berkeley, University of California Press, 2012).

5 Sawyer, J., T. Keeler-Wolf, and J Evens. 2009. *A Manual of California Vegetation*, 2nd ed. (Sacramento: California Native Plant Society).

6 Cornell Lab of Ornithology and National Audubon Society, Inc., *eBird*, <http://ebird.org/content/ebird>. Accessed May 2015.

field surveys. Scientific nomenclature follows the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California.⁷

Surveys for wildlife species included searching for and identifying species' diagnostic signs (i.e., audible calls, prints, scat, nests, skeletal remains, burrows, etc.) and habitat features (i.e., rock or debris piles, cavities, and rock outcrops) that may attract and/or support special-status species. Taxonomy and nomenclature for wildlife for amphibians and reptiles generally follows the *Standard Common & Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians*,⁸ the American Ornithologists Union identification for birds,⁹ and the Revised checklist of North American mammals north of Mexico for mammals.¹⁰

Project Site Conditions

Vegetation Communities and Observed Plants

Vegetation communities were determined by identifying the dominant and codominant plant species. Once the dominant and codominant species were determined, the community boundary was delineated and mapped within the Project area. The delineated boundary was hand-drawn on field maps, and representative GPS coordinates were taken along the boundary to provide reference points for GIS mapping of vegetation community polygons. The vegetation communities were defined to an alliance and association level based on the guidelines within the *Manual of California Vegetation*, second edition.¹¹

The Project Site is characterized as agricultural row crops with occurrences of ornamental planted trees and drainage features. The Project Site lacks the dominance of native plant assemblages it is dominated by ruderal nonnative and native species found within the agricultural fields and on the perimeter of the agricultural fields. Disturbed or developed areas include graded maintained roads and agricultural-related processing facilities, buildings and work areas.

Ornamental planted trees include Brazilian pepper tree (*Schinus terebinthifolius*) and blue gum eucalyptus (*Eucalyptus globulus*).

7 Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California, The Jepson Herbarium, the Jepson Flora Project, http://ucjeps.berkeley.edu/jepson_flora_project.html, accessed June 2015.

8 Collins, Joseph T. and Travis W. Taggart, *Standard Common & Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodylians*, 6th ed. (Lawrence, KS: Center for North American Herpetology, 2009), <http://www.cnah.org/index.asp>.

9 Cornell Lab of Ornithology and the American Ornithologists Union, "The Birds of North America Online," <http://bna.birds.cornell.edu/bna/home/>. Accessed: May 2015.

10 Baker, Robert, et al., *Revised Checklist of North American Mammals North of Mexico* (Lubbock: Museum of Texas Tech University, December 2003).

11 Sawyer, J., T., et al., *A Manual of California Vegetation* (2009).

Adams Barranca is along the western boundary of the Project Site. Adams Barranca is an intermittent drainage characterized as a mixed willow riparian community. An agricultural ditch bisects the Project Area and flows north to south to SR 126.

To identify vegetation communities that would be directly affected by implementation of the Project, the Project's boundary was evaluated and overlain on a map of the vegetation communities within the Project Site. Total existing and affected acreage for each community is provided in **Table 4.4-1, Existing Vegetation Communities**. On-site vegetation communities are shown in **Figure 4.4-1, Existing Vegetation**. In addition, within these vegetation communities numerous individual plant species were observed on the Project Site. Individual Plant species observed are listed in **Table 4.4-2, Plant Species Observed**.

**Table 4.4-1
Existing Vegetation Communities**

Vegetation Communities	Acres
Adams Barranca Mixed Willow Riparian	0.51
Agricultural Avocado Orchard	8.06
Agricultural Ditch	0.18
Agricultural Row Crops	38.46
Developed	6.60
Total	53.81

**Table 4.4-2
Plant Species Observed**

Species Observed Plants (Scientific Name)	Common Name	Family	Native or Nonnative
<i>Ambrosia psilostachya</i> var. <i>californica</i>	Western ragweed	Asteraceae	Native
<i>Anagallis arvensis</i>	Scarlet pimpernel	Myrsinaceae	Nonnative
<i>Arundo donax</i>	Giant cane	Poaceae	Nonnative
<i>Baccharis pilularis</i>	Coyote brush	Asteraceae	Native
<i>Baccharis salicifolia</i>	Mulefat	Asteraceae	Native
<i>Brassica nigra</i>	Black mustard	Brassicaceae	Nonnative
<i>Bromus diandrus</i>	Ripgut grass	Poaceae	Nonnative
<i>Bromus hordeaceus</i>	Soft chess	Poaceae	Nonnative
<i>Bromus rubens</i>	Red brome	Poaceae	Nonnative
<i>Carduus pycnocephalus</i>	Italian thistle	Asteraceae	Nonnative
<i>Centaurea melitensis</i>	Tocalote	Asteraceae	Nonnative
<i>Chenopodium</i> sp.	Goosefoot	Chenopodiaceae	Nonnative
<i>Datura wrightii</i>	Jimsonweed	Solanaceae	Native
<i>Erodium cicutarium</i>	Redstem filaree	Geraniaceae	Nonnative
<i>Eucalyptus globulus</i>	Blue gum eucalyptus	Myrtaceae	Nonnative
<i>Helminthotheca echioide</i>	Bristly ox tongue	Asteraceae	Nonnative
<i>Hirschfeldia incana</i>	Summer mustard	Brassicaceae	Nonnative
<i>Juglans californica</i>	Southern California black walnut	Juglandaceae	Native
<i>Lactuca serriola</i>	Prickly wild lettuce	Asteraceae	Nonnative
<i>Malva parviflora</i>	Cheeseweed	Malvaceae	Nonnative
<i>Marrubium vulgare</i>	Horehound	Lamiaceae	Nonnative
<i>Melilotus albus</i>	White sweet clover	Fabaceae	Nonnative
<i>Nicotiana glauca</i>	Tree tobacco	Solanaceae	Nonnative
<i>Pinus</i> sp.	Pine	Pinaceae	Nonnative
<i>Quercus agrifolia</i>	Coast live oak	Fagaceae	Native
<i>Raphanus sativus</i>	Wild radish	Brassicaceae	Nonnative
<i>Ricinus communis</i>	Castor bean	Euphorbiaceae	Nonnative
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae	Native
<i>Salsola tragus</i>	Russian thistle	Chenopodiaceae	Nonnative
<i>Silybum marianum</i>	Milk thistle	Asteraceae	Nonnative
<i>Schinus molle</i>	Peruvian peppertree	Anacardiaceae	Nonnative
<i>Schinus terebinthifolius</i>	Brazilian peppertree	Anacardiaceae	Nonnative
<i>Sonchus oleraceus</i>	Common sow-thistle	Asteraceae	Nonnative
<i>Tribulus terrestris</i>	Puncture vine	Zygophyllaceae	Nonnative
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae	Native

SPECIAL-STATUS PLANT SPECIES

Using information from the various listed sources and floral and faunal surveys of the area, the potential for special-status species to occur within the Project area was assessed as high, medium, low, or none based on the following criteria:

- High: CNDDDB or other documented occurrences have been recorded within 1 mile of the Project, and suitable habitat is present (suitable nesting or roosting habitat for bird and bat species). Individuals were observed during field surveys, or the species could be present.
- Medium: CNDDDB or other documented occurrences have been recorded within 5 miles of the Project Area and suitable habitat is present (suitable nesting or roosting habitat or high quality foraging areas for bird and bat species). Individuals were not observed during field surveys; however, the species could be present.
- Low: Suitable or marginal habitat may occur in the Project Area, but no CNDDDB records of the species have been recorded within recent years; records of the species within 5 miles of the Project Area are suspected to be now extirpated or potentially misidentified with other species; or individuals were not observed during field surveys and are not anticipated to be present. For bird and bat species, this category may be used for species that are documented, but likely to be only transient through the area during foraging or migratory movements, no suitable nesting or roosting habitat is present.
- None: Suitable habitat not present in the Project Area; no CNDDDB records of the species have been recorded within recent years and individuals were not observed during field surveys.

The results of the records and database review for the potential for special-status species to occur within the Project area are provided in **Table 4.4-3, Special-Status Plant Species**.

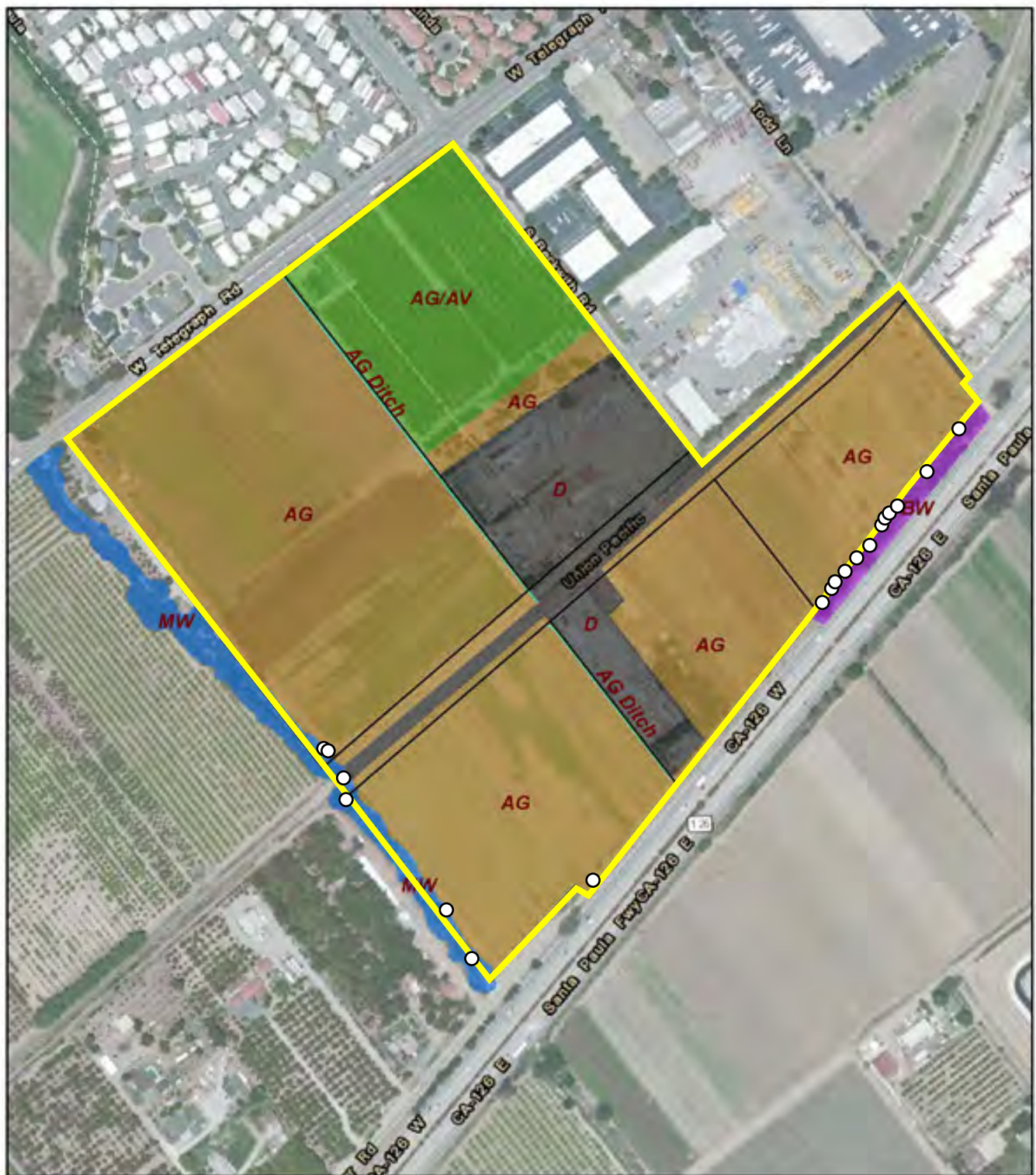
**Table 4.4-3
Special-Status Plant Species**

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Abrams' oxytheca (<i>Acanthoscyphus parishii</i> var. <i>abramsii</i>)	1B.2	Occurs on sandy or shale soils in chaparral habitats at elevations of 1143–2057 meters. Blooming period June–August.	None	Outside of elevation range of species.
Miles' milk vetch (<i>Astragalus didymocarpus</i> var. <i>milesianus</i>)	1B.2	Occurs on clay soils within coastal sage scrub habitats at elevations of 20–90 meters. Blooming period March–June.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Ventura Marsh milk vetch (<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i>)	FE, SE, 1B.2	Occurs in coastal dunes, coastal scrub, and marshes and swamps at elevations of 1–35 meters. Blooming period June–October.	Low	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

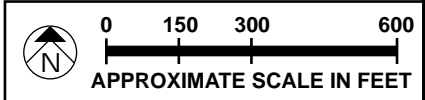
Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Davidson's saltscale (<i>Atriplex serenana</i> var. <i> davidsonii</i>)	1B.2	Occurs in coastal bluff scrub and coastal sage scrub habitats at elevations of 10–200 meters. Blooming period April–October.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Late-blooming mariposa lily (<i>Calochortus fimbriatus</i>)	1B.2	Occurs in chaparral, cismontane woodland, and riparian woodland habitats with serpentine soils at elevations of 275–1905 meters. Blooming period June–August.	None	Outside of elevation range of species.
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	4.2	Occurs in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats with rocky or granitic soils at elevations of 100–1700 meters. Blooming period May–July.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Salt marsh bird's-beak (<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>)	FE, SE, 1B.2	Occurs in coastal dunes, marshes, and swamp habitats at elevations of 0–30 meters. Blooming May–October.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Dune larkspur (<i>Delphinium parryi</i> ssp. <i> blochmaniae</i>)	1B.2	Occurs in maritime chaparral and coastal dune habitats at elevations of 0–200 meters. Blooming period April–June.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Umbrella larkspur (<i>Delphinium</i> <i> umbraculorum</i>)	1B.3	Occurs in chaparral and cismontane woodland habitats at elevations of 400–1600 meters. Blooming period is April–June.	None	Outside of elevation range of species.
Blochman's dudleya (<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>)	1B.1	Occurs in rocky, often clay, or serpentine soils within coastal bluff scrub, chaparral, coastal scrub, and valley and foothill grassland habitats at elevations of 5–450 meters. Blooming period April–June.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Verity's dudleya (<i>Dudleya verity</i>)	FT, 1B.1	Occurs in volcanic, rocky areas within chaparral, cismontane woodland, and coastal scrub habitats at elevations of 60–120 meters. Blooming period May–June.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Conejo buckwheat (<i>Eriogonum crocatum</i>)	SR, 1B.2	Occurs in Conejo volcanic outcrops within chaparral, coastal scrub, and valley and foothill grassland habitats at elevations of 50–580 meters. Blooming period April–July.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Ojai fritillary (<i>Fritillaria ojaiensis</i>)	1B.2	Occurs in rocky areas of broadleaved forest, chaparral, and cismontane woodland habitats at elevations 225–998 meters. Blooming period February–May.	None	Outside of elevation range of species.
mesa horkelia (<i>Horkelia cuneata</i> var. <i>puberula</i>)	1B.1	Occurs in sandy or gravelly areas of maritime chaparral, cismontane woodland, and coastal scrub at elevations of 70–810 meters. Blooming period February–September.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
California black walnut (<i>Juglans californica</i>)	4.2	Occurs in a variety of habitats including riparian, chaparral, and coastal sage scrub.	High	Observed within the Project area.
Coulter’s goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	1B.1	Occurs in coastal marshes and swamps, playas, and vernal pool habitats at elevations of 1–1,220 meters. Blooming period February–June.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Ross’ pitcher sage (<i>Lepechinia rossii</i>)	1B.2	Occurs in chaparral habitats at elevations of 305–790 meters. Blooming period May–September.	None	Outside of elevation range of species.
Robinson’s pepper-grass (<i>Lepidium virginicum</i> var. <i>robinsonii</i>)	4.3	Occurs in chaparral and coastal scrub habitats at elevations of 1–885 meters. Blooming period January–July	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Mexican malacothrix (<i>Malacothrix similis</i>)	1A	Occurs in coastal dune habitats at elevations of 0–40 meters. Blooming period April–May.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
White-veined monardella (<i>Monardella hypoleuca</i> ssp. <i>hypoleuca</i>)	1B.3	Occurs in chaparral and cismontane woodland habitats at elevations of 50–1525 meters. Blooming period April–December.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Southern curly-leaved monardella (<i>Monardella sinuata</i> ssp. <i>sinuata</i>)	1B.2	Occurs in sandy soils within chaparral, cismontane woodland, coastal dunes, and coastal scrub habitats. Blooming period April–September.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Ojai navarretia (<i>Navarretia ojaiensis</i>)	1B.1	Occurs in openings of chaparral, coastal scrub, and valley and foothill grassland habitats at elevations of 275–620 meters. Blooming period May–July.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Chaparral ragwort (<i>Senecio aphanactis</i>)	2B.2	Occurs in chaparral, cismontane woodland, and coastal scrub habitats at elevations of 15–800 meters. Blooming period January–April.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Woven-spored lichen (<i>Texosporium sancti-jacobi</i>)	3	Occurs on soil, small mammal pellets, and dead twigs, and on <i>Selaginella</i> spp. within chaparral openings.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.



- Adams Barranca Mixed Willow Riparian [MW] (2.76 Acres)
- Agricultural Avocado Orchard [AG/AV] (8.06 Acres)
- Agricultural Ditch [AG Ditch] (0.18 Acres)
- Agriculture [AG] (39.96 Acres)
- Developed [D] (8.82 Acres)
- Offsite Southern California Black Walnut [BW] (0.79 Acres) Community
- Individual Black Walnut Trees (19)
- Parcel Boundaries
- Project Boundary



SOURCE: BioResource Consultants, Inc. – June 2015

FIGURE 4.4-1

Several special-status plant species are documented to occur in the vicinity of the Project Site. Only one special-status plant species, Southern California black walnut (*Juglans californica*) was documented or determined to have a high likelihood of occurring within the Project Site. The species is found in the CNPS 4.2 Listing.

Southern California black walnut is a perennial deciduous tree. It is found in a variety of habitats including mixed woodlands, riparian and on slopes where conditions are favorable. This species generally blooms between March and August.

This species was observed within Adams Barranca and just off site in the southeastern section of the Project area, immediately adjacent to SR 126.

Wildlife Species

During field spring surveys conducted in 2015, field biologists observed the presence of wildlife and documented observations. The wildlife was either observed within the Project Site boundaries or flying overhead, as is the case with birds. A summary of all wildlife documented during field surveys is provided in **Table 4.4-4, Wildlife Species Observed**.

**Table 4.4-4
Wildlife Species Observed**

Scientific Name	Common Name
Reptiles	
<i>Sceloporus occidentalis bocourtii</i>	Coast range fence lizard
Birds	
<i>Cathartes aura</i>	Turkey vulture
<i>Charadrius vociferus</i>	Killdeer
<i>Columba livia</i>	Rock pigeon
<i>Streptopelia decaocto</i>	Eurasian collared-dove
<i>Zenaida macroura</i>	Mourning dove
<i>Calypte anna</i>	Anna's hummingbird
<i>Picoides pubescens</i>	Downy woodpecker
<i>Empidonax difficilis</i>	Pacific-slope flycatcher
<i>Sayornis nigricans</i>	Black phoebe
<i>Tyrannus verticalis</i>	Western kingbird
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	Common raven
<i>Hirundo rustica</i>	Barn swallow
<i>Petrochelidon pyrrhonota</i>	Cliff swallow
<i>Tachycineta bicolor</i>	Tree swallow
<i>Psaltriparus minimus</i>	Bushtit

Scientific Name	Common Name
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Bombycilla cedrorum</i>	Cedar waxwing
<i>Sturnus vulgaris</i>	European starling
<i>Cardellina pusilla</i>	Wilson's warbler
<i>Oreothlypis celata</i>	Orange-crowned warbler
<i>Melospiza crissalis</i>	California towhee
<i>Pipilo maculatus</i>	Spotted towhee
<i>Melospiza melodia</i>	Song sparrow
<i>Icterus bullockii</i>	Bullock's oriole
<i>Haemorhous mexicanus</i>	House finch
<i>Spinus psaltria</i>	Lesser goldfinch
<i>Spinus tristis</i>	American goldfinch
<i>Passer domesticus</i>	House sparrow
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
<i>Sylvilagus bachmani</i>	Brush rabbit
<i>Thomomys bottae</i>	Botta's pocket gopher

Special-Status Wildlife Species

Sensitive wildlife species known to occur in the region that could potentially occur on site or in the vicinity are summarized below in **Table 4.4-3, Special-Status Wildlife Species**. Review of the CNDDDB included all recorded species occurrences within the 7.5-minute USGS quadrangle map for the Project Site (Santa Paula) and the surrounding eight quadrangle maps. Based on the database search, a total of 39 special-status wildlife species have been documented in the region.

Sensitive wildlife species known to occur in the region including the Project Site are summarized below in **Table 4.4-5, Special-Status Wildlife Species**.

**Table 4.4-5
Special-Status Wildlife Species**

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Invertebrates				
Sandy beach tiger beetle (<i>Cicindela hirticollis gravida</i>)	None	Sand-colored beetle that occurs on sandy beaches.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Globose dune beetle (<i>Coelus globosus</i>)	None	Occurs within the California coastal dune system.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
monarch—California overwintering population (<i>Danaus plexippus</i> pop. 1)	None	Winter roosts found in wind-protected groves of eucalyptus, Monterrey pine, and cypress with sources of water and nectar nearby. Winter roosts are protected by CDFW.	Low	No winter roost sites were documented within the Project Area.
Santa Monica grasshopper (<i>Trimerotropis occidentiloides</i>)	None	Only known from the Santa Monica Mountains.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Mimic tryonia (California brackish water snail) (<i>Tryonia imitator</i>)	None	Occurs in brackish marsh and estuarine habitats.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Fish				
Santa Ana sucker (<i>Catostomus santaanae</i>)	FT	Habitat generalists but prefer gravel/ rubble/boulder river bottoms with cool, clear flowing water and algae.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Tidewater goby (<i>Eucyclogobius newberryi</i>)	FE,	Occurs within brackish lagoons of streams along the coast of California.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Unarmored threespine stickleback (<i>Gasterosteus aculeatus williamsoni</i>)	FE, SE	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Arroyo chub (<i>Gila orcuttii</i>)	None	Slow-water stream sections with mud or sand bottoms. They feed heavily on aquatic vegetation and associated invertebrates.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Southern Steelhead—Southern California DPS (<i>Oncorhynchus mykiss irideus</i>)	FE	Spawn in freshwater streams and rivers; adapted to seasonally dry streams in Southern California.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Amphibians				
Foothill yellow-legged frog (<i>Rana boylei</i>)	SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Western spadefoot (<i>Spea hammondi</i>)	SSC	Occurs primarily in grassland, scrub, and chaparral habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Reptiles				
Silvery legless lizard (<i>Anniella pulchra pulchra</i>)	SSC	Sandy or loose, loamy soils with moisture content under sparse vegetation in live oak woodland.	Low	Potentially suitable habitat present. No CNDDDB occurrences near the Project site.
Coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	None	Found in a variety of habitats, primarily hot and dry open areas with sparse foliage in chaparral, woodland, and riparian areas.	Low	Potentially suitable habitat present. No CNDDDB occurrences near the Project site.
Western pond turtle (<i>Emys marmorata</i>)	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation. Suitable upland habitat and basking areas are needed.	Low	Potentially suitable habitat present, and occurrences near the Project site.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	SSC	Uses a wide variety of habitats, including coastal sage scrub. Most common along sandy washes with friable soils and scattered low bushes.	Low	Marginally suitable habitat and CNDDDB records in vicinity of Project.
Two-striped garter snake (<i>Thamnophis hammondi</i>)	SSC	Highly aquatic; found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	Low	Potentially suitable habitat present, and occurrences near the Project site.
South coast garter snake (<i>Thamnophis sirtalis</i> ssp.)	SSC	Marsh and upland habitats near permanent water with good strips of riparian vegetation in the Southern California coastal plain, from sea level to about 2,800 feet.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Birds				
Golden eagle (<i>Aquila chrysaetos</i>)	CDFW: FP	Uses rolling foothills and mountain terrain; wide arid plateaus deeply cut by streams and canyons; open mountain slopes; and cliffs and rock outcrops.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Burrowing owl (<i>Athene cunicularia</i>)	SSC	Found mainly in grassland and open scrub from the seashore to foothills. Strongly associated with ground squirrel burrows.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	FT, SSC	In fall and winter, common on sandy marine and estuarine shores. Nests locally in these habitats from April through August, but the major nesting habitat now appears to be on salt pond levees.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FT, SE	Riparian forest nester; found along the broad, lower flood-bottoms of larger river systems.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
White-tailed kite (<i>Elanus leucurus</i>)	CDFW: FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Low	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	FE, SE	Breeds in dense riparian habitats along rivers, streams or other wetlands. The vegetation is dominated by dense growths of willows or other shrubs and medium-size trees.	Medium	Potentially suitable habitat located on site and CNDDDB occurrences within 0.5 miles of the site.
California horned lark (<i>Eremophila alpestris actia</i>)	CDFW: WL	Occurs in a variety of open habitats, usually where trees and large shrubs are absent. Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above tree line.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Prairie falcon (<i>Falco mexicanus</i>)	CDFW: WL	Found in annual grasslands to alpine meadows, but associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields, and desert scrub areas. Requires sheltered cliff ledges for cover and nesting.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
California condor (<i>Gymnogyps californianus</i>)	FE, SE, CDFW: FP	Permanent resident of the semiarid, rugged mountain ranges surrounding the southern San Joaquin Valley, including the Coast Ranges from Santa Clara County south to Los Angeles County, the Transverse Ranges, Tehachapi Mountains, and the southern Sierra Nevada. Forages over wide areas of open rangelands; roosts on cliffs and in large trees and snags. Occurs mostly between sea level and 2700 meters, and nest from 610–1372 meters	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Belding's savannah sparrow (<i>Passerculus sandwichensis beldingi</i>)	SE	Found in grassland, saline emergent wetlands, and wet meadow habitats.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Coastal California gnatcatcher (<i>Polioptila californica californica</i>)	FT, SSC	Found in coastal sage scrub habitats from sea level to 2,500 feet in elevation. Within its range, it associates strongly with California sagebrush (<i>Artemisia californica</i>) dominant.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Bank swallow (<i>Riparia riparia</i>)	ST	Nest in steep slopes of riverbanks composed of compacted sand. Forages generally over riparian and grassland habitats.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
California least tern (<i>Sternula antillarum browni</i>)	FE, SE, CDFW: FP	Nests in open, sandy areas of beaches and lagoons. Generally forages in marine habitats along coastlines and lagoons.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
Le Conte's thrasher (<i>Toxostoma lecontei</i>)	SSC	Occurs in open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats; also occurs in Joshua tree habitat with scattered shrubs.	None	No suitable habitat present within the Project area. No CNDDDB records in vicinity of Project.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE, SE	Typically found in early- to mid-successional willow riparian habitats	Medium	Suitable habitat located on site and CNDDDB occurrences within 0.5 miles of the site.
Mammals				
Pallid bat (<i>Antrozous pallidus</i>)	SSC	Found in grassland, shrublands, woodlands, and forest sea level up to mixed conifer forest. Typically found in dry, open areas with rocky areas for roosting.	Medium	Potentially suitable habitat present and occurrences near the Project site.
Dulzura pocket mouse (<i>Chaetodipus californicus femoralis</i>)	SSC	Found on slopes in chaparral with sandy or loamy soils.	Low	Potentially suitable habitat present. No occurrences near the Project site.
Hoary bat (<i>Lasiurus cinereus</i>)	None	Found in all forested habitat types with medium- or large-size trees and dense foliage from sea level to 4,125 meters.	Medium	Potentially suitable habitat present and occurrences near the Project site.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	SSC	Found in rocky areas of Joshua tree woodland, pinyon-juniper woodland, and chaparral habitats from sea level to 2,600 meters.	Low	Potentially suitable habitat present. No occurrences near the Project site.
Desert bighorn sheep (<i>Ovis canadensis nelson</i>)	CDFW: FP	Typically found in rough, rocky, and steep terrain as well as springs and plateaus above desert floors.	None	Outside of range. Unsuitable habitat present on site.
American badger (<i>Taxidea taxus</i>)	SSC	Found in coastal sage scrub, mixed chaparral, grassland, oak woodland, chaparral, mixed conifer, pinyon-juniper woodland, desert scrub, desert wash, montane meadow, and open areas with sandy soils.	Medium	Potentially suitable habitat present and occurrences near the Project site.

Common Name (Scientific Name)	Listing	Habitat Description	Potential to Occur	Notes
<p><i>Notes:</i> BLM = Bureau of Land Management listed as Sensitive USFS = United States Forest Service Sensitive FE = Federally listed as Endangered FT = Federal listed as Threatened FC = Federal candidate for listing under the Endangered Species Act FD = Federally delisted FPE = Federally proposed for listing as Endangered FPT = Federally proposed for listing as Threatened SC = State proposed for listing SE = State-listed as Endangered ST = State-listed as Threatened SWL= California Department of Fish and Game (CDFW) Watch List Species SSC = California Department of Fish and Game (CDFW) Species of Special Concern SFP = California Department of Fish and Game (CDFW) Fully Protected Species SR = State Rare BCC= United States Fish and Wildlife Service_ Birds of Conservation Concern</p>				

Special-Status Wildlife Species

Five special-status wildlife species were determined to have a medium likelihood of occurring within the Project Area.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*)—Listing: Federally Endangered, State Endangered

The southwestern willow flycatcher is a small passerine bird measuring about 5.75 inches in length. The flycatcher's appearance is overall greenish or brownish gray above, with a white throat that contrasts with a pale olive breast. The belly is pale yellow. Two white wing bars are visible, but the eye ring is faint or absent. The upper mandible is dark, and the lower mandible light.

The species breeds in dense riparian habits along rivers and streams. The vegetation is typically dominated by dense growths of willows or other shrubs and medium-size trees. Almost all southwestern flycatchers breeding habitat is within close proximity of water or saturated soils.

This species was not observed during the Project surveys; however, Adams Barranca provides marginal habitat for the species. The Southwestern willow flycatcher is not expected to breed/nest in Adams Barranca but may use the habitat for foraging. While nesting is not expected for the species, recent CNDDB records indicate nesting pairs within 0.5 miles, within willow riparian habitats of the Santa Clara River.

Least Bell's Vireo (*Vireo bellii pusillus*)—Listing: Federally Endangered, State Endangered

The least Bell's vireo is a small, olive gray, migratory songbird that nests and forages almost exclusively in river-related riparian woodlands. It is typically found in early- to mid-successional willow riparian habitats.

This species was not observed during the Project surveys; however, Adams Barranca provides marginal habitat for the species. Least Bell's vireo is not expected to breed/nest in Adams Barranca but may use the habitat for foraging. While nesting is not expected for the species, recent CNDDDB records indicate nesting pairs within 0.5 miles, within willow riparian habitats of the Santa Clara River.

Pallid Bat (*Antrozous pallidus*)—Listing: CA Species of Special Concern

The Pallid bat has yellowish-brown- to cream-colored fur on its back and white fur on its belly. The most notable feature of the species is its large ears, which are almost half as long as the total length of the head and body. Also, its eyes are larger than most species of North America. The pallid bat is a locally common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern Counties and the northwestern corner of the state from Del Norte and western Siskiyou Counties to north Mendocino County. The species is found in grassland, shrublands, woodlands, and forest sea level up to mixed conifer forest for foraging, and is typically found in dry open and rocky areas for roosting.

This species was not observed during the Project surveys; however, Adams Barranca provides foraging and roosting habitat for the species. The pallid bat is not expected to breed in Adams Barranca but it may use habitat for roosting and the Project Area for foraging.

Hoary Bat (*Lasiurus cinereus*)—Listing: CA Species of Special Concern

The hoary bat is about the size of a mouse and weighs about 20 to 35 grams. The length from the tip of the nose to the end of the tail is 13 to 15 centimeters, and the wing span is 43 cm. These bats have blunt, rounded noses and small beady eyes. The ears are short, thick, broad and rounded. Thick, long, soft hair covers the back extending to the elbow. The coloring of the back is a mixed brown-gray. The hoary bat is the most widespread North American bat. It may be found at any location in California, although distribution is patchy in the southeastern deserts. This common, solitary species winters along the coast and in Southern California, breeding inland and north of the winter range. The hoary bat is found in all forested habitat types with medium- or large-size trees and dense foliage from sea level to 4,125 meters.

This species was not observed during the Project surveys; however, Adams Barranca provides foraging and roosting habitat for the species. The hoary bat is not expected to breed in Adams Barranca but may use the habitat for roosting and the Project Area for foraging.

American Badger (*Taxidea taxus*)—Listing: CA Species of Special Concern

The American badger has a stocky and low-slung body with short, powerful legs; they are identifiable by their large foreclaws (measuring up to 5 cm in length) and distinctive head markings. It preys

predominantly on pocket gophers (*Geomyidae*), ground squirrels (*Spermophilus*), woodrats (*Neotoma*), kangaroo rats (*Dipodomys*), deer mice (*Peromyscus*), and voles (*Microtus*), often digging to pursue prey into their dens. American badgers also prey on ground-nesting birds and on lizards. The species is primarily nocturnal (USFWS 2014).

In California, American badgers are most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers use abandoned burrows of other animals, such as foxes or animals of a similar size. American badger dens are used for concealment and as natal dens; dens are up to 30 feet (10 m) long and 10 feet (3 m) deep.

The avocado orchard and the ecotone between the agricultural fields and Adams Barranca provides forging habitat for this species.

Nesting Birds—Listing Migratory Bird Treaty Act (MBTA)

No active bird nests were observed at the time of survey, however, suitable nesting habitat is present within the avocado orchard, ornamental trees within the Project area, and adjacent trees to the Project Site and within Adams Barranca.

Wildlife Movement

Wildlife corridors are pathways or habitat linkages that connect discrete areas of natural open space otherwise separated or fragmented by topography, changes in vegetation, and other natural or human-induced factors, such as urbanization. Corridors allow animals to move between open space areas and provide escape routes from fire, predators, and human disturbances and provide travel paths for individual animals moving throughout their home range.

Adams Barranca, along the western border of the site, contains a channelized bed that may facilitate the movement of terrestrial wildlife from the foothills of the Topatopa Mountains to the Santa Clara River. This portion of Adams Barranca located adjacent to the Project Site contains marginal habitat for movement purposes in that it has been confined by past agricultural grading activities, contains culverts, and is bordered by developed areas along various reaches. However, it does provide vegetative cover and serves as a pathway for small mammals between historically connected habitat and natural areas, thereby facilitating wildlife movement between these natural areas. The corridor is viable due to ease of travel, native vegetation, and connection with the Santa Clara River.

Jurisdictional Wetlands and Water of the US and State

Two drainage courses traverse the Project Site. As provided previously, Adams Barranca is an ephemeral to intermittent drainage to a mixed southern willow riparian woodland along the southwest boundary.

An agricultural ditch bisects the Project Site and flows north to south from Telegraph Road near the north boundary to SR 126 near the south boundary.

Adams Barranca

Adams Barranca is considered an ephemeral to intermittent drainage that runs generally north–south, originating from Adams Canyon in the foothills north of the City and is tributary to the Santa Clara River south of the Project Site. The limits of the Barranca have been modified by past agricultural grading activity that abuts both sides over most of the Barranca between the foothills and SR 126. The Barranca has also been modified with a concrete culvert that allows it to flow under Telegraph Road and by SR 126, which intersects the Barranca flows to the south. Most stretches of the Barranca contain well vegetated canopies.

The lower reaches of the Adams Barranca run along the southwest boundary of the Project Site. In the area of the Project Site, the Barranca supports a mixed southern willow riparian woodland vegetation community with trees and shrubs within the banks and along the channel within the ordinary high water mark (OHWM). The mixed southern willow riparian community is considered a sensitive natural community by the CDFW. The CDFW jurisdictional boundary includes the channel OHWM, banks, and the extent of riparian vegetation.

Adams Barranca has a reliable OHWM, a defined channel with bed and bank and other physical indicators of flow. Therefore, Adams Barranca is considered “State Waters.” State Waters are regulated under the jurisdiction of the CDFW, per Section 1602 of the Fish and Game Code, and the RWQCB under the Porter-Cologne Water Quality Act, division 7 and Section 13260 of the California Code.

Adams Barranca is considered non–relatively permanent water (Non-6) that flows directly or indirectly into traditional navigable water (TNW). Non-RPWs are drainages in which flows are not continuous, at least seasonally. Adams Barranca flows directly to the Santa Clara River (a TNW) and indirectly to the Pacific Ocean (a TNW). Adams Barranca exhibits channel morphology that would be considered jurisdictional, including bank, scour, sediment deposit, and OHWM. Non-RPWs that flow directly or indirectly into TNWs require a significant nexus to assert jurisdiction over this class of water body under the federal Clean Water Act (CWA). Due to the close proximity and direct hydrologic connection to the Santa Clara River, Adams Barranca is considered to have a significant nexus. Therefore, Adams Barranca, a non-RPW tributary to the Santa Clara River, is considered jurisdictional pursuant to the US Army Corps of Engineers (ACOE) and Section 404 of the CWA and the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA.

Under the new rule, “tributaries are more precisely defined as waters that are characterized by the presence of physical indicators of flow, bed and banks and ordinary high water mark and that contribute flow directly or indirectly to traditional navigable water, interstate water, or the territorial seas. The rule concludes that such tributaries are “Waters of the United States.” Pursuant to the US Environmental Protection Agency (USEPA) and ACOE Final Clean Water Rule—Definition of Waters of the United States (May 26, 2015), Adams Barranca, a tributary to the Santa Clara River, is considered Waters of the United States.

Dredge and fill activities in federally jurisdictional waters (Waters of the United States) that trigger coverage under a Section 404 must also receive water quality certification under Section 401 of the CWA. The State Water Resources Control Board (SWRCB) and its RWQCBs has regulatory oversight over Section 401 water quality certifications in California. Because Adams Barranca is considered Waters of the United States is it subject to Section 401 of the CWA.

Agricultural Drainage Ditch

An unnamed ephemeral drainage/agricultural ditch bisects the Project and flows north to south to SR 126. The agricultural ditch drains into upland agricultural fields with no upstream hydrological connection but outlets to the Santa Clara River to the south. Therefore, this drainage is not considered Waters of the United States. CDFW may consider the agricultural ditch State Waters because it has bed and bank and flows into the Santa Clara River. Therefore, the agricultural ditch may be regulated under Section 1602 of the CDFW Code.

All determinations in this report should be considered preliminary until concurrence through either a Preliminary Jurisdictional Determination, or request for a formal Jurisdictional Determination by the ACOE, Los Angeles District.

Jurisdictional Areas

The total areas of Federal and State jurisdiction for the Adams Barranca and the agricultural ditch are summarized in **Table 4.4-6, Jurisdiction Waters**.

**Table 4.4-6
Jurisdictional Waters**

Feature	Waters of the US (ACOE, RWQCB)				State Waters (CDFW)			
	Acres		Linear Feet		Acres		Linear Feet	
	Total Waters	Within Project Site	Total Waters	Within Project	Total Waters	Within Project	Total Waters	Within Project
Adams Barranca	0.434	0.051	1885	241	2.402	0.430	1885	241
Unnamed agricultural drainage ditch	0	0	0	0	0.117	0.117	1699	1699
Total	0.434	0.051	1885	241	2.519	0.547	3584	1940

Approximately 0.434 acres of Waters of the United States and 2.519 acres of State Waters were identified as either within or in the immediate vicinity (e.g., portions of Adams Barranca that are west of the Project Site). A total of 0.051 acres of Waters of the United States (consisting of portions of Adams Barranca) and 0.547 acres of State Waters (consisting of portions of Adams Barranca and the agricultural ditch) occur within the Project Site.

4.4.2 REGULATORY SETTING

4.4.2.1 Federal Regulations

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act¹² makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other species that may utilize natural and artificial habitats throughout the area.

Federal Endangered Species Act of 1973

Section 3 of the federal Endangered Species Act (ESA)¹³ defines an endangered species as any species or subspecies "in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as any species or subspecies of fish, wildlife, or plant "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Threatened or endangered species and associated critical habitat are designated through publication of a final rule in the Federal Register. Designated endangered and threatened animal species are fully protected from "take" unless an applicant has an incidental take permit issued by the USFWS under Section 10 or incidental take statement issued under Section 7 of the ESA. Take is defined as the killing, capturing, or harassing of a

12 16 USC 703–712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended, Migratory Bird Act.

13 16 USC 1531–1544, 87 Stat. 884, as amended—Endangered Species Act of 1973, Public Law 93-205 (approved December 28, 1973).

species. Proposed endangered or threatened species include those species for which a proposed regulation has been published in the Federal Register, but a final ruling has not been made.

Final Southern California Steelhead Recovery Plan

Steelhead are the anadromous, or ocean-going, form of rainbow trout *Oncorhynchus mykiss* (*O. mykiss*). One of six Pacific salmon species native to the west coast of North America, steelhead are currently the only species of this group that naturally reproduces within the coastal watersheds of Southern California. Steelhead is one of several related *Oncorhynchus* species that exhibit considerable life history plasticity, including the ability to complete their life cycle entirely in freshwater or migrate to the ocean as juvenile “smolts,” returning to spawn in freshwater as adults after 1–3 years at sea. Adding to the complexity of the *O. mykiss* life history is the apparent ability of rainbow trout to produce steelhead offspring (an anecdotally common occurrence in populations within the Santa Clara River watershed), and for steelhead to produce resident rainbow trout offspring. Since steelhead typically remain in freshwater for at least 1 year after hatching, most river habitats are utilized by one or more life stages (egg, fry, fingerling, juvenile, and adult), which provides an indicator of the health of Southern California watersheds. Southern California steelhead populations have declined precipitously, largely due to extensive watershed development.

Based on the results of a comprehensive status review of all West Coast steelhead populations conducted by the National Oceanographic and Aeronautics Administration’s (NOAA) National Marine Fisheries Service (NMFS), Southern California steelhead were listed as an endangered species under the ESA on August 18, 1997, with a range extension to the US-Mexico Border in 2002. Following a status review in 2005, a final listing determination was issued on January 5, 2006, for the Southern California Steelhead Distinct Population Segment (DPS); additionally, critical habitat was designated within 32 watersheds known to support this DPS.

The Southern California Steelhead (SCS) Recovery Planning Area extends from the Santa Maria River to the Tijuana River at the US-Mexico border. The SCS Recovery Planning Area includes those portions of coastal watersheds that are at least seasonally accessible to steelhead entering from the ocean, and the upstream portions of watersheds that are currently inaccessible to steelhead due to man-made barriers but were historically used by steelhead. Major steelhead watersheds in the northern portion of the SCS Recovery Planning Area include the Santa Maria, Santa Ynez, Ventura, and Santa Clara Rivers, and Malibu and Topanga Creeks. Major steelhead watersheds in the southern portion of the SCS Recovery Planning Area include the San Gabriel, Santa Margarita, San Luis Rey, San Dieguito, and Sweetwater Rivers, and San Juan and San Mateo Creeks. The Santa Clara River, which drains much of the western Traverse Range, was also included in the critical habitat designation.

The Final Southern California Steelhead Recovery Plan¹⁴ identifies the Monte Arido Highlands Biographic Population Group (BPG), which includes the Santa Clara River, as Core 1 population, with a high priority for recovery.¹⁵ Critical recovery actions identified for the Santa Clara River include implementing operating criteria to:

- Ensure the temporal pattern and magnitude of water releases, including bypass flows from diversions at Vern Freeman, Santa Felicia, Pyramid, and Castaic dams that provide essential habitat functions that support life history and habitat requirements of adult and juvenile steelhead; and
- Provide natural rates of migration for steelhead to upstream spawning and rearing habitats, and passage of smolts and kelts downstream to the estuary and ocean by physically modifying the diversions at Vern Freeman, Harvey, Santa Felicia, and Pyramid dams, and the lower Santa Paula Creek flood control channel.

Clean Water Act

The federal CWA¹⁶ regulates discharges into Waters of the United States. The CWA states:

“Waters of the United States” include:

1. *all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters subject to tidal action;*
2. *all interstate waters, including interstate wetlands;*
3. *all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters;*
 - a. *which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
 - b. *from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
 - c. *which are used or could be used for industrial purpose by industries in interstate commerce;*
4. *all impoundments of waters otherwise defined as waters of the United States under the definition;*
5. *tributaries of waters identified in paragraphs (a) (1) through (4) of this section;*

14 National Marine Fisheries Service, *Southern California Steelhead Recovery Plan*, Public Review Draft Version (Long Beach, CA: Southwest Regional Office, January 2012).

15 National Marine Fisheries Service, *Southern California Steelhead Recovery Plan* (January 2012), Table 9-3.

16 33 USC, sec. 1251 et seq., Federal Clean Water Act (1972).

6. *the territorial seas; and*
7. *wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section.*

ACOE jurisdiction in nontidal waters typically extends to the OHWM. The OHWM for intermittent streams, for example, can be determined by the fluctuations of water as indicated by physical characteristics such as clear, natural lines impressed on a water bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas (33 CFR 328.3(e)).

In 2006, the US Supreme Court revisited the issue of jurisdictional scope of Section 404 of the CWA. In *Rapanos vs. US* and *Carabell vs. US*, the court ruled that Waters of the United States are subject to CWA jurisdiction if the water body (1) is relatively permanent or seasonal (typically three months or more); (2) is a wetland that directly abuts a relatively permanent water body; or (3) if the water body and its adjacent wetland has a significant physical, biological, or chemical nexus with a traditionally navigable waterway.

Most impacts to areas delineated as waters of the United States, if determined to be jurisdictional by the ACOE, require approval under the authority of the CWA and its implementing regulations.

Section 401

Section 401 of the CWA authorizes the State of California to certify that federal permits—including ACOE Section 404 permits—and licenses do not violate the state’s water quality standards. The state’s implementing regulations to conduct certifications are codified under the California Code of Regulations Title 23, “Waters,” Sections 3830–3869. Projects qualifying for a ACOE Section 404 permit must submit materials for review to the appropriate RWQCB and request a Section 401 certification. Much of the same information (project description, potential impacts, and mitigation measures) necessary to apply for ACOE Section 404 and California Fish and Game Code Section 1602 permits is required for the Section 401 certification.

In response to certain federal court decisions that limited ACOE jurisdiction, the state issued several directives to the regional boards regarding the regulation of isolated waters no longer regulated by the ACOE. At present, the State Water Quality Control Board and the RWQCBs are to:

- Continue issuing Section 401 certifications for federal permits; and
- Issue Waste Discharge Requirements (WDRs) for dredge or fill discharges to waters deemed by the ACOE as not subject to federal jurisdiction referencing the same regulatory considerations that are used to issue general WDRs.

A Section 401 certification and a WDR application may be made on the same form, but the State Board has issued a model letter to be submitted with the WDR application to clarify that the WDRs are intended to cover “waters of the State” not covered by the Section 401 certification and not subject to the ACOE regulations.

Section 404

The federal CWA was passed in 1972 and regulates discharges into Waters of the United States. Section 404 of the CWA regulates activities including discharge of dredged or fill materials into Waters of the United States.

The discharge of fill material into an area delineated as Waters of the United States, including wetlands, that is determined to be under the ACOE jurisdiction, requires a permit or other approval by the ACOE Regulatory Branch. Fill is broadly defined as anything foreign introduced into the receiving water. This includes most materials (e.g., rock, soil, pilings, concrete, wood, some incidental fallback of soil from earth-moving equipment, and in some cases additional water) that can be discharged into a water or wetland.

Most Section 404 permits require mitigation for reducing overall impacts to wetlands, including Waters of the United States and their functions.

Federal Rivers and Harbors Act

Federal regulations of Waters of the United States stem from Section 10 of the Federal Rivers and Harbors Act of 1899,¹⁷ enacted to regulate activities within navigable waters. Under Section 10 of the act, the building of any wharfs, piers, jetties, and other structures is prohibited without Congressional approval, and excavation or fill within navigable waters requires the approval of the Chief of Engineers. Primary concerns of this act include contamination of sediments associated with dredge or fill projects in navigable waters.

4.4.2.2 State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA)¹⁸ generally parallels the main provisions of the federal ESA and is administered by the CDFW. The CESA ensures that deserving plant or animal species will be given protection by the state based on their ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the state. The CESA establishes state policy to conserve,

17 33 USC 403; ch. 425, March 3, 1899; 30 Stat. 1151, Rivers and Harbors Act of 1899.

18 California Fish and Game Code, sec 2050 et seq.

protect, restore, and enhance endangered species and their habitats. Under state law, plant and animal species may be formally designated as rare, threatened, or endangered through official listing by the California Fish and Game Commission. Listed species are provided greater protection during the land use planning process by local governments, public agencies, and landowners than are species that have not been listed.

On private property, endangered plants may also be protected by the Native Plant Protection Act (NPPA) of 1977. State-listed threatened plants are protected by the CESA, and state-listed rare plants are protected by the NPPA. However, the CESA authorizes that "private entities may take plant species listed as endangered or threatened under the ESA and CESA through a federal incidental take permit issued pursuant to Section 10 of the ESA, if the CDFW certifies that the incidental take statement or incidental take permit is consistent with the CESA." In addition, the California Environmental Quality Act (CEQA) requires disclosure of any potential impacts on listed species and alternatives or mitigation that would reduce those impacts.

California Fish and Game Code

Sections 1602–1605

The State of California regulates water resources under Sections 1600–1605 of the Fish and Game Code of California.¹⁹ It is unlawful for any person to divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or to use any material from the streambeds, without first notifying the CDFW of that activity.

The CDFW considers most natural drainages to be streambeds unless it can be demonstrated otherwise. Streams are defined in the California Code of Regulations as follows:²⁰

A stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.

The CDFW jurisdiction under Section 1602 includes ephemeral, intermittent, and perennial watercourses, and is often extended to the limit of riparian habitats that are located contiguous to the water resource and that function as part of the watercourse system. The California Fish and Game Code states:²¹

19 California Fish and Game Code, sec. 1600–1605.

20 California Code of Regulations tit. 14, ch. 1, sec. 1.72.

21 California Fish and Game Code, sec. 2785(e).

Riparian habitat means lands which contain habitat that grows close to and which depends on soil moisture from a nearby freshwater source.

Any project that impacts CDFW jurisdictional areas, including fills, vegetation removal, or bridging, requires a Section 1602 Streambed Alteration Agreement (SAA) from the CDFW. Much of the same information (i.e., project description, potential impacts, mitigation measures, etc.) necessary to apply for ACOE Section 404 permits is also required in the SAA application.

Sections 3503, 3503.5, and 3800

The California Fish and Game Code²² also prohibits the destruction of bird nests and eggs (Section 3503), and the “take” of birds of prey (Section 3503.5) and nongame birds (Section 3800). Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered “take.” Such take would also violate federal law protecting migratory birds.

Incidental take permits (i.e., Management Agreements) are required from the CDFW for projects that may result in the incidental take of species listed by the State of California as endangered, threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

California Environmental Quality Act—Treatment of Listed Plant and Animal Species

The ESA and CESA protect only those species formally listed as endangered or threatened (or rare in the case of the state list). Section 15380 of the State CEQA Guidelines independently defines “endangered” species of plants or animals as those whose survival and reproduction in the wild are in immediate jeopardy, and “rare” species as those in such low numbers that they could become endangered if their environment worsens. Therefore, a project normally will have a significant effect on the environment if it will substantially affect an endangered or rare species of animal or plant, or the species’ habitat. The significance of impacts to a species under CEQA must be based on analyzing the actual threat of extinction or rarity of the species or habitat despite legal status or lack thereof.

4.4.2.3 Local Regulations

City of Santa Paula

General Plan Open Space and Conservation Element

The Santa Paula General Plan Conservation and Open Space Element contains descriptive information related to natural resources and open space that is relevant and of concern to Santa Paula. The purpose

22 California Fish and Game Code, sec. 3503, 3503.5, and 3800.

of the Conservation and Open Space Element is to maintain the overall quality of life for Santa Paula residents through the management and protection of natural resources and open space lands. The goals, objectives, and policies in the Conservation and Open Space Element provide guidelines and mandates for community actions.

The Santa Clara River flows south of the City and, as addressed in the Conservation and Open Space Element, is probably the most important natural resource in the Santa Paula area.²³ Future planning efforts in these areas should emphasize conservation of this extremely important aquatic resource. A few parcels located at the east end of the City (south of the freeway) adjacent to the river, provide opportunities to conserve important riparian/wetland habitat. Additionally, open space buffers should be included between all future development and the river. These buffers may include agriculture, natural open space, parks, or continued aggregate operations, if compatible with proposed development.

The Conservation and Open Space Element identifies the southern willow scrub and cottonwood-willow riparian forest along the Santa Clara River as sensitive habitats.²⁴ The yellow warbler and yellow-breasted chat, which generally breed in riparian thickets, have been reported breeding along the river upstream of Santa Paula. Least Bell's vireo (listed by both the state and federal governments as endangered) also breeds along the river. To the extent possible, the habitat value of these important riparian resources should be maintained.

The following goals, objectives, and policies of the Conservation and Open Space Element apply to the proposed project:²⁵

Municipal Code

Tree Protection Ordinance

The City of Santa Paula includes trees as a significant, historical, aesthetic, and valuable ecological resource. As a result, mature trees on public property, and native oak, sycamore, and heritage and historic trees on public or private property are to be protected and preserved to the greatest extent possible, especially when the trees are associated with proposed urban development.²⁶ Chapter 56 of the Municipal Code was adopted with the intent to maintain and enhance the general health, safety, and welfare of the residents of the City by preserving and protecting certain trees.

23 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998), pp. CO-32–33.

24 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998), p. CO-35.

25 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998), pp. CO-43–47.

26 City of Santa Paula, Municipal Code, sec. 17.56.010 to 17.56.120, and City Resolution No. 3919, Tree Preservation Ordinance.

No native oak and sycamore tree, heritage or historic tree, where that tree is on public or private property, or any other mature tree on public property, or trees which are on land which is part of a proposal for urban development, shall be removed, cut down, or otherwise destroyed, unless a Tree Removal Permit has been issued by the City. Tree trimming and pruning are exempted from the permitting requirements unless the tree would be destroyed by the trimming or pruning. In no event shall a permit be denied if to do so would eliminate all reasonable economic use of the property.

4.4.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on agricultural resources if any of the following occur.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Section 15065(a) of the State CEQA Guidelines also states that a project may have a significant effect on the environment when the project has the potential for any of the following to occur:

- substantially degrade the quality of the environment;
- substantially reduce the habitat of a fish or wildlife species;
- cause a fish or wildlife population to drop below self-sustaining levels;

- threaten to eliminate a plant or animal community; or
- reduce the number or restrict the range of an endangered, threatened, or rare species.

The physical alteration of habitat is not, in itself, a significant impact under CEQA. Significance is determined by comparing physical alteration of habitat against each of the significance threshold criteria defined above. For example, should the alteration of habitat result in the direct or indirect loss or have an otherwise substantial adverse effect on a species identified as a “candidate, sensitive, or special-status species in local or regional plans, policies, or regulations or by the CDFW or USFWS,” impacts would be considered significant.

4.4.4 PROJECT IMPACTS

Threshold: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service

The plant communities occurring within the Project Site are shown in **Figure 4.4-1**. The total acreage of each plant community occurring on site was calculated within a GIS database. Total and impacted acreage of each community is provided in **Table 4.4-7, Plant Communities Impacted**.

**Table 4.4-7
Plant Communities Impacted**

Vegetation Communities	Acres on Site	Acres to Be Developed under the Project
Adams Barranca Mixed Willow Riparian	0.51	0.00
Agricultural Avocado Orchard	8.06	8.06
Agricultural Ditch	0.18	0.18
Agricultural Row Crops	38.46	38.46
Developed	6.60	6.60
Total	53.81	

Since the Project includes the dedication of Open Space for the areas identified as Mixed Willow Riparian, and no development would occur within the Mixed Willow Riparian habitat area, potential impacts to vegetation communities are considered less than significant.

Loss of Special-Status Plant Species

No special-status plant species are expected to occur within the impacted agricultural avocado orchard, agricultural ditch, or agricultural row crop communities, or developed areas.

As discussed previously in Existing Conditions, Southern California black walnut (*Juglans californica*) is the only special-status plant species that was documented or determined to have a high likelihood of occurring within the Project Site. A total of 19 individual trees are located along the perimeter of the Project Site, mainly along the southwest boundary within the riparian habitat of the Adams Barranca and along the SR 126 right-of-way along the southeast boundary of the Project Site.

This species was observed within Adams Barranca and just off site in the southeastern section of the Project area, immediately adjacent to SR 126. The Project includes the designation of Open Space over the riparian habitat of the Adams Barranca, including the black walnut trees within; and thus would not grade near the trees or otherwise cause damage to the trees or the soil within the tree driplines. With regard to the black walnut trees along the southern boundary, the Project grading and construction activity could avoid the trees because many are just outside the Project boundary or are on the outermost fringe of the Project grading limits. While it is possible for these trees to be avoided and remain post development, there is a potential that Project land moving and grading could affect the trees drip line or inadvertently cause damage to the trees. Therefore, impacts to special-status plant species (e.g. black walnut) are considered potentially significant.

Special-Status Wildlife Species

Southwestern Willow Flycatcher (Empidonax trailii extimus)—Listing: Federally Endangered, State Endangered

As previously described, the Southwestern willow flycatcher breeds in dense riparian habits along rivers and streams, and almost all southwestern flycatchers breeding habitat is within close proximity of water or saturated soils. While this species was not observed during the Project surveys, Adams Barranca provides marginal habitat for the species. This species is not expected to breed and nest in Adams Barranca but may use the habitat for foraging, and CNDDDB records indicate nesting pairs within 0.5 miles within willow riparian habitats of the Santa Clara River. The Project includes construction activity that could result in a temporary impact to the species if members are foraging or in the unlikely event they nest near the Project Site at the time of construction. Therefore, impacts are considered potentially significant.

Least Bell's Vireo (Vireo bellii pusillus)—Listing: Federally Endangered, State Endangered

The least Bell's vireo was not observed during the Project surveys; however, Adams Barranca provides potential habitat for the species. This species is not expected to breed and nest in Adams Barranca but may use the habitat for foraging. While nesting is not expected for the species, recent CNDDDB records indicate nesting pairs within 0.5 miles within willow riparian habitats of the Santa Clara River. Given the location in close proximity to the Project Site and the potential for foraging habitat within the Project Site, impacts are considered potentially significant in the unlikely event this species nests on site or in the immediate vicinity and is subject to disturbance from construction activity.

Pallid Bat (Antrozous pallidus)—Listing: CA Species of Special Concern

Although the Pallid bat was not observed during the Project surveys, Adams Barranca provides foraging and roosting habitat for the species. This species is not expected to breed in Adams Barranca but may use habitat for roosting, and the agricultural and row crops areas of the Project Site for foraging. Construction under the Specific Plan could result in potentially significant impacts to pallid bats.

Hoary Bat (Lasiurus cinereus)—Listing: CA Species of Special Concern

This species was not observed during the Project surveys, however, Adams Barranca provides foraging and roosting habitat for the species. This species is not expected to breed in Adams Barranca but may use the habitat for roosting, and the agricultural areas of Project Area for foraging.

American Badger (Taxidea taxus)—Listing: CA Species of Special Concern

The avocado orchard within the Project Site and the ecotone between the agricultural fields and Adams Barranca provides foraging habitat for the American badgers, as they are most abundant in the drier, open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers use abandoned burrows of other animals such as foxes or animals of a similar size. Development under the Specific Plan could result in the loss of American badger habitat. Impacts are considered potentially significant.

Nesting Birds—Listing Migratory Bird Treaty Act (MBTA)

No active bird nests were observed at the time of survey; however, suitable nesting habitat is present within the avocado orchard, ornamental trees within the Project area, and adjacent trees to the Project Site and within Adams Barranca. However, there is the potential for nesting birds during the breeding season and thus impact may be potentially significant.

Threshold: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service

Development under the Specific Plan would include removal of existing vegetation within the Project Site; grading to reach finished grades to support structures; installation of storm drains to carry surface runoff; and construction of buildings, driveways, and parking lots. This would require the removal of the agricultural drainage ditch that bisects the Project Site and is considered State Waters pursuant to the Fish and Game Code and the Clean Water Act. Other state and federal jurisdictional waters (i.e., those within Adams Barranca) would be preserved through an Open Space dedication and prevention of construction activities within the Barranca. **Table 4.4-8, Impacts to Jurisdictional Waters**, provides a breakdown of the acres and linear feet of impacts of the Project.

**Table 4.4-8
Impacts to Jurisdictional Waters**

Feature	Waters of the US (ACOE, RWQCB)				State Waters (CDFW)			
	Acres		Linear Feet		Acres		Linear Feet	
	Within Project Site	Area Impacted by Project	Within Project	Area Impacted by Project	Within Project Site	Area Impacted by Project	Within Project	Area Impacted by Project
Adams Barranca	0.051	0.00	241	0.00	0.430	0.00	241	0
Unnamed agricultural drainage ditch	0.00	0.00	0	0.00	0.117	0.117	1699	1699
Total	0.051	0.00	241	0.00	0.547	0.117	1940	1699

As shown in **Table 4.4-8**, development under the Specific Plan would result in the loss of approximately 0.117 acres and 1,699 linear feet of state jurisdictional waters. The Applicant would be required to obtain a 1602 Agreement (SAA) from the CDFW for these impacts. A 401 permit from the RWQCB will also be required. Each of the agencies will require mitigation for impacts.

While all Project impacts to ACOE and CDFW jurisdictional areas are considered potentially significant, they would be mitigated to a less than significant level through the conditions imposed pursuant to the Project's 404, 401, and 1602 permits/agreement as well as by mitigation measures imposed by this EIR.

Increases in Light and Glare

The development of the Project Site would increase the number of nighttime light and glare sources on the site. Light and glare can "spill over" into adjacent open space areas, increasing the level of light currently experienced there. Nighttime illumination is known to adversely affect some species of animals

in natural areas. Nighttime light can disturb breeding and foraging behavior and can potentially alter foraging and breeding behavior of nocturnal birds, mammals, and invertebrates, which is considered a potentially significant impact.

Increase in Human Presence

The close proximity of the Project to Adams Barranca could result in adverse edge effects that could adversely impact riparian habitats and associated wildlife, and compromise its value as a wildlife corridor. Although Adams Barranca is already significantly affected by human and pet encroachment from residential areas to the north, development under the Project can be expected to increase human activity near Adams Barranca, which could result in an increase in the frequency of human encroachment into the Barranca when compared to existing conditions. Human encroachment has the potential to disturb riparian vegetation in the Barranca. Also, human encroachment and noise could result in disturbance, harassment, capture, removal, and/or mortality of wildlife, including nesting birds. Excessive noise and light trespass and glare from artificial night lighting associated with the development could disturb wildlife and cause some species to avoid the area; however, the Adams Barranca is already significantly disturbed by human presence and by noise and light trespass from vehicular traffic and nearby urban uses, including glare from artificial night lighting.

The Open Space designation of the Specific Plan, upland buffers from the riparian area and development under the Project, and the Project characteristics that would provide predominantly indoor daytime work areas would minimize any potential for increase human disturbance to the Adams Barranca. Therefore, indirect impacts from human encroachment would be less than significant.

Increase in Nonnative Plants

Plants typical of an urban environment already occur to some degree in the region due to the presence of development in the immediate vicinity. Because nonnative and exotic plants are commonly included in landscaping plans of both common areas and private lots of new development projects, the Project could increase nonnative and exotic plant populations.

Invasive exotic species introduced as landscaping could be dispersed by stormwater, wind, or wildlife, or by various other means to natural habitats in the area, including Adams Barranca and other downstream waterbodies, such as the Santa Clara River. Invasive species could outcompete native plants and disrupt normal ecological processes, reducing biological diversity and potentially threatening the quality of natural habitats. Impacts from the introduction of invasive exotic landscape plants could be potentially significant.

The plant palettes of the Preliminary Landscape Plan and plant palette and any landscape plans included with future development under the Specific Plan must be compared with the then-current version of the California Invasive Plant Inventory, as well as an invasive plant list compiled by the CNPS.

Urban Runoff

The Specific Plan is designed to include stormwater infiltration and treatment (refer to **Section 4.9 Hydrology** and **Appendix 4.9** of this EIR for a more detailed discussion). This includes low-impact development (LID) best management practices (BMPs) to ensure that the Project does not result in adverse effects to water quality in the Adams Barranca or the Santa Clara River. The Santa Paula West Business Park Specific Plan Drainage Master Plan will provide storm drains and runoff directed to an on-site detention basin for passive treatment of runoff from the Project driveways and other hard surfaces. The detention basins will be designed using flow-based criteria (e.g., 10 percent of the 50-year design flow rate) from the storm drain system, consistent with the Ventura County Stormwater Quality Urban Impact Mitigation Plan (SQUIMP) guidelines. The slopes of the detention basins will be planted with various plant species as outlined in the County of Ventura *Technical Guidance Manual*. Flow rates through the basin will be reduced due to the plants that are inundated in the stormwater to allow for contact time with the vegetation, which will maximize infiltration and sediment settling and reduce flows. All runoff will be routed through stormwater BMPs treatment facilities; only the later-stage flows of the larger rainfall events will be allowed to discharge off site. The BMPs will moderate the storm runoff such that peak flows from the Project Site to the off-site drainages will be no higher than under current conditions. In addition, the BMPs will treat flows by allowing particulates and pollutants to settle out and be retained on site, thereby substantially improving the water quality of the stormwater, compared to existing pre-Project discharge conditions. Vegetation in the flow detention features will further reduce concentrations of metals in runoff through natural metabolic uptake and sorption processes.

Overall, the BMPs and the Project Design Features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all applicable federal, state, and local water quality rules and regulations in order to effectively minimize the Project's impact on water quality. Accordingly, impacts would be less than significant.

Threshold: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

As discussed previously, surveys identified approximately 0.117 acres and 1116 linear feet of agricultural ditch represents an ephemeral drainage are generally subject to the jurisdiction of the ACOE under the Clean Water Act, Section 404 the RWQCB pursuant to the Clean Water Act, Section 401 and the California Porter-Cologne Act; and the CDFW under California Fish and Game Code, Section 1602.

As such, a formal determination of jurisdictional wetlands and waters would be required during the applicable permitting phase and prior to any ground disturbance that may impact these features.

ACOE review and certification of a jurisdictional delineation would be required to confirm the above estimated jurisdictional areas and to verify ACOE jurisdictional area.

Fill in areas determined by the ACOE to fall under its jurisdiction would be subject to a Clean Water Act Section 404 Nationwide Permit (NWP). Additionally, areas determined to be federally protected by the ACOE would also be subject to the jurisdiction of the RWQCB, and a Clean Water Act Section 401 Water Quality Certification (401 Certification).

Alteration of state-protected waters and associated riparian vegetation would require the acquisition of a Fish and Game Code Section 1602 SAA from the CDFW. Due to the high habitat value that drainages and swales are known to provide for wildlife and because these areas are under the jurisdiction of the CDFW, the proposed removal of these waters is considered a potentially significant impact.

Threshold: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

As described previously, Adams Barranca, located along the western border of the Project Site is could provide a wildlife movement corridor with linkage between the foothills of the mountains north of the City and the Santa Clara River. The Project would not include construction within the Adams Barranca and would not otherwise hamper or block the existing wildlife movement corridor because the Barranca itself is the corridor of travel. The Project would not result in potentially significant impacts to the movement of resident or migratory fish or terrestrial wildlife species.

As previously noted, no historical or active raptor nests or communal roosts exist at the Project Site or within 100 feet of any area that is or will be subject to development within the Project Site. Several species of raptors could potentially nest within the riparian habitats of Adams Barranca or in the eucalyptus or black walnut trees along the western and southern boundaries. Although the quality of these areas as raptor nesting habitat is relatively low due to surrounding agriculture, SR 126, development, noise, and human activities. For this reason, development of the Project within the West Area 2 Expansion Area (as defined in the City's General Plan) would not substantially reduce or eliminate the quantity or quality of raptor nesting or communal roosting areas and would have a less than significant impact.

On an incremental basis, the development of the Project would result in the permanent loss of marginally suitable foraging habitat for raptors, but the foraging habitat at this site is predominantly agricultural land and not essential for the successful breeding of raptors nesting in the region and is not designated as a conservation area for this purpose. The mixed riparian and native vegetation along Adams Barranca would be preserved through an Open Space designation; as such, development impacts to that area would be avoided. The nonnative vegetation that would be removed by the Project (i.e., agricultural and developed areas) is of less importance to raptors than the habitat available in the larger and more diverse natural habitats within the general Santa Clara River Valley area. Because raptors are mobile species with generally large home ranges, they are capable of compensating for the loss of small acreages of foraging habitat in a local area by moving to other suitable foraging habitats. Therefore, development of the Project would not eliminate significant raptor foraging areas or limit raptors' access to food resources, making potential impacts to raptors due to the development of the Project less than significant.

Threshold: **Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan**

The goals, objectives, and policies in the Conservation and Open Space Element guide the protection of natural resources, open space, and sensitive biological resources. The Conservation and Open Space Element identifies Adams Barranca as a natural resource preservation area. The Project includes the dedication of approximately 4.9 acres (9.1 percent) of the Project Site as Open Space along the western boundary to preserve and provide a buffer area from the Adams Barranca. Therefore, the Project is consistent with the City General Plan Conservation and Open Space Element because it provides for the protection the City's natural resources, and impacts would be less than significant.

The USFWS has prepared Recovery Programs for both the least Bell's vireo and Southwestern willow flycatcher. As noted under the Existing Conditions discussion, neither of these species was found on the Santa Paula West Business Park Project areas or within the nearby areas. The Santa Paula West Business

Park Project is consistent with criteria of the recovery plans for the least Bell's vireo and southwestern willow flycatcher in that habitat located on site will not be permanently impacted. Implementation of the Open Space dedication would provide stable habitat for individuals in the Santa Clara River Watershed by providing additional nesting and foraging opportunities. Therefore, implementation of the Project would result in less than significant impacts to the recovery of these species.

Final Recovery Plan for the Least Bell's Vireo

The Project is consistent with the recovery plan for this species because the least Bell's vireo habitat present on the site would not be impacted. The Project would result in potentially significant impacts to the least Bell's vireo. However, mitigation measures are included within this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts to habitat for least Bell's vireo individuals in the Santa Clara River Watershed.

Final Recovery Plan for the Southwestern Willow Flycatcher

The Project is consistent with the recovery plan for this species because if southwestern willow flycatchers are located on site, they would not be permanently impacted. Although, the Project would result in potentially significant impacts to the southwestern willow flycatcher, mitigation measures are included within this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed.

4.4.5 CUMULATIVE IMPACTS

Cumulative impacts are defined in CEQA as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines Section 15355). Stated in another way, "a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing relating impacts" (CEQA Guidelines Section 15130 (a)(1)).

The development of approximately 49 acres of already disturbed agricultural lands and 4.48 acres of urban developed land on the Project Site would have limited adverse effects on the diversity and abundance of native flora and fauna either locally or in the region. Natural habitat areas containing suitable habitat for special-status animal and plant species is proposed to be preserved. The impacted area of the Project Site supports only marginally suitable habitat for a few special-status animals, and has no potential to support a high diversity of native plants. Most wildlife species that could be expected to use the Project Site are species that are adapted to the disturbance that is caused by human-induced activities. Because of the present condition of the Project Site and the surrounding lands, it is unlikely that development of the site would contribute significantly to cumulative adverse impacts to regional flora and fauna. The loss of

habitat associated with development of the Project area would contribute to the overall cumulative loss of biological resources in the Santa Paula region. However, given that the impacted habitat within the Project area consists primarily of agricultural and urban developed land, and the impacted waters are small (less than 1 acre), the incremental contribution of the Project to this habitat loss is not cumulatively considerable and, therefore, not significant.

4.4.6 MITIGATION MEASURES

BR-1 Before issuance of a grading permit, the Applicant must identify on grading plans, the locations of any protected trees (such as the Southern California black walnut, *Juglans californica*) and must include a report pertaining to preserving the tree(s) that could be affected by the grading activity. The report shall be prepared by a tree expert and shall evaluate the subdivider's proposals for protected tree preservation, including avoiding grading, land movement, or other activity within the drip line of any protected tree. Prior to grading, the drip line must be fenced to prevent earthmoving equipment from inadvertently entering the drip line. In the event protected tree cannot be avoided, then the Applicant must provide a tree report in accordance with the City's Tree Protection Ordinance and must provide for the replacement or relocation of any protected trees that are to be removed, or would be subject to landmoving or grading within its drip line.

BR-2 Before issuance of a grading permit for development within the Specific Plan area, a landscaping and irrigation plan must be prepared and must incorporate the planting of native vegetation and use of water conserving irrigation. The landscaping and irrigation plan must be prepared by a licensed landscape architect, and use native plant and tree species. The landscape and irrigation plan must be submitted to the City of Santa Paula Planning Department for review and approval.

Nonnative plants or vegetation must be avoided in future development areas. The landscaping plans within common areas of development areas must include appropriate provisions to prevent other invasive plant species from colonizing remaining natural areas. These provisions must include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) the monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species must be determined by a qualified botanist.

For areas adjacent to Adams Barranca riparian corridors, the plan must provide for adequate landscaping to reduce indirect impacts including attenuation of noise and reduction of nighttime lighting and glare.

BR-3 To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special-status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove.

BR-4 If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the qualified biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

BR-5 The Applicant shall retain a qualified biologist (approved by the City of Santa Paula) to survey the Project Site for the presence of the American badger no earlier than 1 day prior to any grading activity. In particular, the survey shall include an examination of the fallow agricultural field in the eastern portion of the site that will be impacted during project implementation.

If American badger is located on site, potential loss of individual animals shall be mitigated through one of the following: (1) an on-site passive relocation program, through which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for 1 week to confirm badger usage has been discontinued, and hand excavation and collapse of the burrow to prevent reoccupation; or (2) active trapping and relocation of badgers to suitable off-site habitat by a qualified biologist and in coordination with the CDFW, as approved by the City and CDFW.

BR-6 To avoid impacts to the Pallid bat (*Antrozous pallidus*) and the Hoary Bat (*Lasiurus cinereus*), the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities. Thirty days before ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys in accordance with standard protocols to determine if roosting western red bats are present in the construction zone or within 300 feet of the construction zone. Roosting bat surveys shall be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees and large shrubs in which this species is known to roost. Any bats found outside of the breeding season (May through August) shall be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 300 feet of the roost, shall be postponed or halted until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site shall be established in the field with flagging, fencing, or other appropriate barriers. Construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as

a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of these bat species.

BR-7 Before issuance of a grading permit for areas that require state permits, the applicant shall coordinate with the CDFW to verify the impact to state-protected waters and associated vegetation on the Project Site. A Streambed Alteration Agreement (SAA) must be obtained, and mitigation measures recommended by the CDFW as part of the SAA shall be implemented. The SAA shall be provided to the City prior to issuance of a grading permit.

The Applicant must mitigate for impacts to jurisdictional waters as administered by the CDFW jurisdiction by restoring habitats within those jurisdictions acceptable to the resource agency. Habitat must be mitigated onsite or within the same watershed, if feasible.

- The mitigation site(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas.
- The mitigation area shall provide procedures to prepare soils in the mitigation area, provide detailed seeding/planting mixtures, provide seeding/planting methods, and other procedures that will be used for successful re-vegetation.
- Impacts to jurisdictional waters shall be avoided to the extent feasible in the design phase of the Project.
- Maintenance and monitoring requirements shall be established, including quarterly and annual monitoring reports to CDFW.

BR-8 Prior to the issuance of a grading permit for areas that require state or federal permits, the applicant and/or its contractor shall coordinate with the Army Corps of Engineers (ACOE) to verify the impact to federally regulated waters on the Project Site. A Nationwide Permit (NWP) shall be obtained and mitigation measures recommended by the ACOE, and National Marine Fisheries, as part of the NWP shall be implemented. The NWP shall be provided to the City prior to initiating construction of the bridge crossing Santa Paula Creek.

- Areas determined to be federally regulated by the ACOE shall also fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB), and a Clean Water Act Section 401 Water Quality Certification (401 Certification) will be required from the RWQCB for impacts to those areas.

BR-9 For impacts to Regional Board jurisdiction, the Applicant shall:

- Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio) on site; or
- Provide a one-time in-lieu fee to a Regional Board–approved mitigation bank and/or in-lieu fee program within the Santa Clara River Watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1.27 acres of Regional Board jurisdiction; or
- A combination of on-site and/or off-site compensatory mitigation options, as described above

BR-10 As mitigation impacts to CDFW jurisdiction, the Applicant shall:

- Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio acres of CDFW jurisdiction for loss of State Waters; or
- Provide a one-time in-lieu fee to a CDFW-approved mitigation bank and/or in-lieu fee program within the Santa Clara River watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1:1 CDFW jurisdiction area; or
- A combination of on-site and/or off-site compensatory mitigation options, as described above.

4.4.7 RESIDUAL IMPACTS AFTER MITIGATION

Through the implementation of the above mitigation measures, all potentially significant adverse impacts to biological resources would be avoided or reduced to less than significant.

4.5 CULTURAL RESOURCES

This section discusses cultural resources, including historical, archaeological, and paleontological resources. Cultural resources include places, objects, and settlements that reflect group or individual religious, archaeological, architectural, or paleontological activities. Such resources provide information on scientific progress, environmental adaptations, group ideology, or other human advancements. For purposes of this analysis, historical resources include buildings, other structures, and surface (aboveground) features and landforms of historical significance. Archaeological resources are buried resources from either historic or prehistoric periods. This section evaluates the potential for implementation of the proposed Project to impact cultural resources within the Project Site and in the immediate surrounding area.

The analysis in this section is derived from the *Santa Paula West Specific Plan Area Paleontological Resource Investigation*, prepared by the San Diego Natural History Museum, dated October 13, 2014; the *Phase I Archaeological Survey of the Santa Paula West Specific Plan Area, Santa Paula, Ventura County, California*, prepared by ASM Affiliates, dated June 2, 2015; and the *Historic Resources Evaluation Report 15258 W. Telegraph Road Santa Paula, Ventura County, California*, prepared by Meridian Consultants, dated September 2015. These reports are provided in **Appendix 4.5, Cultural Resources**.

4.5.1 EXISTING CONDITIONS

In 2014, site reconnaissance and a records review were conducted to determine whether the existing conditions have changed with respect to cultural resources within the Project Site. The review was conducted to fulfill the regulatory requirements for project review in compliance with Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). The adequacy of previous cultural resources studies, including architectural historical assessment and Phase I and II archaeological studies, were examined with respect to those land use actions proposed for the Santa Paula West Business Park Specific Plan (“Specific Plan”). Additionally, in 2015, at the request of the City of Santa Paula, a historic resources assessment (HRA) for 15258 W. Telegraph Road was conducted. This investigation was also part of the environmental review process required under CEQA for the proposed annexation of the Project Site to the City of Santa Paula, adoption of the Santa Paula West Business Park Specific Plan, and amendment to the City of Santa Paula’s Sphere of Influence (SOI) to include this expansion area. The HRA evaluated the eligibility of the property at 15258 W. Telegraph Road for inclusion in the NRHP or the CRHR, or designation as a local landmark, to assess the impacts the Project would have on the property if considered eligible for any of these.

As discussed below, this section is concerned with the following types of historic and cultural resources:

- **Paleontological Resources:** Remains or traces of past life, including body fossils (e.g. bones, teeth, shells, leaves, wood), trace fossils (e.g. burrows, tracks, footprints, feeding traces), and any impressions (e.g. molds or casts) of these fossils.¹ Generally, these fossil resources date to the Pleistocene epoch (older than about 10,000 years), but prehistoric organic remains that date back to the Holocene age (less than about 10,000 years ago) can also be considered fossils. A paleontological resource investigation was conducted for the Project Site (see **Appendix 4.5**).
- **Archaeological Resources:** Remnants of human activity from an earlier time.

Historic Resources: Buildings, structures, improvements, and remnants associated with a significant historic event or person(s) and/or have a historically significant style, design, or achievement. Generally, any resource more than 50 years old has the potential to be considered a historic resource. An HRA for 15258 W. Telegraph Road was conducted for the Project Site.

Paleontological Resources

The Project Site is located directly west of the City of Santa Paula within unincorporated Ventura County. The Project Site lies within the Transverse Ranges Geomorphic Province of the Santa Clara River Valley, which itself are defined by mountains to the north and south. The Project Site consists of Holocene-age alluvial deposits that are primarily composed of sands, gravels, and cobbles created by the Santa Clara River located to the south.² Pleistocene alluvial deposits are presumed to underlie the Holocene deposits, however, at an unknown depth.³

Paleontological resources are valued for the information they yield about the history of the earth and its past ecological settings. Paleontological data was collected from the Natural History Museum of Los Angeles County (NHM).⁴ Research of these records did not determine the presence of any LACM recorded fossils within vicinity of the Project Site, nor any known Holocene- or Pleistocene-age fossils within the entire Santa Clara River Valley.⁵ However, significant paleontological resources have been documented throughout Ventura County, specifically within the Pleistocene-aged alluvial deposits found in Simi Valley and Thousand Oaks.⁶

Archaeological Resources

The archaeological basis for the regional prehistoric sequence in Ventura County lies ultimately in the research of David Banks Rogers (1929), who worked on the Channel Islands and along Santa Barbara coastline. William J. Wallace (1955) subsequently modified the terminology of Roger's scheme and

1 San Diego Natural History Museum, *Paleontological Resource Investigation, Santa Paula West SPA* (October 2014).

2 San Diego Natural History Museum, *Paleontological Resource Investigation* (October 2014).

3 San Diego Natural History Museum, *Paleontological Resource Investigation* (October 2014).

4 San Diego Natural History Museum, *Paleontological Resource Investigation* (October 2014).

5 San Diego Natural History Museum, *Paleontological Resource Investigation* (October 2014).

6 San Diego Natural History Museum, *Paleontological Resource Investigation* (October 2014).

improved it with additional and more detailed data and radiocarbon dates, with further refinements by Chester King (1981).⁷

Wallace's chronology includes four prehistoric time periods for coastal California, including Ventura County. These time periods are the Early Man/Big Game Hunting Period (12,000–7000 before present [BP]), Early Millingstone Period (7000–3500 BP), Intermediate Period (3500 BP–1000 Common Era [CE]), and the Late Prehistoric Period (1000–1769 CE). Below is a brief discussion of each time period.⁸

Figure 4.5-1, Archaeological Sensitivity Map, Ventura County (South Half), portrays generalized archaeological site sensitivity areas based on known or suspected prehistoric use areas. The map indicates that the Specific Plan area lies outside of areas designated as “sensitive” or “very sensitive.”

Early Man/Big Game Hunting Period

The occupation of the southern California coastal regional is believed to have begun during the 12,000–to 7000 BP interval (Terminal Pleistocene Period), or the Early Man/Big Game Hunting Period, although to date the only evidence of such has been limited to a few discoveries of fluted projectile points found in isolated locales. However, the characteristic geomorphological instability of the California coastline, combined with the major change in erosional/degradational regimes that occurred at the end of the Pleistocene, does not favor the preservation of remains from this or an earlier period.⁹

Early Millingstone Period

Most sites of the 7000–5000 BP interval, or Early Millingstone Period (Early Horizon), date between 8,500 and 3,500 years in age and are dominated by assemblages containing large numbers of groundstone artifacts, along with crude choppers and other core/cobble tools. These are thought to represent an adaptation to gathered foods, particularly a reliance on hard-shelled seeds.¹⁰ In addition, J. Erlandson has shown that the native inhabitants of the area were generalized foragers who, during the beginning of this period, relied on a variety of different kinds of terrestrial, coastal, and marine resources. Erlandson proposes an early adaptation to estuarine embayments, during which shellfish and other marine

7 Whitley D. S., *Phase I Archaeological Survey of the Santa Paula West Specific Plan Area, Santa Paula, Ventura County, California* (ASM Affiliates, June 2, 2015).

8 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).

9 Whitley, D.S. and R.I. Dorn, “New Perspectives on the Clovis vs. Pre-Clovis Controversy,” *American Antiquity*, 58 (1993): 626–47.

10 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).

resources were consumed as primary protein sources.¹¹ Erlandson's evidence suggests that the adaptation to the seashore is an ancient and long-lived strategy in local prehistory.¹²

Intermediate Period

The Intermediate (or Middle) Period occurred about 3,500 years ago and is believed to have lasted until about 1000 CE. This time period is marked on the coast by a growing exploitation of marine resources, the appearance of the hopper mortar and stone bowl/mortar, and a diversification and increase in the number of chipped stone tools.¹³ Projectile points, in particular, are more common at sites than previously, while artifacts such as fishhooks and bone gorges also appear. Moreover, substantial evidence exists indicating that inland sites were first established and occupied at the beginning of this time period, and that a movement of coastal sites down toward the beaches occurred, suggesting the exploitation of more varied environments and perhaps an increase in population.¹⁴

Late Prehistoric Period

The introduction of the bow and arrow technologies to the region marked the beginning of the Late Prehistoric Period in Southern California coastal regions, dating from about 1500 BP (500 CE) to the time of formal Spanish contact (approximately 1769–1770 CE). Coastal sites dating to this period are numerous and contain diagnostic artifacts, such as an increase in projectile points, mortars and pestles, steatite ornaments and containers, perforated stones, circular shell fishhooks, and numerous and varied bone tools, as well as bone and shell ornamentation. A considerable increase of craft specialization during this period, an example being standardized micro drills to mass produce shell beads, serves as a reliable indication of a rise in social complexity and organization.¹⁵ The transition to the Late Prehistoric Period was thus marked by the evolution and eventual dominance of a sophisticated maritime economy.¹⁶ More important, the use of ethnographic resources provides evidence to correlate local prehistory with Chumash cultural groups that occupied the Santa Clara River Valley prior to and during Spanish colonization.¹⁷

11 Erlandson, J. and R. Colton, Eds. "Hunter-Gatherers of the Early Holocene Coastal California." *Perspectives in California Archaeology*, vol. 1. (Los Angeles: Inst. of Archaeology, Univ. of California, 1991).

12 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).

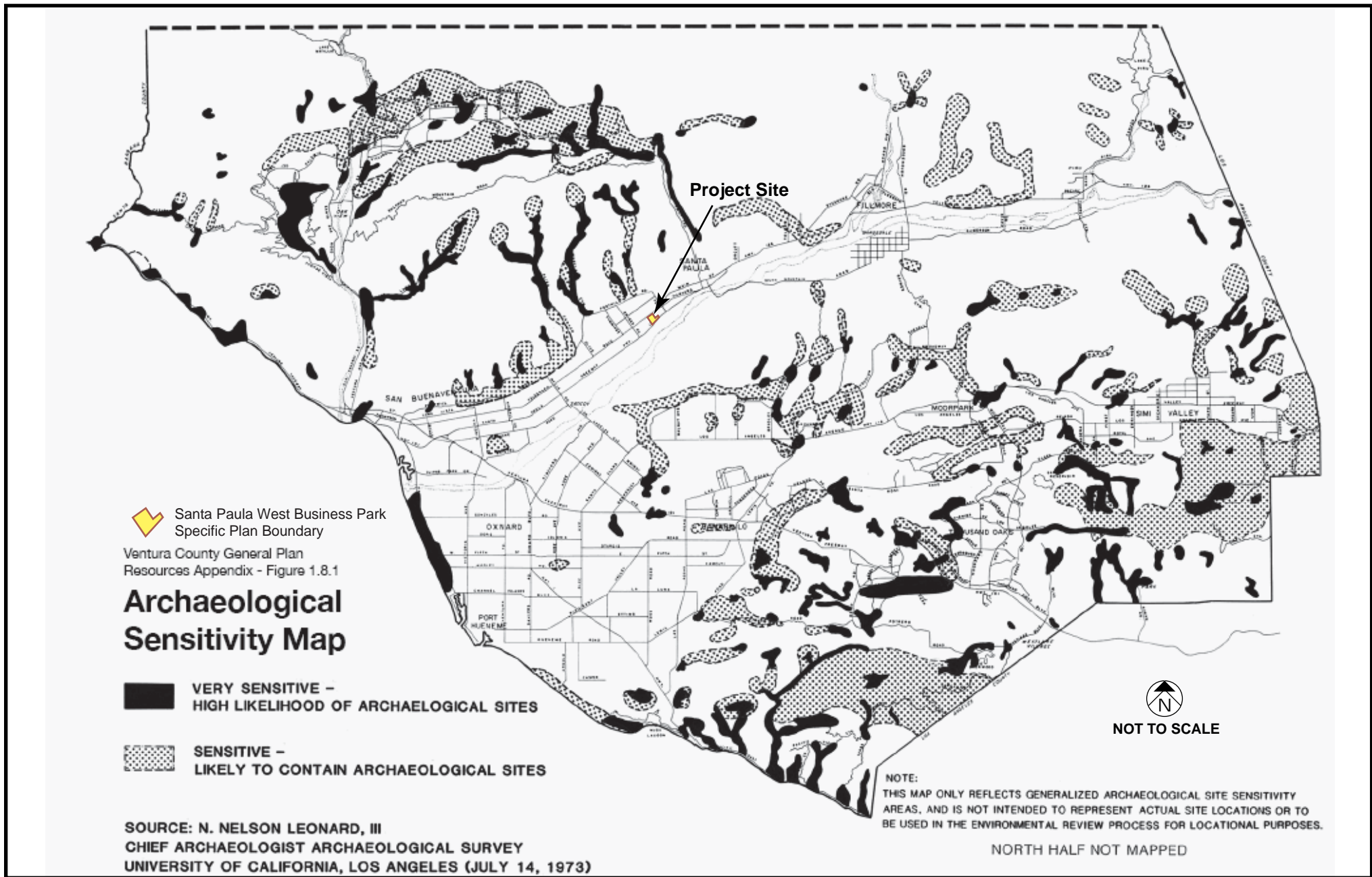
13 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).

14 Whitley D.S., and M.P. Beaudry. "Chiefs on the Coast: Developing Chiefdoms in the Tiquisate Region in Ethnographic Perspective," in *The Formation of Complex Societies in Southeastern Mesoamerica*, W. Fowler, ed. Boca Raton, FL: CRC Press, 1991).

15 Arnold, J. *Craft Specialization in the Prehistoric Channel Islands, California*. University of California Publications in Anthropology, vol. 18. (Berkeley: University of California Press, 1987).

16 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).

17 Whitley D.S., *Phase I Archaeological Survey* (ASM Affiliates, June 2, 2015).



SOURCE: Ventura County General Plan, Resources Appendix, Figure 1.8.1 - 2011

FIGURE 4.5-1

Ethnographic Resources

The City of Santa Paula, including the Project Site, lies within the historic territory of the Ventureño dialect of the Chumash Native American group.¹⁸ The Ventureño occupied most of the area of present-day Ventura County and southwest corner of Los Angeles County.¹⁹ Centered around the capital village of Muwu (known today as Point Mugu), the Chumash chiefdom Lulapin covered the territories of the Santa Clara River Valley.²⁰ The inhabited and inhabitable areas of the City of Santa Paula and along the Santa Clara River are considered to be areas of high archaeological sensitivity. Thus, the General Plan indicates that site-specific surveys would be required to determine the presence of such potential resources.²¹

Historic Resources

The term “historical resources” refers to the material and nonmaterial expressions of human adaptations that characterized the postcontact or historic period. These resources primarily include historic event or activity sites, historic archaeological sites, standing architecture and other significant properties, documents and other sources of historical information, and objects of material culture; secondarily, they include more intangible cultural qualities, such as folklore, social organization, and value systems, that are associated with these properties.

The 53.81-acre Project Site is currently developed for the agricultural production of row crops and avocado and citrus orchards. It is estimated that the Project Site has been used as agricultural land as far back as 1938, which is the date of the last aerial photograph of the site.²² Various structures are located on the Site for the use of agricultural operations, including maintenance storage facilities, offices, and other ancillary uses, such as parking facilities and related farming materials. There are three wind machines located on the Project Site, two of which are electric powered and one that is an abandoned gasoline power tower. Additionally, the Project Site contains one single-family residence and a storage shed on the northwest corner. The single-family residence on the northwest corner of the Project Site dates back to between the years 1947 and 1959.²³

Furthermore, Ventura County maintains an inventory of historical landmarks and points of interest that reflects the diversity of sites, buildings, and natural features that have been recognized by the Cultural

18 City of Santa Paula, *General Plan, “Conservation and Open Space Element”* (1998).

19 City of Santa Paula, *General Plan, “Conservation and Open Space Element”* (1998).

20 David S. Whitley and C. William Clewlow, Jr, “The Organizational Structure of the Lulapin and Humaliwo,” in *The Archaeology of Oak Park, Ventura County, California*. vol. 3, Institute of Archaeology, Monograph 11 (Los Angeles: University of California Los Angeles, 1979); and Whitley and Beaudry, “Chiefs on the Coast” (1991).

21 City of Santa Paula, *General Plan, “Conservation and Open Space Element”* (1998).

22 PW Environmental, *Environmental Case Review—Santa Paula West Business Park* (October 2014).

23 PW Environmental, *Environmental Case Review—Santa Paula West Business Park* (October 2014).

Heritage Board for their outstanding historical character.²⁴ Included are Chumash archaeological sites, Spanish and Mexican adobes, Victorian-era mansions, banks, trees, and innumerable other points of interest. No sites listed on the Ventura County inventory are located within the Project Site.

General Historical Context of the Santa Clara Valley

The Santa Clara Valley was originally part of several land grants; Rancho Santa Paula y Saticoy, Rancho Sespe, Rancho Ex-Mission San Buenaventura, and Rancho San Francisco. In addition, portions of the valley not included within rancho boundaries were considered public lands. The area located east of Santa Paula and west of Fillmore has been referred to as the Sespe region because the majority of the land was originally part of Rancho Sespe. The remaining lands were public lands, and settlers used both the Preemption Act of 1841 and the Homestead Act of 1862 to acquire these lands once the Rancho Sespe boundaries were settled.

Rancho Sespe was granted by Governor Figueroa to Carlos Antonio Carrillo in 1833. The rancho encompassed all of the Santa Clara Valley between Piru and Santa Paula Creeks and was bounded on each side by the mountains, a total of 6 square leagues or 26,000 acres. Carrillo did not take possession of his land until 1842, when a survey was conducted and an adobe house built. Carrillo had attained a high degree of prominence in the Mexican government, having been elected to the assembly and eventually appointed governor in 1837. The Carrillo family lived in Santa Barbara and occasionally traveled to the ranch, which was run by the majordomo (ranch manager). Carrillo died 10 years later, in 1852, and his wife died the following year. His adobe house, located near Hall and Telegraph Roads, was partially destroyed by fire in the 1850s and fell into ruin. In the 1880s, children attending the Santa Clara School across the ravine from the old adobe used to play among the ruins.

Thomas Wallace More and his brothers, Andrew and Henry, purchased 6 square leagues of the rancho in 1854 from the estate of Josefa Carrillo.²⁵ The California Agriculture Census indicates that by 1860, More had become the largest single landowner in Santa Barbara County, which at the time included all of contemporary Ventura County. T. W. More raised sheep and cattle on the ranchos until the disastrous droughts of the late 1850s and early 1860s forced the brothers to dissolve their partnership and subdivide the rancho land.²⁶ T. W. More got Rancho Sespe, and he also inherited the difficulties surrounding the actual size of the ranch. These difficulties were to pit the large ranch owner against settlers who had come to California looking for public lands on which to stake a claim using the Pre-emption Act or the Homestead Act as the legal basis for claiming land.

24 Ventura County, *General Plan*, "Resource Appendix," Figure 1.8.2 (June 2011).

25 Cleland, Robert Glass, *A Place Called Sespe* (Los Angeles: Robert Glass Cleland, 1953).

26 Cleland, Robert Glass, *A Place Called Sespe* (1953).

At the time the More brothers purchased Rancho Sespe in September of 1854, the US Land Commissioners had confirmed in April of that year the Sespe grant as originally petitioned by Carrillo, with the boundaries of the map to include 6 square leagues. The Mores believed they paid for 6 square leagues. However, from the time the grant had been approved, the US government had appealed the approval based on evidence in a different version of the Expediente that said the rancho was 2 square leagues. The Mores' attorney went along with the government's approval of 2 square leagues without the brothers' approval.

The rancho was surveyed in two tracts in 1868 by Surveyor Charles F. Hoffman. The plat was completed and the map drawn in 1871 and in March 1872, the Mores received title to 2 square leagues (8,880.81 acres). The Craven Survey of Public Lands was not filed until December 19, 1874, and the settlers then had 90 days to file declaratory statements for land on which they had settled. It also opened the way for new settlers to come in.

Settlers, or squatters—as they were also referred to—began to arrive in the Santa Clara Valley looking for land following the Civil War in the mid to late 1860s. In 1867, land was subdivided in the Santa Paula y Saticoy Rancho, and many settlers who had money from working in the goldfields in Northern California purchased land in the area west of Santa Paula. Those wanting to take advantage of free land offered by the Homestead Act of 1862 had to locate available public lands; because the Craven Survey wasn't filed until 1874, it was difficult for settlers to know the exact location of nonrancho lands.

A small group of squatters began to settle in the area surrounding T. W. More's Sespe Ranch near the confluence of Sespe Creek and the Santa Clara River, especially after the Craven public land survey was filed.

Disappointed at not receiving the entire 6 leagues, T. W. More filed an application in 1875 to buy the remaining 4 square leagues. It was denied by the Los Angeles Land Office, but before that happened, the Sespe Settlers League had banded together to protect their property. The following years, 1876–1877, were extremely dry years for ranchers in the Sespe, and there was much anxiety over the drought. This anxiety was heightened when the Sespe squatters learned that More had filed claim with the County to build an irrigation ditch on his rancho. Concerned that More would take all the water from the Sespe and Santa Clara Rivers, the settlers believed they would be deprived of water for their crops. More began to trench his ditch before the application was approved, thereby continuing to anger the squatters.

The local newspapers took up the cause of the Sespe Settlers League against the large ranch owner. Between 1872 and 1877, newspaper headlines proclaimed the following: "Land Grabbers of California,"

“Cursed with Land Monopoly,” “Doings of the Land Robbers,” etc.²⁷ The continuous inflammatory newspaper articles and the attempt of More to buy back land or take water from land that squatters had begun to settle led to the most famous murder case of the century. On March 24, 1877, Thomas Wallace More was shot and killed while trying to put out a barn fire on his ranch. Although originally seven men were arrested, only one was ever convicted and sent to prison. Frank Sprague was released after serving his 7-year sentence in San Quentin prison.²⁸

Following More’s death in 1877, the US Land Office overturned the 1875 ruling and said that More’s heirs did have the right to buy the disputed land. Once again, however, this was overturned by the final ruling on July 25, 1878, that denied the heirs the rights to buy the remaining 4 leagues.

The majority of residents who settled in the Sespe region of the Santa Clara Valley had homesteaded their land. The exception would be those who purchased land from the heirs of Rancho Sespe when they began to subdivide their property in the 1880s. A partial listing of homestead patents included Miles and William Balcom, George W. Cook, Henry T. Cook, James A. Culp, Thomas O. Toland, Joseph Bath, William Brock, Eben Moore, Albert Miles Tanner, John Hall Orcutt, Nickolas J. and Mary Schieferle, George M. Richardson, J.W. Rosenburg, and Charles H. Willard.

Santa Paula Historical Context

George G. Briggs purchased approximately 15,000 acres of Rancho Santa Paula y Saticoy from T. W. More in 1861. Earlier that year, Briggs, together with his nephew Jefferson Crane, had visited More at his adobe residence. All three men had known one another in Ohio, where they had lived previously. After purchasing the land from More, Briggs used the 2-story adobe built for More by W. D. Hobson as the center of his ranching operations. Briggs, formerly a horticulturist in Marysville, believed he could successfully raise fruit on the land and planted a 160-acre orchard near the adobe. Discouraged by the continuing drought conditions and disheartened by the death of his wife, Briggs in 1867 authorized land agent E. B. Higgins to begin subdividing the rancho into 150-acre parcels. These parcels were sold primarily to farmers emigrating from the Northern California gold fields, the East, and Midwest.²⁹ The survey was prepared by W. H. Norway in 1867.

In 1872, Nathan Weston Blanchard and his silent partner, E. L. Bradley, purchased 2,700 acres of Rancho Santa Paula y Saticoy from Higgins, and 3 years later recorded the town site of Santa Paula on a portion of it. Blanchard, generally considered the founder of Santa Paula, was born in Madison, Maine, in 1831.

27 Outland, Charles F, *Sespe Gunsmoke: An Epic Case of Rancher versus Squatters* (Ventura, CA: Ventura County Museum of History and Art, 1991).

28 Outland, *Sespe Gunsmoke* (1991).

29 Sheridan, E. M. “The Narrative of Jefferson Crane.” *Ventura County Historical Society*, 1 (1955).

He arrived in northern California in 1854, during the Gold Rush. He gained financial success in the meat butchering business and the lumber trade in Dutch Flat, a Sierra Nevada gold-mining boomtown. He married Ann Elizabeth Hobbs in 1864. Following the death of their first child, Dean, they moved to Ventura County in 1872. The Santa Paula town site, surveyed in 1873 and recorded by Blanchard and Bradley in 1875, was bounded on the north by Santa Paula Street, on the south by Ventura Street, on the east by Twelfth Street and on the west by Mill Street. Blanchard planted seedling orange trees in 1874 and, during the late 1880s, constructed the first packinghouse, located adjacent to the railroad.

In addition to the development of agriculture, oil exploration was occurring in portions of the Santa Clara Valley as early as the 1860s. Some of the first oil explorations in the Santa Paula area occurred in Adams Canyon, where tunnels were drilled horizontally into the hillsides. Sulphur Mountain was also cited in early geology reports as being one of the major oil-prospecting regions in California. Thomas Bard, representing Thomas Scott of the Pennsylvania Railroad, arrived in Ventura in 1867 with the intent of purchasing land for this purpose.

By the early 1880s, Santa Paula had become the base of operations for Pennsylvania oil developers Wallace L. Hardison and Lyman Stewart. They established the Hardison and Stewart Oil Company offices on Mupu (Main) Street in 1886. In 1890, several small oil companies owned by Hardison, Stewart, and Bard joined forces to become the Union Oil Company.

Despite these pioneering efforts, the growth of Santa Paula's agriculture and oil industries was restrained by transportation considerations until the Southern Pacific railroad arrived in the Santa Clara Valley in 1887. Soon afterwards, citrus cooperatives were established to provide the ranchers with efficient methods of shipping and marketing. Agriculture as an industry (as differentiated from traditional family farming) began in 1893, with the founding of the Limoneira Company west of Santa Paula, followed by the Teague-McKevett Ranch east of the city in 1905. Both companies built their own packinghouses and warehouses adjacent to the railroad. By 1890, several other large subdivisions had been added to the original 1875 Santa Paula town site: the McKevett Tract in 1891, the Hardison-Irwin Tract in 1887, the Barkla Tract in 1888, and the Orcutt-Moore Tract in 1892.

Rapid growth of the community followed the establishment of viable oil and agriculture industries, culminating in the incorporation of the city in 1902. The first two decades of the 20th century were marked by both the maturation of the citrus industry and the opening of the highly productive South Mountain oil fields. The growing profitability of these industries produced Santa Paula's third building wave, the expansive era of the 1920s. Numerous new schools, banks, offices, and commercial buildings were built or remodeled. The development of new residential tracts for both the affluent and the working class rapidly transformed Santa Paula's previously rough appearance to one of modernity and respectability.

Agricultural Context

Development resulted from experimentation with the cultivation and marketing of agricultural products, and each successive wave left a distinct mark on the land. As was the case throughout much of the West, the earliest American settlers in the Santa Clara Valley engaged primarily in dry farming, carrying on essentially in the tradition of the Californios. Lacking reliable sources of irrigation and transportation, this thinly populated frontier region supported primarily low-intensity sheep and cattle ranching, grain production, and, to a limited extent, the more drought-tolerant forms of fruit cultivation.

The first fruit-growing efforts in the western end of the valley were apricots, deciduous fruits, lemons, and walnuts. Other crops commonly grown during these early decades were grains—wheat, barley, flax, and corn—and lima beans.

The advent of greatly improved transportation and irrigation systems, including the construction of wharves at Hueneme (1871) and Ventura (1872), and the Southern Pacific Railroad line (1887), combined with the development of the Atmore Ditch (1879), the Interurban Land and Water Company (1906), and other smaller ditches bringing water from the Sespe Creek and Santa Clara River, permitted valley property owners to realize the economic potential of the local soil and climate. Groundwater development also occurred in the area with the establishment of the Hardscrabble Mutual Water Company (1920), the Community Mutual Water Company (1920), and the Citrus Mutual Water Company (1929). Reliable water sources and transportation resulted in the gradual displacement of grain crops by walnuts, olives, and apricots. But it was citrus ranching, in both myth and reality, that was to become thoroughly enmeshed with every aspect of the region's economy, culture, and popular image.

The earliest plantings of commercial citrus in the western Santa Clara Valley were accomplished by Nathan W. Blanchard in 1874, with the first profitable orange harvest arriving fourteen years later. This shift to citrus crops accelerated rapidly in the 1890s through the 1910s, with the establishment of the Limoneira in 1893, Teague-McKevett in 1905, and the Newhall Land and Farming Company's Orchard Farm in 1912. Citrus cultivation progressed in successive waves, from oranges to lemons and later to avocados, with each of these tree crops wholly or partially replacing the previous one. The increasing sophistication of the citrus industry also led to the development of new tree varieties, and these improved types gradually superseded the earlier species.

During the period of 1920–1945, the citrus industry sustained an unprecedented era of expansion, increasing the total volume of production in California nearly 150 percent. This growth engendered the profound transformation of the entire economic, social, and physical character of the Southern California

region to an extent described by historian Carey McWilliams as “difficult to emphasize sufficiently.”³⁰ The establishment of the verdant “citrus belts” along the foothills helped to firmly establish an almost utopian image of Southern California in the national consciousness. This depiction, although it contrasted decidedly with the natural aridity of the area, became thoroughly integrated into the regional mystique, having been championed tirelessly by development interests and the citrus industry. It is virtually impossible to separate the economic, social, and physical impacts of this industry from other influences present during this period because virtually the entire urban and rural form taken on by the Southern California foothills region can reasonably be attributed either directly or indirectly to citrus production.

Because citrus cultivation is a highly capital-intensive industry, it attracted well-established farmers and businesspeople, frequently from other parts of the country. This factor, together with the ability of the cooperative associations to manage virtually all aspects of the growing, packing, shipping, and marketing of the fruit, validated the Southern California citrus grower’s “gentlemen farmer” reputation: a refined agriculturalist whose hands needn’t touch soil. At the same time, a variety of ethnic groups, including at various times large numbers of Chinese, Japanese, and Mexican immigrants, characterized the labor force. A significant number of Dust Bowl refugees of the 1930s and 1940s, especially women, came to work in the packinghouses, particularly after the labor turmoil of 1941 and the relocation of the Japanese-American population in 1942.

The rapid suburbanization of the Southern California region taking place during the two decades following the end of World War II placed heavy pressure on agriculture to turn land over to development interests. This trend was abetted by the “highest and best use” scheme of property taxation in effect prior to the implementation of the California Land Conservation (Williamson) Act of 1965. Further, the root stock planted during the industry’s peak years of expansion had by this time become less productive, and in particular had become widely infected with the citrus diseases. Balancing the imminent need to reinvest in new trees against increasing taxation and the new development value of their property, growers in large numbers chose to remove their land from cultivation.

These convergent events taking place during the mid to late 1950s led to a steady decline in the citrus industry in Los Angeles and Orange Counties, and in Riverside and San Bernardino Counties somewhat later. The Santa Clara Valley of Ventura County, by virtue of geography, largely escaped these events, however, and retained its citrus landscape largely intact until the 1970s, when strict planning guidelines for the protection of agricultural areas countywide were adopted. Accordingly, the Santa Clara Valley represents one of the best preserved examples of a mature Southern California citriculture landscape.

30 McWilliams, Carey. *Southern California Country: An Island on the Land* (New York: Duell, Sloan & Pearce, 1946).

Architectural Context, Building Arrangement, and Types

The architectural styles present in the valley reflect both the changing tastes and the steadily increasing affluence of its residents, as well as technological innovations and transportation improvements. By 1910, classically derived architectural styles had almost entirely given way to the California Bungalow style. This style persisted well into the 1930s, when it blended almost seamlessly into the ranch style. The bungalow form proved especially adaptable and can be seen in buildings ranging from modest agricultural worker's cottages to costly, large-scale residences.

Labor housing was provided on both the family farms and agribusiness ranches. Farm labor was both seasonal-itinerant and year-round, and provided by a wide variety of ethnic groups. Bunkhouses were constructed for the use of single men. Labor camps, consisting of a large number of small dwellings, housed families, while individual detached dwellings provided housing for ranch foremen and labor supervisors. Homes built for ranch employees varied in size but were usually smaller than the homes built for family farmers, and were more modest in design and materials.

Packinghouses were an essential feature of the citrus landscape. Only the largest agricultural concerns maintained private packinghouses on their own properties. Smaller growers were dependent on the association packinghouses within the nearby communities of Santa Paula and Fillmore. The specific procedures for preparing oranges, lemons, and walnuts for market were reflected in the design and locations of these buildings. Barns were associated with all farming and ranching operations, and depending on the nature of the operation, were used for the storage of farm equipment and feed, and for the housing of farm animals, such as horses and mules.

A variety of purpose-built and generic outbuildings related to ranching operations were constructed throughout the agricultural areas of the Santa Clara Valley. Secondary processing buildings, such as walnut dehydrators, remain as artifacts of this antecedent commercial crop, which faded in importance in the 20th century. Box sheds were often constructed for the storage of orchard heaters, and field lug boxes used to transport citrus from the fields to the packinghouses. Garages and sheds were constructed in large numbers for various purposes, such as the storage of farm equipment and vehicles.

Agricultural Structures

Irrigation provided the essential ingredient required to realize the agricultural potential of the valley. Unlike many areas of Southern California, the Santa Clara Valley featured the relatively reliable, year-round surface water flows of the Santa Clara River and Sespe and Santa Paula Creeks. Property owners began in 1879 to construct the water delivery system known as the Atmore Ditch, which diverted runoff from near the juncture of the Sespe Creek and Santa Clara River, eventually extending the system to the

western edge of the valley. Other small private ditches were constructed to bring water from the Santa Clara River to individual ranches.

Open ditches and flumes were employed initially, but the system was eventually converted to buried pipes, although roadside ditches remain in use to collect rain and irrigation runoff. Some of these ditches were constructed with the abundant river rock available in the area. The irrigation system employed weirs, penstocks, reservoirs, and pump houses as integral elements. Water towers and cisterns were common features of the historic landscape, and were used primarily in connection with the storage and supply of domestic water. Almost none of these structures remain today.

Transportation systems in the valley are represented by roads and railroads. Preliminary surveys for the construction of a railroad line through the valley were undertaken by the early 1860s, but it was not until 1887 that the Southern Pacific Railroad completed its connection between Los Angeles and Ventura, spawning the towns of Fillmore and Piru in the eastern Santa Clara Valley, and ensuring the survival of Santa Paula, Saticoy, and Ventura in the west county. The railroad right-of-way imposed the logic of Southern Pacific's surveyors on the valley, cutting diagonally across the public land survey and Rancho Sespe survey but paralleling the highway. Having split numerous earlier parcels of land, this new boundary gradually came to alter land ownership patterns. At least one railroad siding was developed to serve the Teague-McKevett Company's packing operations.

Sites and Field Patterns

The most visually striking features defining the historic landscape of the Santa Clara Valley are direct products of the development of the land for agriculture, particularly tree crops. The orchards as they are seen today echo the historic techniques of citriculture: trees are planted in regularly spaced rows, with shallow irrigation ditches running between, a system designed to permit gravity flood irrigation and drainage. Wider rows are introduced on regular intervals to permit access to the orchards by picking and spraying equipment. The trees themselves have been subjected to a constant process of replacement as improved varieties were developed, older trees became unproductive due to age, or trees were damaged by infestations or one of the area's periodic freezes.

Description of Potential Historic Resource

The employee residence at 15258 W. Telephone Road is a rectangular-massed building of no discernable architectural style, save for one Craftsman-style, three-over-one wooden-sash window present on the front façade. The house consists of a front-gabled core with flanking side projections. A shed-roofed room projects off the kitchen on the east elevation, which provides rear access to the house through a notched porch at the southeast corner. The west elevation features a shed-roofed projection and a side-gabled projection, each corresponding to a bedroom. The symmetrical façade of the house is characterized by a

hipped-roof, partial-width front porch. The porch roof is supported by 4-by-4 posts and has a beadboard ceiling. A vertical-slat porch railing encloses the space, save for the front entrance, which is accessible via cast concrete steps. The house is clad in wide shiplap- or novelty-board siding; is capped by a medium-pitched, asphalt-shingle roof; and sits on a crawlspace. The perimeter foundation appears to be cast concrete. Fenestration is a mixture of one-over-one wooden- and vinyl-sash windows, with one vinyl-sliding window on the east elevation and, as noted previously, a three-over-one sash window on the façade. The house has enclosed eaves and louvered gable vents in each of the three gable ends. An exterior brick chimney is located on the east elevation of the house, toward the front, and corresponds to a fireplace in the front living room.

Two ancillary structures are directly behind and to the south of the employee residence. The first is a small manufactured shed south of the house. The second is a front-gabled garage clad in corrugated metal sheets.

The immediate setting around the employee residence is characterized by mature fruit trees, a small fenced yard, and a brick-paver path leading from the front of the house to dirt parking areas.

4.5.2 REGULATORY SETTING

Federal

National Historic Preservation Act

The NHPA protects archaeological, cultural, and historic resources of national importance in the United States.³¹ The Act established the National Register of Historic Places (NRHP), an official list of resources that are identified as worthy of protection. A resource is eligible for listing in the NRHP if it:

- Is associated with events that have made a significant contribution to the broad patterns of our history;
- Is associated with the lives of persons significant in our past;
- Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; and
- Has yielded, or may be likely to yield, information important to the prehistory.

31 United States Code, National Historic Preservation Act, tit. 16, sec. 470 et seq. (1966).

American Indian Religious Freedom Act

The American Indian Religious Freedom Act, passed by a joint resolution of Congress in 1978, establishes that the policy of the United States is to protect and preserve for Native Americans their inherent right of freedom to believe, express, and exercise their traditional religions.³² Executive Order No. 13007 directs all federal agencies to enact procedures to protect sacred Native American sites.³³

State

California Environmental Quality Act

CEQA and the CEQA Guidelines provide a framework for the analysis of impacts to historical and archaeological resources.³⁴

To be considered a historic resource under CEQA, a resource must be listed in or determined eligible to be listed in the California Register of Historical Resources³⁵ included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code; or identified as significant in a historic resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code.

Impacts to “unique archaeological resources” and “unique paleontological resources” are also considered under CEQA, as described under the Public Resources Code, Section 21083.2.³⁶ A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge there is a high probability that it meets one of the following criteria:

1. The archaeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information.
2. The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type.
3. The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

32 United States Code, American Indian Religious Freedom Act, tit. 42, sec. 1996 (1978).

33 61 Federal Register, Executive Order 13007, Sacred Sites (2011).

34 Public Resources Code, California Environmental Quality Act, sec. 2100 et seq.

35 Public Resources Code, sec. 5024.1; 14 California Code of Regulations, sec. 4850 et seq.

36 Public Resources Code, Section 21083.2.

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under Public Resources Code Section 5097.98.

Under Public Resources Code Section 15064.5, a project would potentially have significant impacts if it would cause substantial adverse change in the significance of one of the following:

- A historical resource
- An archaeological resource
- A unique paleontological resource or unique geologic feature
- Human remains

Furthermore, California Senate Bill (SB) 18 requires cities and counties to notify and consult with California Native American tribes about proposed local land use planning decisions to protect Traditional Tribal Cultural Places.^{37,38} Cities and counties must obtain a list from the Native American Heritage Commission (NAHC) of the California Native American tribes whose traditional lands within the agency's jurisdiction may be affected by a proposed adoption or amendment of a general plan or specific plan. Before the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes of the opportunity to conduct consultations on the proposed project. Before the adoption or substantial amendment of the general plan or specific plan, a local government must refer the proposed project to those tribes on the Native American contact list that have traditional lands within the agency's jurisdiction.

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with the California Health and Safety Code and Public Resources Code as reviewed below.³⁹

In the event that human remains are encountered during project development and in accordance with the Health and Safety Code Section 7050.5, the County Coroner must be notified if potentially human bone is discovered. The Coroner will then determine within two working days of being notified if the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she shall contact the Native American Heritage Commission (NAHC) by phone within 24 hours, in accordance with Public Resources Code Section 5097.98. The NAHC will then designate a Most Likely Descendant (MLD) with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the

37 California Government sec. 65040.2, 65092, 65351, 65352, and 65560; and California Civil Code, sec 815.3.

38 California Senate Bill 18, ch. 905, Statutes of 2004.

39 California Health and Safety Code, sec. 7050.5 and 5097.98.

excavation work means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

Regional and Local

City of Santa Paula

General Plan

The City of Santa Paula's General Plan Conservation and Open Space Element contains descriptive information related to natural resources and open space that is relevant and of concern to Santa Paula, including specific goals, policy statements, and implementation measures that carry out the goals. Lands throughout the City and the surrounding Area of Interest contain a wide variety of resources that are significant in the area's local history, regional architecture, archaeology, and culture. The resources considered significant usually meet the following criteria:

- The resource is associated with events that made a significant contribution to the broad patterns of our history; or
- The resources are associated with the lives of persons significant in our past; or
- The resources embody the distinct characteristics of a type, period or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant distinguishable entity; or
- The resources have yielded or may likely yield information on history or prehistory.

Development Code

City of Santa Paula Ordinance No. 816 provides for the designation of City landmarks and establishes the criteria for designating a landmark nomination: "Any structure, property, or area that meets one or more of the above criteria shall also have sufficient integrity of location, design, materials, construction and workmanship to make it worthy of preservation, restoration or rehabilitation." City of Santa Paula Ordinance No. 816 provides for the designation of Historic Districts.

4.5.3 THRESHOLDS OF SIGNIFICANCE

Based on CEQA Guidelines, the proposed Project would result in significant adverse environmental impacts on cultural resources if it would:

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
- Disturb any human remains, including those interred outside of formal cemeteries?
- Cause a substantial adverse change in the significance of a historical resource as defined in Government Code Section 15064.5?

- Cause a substantial adverse change in the significance of an archaeological resource pursuant to Government Code Section 15064.5?

Section 15064.5(b) of the CEQA Guidelines provides that a project with an effect that may cause a substantial adverse change in the significance of a historical resource may also have a significant effect on the environment. A substantial adverse change in the significance of a historical resource is defined as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

4.5.4 PROJECT IMPACTS

The Project would alter the ground surface of the Project Site during grading; construction and subsurface construction of structural foundations; utility trenching; stormwater infrastructure; paving; and landscaping. These disturbances to the ground surface would not extend beyond the boundaries of the Specific Plan, or the areas of the Master Vesting Tentative Map.

Threshold: **Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

Older Alluvium

While a majority of the Project Site consists of younger Holocene alluvial soils, older Pleistocene alluvial deposits are presumed to underlie these younger soils. Because these depths of older alluvial soils are unknown, there is a moderate to high potential for development-related earthmoving activities and unauthorized fossil collecting within older alluvium on the Project Site to result in the loss of scientifically important fossil remains, currently unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data. Implementation of **Mitigation Measure (MM) CUL-1** would reduce any potential impacts to paleontological resources to a level of less than significance.

Younger Alluvium

The Project Site consists in majority of younger alluvial soils, which are considered to have low potential of containing significant paleontological resources. At shallow depths, the younger alluvium is considered too young to contain remains old enough to be considered fossilized. As a result of the unlikelihood of significant fossil resources being found within these younger soils, ground-disturbing activities of less than 10 feet below the current grade of the Project Site are anticipated to have low potential to impact any paleontological resources. However, given that occurrences of significant paleontological resources have been found in the nearby cities of Simi Valley and Thousand Oaks, there is potential for the Project Site to contain resources of similar significance. Therefore, implementation of **MM CUL-1** would reduce any potential impacts to paleontological resources to a level of less than significance.

Threshold: Disturb any human remains, including those interred outside of formal cemeteries?

The nearest formal cemetery to the Project Site is the Pierce Brothers Santa Paula Cemetery, which is located approximately 1.4 miles northeast of the Site at 380 Cemetery Road. No known sites containing human remains exist within the Project area. However, currently unknown human remains potentially could be discovered during the construction of future projects within the Specific Plan. Project construction would require ground-disturbing activities, including grading and excavation, and the presence of construction equipment. These construction activities could potentially result in the discovery of previously unrecorded human remains, including Native American burials. Impacts related to construction would be limited to the construction area for each individual project within the Specific Plan.

As required by SB 18, consultation with the NAHC and tribal representatives was conducted during preparation of the cultural resources report (see **Appendix 4.5**). No responses regarding the presence of Native American sites, including burial sites, were received. Furthermore, there is no record of human remains in any archaeological record within the Specific Plan area. Ground-disturbing activities could potentially uncover previously unknown resources, including human remains. In the event that human remains are uncovered during subsurface excavation activities, implementation of **MM CUL-2** would require notification of the County coroner within 24 hours of the discovery to handle and identify the human remains.

Threshold: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Government Code Section 15064.5?

A majority of the Project Site has been extensively farmed with various row crops and orchards, which has continually disturbed the surface of the soils. As noted earlier, **Figure 4.5-1** portrays generalized archaeological site sensitivity areas based on known or suspected prehistoric use areas within Ventura County. The map indicates that the Project Site lies outside of areas designated as “sensitive” or “very sensitive.” While the Project Site does not contain any known sensitive archaeological resources within the disturbance area, the general Santa Clara River Valley is considered sensitive, and there is potential for unknown resources to be uncovered by activities, such as grading, that disturb the ground surface. In the event of the discovery of unknown archaeological resources, the implementation of **MM CUL-3** would ensure that the proper evaluation of the potential archaeological resources would not result in a significant impact on historical resources.

Threshold: Cause a substantial adverse change in the significance of a historical resource as defined in Government Code Section 15064.5?

The development of the Project Site in accordance with the Santa Paula West Business Park Specific Plan would result in the demolition of the employee residence at 15258 W. Telegraph Road and the loss of agricultural fields associated with the former Atmore Ranch.⁴⁰ The residence and fields are elements that contribute to the significance of the Santa Clara Valley Rural Historic District, which is considered a historical resource under CEQA. According to Public Resource Code 21084.1, “a project that may cause a substantial change in the significance of an historical resource is a project that may have a significant effect on the environment.” The Public Resources Code broadly defines a threshold for determining if the impacts of a project on an historic property will be significant and adverse. By definition, a substantial adverse change means, “demolition, destruction, relocation, or alterations,” such that the significance of an historical resource would be impaired. For purposes of NRHP eligibility, reductions in a property’s integrity (the ability of the property to convey its significance) should be regarded as potentially adverse impacts. However, the on-site residence, located within the County of Ventura, caught fire in September 2016 and suffered major structural damage beyond repair.

The historic resource evaluation report concludes that while the development of the Project would result in an adverse impact by eliminating elements that contribute to a historic district, this impact would not cause a substantial change in the significance of the Santa Clara Valley Rural Historic District. Given the large size and complex nature of the historic district, the loss of a single employee residence and associated fields would not reduce the integrity of the historic district such that it could no longer convey historic significance. The Santa Clara Valley Rural Historic District would remain eligible for the NRHP and the CRHR. Therefore, the impact resulting from the Project would be less than significant.

4.5.5 CUMULATIVE IMPACTS

Previous development within Ventura County has resulted in the loss of much of the evidence of the prehistoric occupation and use of the area. As discussed in **Section 3.0, Related Projects**, current development projects within the City of Santa Paula include a number of projects ranging from relatively small residential developments to larger residential development, commercial and industrial developments, and mixed-use developments. Other Specific Plan projects that would likely have similar potentially significant impacts to paleontological, archaeological, and historic resources include the remainder of West Area 2, Adams Canyon, Fagan Canyon, and the recently approved East Area 1 Specific Plan Amendment area. The Specific Plan, in combination with other currently planned projects, would

⁴⁰ The on-site residence, located within the County of Ventura, caught fire in September 2016 and suffered major structural damage beyond repair.

result in the potential for a significant cumulative impact. Mitigation measures would reduce the potentially significant cumulative contribution to paleontological, archaeological, and historical resources. Therefore, impacts are not considered cumulatively considerable and potentially significant.

4.5.6 MITIGATION MEASURES

MM CUL-1: Should unexpected paleontological resources be discovered during any ground-disturbance activities greater than 10 feet below existing grade of Project Site, work in the immediate area of the discovery shall be halted and the City shall require an assessment by a qualified paleontologist to determine the significance of the find.

MM CUL-2: In the event of a discovery of human bones, suspected human bones, or a burial, during ground-disturbing activities, all excavation in the vicinity must halt immediately and the area of the find protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bones are human, the Ventura County Coroner must be notified before additional disturbance occurs. The construction contractor must ensure that the remains and vicinity of the find are protected against further disturbance until the Coroner has made a finding with regard to PRC 5097 procedures, in compliance with Health and Safety Code Section 7050.5(b). If it is determined that the find is of Native American origin, the City will comply with the provisions of PRC Section 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).

MM CUL-3: In the event that previously unidentified archaeological resources are discovered during building construction, the contractor must cease work in the immediate area and the City Planning Director shall be contacted. An independent qualified archaeologist, retained by the City at the expense of the applicant, must assess the significance of the find and make mitigation recommendations.

4.5.7 RESIDUAL IMPACTS AFTER MITIGATION

With implementation of existing regulations and standards identified above along with mitigation measures, would reduce potential impacts associated with cultural resources to a level that would be less than significant.

Implementation of **MM CUL-1, CUL-2, and CUL-3** would mitigate any potentially significant impacts with respect to any possible occurrence of archaeological or historical resources on the Project Site to less than significant.

4.6 GEOLOGY AND SOILS

This section analyses the potential impacts of development of the Santa Paula West Business Park Specific Plan with regard to existing geology and soils conditions. It assesses the Project's potential to result in, or expose people or property to, adverse geologic and seismic conditions or hazards. This analysis is based primarily on the *Geologic and Geotechnical Study, Santa Paula West Industrial Park Specific Plan* ("Geotechnical Report"), prepared by Leighton and Associates, dated June 2015, and provided in **Appendix 4.6**.

4.6.1 EXISTING CONDITIONS

4.6.1.1 Regional Geologic Conditions

The Specific Plan area is within the Transverse Ranges Geomorphic Province,¹ a mountainous region characterized by an east-to-west-trending geologic grain, meaning that its primary faults, folds, mountains, and valleys are all aligned in an east–west direction. This portion of the Transverse Ranges is underlain by Tertiary and Quaternary sedimentary and volcanic rocks, with steeply dipping compressional faults. The Transverse Ranges are a tectonically active region with high rates of uplift, folding, and sedimentation. This deformation is driven by north–south compression associated with interaction of the North American Plate and the Pacific Plate. Young geologic structures characterize the area as a result of the region's active seismicity.

Physiography and Topography

The Specific Plan area is approximately 2,600 feet north of the Santa Clara River and is generally bounded by Telegraph Road to the north, the Santa Paula Freeway (State Route [SR] 126) to the south, Beckwith Road and Todd Road to the east, and the lower reaches of the Adams Barranca. The Adams Barranca is an improved channel that runs generally north–south, and generally about 60 feet wide from bank to bank along the Project Site. The topography of the Project Site is relatively flat or gently slopes from north to south. Elevations range from a high of approximately 250 feet above mean sea level (amsl) near Telegraph Road to a low of approximately 226 feet amsl near the boundary with SR 126.

The Project Site has undergone extensive surface grading and leveling as part of the ongoing agricultural operations. There are several unpaved roads throughout the Project Site providing access to the existing agricultural operations. As noted elsewhere, the Ventura County Transportation Commission (VCTC) railroad right-of-way, containing railway tracks, bisects the Project Site.

¹ California Geological Survey, Note 36, *California Geomorphic Provinces* (December 2002).

Surface and Subsurface Geologic Units

The surface geologic units within and near the Project Site are shown on **Figure 4.6-1, Geologic Map**. The geologic unit on-site is classified as Quaternary alluvium of the Santa Clara River, and has been mapped in the areas surrounding the Site as well. The alluvial soil is expected to consist of silts, sands and gravel, which extend to unknown depths below the ground surface. The Geotechnical Report indicates that in areas close to creeks, the thicknesses of the alluvial formations can be 50 feet. Although not shown on available geologic maps, it is likely that nonengineered (uncertified) artificial fill, colluvium, and topsoil materials are present within the Project Site.

4.6.1.2 Groundwater

The Project Site is underlain by the Santa Paula Groundwater Basin (Santa Paula Basin). The Santa Paula Basin is located along the Santa Clara River, extending from approximately Kimball Road and the town of Saticoy in the west (west of the Project Site) to Santa Paula Creek in the east (east of the Project Site). The Santa Paula Basin is bounded by the Sulphur Mountain foothills to the north and South Mountain to the south; it is generally aligned in a northeast–southwest direction, and is about 10 miles long and as much as 3.5 miles wide. Groundwater elevations range between 270 feet amsl near Santa Paul Creek to 130 feet amsl near Saticoy.² Historically, the groundwater beneath the area was as shallow as 20 feet below ground surface (bgs) at the south end of the Project Site and greater than 40 feet bgs at the northern end of the Project Site. The California Geologic Survey indicates estimated historically shallowest groundwater depths (i.e., historically high groundwater levels) in the Santa Clara River valley (see **Figure 4.6-2, Historically Shallowest Groundwater Depth Contours**), including the Project Site.³ Current water levels/depths may vary from these shallowest measurements; however, analysis of potential impacts must consider these very likely more conservative (shallower) values. Borings near the Project Site indicate that groundwater depth is variable and has been encountered as shallow as 20 feet bgs in some borings while not encountered within 40 feet in others. Locations where geologic units have shallow clay-rich layers (e.g., Qht and Qhf), perched groundwater may be encountered at shallower depths.

Modified maps from California Geological Survey) in the Santa Paula vicinity. This data suggests historically shallow groundwater depths of greater than forty feet below the ground surface (bgs) for the Project Site.

2 United Water Conservation District, Groundwater and Surface Water Conditions Report—2013, Open-File Report 2014-02, by the Groundwater Resources Department, May 2014.

3 California Geological Survey, Seismic Hazard Evaluation of the Santa Paula 7.5-minute quadrangle, Ventura County, California: California Department of Conservation, Division of Mines and Geology Open-File Report 02-61, 2002, Plate 1.2.

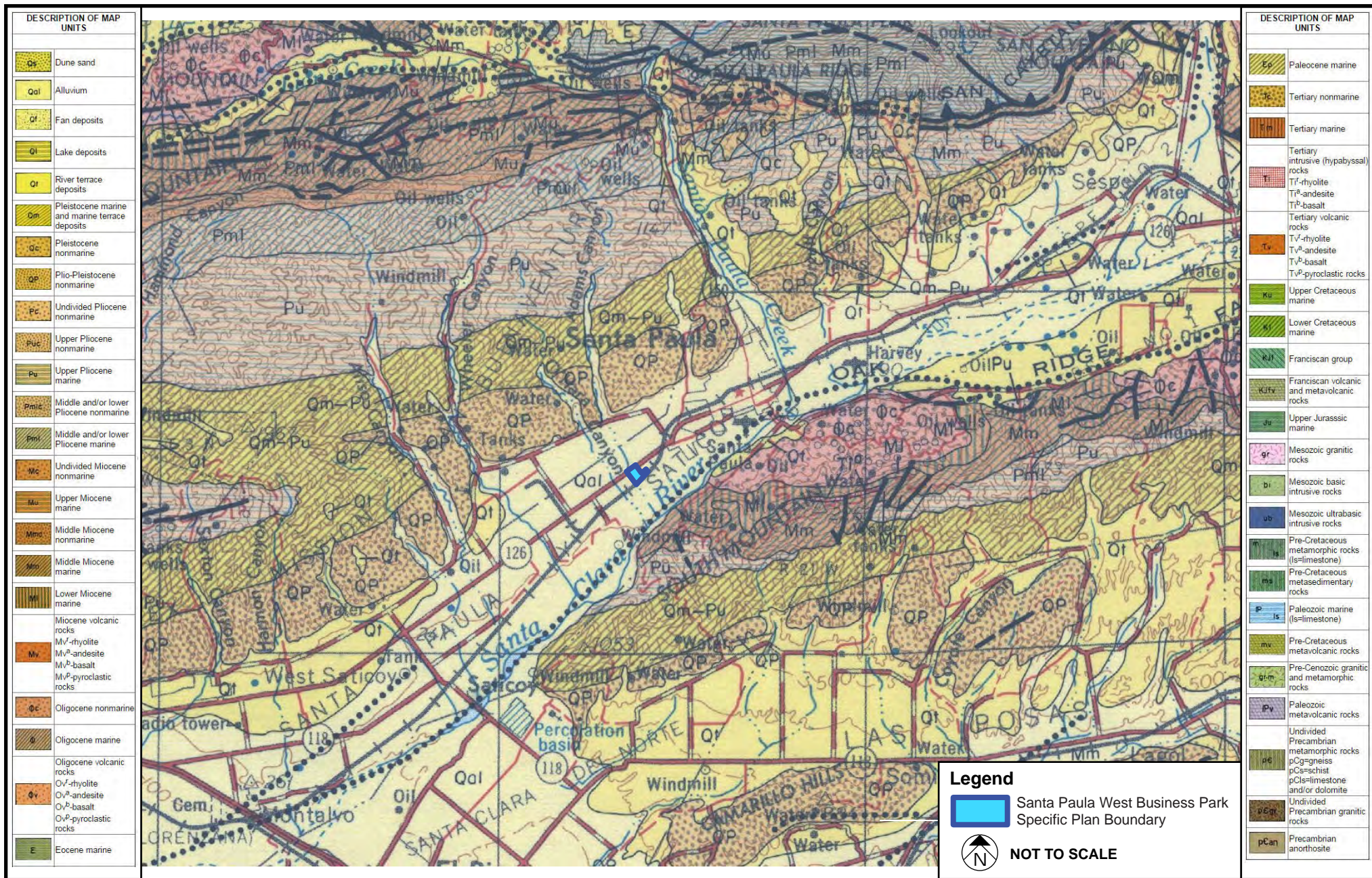
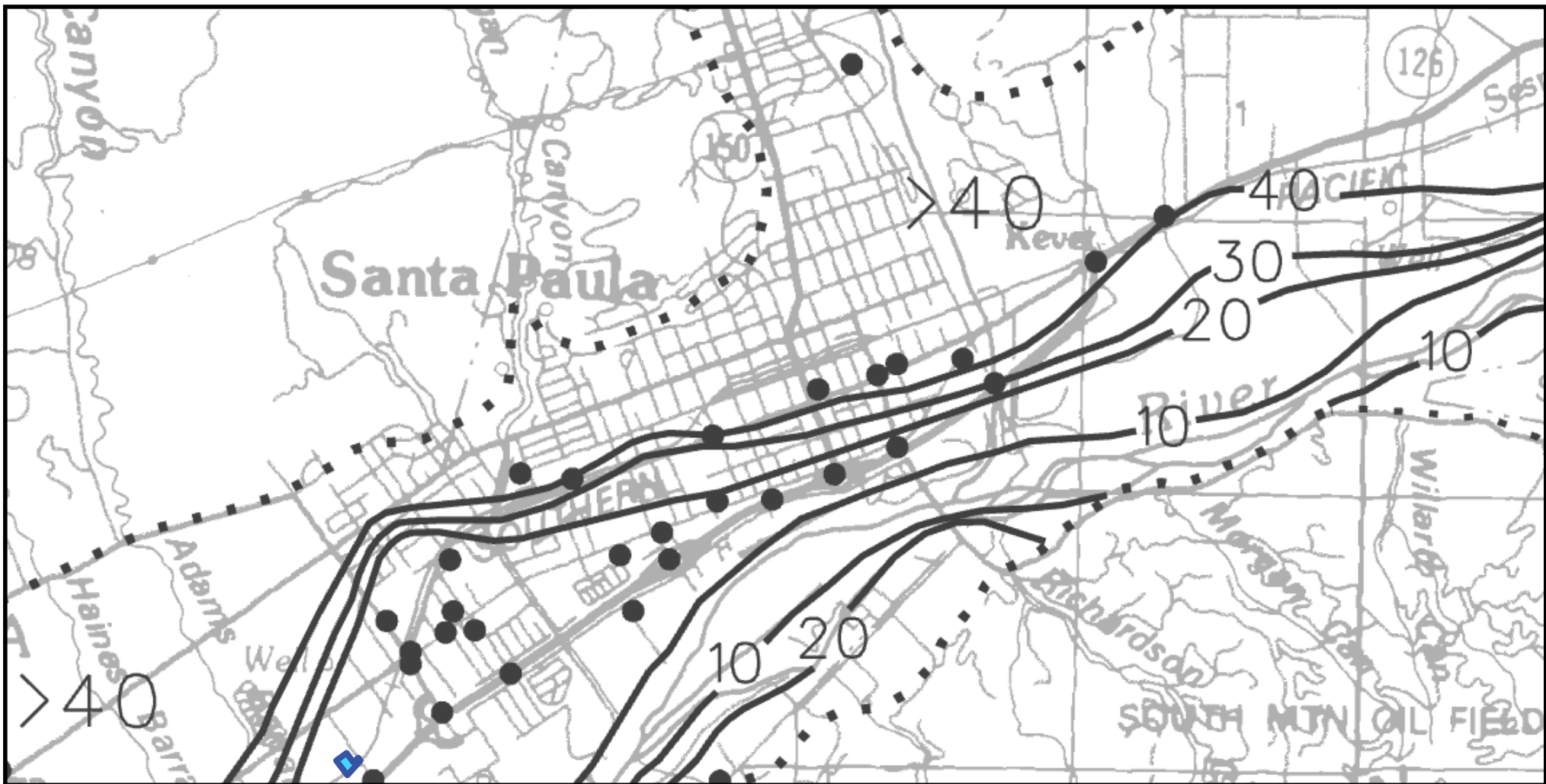





FIGURE 4.6-1





Legend


 Santa Paula West Business Park Specific Plan Boundary

 0 0.25 0.5 1
APPROXIMATE SCALE IN MILES

 Monitoring Well Locations

 Approximate Basin Boundaries

 20 Historically shallowest ground-water depth contours (in feet)

 >40 Historically shallowest ground-water depth greater than 40 feet over a broad area

SOURCE: California Geological Survey 2002

FIGURE 4.6-2

 **Meridian**
Consultants

Historically Shallowest Groundwater Depth Contours

4.6.1.3 Faulting and Seismicity

Faults

A geologic fault is a discontinuity in the earth's crust along which earth materials on one side of the fault have moved vertically or horizontally relative to the other side. Based on criteria established by the State Mining and Geology Board (SMGB) in 14 California Code of Regulations §§ 3600, et seq., and as summarized in the Special Publication 42 Fault Rupture Hazard Zones in California, published by the State of California Geological Survey (CGS), faults can be classified as active, potentially active, or inactive.⁴

The State of California Alquist-Priolo Earthquake Fault Zoning Act (2007), Public Resources Code Sections 2621, et seq., defines an active fault as one with surface displacements within Holocene time, or approximately within the last 11,000 years. A fault is deemed sufficiently active if there is evidence of Holocene surface displacement. A fault is considered well defined if its trace is clearly detectable by a geologist as a physical feature at or just below the ground surface. Inactive faults have no evidence of movement within the last 1.6 million years. The term non-active fault is sometimes used for faults with no evidence of Holocene movement and that are considered unlikely to move during the life of an engineered structure.

Major structural features to the north include the Orcutt Fault, the Timber Canyon Fault, the Sisar Fault, the Cayetano Fault, the Santa Paula Ridge Anticline, the Pine Canyon Anticline, the Echo Canyon Anticline, and numerous other onshore and offshore faults⁵ (see **Figure 4.6-3, Regional Fault Map**).⁶ The Specific Plan area is not located within an active fault zone.⁷ The nearest active fault zones occur over 9,000 feet to the north of the Specific Plan area, and no mapped faults or fault zones have a trajectory toward the Specific Plan area.

Fault rupture hazards occur when regional earth movements change the surface configuration of the earth. The movement may be in response to an earthquake (seismically induced) or without any earthshaking (aseismic). These vertical or horizontal changes in the earth can damage structures, utilities, and transportation corridors. Fault rupture/displacement may also alter natural drainage and ground water flow direction.

4 The California Geological Survey was formerly called the California Division of Mines and Geology (CDMG).

5 Dibblee, T.W., 1990, Geologic Map of the Santa Paula Peak Quadrangle, Ventura County, California, Dibblee Geological Foundation.

6 California Geological Survey, 2010 Fault Activity Map of California, 2010, <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>.

7 California Division of Mines and Geology (CDMG), 1998, State of California Earthquake Fault Zones Map, Santa Paula 7.5-minute Quadrangle Map, May 1, 1998.

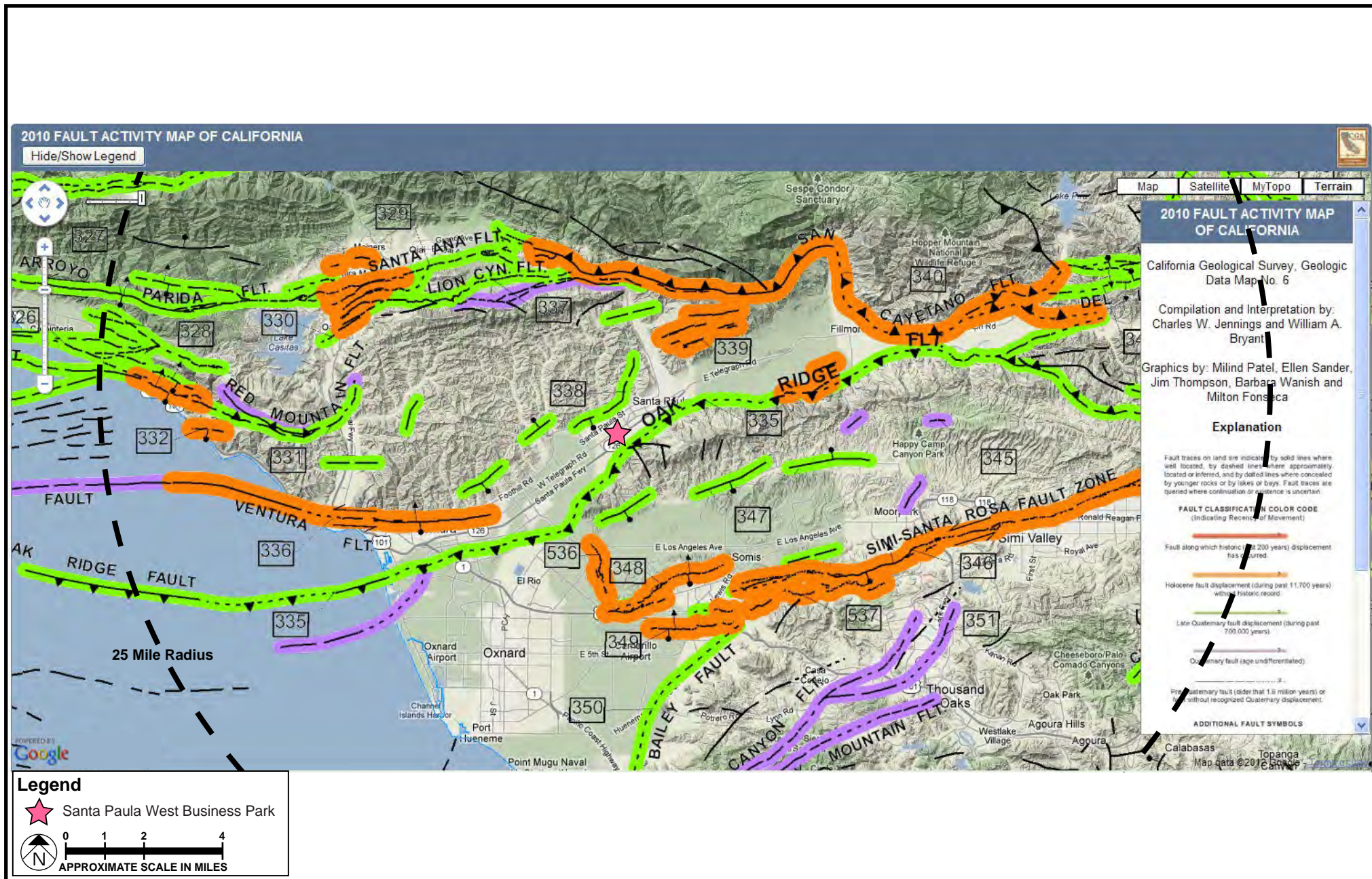
Active or potentially active faults near the Project Site are listed in **Table 4.6-1, Active and Potentially Active Faults within 25 Miles of the Project Site.**

**Table 4.6-1
Active and Potentially Active Faults within 25 Miles of the Project Site**

Fault	Maximum Moment Magnitude	Distance from the Project Site
Oak Ridge (onshore)	6.9	1.0
San Cayetano	6.8	5.4
Simi-Santa Rosa	6.7	5.6
Ventura–Pitas Point	6.8	5.3
Mission Ridge–Arroyo Parida–Santa Ana	6.7	10.1
Santa Ynez, East	6.7	12.2
Red Mountain	6.8	13.7
Montalvo–Oak Ridge Trend	6.6	15.0
Santa Susana	6.6	16.1
Channel Islands Thrust	7.4	16.5
Oak Ridge (blind thrust offshore)	6.9	17.7
Anacapa-Dume	7.3	18.6
Northridge (East Oak Ridge)	6.9	18.7
Malibu Coast	6.7	21.4
San Gabriel	7.0	23.7

Source: California Division of Mines and Geology (CDMG), 1998, State of California Earthquake Fault Zones Map

The San Cayetano and Oak Ridge Faults to the north and south of the Project Site, respectively, are the most important controlling faults in the region. The Oak Ridge Fault is an active, mostly south-dipping reverse fault that trends to the northeast along the south side of the Santa Clara River Valley (CGS, 2002). The San Cayetano Fault is an active north-dipping reverse fault that trends east to west. Several secondary active normal and reverse faults associated with folding of the Santa Clara syncline are to the south of the San Cayetano Fault. These features have been mapped as short strands approximately 2 to 10 miles in length. These faults are relatively short compared to the Oak Ridge and San Cayetano Faults, which are mapped as laterally continuous strands that extend for tens of miles.



SOURCE: California Geological Survey, 2010

FIGURE 4.6-3

The Ventura County Geographic Information System website identifies a fault east of the Specific Plan area that trends along the southernmost foothills of Santa Paula Ridge toward the site but ends east of Haun Creek. The source documents for the Ventura County Geographic Information System website depicts the same feature (an inferred fault) to trend across the site. Subsurface investigation of this previously mapped fault did not confirm the existence of the purported feature on site.

Seismicity

The principal factors determining the level of seismic ground-shaking risk at a location are (1) the distance to the active and potentially active faults capable of causing a moderate to large earthquake; (2) the maximum and probable earthquake magnitudes for each fault; (3) the recurrence interval for, or average time between, each earthquake; and (4) the type of geologic or man-made materials (e.g., artificial fill, alluvium, or bedrock) underlying the location. Significant ground-shaking levels can cause damage to structures, utilities and transportation corridors; cause landslides, rockfalls and embankment failures and induce liquefaction failure in certain cohesionless soils.

The faults listed in **Table 4.6-1** are estimated to be capable of generating a peak ground acceleration of approximately 0.96 g and a Modified Mercalli Intensity of at least VIII. Although the San Andreas fault is not on the list it is considered in ground shaking estimates due to the potential for very large earthquakes and the relatively high probability of occurrence. Other inactive or poorly studied faults may be present within 25 miles of the Specific Plan area, but would not generate ground acceleration capable of affecting the Specific Plan development area.

The principal factors determining the level of seismic ground-shaking risk at a location are (1) the distance to the active and potentially active faults capable of causing a moderate to large earthquake; (2) the maximum and probable earthquake magnitudes for each fault; (3) the recurrence interval (average time between each) earthquake (slip rate); and (4) the type of geologic or man-made materials (e.g., artificial fill, alluvium, or bedrock) underlying the location. Significant ground shaking levels can cause damage to structures, utilities and transportation corridors; cause landslides, rockfalls, and embankment failures and induce liquefaction failure in certain cohesionless soils.

Ground shaking is the primary hazard most likely to affect the Project Site, based upon its proximity to active or potentially active faults. Active or potentially active faults near the Project Site are listed in **Table 4.6-1**, and shown on **Figure 4.6-3**. These faults are estimated to be capable of generating a peak ground acceleration of greater than 0.10 g and a Modified Mercalli Intensity of at least VIII. Although the San Andreas fault is not on the list it is considered in ground shaking estimates due to the potential for very large earthquakes and the relatively high probability of occurrence. Other inactive or poorly studied faults

may be present within 25 miles of the proposed site; however, the faults listed in **Table 4.6-1** are considered representative of earthquake sources potentially impacting the Project Site.

The probabilistic seismic hazard analysis (PSHA) of the East Area 1 Specific Plan area is provided in **Table 4.6-2, Probabilistic Seismic Hazard Analysis**.

Table 4.6-2
Probabilistic Seismic Hazard Analysis

Attenuation Relationship	Design Basis Earthquake (10% in 50 years)		Upper Bound Earthquake (10% in 100 years)	
	PHGA(g)	PHGA (g) (Mw=7.5)	PHGA(g)	PHGA (g) (Mw=7.5)
Boore et al. (1997): 310 m/s	0.85	0.65	1.06	0.82
Campbell (1997,2000) Alluvium	0.87	0.62	1.04	0.75
Sadigh et al. (1997): Deep Soil	0.92	0.65	1.12	0.80
Average Estimated PHGA	0.88	0.64	1.07	0.79

Source: Leighton and Associates, Inc., *Geologic and Technical Study the Santa Paula West Industrial Park Specific Plan (June 2015)*.

The computer program EQSEARCH17 was used to evaluate past documented seismic activity near the annexation area. This program performs an automated search of a catalog of historic Southern California earthquakes, and computes the distance from a project site to each of the earthquake epicenters within a specified search radius of 62 miles (approximately 100 kilometers). From the computed distances, the program also estimates (using an appropriate attenuation relationship) the peak horizontal ground acceleration that may have occurred at the site due to each earthquake. A database of recorded earthquakes with magnitudes of 4.0 or larger between 1800 and 2014 was used in the analysis.

The Geotechnical Report considered ground motions with both a 10 percent probability of exceedance in 50 years (standard construction and an average 475-year return period) and a 10 percent probability of exceedance in 100 years (critical facilities and a 950-year return period). The PSHA considered various magnitudes of earthquakes that major active or potentially active faults within a 100kilometer radius of the site could produce along their respective fault lengths. The results are believed to be reasonable for the project area due to its immediate proximity to their study area and the very regional nature of the data used. Leighton and Associates agree with the CGS20 PSHA showing the project area within a range of 0.8–0.9 g for the 10 percent probability of exceedance in 50 years in alluvium.

The largest historical earthquake within the 62-mile radius of the Project Site was the 1952, magnitude 7.7 Arvin-Tehachapi Earthquake that occurred on the White Wolf Fault approximately 51 miles to the northeast. It is estimated to have produced a horizontal ground acceleration of 0.1 g at the site. A 1904,

magnitude 4.6 earthquake occurred approximately 0.5 mile from the annexation area and resulted in an estimated horizontal ground acceleration of 0.16 g within the annexation area, which is the earthquake event believed to have produced the highest-estimated horizontal ground acceleration at the site.

4.6.1.4 Geohazards

Liquefaction-induced ground failure can involve a complex interaction in soils when strong cyclic ground shaking during an earthquake causes soil mass to turn from a solid to a liquid state. Failures can include ground fissures, sand boils, ground settlement, loss of bearing strength, buoyancy effects, ground oscillation, flow failure, and complex lateral spread landslides.⁸ These, in turn, can affect surface and subsurface structures. Lateral spread is a liquefaction-induced landslide of a fairly coherent block of soil and sediment deposits that moves laterally (along the liquefied zone) by gravitational force, sometimes on the order of 10 feet, often toward a topographic low such as a depression or a valley area. The three key factors that indicate whether an area is potentially susceptible to liquefaction are the capacity for severe cyclic ground motions, shallow groundwater, and low-density granular deposits (mainly finer-grained sands). In these areas, where alluvium is sufficiently loose and groundwater is sufficiently shallow that strong earthquake shaking could cause sediments to lose bearing capacity, severe settlement of surface facilities and in some cases uplift of buried structures (e.g., large pipelines) could occur.

The Seismic Hazard Maps for the Santa Paula quadrangle, as shown in **Figure 4.6-4, Liquefaction and Earthquake-Induced Landslides**,⁹ indicate that the Specific Plan area is within a zone identified for as a potential liquefaction hazard. These are indicative of potential liquefaction in loose sands. Therefore, based on the State hazard mapping program and the subsurface exploration data and test results for the Project Site, the potential for liquefaction affecting the Project Site is considered to be high.

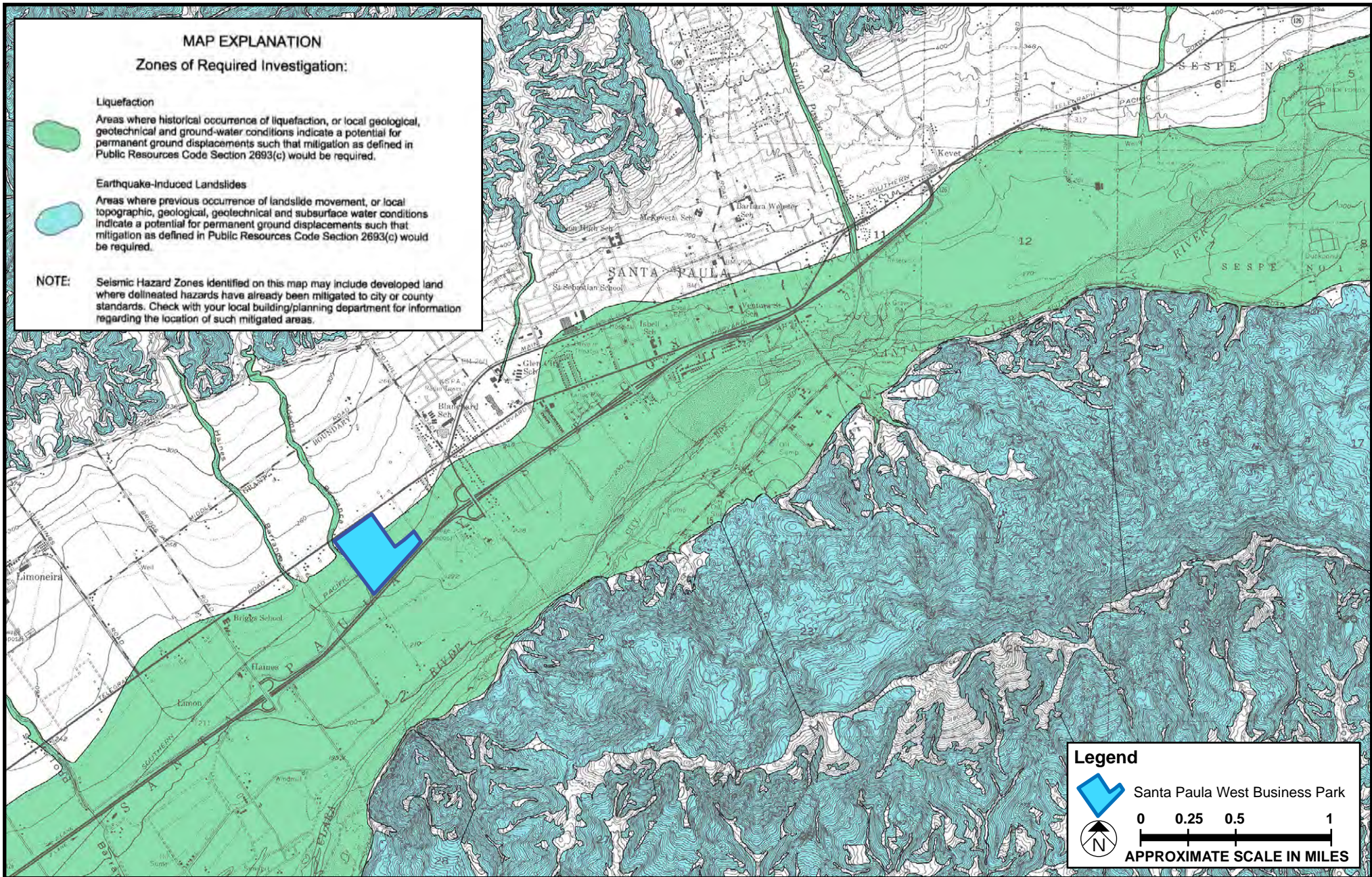
Lateral Spreading

Lateral spreading is a phenomenon where large blocks of intact, nonliquefied soil move downslope on a liquefied substrate of relatively large aerial extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, or is known to move on slope gradients as gentle as 1 degree. The land in the vicinity of the Site is essentially flat; no slopes are present. Therefore, the potential for lateral spreading to occur at the site may be low, but this will need to be studied on a case-by-case basis.

8 Bartlett, S. F., and T. L. Youd, 1992, "Case Histories of Lateral Spreads Caused by the 1964 Alaska Earthquake," in *Case Studies of Liquefaction and Lifeline Performance During Past Earthquakes*, vol. 2, United States Cases, Technical report NCEER-92-0002, Hamada, Masanori, and T. D. O'Rourke, eds. (Buffalo, NY: National Center for Earthquake Engineering Research, 1992), pp. 2-1–2-127.

9 California Geological Survey, "Seismic Hazard Zone Map—Santa Paula Quadrangle," 1:24000 (June 21, 2002).

Liquefaction-induced lateral spread failures are more prevalent adjacent to topographic depressions or valley areas that form unsupported slopes or “free faces.” The potential for lateral spread landslides are more of a concern in the areas adjacent to the Santa Clara River channel. Such failures have occurred in areas with very low topographic slope gradients.



SOURCE: California Geological Survey, 2002

FIGURE 4.6-4

Seismically Induced Settlement

Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, loosely packed granular alluvial deposits are especially susceptible to this phenomenon. Poorly compacted artificial fills may also experience seismically induced settlement. Settlement caused by ground shaking is often nonuniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. The potential exists for seismically induced settlement to occur in areas underlain by alluvial deposits.

Seismically Induced Landslides

Marginally stable slopes may be subject to landsliding caused by seismic shaking. In most cases, this is limited to relatively shallow soil failures on steeper natural slopes, although deep-seated failures of oversteepened slopes are also possible. The Project area is located on flat land and thus, the potential for seismically induced landslides is considered to be low.

Subsidence

Subsidence is the gradual downward settling of the land surface with little or no horizontal movement. It can be caused by many different factors, including natural causes such as consolidation of recently deposited sediment or by man induced changes such as extracting large volumes of subsurface fluids (e.g. water, oil, and gas).

There are several active water wells within the Project Site area, which are used for irrigation and potable water.¹⁰ As noted above, dewatering of an aquifer can result in subsidence. However, the geotechnical analysis (**Appendix 4.6**) determined that the area is not experiencing subsidence, nor is the water extraction contributing to any evidence of subsidence in the general area. Furthermore, in their latest districtwide report, United Water Conservation District (UWCD) modeling has produced no evidence of subsidence in the Santa Paula Basin or Fillmore Basin.

There are no active oil wells on or near the Specific Plan area. The South Mountain oil field lies as close as a few thousand feet to the south, within consolidated bedrock formations being pumped from 5000 to 10000 feet below South Mountain and a portion of the Santa Clara River south of the Project area.¹¹ No reports of surface subsidence were noted.

10 United Water Conservation District, Groundwater and Surface Water Conditions Report – 2011, Open-File Report 2012-02, by the Groundwater Resources Department, May 2012.

11 Davis, T. L. and J. S. Namson, Role of Faults in California Oilfields PTTC Field Trip August 19, 2004, Davis and Namson Consulting Geologists, 39 pages.

Slope Stability

Areas of potential slope instability are shown on the Seismic Hazards Zone Map for the Santa Paula 7.5-Minute Quadrangle, Ventura County, California¹² or the City of Santa Paula General Plan, Safety Element at or adjacent to the site.¹³

The Project Site is located on flat terrain, and no significant slopes are present in or immediately surrounding the area. No areas of potential slope instability are shown on the Seismic Hazards Zone Map for the Santa Paula 7.5-Minute Quadrangle, Ventura County, California or the City of Santa Paula General Plan, Safety Element at or adjacent to the site.

Furthermore, manufactured slopes and walls, if any, from developments within the area should be designed in accordance with current codes and standards, and the design should be reviewed from a geotechnical perspective. When so designed, the risk of slope instability is considered to be very low.

Slope Instability and Erosion

Slope instability under non-earthquake (static) conditions hazards occur in hillside and artificial cut/fill slope areas. Landslides, mudslides, debris flows, and soil-slips/surficial material failures affect both the area where the material originates and the downslope “runout” areas where the landslide debris accumulates. Damage to structures can be severe in either location, with structures being dislocated from a few to many tens of feet.

The Specific Plan area is in an area of low topographic slope and is not adjacent to hillside areas where slope failures would be likely emanate. None of the Specific Plan area is within areas identified by the CGS as requiring investigation to address the potential for seismically induced landslides.¹⁴

Erosion is the process by which the earth’s surface is worn by wind or water. Susceptibility to erosion is increased in soils and geologic formations that are poorly consolidated, and where topographic relief is high.

The unconsolidated alluvial deposits exposed on potential cut slopes or other excavations in the area are expected to be susceptible to erosion. Manufactured slopes composed of compacted fill are also expected to be moderately to highly susceptible to erosion.

12 California Geological Survey, 2002, Seismic Hazard Zones, Santa Paula Quadrangle, Official Map, Released June 21, 2002, Scale of 1 inch = 2,000 feet.

13 City of Santa Paula, General Plan, Safety Element, 1998.

14 California Geological Survey, Seismic Hazard Zone Map—Santa Paula Quadrangle, June 21, 2002, 1:24000.

The unconsolidated alluvial deposits exposed on potential cut slopes or other excavations in the area are expected to be susceptible to erosion. Manufactured slopes composed of compacted fill are also expected to be moderately to highly susceptible to erosion.

The Project Site soils are poorly consolidated, but the local topographic relief is low, and storm water infrastructure is in place to convey overland flow from the north to the outlets in the Santa Clara River. Therefore, erosion potential is considered low.

Expansive Soils

Ground surface settlement may occur soils are susceptible to expansion/contraction (very clay rich soils) and possibly hydroconsolidation (fine-grained granular soils). When present, moderate to high expansion indices indicate that there is a substantial amount of clay in the soils, and repeated episodes of wetting and drying will cause distress to structures in contact with such soils. Consolidation (and long-term settlement) is most prominent in clay-rich and silt-rich soils, resulting from loading pressure created by overlying structures, including buildings or artificial fill. This added weight could collapse internal void spaces within the soils, causing overlying structures to settle and possibly experience damage. This consolidation and settlement can be much more dramatic under severe seismic shaking (dynamic settlement). Hydroconsolidation will also lead to settlement but includes the addition of water into the soil structure, causing more rapid and more substantial settlements.

The following findings are based on a review of existing data and conditions in the Santa Paula area. Geotechnical investigations would be conducted for individual improvement projects within the Specific Plan area to provide recommendations for grading, overexcavation, and removal of compressible soils, fill placement, wall design, and other specific measures to address geotechnical aspects of proposed improvements.

Compressible and Collapsible Soil

Soil compressibility refers to a soil's potential for settlement when subjected to increased loads, such as from a fill surcharge. Based on our experience in the area, topsoil and the upper portion of the young alluvial soil are generally expected to be slightly to moderately compressible. Uncontrolled fill would be considered compressible throughout the entire depth.

Collapse potential refers to the potential settlement of the alluvial soil under existing stresses (loads) upon being wetted. The alluvial soil underlying the area is expected to have a slight to moderate collapse potential.

Expansive Soils

The upward pressures induced by expansive soils can have significant effects on structures and other surface improvements. Shrinkage of these soils during drying can also cause damage as structural support is removed. Based on soil information from the Santa Paula area, the alluvial soils present within the site vicinity are expected to exhibit a low expansion potential. Soils with a higher expansion potential (medium or greater) may be encountered locally. Testing to evaluate the expansion potential of the soil should be conducted in areas where improvements are planned.

Corrosive Soils

Corrosive soils contain chemical constituents that may cause damage to construction materials such as concrete and ferrous metals. One such constituent is water-soluble sulfate, which, if high enough in concentration, can react with and damage concrete. Electrical resistivity, chloride content, and pH level are indicators of the soil's tendency to corrode ferrous metals. The soil in the area is expected to be corrosive to ferrous metals. Testing of the soils should be conducted to identify the corrosive potential of the earth materials in the area. If concrete structures are planned, sulfate testing should also be conducted to determine if special concrete would be required to withstand sulfate attack.

Rippability and Oversized Rock

The alluvial soils in the area are expected to be readily excavated using conventional earthmoving methods. Oversized material could be generated depending on the design, specific site conditions and depth of excavation into the alluvial soils. Development designs should consider the presence of oversized materials such as cobbles and boulders at depth. If oversized materials are encountered, the design should be reviewed and additional geotechnical recommendations should be provided for oversized material placement.

Suitability as Fill Material

The soils underlying the annexation area are generally suitable for use as compacted fill, provided they are free of debris, significant organic material, and oversized material. Moisture conditioning (either moistening or drying) will generally be needed to obtain the proper moisture content needed for compaction.

4.6.2 REGULATORY SETTING

Federal

International Building Code

The model building code that is predominantly adopted in the United States is the International Building Code (IBC) from the International Code Council (ICC), a nongovernmental organization. The ICC produces other model codes, such as the International Residential Code (IRC). The IBC and its companion ICC documents form the basis of the building codes in most states and have been adopted by local governments within all states.

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) supports the development of seismic provisions in building codes. The NEHRP “Recommended Provision for Seismic Regulations for New Buildings and Other Structures”¹⁵ presents the state of the art of earthquake engineering research and practice in a form usable by the engineering community, and provides a nationally applicable resource document for all model codes and standards. A 2012 series of National Seismic Hazard Maps by the USGS shows the severity of expected earthquake shaking for a particular level of probability; for example, levels of earthquake shaking that have a 2 in 100 chance of being exceeded in a 50-year period. The time period of 50 years is commonly used because it represents a typical building’s lifetime, while the 2 percent probability level is usually considered an acceptable hazard level for the building codes. Maps also show seismic-shaking levels using a number of different measures that apply to designing earthquake-resistant buildings of different heights, which respond to different frequencies of ground motion.

State

Building Codes

Development in the State of California is governed by the 2016 California Building Code (CBC).¹⁶ These regulations include provisions for site work, demolition, and construction, which include excavation and grading, as well as provisions for foundations, retaining walls, and expansive and compressible soils. The 2013 County of Ventura Building Code is based on the CBC, the International Building Code, and others. CBC amendments and building regulations were adopted by Ordinance 4422.¹⁷ Standard residential,

15 Building Seismic Safety Council (BSSC), 2009, NEHRP (National Earthquake Hazards Reduction Program) Recommended Seismic Provisions for New Buildings and Other Structures (FEMA P-750) 2009 Edition, prepared for the Federal Emergency Management Agency by the of the National Institute of Building Sciences. Washington, D.C.

16 California Building Standards Commission, 2016 California Building Code, <http://www.bsc.ca.gov/default.htm> and International Code Council, 2015, Chapters 16 and 16A, Site Class definition, <http://codes.iccsafe.org/app/book/content/2015-I-Codes/2015%20IBC%20HTML/Chapter%2016.html>.

17 Ventura County, Building Code, Articles 1 through 10, Ordinance 4422 effective on January 1, 2011.

commercial, and light industrial construction is governed by the CBC, which the County may amend. The 2016 CBC¹⁸ includes additions to the previous building code that make it more stringent, particularly with regard to seismic and earthquake conditions for critical structures such as essential facilities, public schools, and hospitals.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Geologic Hazards Zone Act¹⁹ was enacted to address the hazard and damage caused by surface fault rupture during an earthquake. The act, which has been amended ten times and named the Alquist-Priolo Earthquake Fault Zoning Act (APEFZA), defines an active fault as one that has had surface displacements within Holocene time (about the last 11,000 years). Initially, faults were defined in the Alquist-Priolo Act as "potentially active" and were zoned if they showed evidence of surface displacement during Quaternary time (last 1.6 million years).²⁰ Beginning in 1977, evidence of Quaternary surface displacement was no longer used as a criterion for zoning. Since 1975, the State of California has defined the terms "sufficiently active" and "well defined" for application in zoning faults. These two terms constitute the present criteria used by the State Geologist in determining if a given fault should be zoned under the Alquist-Priolo Act, and are defined as follows:

Sufficiently active. A fault is deemed sufficiently active if there is evidence of Holocene surface displacement along one or more of its segments or branches. Holocene surface displacement may be directly observable or inferred; it need not be present everywhere along a fault to qualify that fault for zoning.

Well-defined. A fault is considered well defined if its trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The fault may be identified by direct observation or by indirect methods (e.g., geomorphic evidence). The critical consideration is that the fault, or some part of it, can be located in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

The act requires the State Geologist to establish "earthquake fault zones" along known active faults in the State. Cities and counties that include earthquake fault zones are responsible for regulating most development projects within the Earthquake Fault Zones (EFZ), as described in the act, but may enact regulations that are more stringent. Certain smaller residential developments can be exempt.

18 California Administrative Code CCR Part 2 of Title, 2013 California Building Code.

19 California Public Resources Code, Sections 2621-2630, 1972 as amended.

20 Bryant, W. A. and E.W. Hart, 2007, Fault Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps, California Division of Mines and Geology Special Publication 42.

Seismic Hazards Mapping Act

The Seismic Hazard Mapping Act (SHMA) of 1990²¹ was enacted, in part, to address seismic hazards not included in the Alquist-Priolo Act, including strong ground shaking, landslides, and liquefaction. Under this act, the State Geologist is assigned the responsibility of identifying and mapping seismic hazards zones.

The State of California Geologic Survey (CGS) has also adopted seismic design provisions in Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California*, on March 13, 1997 (revised 2008).²² The CGS provides guidance with regard to seismic hazards under the Seismic Hazards Mapping Act; seismic hazard zones are to be identified and mapped to assist local governments with respect to planning and development purposes. The intent of this publication is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure, and other hazards caused by earthquakes. Lead agencies with the authority to approve development projects shall ensure the following:

The geotechnical report shall be prepared by a registered civil engineer or certified engineering geologist, having competence in the field of seismic hazard evaluation and mitigation. The geotechnical report shall contain site-specific evaluations of the seismic hazard affecting the project, and shall identify portions of the project site containing seismic hazards. The report shall also identify any known off-site seismic hazards that could adversely affect the site in the event of an earthquake.

Prior to approving the project, the lead agency shall independently review the geotechnical report to determine the adequacy of the hazard evaluation and proposed mitigation measures and to determine the requirements of Section 3724(a), above, are satisfied. Such reviews shall be conducted by a certified engineering geologist or registered civil engineer, having competence in the field of seismic hazard evaluation and mitigation.

The County of Ventura and City of Santa Paula have been mapped pursuant to the SHMA, and there are zones of required investigation for liquefaction and earthquake-induced landslide hazards in and adjacent to the Project Area.

21 California Public Resources Code, Chapter 7.8, Sections 2690-2699.6, Seismic Hazards Mapping Act of 1990.

22 California Geological Survey, 2008, Special Publication 117 Guidelines for Evaluating and Mitigating Seismic Hazards in California, <http://www.conservation.ca.gov/cgs/shzp/webdocs/Documents/sp117.pdf>.

National Hazards Disclosure Act

The Natural Hazards Disclosure Act²³ requires:

That sellers of real property and their agents provide prospective buyers with a “Natural Hazard Disclosure Statement” when the property being sold lies within one or more state-mapped hazard areas, including a Seismic Hazard Zone.

The Natural Hazards Disclosure Act specifies two ways in which this disclosure can be made:

In all transactions that are subject to Section 1103 of the Civil Code, the disclosure required by subdivision (a) of this section shall be provided by either of the following means:

1. The Local Option Real Estate Transfer Disclosure Statement as provided in Section 1102.6a of the Civil Code.
2. The Natural Hazard Disclosure Statement as provided in Section 1103.2 of the Civil Code.

The Local Option Real Estate Disclosure Statement can be substituted for the Natural Hazards Disclosure Statement if it contains substantially the same information and substantially the same warning as the Natural Hazards Disclosure Statement. Both the APEFZA and the SHMA require that real estate agents, or sellers of real estate acting without an agent, disclose to prospective buyers that the property is located in an Alquist-Priolo fault zone or seismic hazard safety zone.

City of Santa Paula

Building and Safety Department

The Building and Safety Department ensures that all laws pertaining to the construction or alteration of buildings and structures are enforced to ensure the health and safety of the community. It conducts inspections and issues all appropriate permits for building, plumbing, electrical and mechanical work, and various other permits.

General Plan

Safety Element

The City of Santa Paula General Plan Safety Element was prepared in 1975 and updated in 1998. The focus of the Safety Element is to adopt policies that will “reduce death, injuries, property damage, and the economic and social dislocation resulting from natural hazards.”²⁴

²³ California Civil Code, Section 1103, Natural Hazards Disclosure Act, effective June 1, 1998.

²⁴ City of Santa Paula, *General Plan*, Safety Element, 1998.

As described in the Safety Element, it is the intent of the City to provide for balanced planning decisions based on the recognition of the importance of public safety and on the need to integrate safety concerns with other local issues. Depending on the degree of hazard within a given area, the Safety Element is integrated with the other elements, for example, when addressing landslides (Housing and Conservation and Open Space Elements), decisions on where to locate habitable or critical structures (for hazard avoidance and emergency services), and provision of emergency response in the event of a disaster (Circulation Element).

Development Code

The City of Santa Paula Municipal Code (SPMC) includes the city zoning and development regulations. The chapters directly applicable to geology and soils issues are Grading and Erosion Control²⁵ and Subdivision Regulations.²⁶ Per the SPMC, the City Engineer or Building Official shall issue grading permits based on the appropriate submittal, including geotechnical and engineering geology reports.

4.6.3 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines (Environmental Checklist Form) a project would have a significant impact on the environment if it:

- Exposes people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - a. Rupture of known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning map issued by the State Geologist from the area or based on other substantial evidence of a known fault.
 - b. Strong seismic ground shaking.
 - c. Seismic related ground failure, including liquefaction.
 - d. Landslides.
- Results in substantial soil erosion or the loss of topsoil.
- Is located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an off-site landslide, lateral spreading, subsidence liquefaction, or collapse.
- Is located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property.

25 City of Santa Paula, Municipal Code, Title 16, and Erosion Control, Chapters 16.96--16.99.

26 City of Santa Paula, Municipal Code, Title 16, and Erosion Control, Subdivision Regulations, Chapter 16.80.

4.6.4 PROJECT IMPACTS

The environmental impact analysis presented below is based on determinations made in the Notice of Preparation (NOP) for issues that were determined to be potentially significant with mitigation incorporated; or for issues identified by reviewing agencies, organizations, or individuals commenting on the NOP who made a reasonable argument that the issue was potentially significant (see Responses to NOP, **Appendix 1.0**). No issues arose during the NOP process that are not already covered by Appendix G of the State CEQA Guidelines (Environmental Checklist Form) for Geology and Soils.

Threshold: **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of known fault?**

The Specific Plan area is neither located within an established Alquist-Priolo Earthquake Fault Zone, nor is it crossed by a known active fault. The nearest active fault is the Oak Ridge Fault, located approximately 1 mile south of the Specific Plan boundary. As no faults are known to occur through the Project Site, no setbacks from fault or other avoidance measures are necessary. However, given the seismic activity of the region, the CBC requires that structures be constructed to address the seismic nature of the region-based seismic stability factors established within the Code. The Project will not increase the intensity of the development on the Project Site beyond what was considered at the time the City's General Plan was adopted. The risk of loss, injury, or death associated with surface rupture of a known earthquake fault is considered very low, and impacts will be less than significant.

Threshold: **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- b. Strong seismic groundshaking**

The Specific Plan area could be subject to strong ground shaking in the event of an earthquake originating along one of the faults listed in **Table 4.6-1** (or another active or potentially active in the Southern California area, such as the San Andrea Fault). Strong seismic ground-shaking potential hazard exists throughout Southern California and could pose a risk to public safety and property by exposing people, property, or infrastructure to potentially adverse effects (e.g., severe structural damage and building collapse). All structures shall be designed in accordance with the then-current CBC and applicable City codes to ensure safety in the event of an earthquake.

Similar to most of Southern California and the County of Ventura, the Project Site is subject to some level of damaging ground shaking as a result of movement along the major active and potentially active fault zones that characterize this region. Strong seismic ground-shaking potential hazard exists throughout Southern California and could pose a risk to public safety and property by exposing people, property, or infrastructure to potentially adverse effects (e.g., severe structural damage and building collapse).

As part of the preparation of the Project Site for future development, additional subsurface explorations will be performed to establish required removal depths and delineate any areas that may be susceptible to seismically induced settlement. The Geotechnical Report determined that the Project Site is suitable to support the development allowed by the Specific Plan, and specific geotechnical engineering will determine design specification to address settlement.

Seismic design standards contained in the CBC include coefficients and factors for lateral force design. These coefficients and factors may change periodically because the CBC is amended approximately every 3 years. Construction allowed by the Specific Plan will be required to comply with the version of the CBC in effect at the time individual building permits are obtained. The Project will not expose residents to unknown safety issues associated with seismicity (including ground shaking), and potential impacts are less than significant.

Threshold: **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

c. Seismic-related ground failure, including liquefaction

Generally, liquefaction potential is greatest where the groundwater level is shallow and submerged loose, fine sands occur within a depth of about 50 feet or less below the ground surface. Most of the Project Site lies within a liquefaction hazard zone, an area where the historic occurrence of liquefaction or groundwater conditions indicate a potential for ground displacements as a result of liquefaction, as designated by the State of California and the City of Santa Paula. Historically highest groundwater levels beneath the affected areas are at depths up to 20 feet below the existing ground surface. If liquefaction were to occur at the Project Site, the repercussions would likely be in the form of dynamic settlement; loss of bearing is not anticipated. As described above, up to 6 feet of compacted fill material would be placed on top of the existing soils in the western portion, and other areas would undergo overexcavation, recompaction, and fill as needed. The thickness of the potentially liquefiable soil would be significantly reduced from the estimated value, or possibly eliminated altogether. Specific geotechnical recommendations would be made to reduce the effects of dynamic settlement to an acceptable level of risk per Title 14 of the California Code of Regulations. Until specific design parameters are established

based on future building and utility infrastructure designs to reduce magnitude of dynamic settlement, impacts are considered potentially significant.

Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, loosely packed granular alluvial deposits are especially susceptible to this phenomenon. Poorly compacted artificial fills may also experience seismically induced settlement. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. Seismic settlement could occur on the site and is thus considered a potentially significant impact.

Threshold: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

d. Landslides

Landslides involve the vertical and lateral movement of large earth masses by gravity (and possible initiated by earthquake forces). If landslides encroach into areas with structures, these structures can be severely damaged or destroyed, and occupants can be seriously injured if such failures (e.g., slope cracking and/or structural deformation) were to occur without some advanced warning.

No areas of potential slope instability on the site are shown in the Seismic Hazard Zone Report²⁷ or the City of Santa Paula Safety Element.²⁸ The topography of the project area is relatively flat and has no landforms where a landslide could form, except for possible lateral spread landslides, as discussed above. Therefore, the potential for impacts from earthquake-induced landslides or other landslides (except lateral spread landslides) is considered less than significant.

Threshold: Result in substantial soil erosion, or the loss of topsoil

The native topsoil and alluvial soils in the annexation area may be moderately susceptible to erosion. Construction activity associated with even moderate-scale grading can result in wind, gravity, and water driven erosion of earth materials (soils and geologic units) if soil is disturbed, exposed, or stockpiled. After construction and covering the sites with pavement and landscaping, this potential impact is substantially reduced. Due to the extent of grading and the materials present, there could be a substantial loss of topsoil on the proposed Specific Plan development area, which would convert the site agricultural land to urban use, necessitating topsoil removal as part of geotechnical remediation, and covering the land with

²⁷ California Geological Survey, Seismic Hazard Zone Map—Santa Paula Quadrangle, June 21, 2002, 1:24000.

²⁸ City of Santa Paula, General Plan, Safety Element, 1998.

roadways, parking areas, and buildings. Long-term operations would include the infrastructure to control runoff through the use of an on-site detention basin. The Project would also include improvements that would involve filling the western portion of the Project Site to above flood elevations of the Adams Barranca and would allow the flow from Adams Barranca to continue south toward its outlet with the Santa Clara River.

Construction activities would comply with erosion control requirements, including grading and dust control measures, imposed by the City pursuant to grading permit regulations. Specifically, each construction project permitted under the Specific Plan would be required to comply with City's necessary permits, plans, plan checks, and inspections to reduce the effects of sedimentation and erosion. In addition, as discussed in **Section 4.9, Hydrology and Water Quality**, the Project would be required to have a Storm Water Pollution Prevention Plan (SWPPP) pursuant to the National Pollutant Discharge Elimination System (NPDES) permit requirements. As part of the SWPPP, best management practices (BMPs) would be implemented during construction to reduce soil erosion and pollutant levels to the maximum extent possible.

After construction, the project may result in a limited degree of soil erosion effects from vegetated areas. However, in accordance with NPDES requirements, the project would be required to have a Standard Urban Stormwater Mitigation Plan (SUSMP) in place during the operational life of each development within the Specific Plan, which would include BMPs that would reduce on-site erosion from vegetated areas and basins on the Project Site. While BMP design features would be developed with more refined engineering for each development prior to implementation of the above requirements, impacts associated with erosion and sedimentation are considered potentially significant.

Threshold: **Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; and be located on expansive soil, as defined in the Uniform Building Code, creating substantial risks to life or property.**

The potential impacts from landslides and liquefaction are discussed in the subsections above.

The alluvial soils present in the annexation area are expected to exhibit a low expansion potential. However, soils with a higher expansion potential (medium or greater) may be encountered locally. Depending on the improvements planned for the area, expansive soils could pose a risk to property. However, as previously noted, geotechnical studies should be conducted to evaluate the potential for expansive soil to impact individual improvements.

Lateral spread potential may be present if liquefaction in shallow layers is determined, even with the relatively flat natural slopes toward the Santa Clara River and Adams Barranca. To minimize effects of lateral spreading, the geotechnical investigations include design specifications for footing and foundations to resist any lateral spreading impacts to the structural integrity of developments. Through compliance with the 2016 CBC and recommendations of the geotechnical investigations, effects could be addressed via specific design project design features for individual developments in accordance with the Specific Plan. Without site-specific geotechnical investigations to analyze lateral spread landslide potential in accordance with the 2016 CBC and Special Publication 117, impacts related to lateral spread landslides would be potentially significant.

Quaternary alluvial deposits consisting of silt, sand, and gravel (or larger-size) clasts, and possibly clay-rich soils and miscellaneous artificial fill, underlie the Project Site. As noted earlier, there are four alluvial geologic units within the Specific Plan development area. Without engineering modification, the surficial units would be consolidation prone and erodible, and would make poor foundation materials. These conditions could lead to damage for any structures placed over these materials. Expansive soils units may be found in the Qht deposits that could cause damage to foundations and walls due to repeated drying and wetting (shrink and swell). Therefore, geologic, soils, and geotechnical impacts would be potentially significant.

4.6.5 CUMULATIVE IMPACTS

Geologic impacts are typically confined to a project site or within a localized area and do not affect off-site areas associated with the related projects identified in **Section 3.0, Related Projects**, or other growth in the City. At a minimum, all development occurring within the City of Santa Paula would be subject to CBC and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Also, individual project geotechnical investigation reports would provide recommendations to account for site-specific design requirements to avoid subjecting on- and off-site properties to geologic hazards, in accordance with the CBC. With regard to erosion and sedimentation, development under the Santa Paula West Specific Plan and related projects are required to implement a SWPPP during construction, as required by the NPDES permit, to minimize impacts to off-site properties from the effects of erosion. Therefore, based on the Santa Paula West Specific Plan design (including recommendations within the geotechnical reports), and compliance with applicable regulations and plan review, the Project will meet the applicable standards and will sufficiently reduce its incremental cumulative geology and soil impacts to a less than significant cumulative impact.

4.6.6 MITIGATION MEASURES

G-1: Additional explorations must be performed at the tentative tract map and grading plan review stages of the development planning. The purpose of the explorations would be to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement.

G-2: Detailed, design-level geotechnical investigation reports for all future subdivision and other discretionary development approvals must be submitted to the Public Works Director, or designee, for approval. In addition, grading plans and geotechnical reports prepared by a licensed Engineering Geologist (approved by the Public Works Director) must be provided to the Public Works Director, or designee, before the City issues grading building permits for individual development projects within the Project Site. Requirements for the geotechnical reports and compliance are described below.

- The Engineering Geologist must make recommendations to address any seismically induced settlement within portions of the Project Site. In particular, seismically induced settlement must be addressed in the western parts of the Project Site, where preliminary geotechnical investigations determined that the area may experience up to several inches of seismically induced settlement in the event of strong ground motion.
- The Engineering Geologist must inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with construction specifications, and make site-specific recommendations for grading, drainage installation, and foundation design, as appropriate.
- The Public Works Director, or designee, must ensure that all soils and engineering report recommendations are incorporated into the project engineering and construction plans, including soils tests to ensure that it meets the soil classifications assumed in the soils reports, and that soils meet the CBC requirements.
- All Project plans as determined necessary by the Public Works Director, or designee, including Grading and Construction Plans, must be reviewed and stamped by a Project soils engineer and submitted to the Public Works Director, or designee, for review and verification that all requirements are incorporated before the City issues grading or construction permits.
- The Applicant and/or contractor must retain a licensed soils engineer acceptable to the Public Works Director, or designee, to review all construction plans for

consistency with the soils reports and to monitor on-site grading and construction to ensure the conditions at the Project Site do not substantially change the requirements of report recommendations for design-level geotechnical investigations. The project soils engineer must monitor grading and construction activity and report observations to the Public Works Director, or designee. The Public Works Director, or designee, will conduct field inspections as needed.

G-3: The final grading and erosion control plan shall be designed to minimize erosion. The plan shall include, but not be limited to, the following:

- Best management practices (BMPs), such as temporary berms and sedimentation traps (such as silt fencing, straw bales, and sand bags), shall be installed in association with project grading. The BMPs shall be placed at the base of all cut/fill slopes and soil stockpile areas where potential erosion may occur and shall be maintained to ensure effectiveness. The sedimentation basins and traps shall be cleaned periodically, and the silt shall be removed and disposed of in a location approved by the City.
- Nonpaved areas shall be revegetated or restored (i.e. geotextile binding fabrics) immediately after grading and installation of utilities to minimize erosion and to re-establish soil structure and fertility. Revegetation shall include drought-resistant, fast-growing vegetation that would quickly stabilize exposed ground surfaces. Alternative materials rather than reseeding (e.g., gravel) may be used, subject to review and approval by the City.
- Runoff shall not be directed across exposed slopes. All surface runoff shall be conveyed in accordance with the approved drainage plans.
- Energy dissipaters or similar devices shall be installed at the end of drainpipe outlets to minimize erosion during storm events.
- Grading shall occur during the dry season (April 15 to November 1) unless a City-approved erosion control plan is in place and all erosion control measures are in effect. Erosion control measures shall be identified on an erosion control plan and shall prevent runoff, erosion, siltation, and tracking of mud and soil onto City streets. All exposed graded surfaces shall be reseeded with ground cover vegetation to minimize erosion. Graded surfaces shall be reseeded within four (4) weeks of grading completion, with the exception of surfaces graded for the placement of structures. These surfaces shall be reseeded if construction of structures does not commence within four (4) weeks of grading completion.

- Site grading shall be completed such that permanent drainage away from foundations and slabs is provided and so that water shall not pond near proposed structures or pavements.

4.6.7 RESIDUAL IMPACTS AFTER MITIGATION

All potential impacts related to geologic characteristics, faulting, seismic shaking, soils, and slope stability will be mitigated to less than significant by implementation of Mitigation Measures G-1 and G-2. To control erosions and sedimentation Mitigation Measure G-3 would reduce impacts to less than significant. In addition, the Project Site is not susceptible to impacts related to subsidence, flooding, tsunami affects, and/or dam inundation. As such, all impacts related to geology and soils conditions are considered less than significant.

4.7 GREENHOUSE GASES

This section evaluates the significance of the greenhouse gas (GHG) emissions that would be generated by the Santa Paula West Business Park Specific Plan (SPWBPSP), referred to as the Specific Plan. A quantified estimate of these GHG emissions is provided for both construction and operation of the Project. The input assumptions for operational GHG emissions calculations and the GHG conversion from consumption to annual regional CO₂ equivalency (CO₂e) emissions are summarized in the CalEEMod output files found in **Appendix 4.3, Air Quality and Greenhouse Gas Emissions Model Output**.

The Project GHG emissions are considered within the context of the Statewide and Local GHG reduction laws, plans, and policies. The Project's sustainable design features to reduce GHG emissions are provided. Analysis years for all construction phases and total Project operational years are provided to determine the total estimated maximum emissions of the Project.

4.7.1 EXISTING CONDITIONS

Greenhouse Gas

Climate change is a change in the average climatic conditions on earth that may be measured by changes in wind patterns, storms, precipitation, and temperature. These changes are assessed using historical records of temperature changes that have occurred in the past, such as during previous ice ages. Many of the concerns regarding climate change use this data to extrapolate a level of statistical significance, specifically focusing on temperature records from the last 150 years (the Industrial Age), which differ from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change (IPCC) considered six alternative future GHG scenarios that would stabilize global temperatures and climate change impacts. The IPCC predicted that global mean temperature change from 1990 to 2100 for the six scenarios considered could range from 1.5 degrees Celsius (°C) to 2.0°C. Global average temperatures and sea levels are expected to rise under all scenarios.¹

In California, climate change may result in consequences such as the following:

- A reduction in the quality and supply of water to the State from the Sierra snowpack
- Increased risk of large wildfires
- Reductions in the quality and quantity of certain agricultural products

1 Intergovernmental Panel on Climate Change, "Summary for Policymakers," in *Climate Change 2013: The Physical Science Basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, (Cambridge University Press: Cambridge, UK and New York, 2013).

- Exacerbation of air quality problems
- A rise in sea levels resulting in the displacement of coastal businesses and residences
- Damage to marine ecosystems and the natural environment
- An increase in infections, disease, asthma, and other health-related problems
- A decrease in the health and productivity of California's forests

GHGs are gases that trap heat in the atmosphere; the effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. The presence of these GHGs in the atmosphere affects the earth's surface temperature. Both natural processes and human activities emit GHGs. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

The global warming potential (GWP) is the potential of a gas or aerosol to trap heat in the atmosphere. The GWP compares the amount of heat trapped by a certain mass of the gas in question to the amount of heat trapped by a similar mass of carbon dioxide. A GWP is calculated over a specific time interval, commonly 20, 100, or 500 years. GWP is expressed as a factor of carbon dioxide (whose GWP is standardized to 1). For example, the 100-year GWP of methane is 28, which means that if the same mass of methane and carbon dioxide were introduced into the atmosphere, that methane will trap 28 times more heat than the carbon dioxide over the next 100 years.² A summary of the atmospheric lifetime and GWP of selected gases is presented in **Table 4.7-1, Atmospheric Lifetimes and Global Warming Potentials of GHGs**. As indicated, GWP ranges from 1 to 23,500.

2 Working Group, *Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013.

Table 4.7-1
Atmospheric Lifetimes and Global Warming Potentials of GHGs

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon dioxide (CO ₂)	100–300	1
Methane (CH ₄)	12 (+/-3)	28
Nitrous oxide (N ₂ O)	121	265
CFC-11 (CCL ₃ F)	45	4,660
CFC-12 (CCL ₂ F ₂)	100	10,200
CF-113 (CCL ₂ CCIF ₂)	85	5,820
HCFC-22 (CHCIF ₂)	11.9	1,760
HCFC-141b (CH ₃ CCl ₂ F)	9.2	782
HCFC-142b (CH ₃ CCIF ₂)	17.2	1,980
Halon 1211 (CBRCIF ₂)	16	1,750
Halon 1301 (CBrCIF ₃)	65	6,290
HFC-134a (CH ₂ FCF ₃)	13.4	1,300
Carbon tetrachloride (CCl ₄)	26	1,730
Sulfur hexafluoride (SF ₆)	3,200	23,500

Source: Intergovernmental Panel on Climate Change, IPCC Fifth Assessment Report: Climate Change 2013.

Individual GHG compounds have varying GWP and atmospheric lifetimes. The calculation of the carbon dioxide equivalent (CO₂e) is a consistent methodology for comparing GHG emissions, since it normalizes various GHG emissions to a consistent metric. Methane's warming potential of 28 indicates that methane has a warming effect that is 28 times greater than carbon dioxide on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its GWP.

The GHGs of most concern are identified in **Table 4.7-2, Greenhouse Gases**. Of the two primary sources of GHG in CO₂ and methane, CO₂ would be generated by sources associated with the Project, while methane would not be generated in any substantial amount.

**Table 4.7-2
Greenhouse Gases**

Greenhouse Gas	Description and Physical Properties	Sources
Carbon dioxide (CO ₂)	Carbon dioxide is an odorless, colorless, natural GHG. GWP = 1.	Carbon dioxide is emitted from natural and anthropogenic sources. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood. The concentration in 2005 was 379 ppm, which is an increase of about 1.4 ppm per year since 1960.
Haloalkanes	Haloalkanes (also known as halogenoalkanes or alkyl halides) are colorless, relatively odorless, and hydrophobic.	Haloalkanes are mostly human-produced such as flame retardants, fire extinguishants, refrigerants, propellants, solvents, and pharmaceuticals. Nonartificial-source haloalkanes do occur, mostly through enzyme-mediated synthesis by bacteria, fungi, and especially sea microalgae (seaweeds).
Methane (CH ₄)	Methane is a flammable gas and is the main component of natural gas. GWP = 21.	A natural source of methane is from the anaerobic decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from landfills, fermentation of manure, and cattle.
Nitrous oxide (N ₂ O)	Nitrous oxide is also known as laughing gas and is a colorless GHG. GWP = 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Perfluorocarbons (PFCs)	Perfluorocarbons liquids are colorless with high density, up to more than twice that of water. It is also an odorless, nonflammable, unreactive gas.	Man-made compounds containing just fluorine and carbon. They are used mainly in the electronics sector in semiconductor manufacture, with significant usage as refrigerants.
Sulfur hexafluoride (SF ₆)	Sulfur hexafluoride is an inorganic, colorless, odorless, nonflammable, extremely potent GHG that is an excellent electrical insulator. GWP = 23,900	Sulfur hexafluoride emissions are virtually all of anthropogenic origin including electricity sector, magnesium industry, electronics industry, and adiabatic property.

Source: Intergovernmental Panel on Climate Change, IPCC Fifth Assessment Report: Climate Change 2013 .

Notes: ppm = parts per million; ppt = parts per trillion (measure of concentration in the atmosphere); GWP = global warming potential.

Emissions Inventory and Trends

GHG emissions are presented in units of metric tons of carbon dioxide equivalent (MTCO₂e) per year, which allows emissions of other GHGs, such as CH₄, N₂O, and high GWP GHGs, to be normalized to a single unit of measure. In 2012, California produced 458.68 million metric tons of carbon dioxide

equivalents (MMTCO₂e),³ including imported electricity and excluding combustion of international fuels and carbon sinks or storage. The major source of GHGs in California is transportation, contributing to 37 percent of the State's total GHG emissions.⁴ Electricity generation (both in and out of State) is the second largest source, contributing to 21 percent of the State's GHG emissions.⁵ The statewide inventory of GHGs by sector is shown in **Table 4.7-3, California GHG Inventory 2004–2012**.

**Table 4.7-3
California GHG Inventory 2004–2012**

Main Sector	Emissions MMTCO ₂ e								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
Transportation ^a	186.88	189.08	189.18	189.27	178.02	171.47	170.46	168.13	167.38
Electric power	115.20	107.86	104.54	113.94	120.15	101.32	90.30	88.04	95.09
Commercial/Residential	42.90	41.24	41.89	42.11	42.44	42.65	43.82	44.32	42.28
Industrial ^b	94.48	92.29	90.28	87.10	87.54	84.95	88.51	88.34	89.16
Recycling and waste	7.57	7.75	7.80	7.93	8.09	8.23	8.34	8.42	8.49
High GWP ^{c,d}	9.56	10.36	11.08	11.78	12.87	13.99	15.89	17.35	18.41
Agriculture	36.26	36.54	37.75	37.03	37.99	35.84	35.73	36.34	37.86
Total Emissions	492.86	485.13	482.52	489.16	487.10	458.44	453.06	450.94	458.68

Source: CARB 2014. California Greenhouse Gas Inventory for 2004–2012,

http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-12_2014-03-24.pdf

^a Includes equipment used in construction, mining, oil drilling, industrial, and airport ground operations.

^b Reflects emissions from combustion of natural gas, diesel, and lease fuel plus fugitive emissions.

^c These categories are listed in the Industrial sector of CARB's GHG Emission Inventory sectors.

^{c,d} This category is listed in the Electric Power sector of CARB's GHG Emission Inventory sectors.

4.7.2 REGULATORY SETTING

International

Kyoto Protocol

In 1988, the United Nations established the IPCC to evaluate the impacts of global warming and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (FCCC) agreement with the goal of controlling greenhouse gas emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The Plan currently consists of more than 50 voluntary programs.

3 CARB, California Greenhouse Gas Inventory for 2000-20012 by Category as Defined in the 2008 Scoping Plan (March 24, 2014) http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-12_2014-03-24.pdf.

4 California Energy Commission (December 2006).

5 California Energy Commission (December 2006).

Paris Agreement

The Paris Agreement is an agreement within the United Nations Framework Convention on Climate Change (UNFCCC) dealing with GHG mitigation, adaptation, and finance. As of October 2016, 191 UNFCCC members have signed the treaty, 85 of which have ratified it. After the European Union ratified the agreement in October 2016, there were enough countries that had ratified the agreement, and that produce enough of the world's greenhouse gases, for the agreement to enter into force. The agreement will take effect on November 4, 2016.

Federal

The US Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO₂ and other GHGs are pollutants under the federal Clean Air Act (CAA), which the US Environmental Protection Agency (USEPA) must regulate if it determines they pose an endangerment to public health or welfare. The Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the court found that the USEPA could avoid taking action if it found that GHGs do not contribute to climate change or if it offered a “reasonable explanation” for not determining that GHGs contribute to climate change.

On April 17, 2009, the USEPA released a proposed finding that determined climate change poses a risk to public health. The USEPA held a 60-day public comment period, which ended June 23, 2009, and received over 380,000 public comments. On December 7, 2009, the USEPA Administrator (Administrator) signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs—carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)—in the atmosphere threaten the public health and welfare of current and future generations.
- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the proposed USEPA GHG standards for light-duty vehicles. These were jointly proposed by the USEPA and the Department of Transportation’s National Highway Traffic Safety Administration (NHTSA) on September 15, 2009. The two findings were published in Federal Register Docket ID No. EPA-HQ-OAR-2009-0171. The final rule was effective January 14, 2010.

The USEPA has issued the Final Mandatory Reporting of Greenhouse Gases Rule that requires reporting of GHG emissions from large sources and suppliers in the United States. Under the rule (effective December 29, 2009), suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the USEPA. The gases covered by the proposed rule are CO₂, CH₄, N₂O, HFC, PFC, SF₆, and other fluorinated gases including nitrogen trifluoride (NF₃) and hydrofluorinated ethers (HFEs).

On September 15, 2009, the USEPA and the NHTSA proposed a new national program to reduce greenhouse gas emissions and improve fuel economy for all new cars and trucks sold in the United States. The USEPA proposed the first-ever national GHG emissions standards under the CAA, and NHTSA proposed Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. This proposed national program would allow automobile manufacturers to build a single light-duty national fleet that satisfies all requirements under both federal programs and the standards of California and other states.

On July 20, 2011, the EPA published its final rule deferring GHG permitting requirements for carbon dioxide emission from biomass-fired and other biogenic sources until July 21, 2014. Environmental groups have challenged the deferral. In September 2011, EPA released an “Accounting Framework for Biogenic CO₂ Emissions from Stationary Sources,” which analyzes accounting methodologies and suggests an implementation for biogenic carbon dioxide emitted from stationary sources.

On April 4, 2012, EPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel-fired electric generating units larger than 25 MW would be required to limit emissions to 1,000 pounds CO₂/MWh on an average annual basis, subject to certain exceptions.

On April 17, 2012, EPA issued emission rules for oil production and natural gas production and processing operations.

State

Assembly Bill 1493

AB 1493 (Pavley), enacted on July 22, 2002, requires the California Air Resources Board (CARB) to adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. The CARB estimates that the regulation would reduce climate change emissions from the light-duty passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030.⁶ On June 30, 2009, the USEPA granted a

⁶ California Air Resources Board, Fact Sheet, Climate Change Emission Control Regulations, (December 10, 2004).

waiver of CAA preemption to California for the state's GHG emission standards for motor vehicles beginning with the 2009 model year. The waiver was published in the Federal Register on July 8, 2009.

Executive Order S-3-05 and the Climate Action Team

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established the following total GHG emission targets:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive but achievable midterm target. To meet these targets, the governor directed the secretary of the California Environmental Protection Agency to lead a Climate Action Team made up of representatives from the Transportation, Agency; the Department of Food and Agriculture; the Resources Agency; the CARB; the Energy Commission; and the Public Utilities Commission. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure that the targets in Executive Order S-3-05 are met.⁷

Executive Order S-01-7

Former governor Arnold Schwarzenegger signed Executive Order S-01-07 on January 18, 2007. The order mandated that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It also established a Low Carbon Fuel Standard for transportation fuels for California.

California Air Resources Board

On October 24, 2008, the CARB released the first preliminary draft of recommended approaches for setting interim significance thresholds for GHG under the California Environmental Quality Act (CEQA). The draft approach seeks to establish GHG thresholds and/or performance standards based on sector-types, as defined in the 2008 Scoping Plan. Sectors identified in the 2008 Scoping Plan are Transportation,

7 State of California, Environmental Protection Agency, Climate Action Team, Climate Action Team Report to Governor Schwarzenegger and the California Legislature, http://www.climatechange.ca.gov/climate_action_team/reports/index.html#catreports, (March 2006), accessed August 24, 2016.

Electricity, Industrial, Commercial and Residential, Agricultural, High Global Warming Potential, and Recycling and Waste. CARB has not yet finalized the proposed thresholds/performance standards.

Assembly Bill 32

In 2006, the California State Legislature enacted Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. CARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming as part of an effort to reduce emissions of GHGs.

The CARB Governing Board approved the 1990 GHG emissions level of 427 MMTCO₂e on December 6, 2007. Therefore, by 2020, emissions in California are required to be at or below 427 MMTCO₂e.

Under the current “business as usual” scenario, statewide emissions are increasing at a rate of approximately 1 percent per year as noted below.

- 1990: 427 MMTCO₂e
- 2004: 480 MMTCO₂e
- 2008: 495 MMTCO₂e
- 2020: 596 MMTCO₂e

Under AB 32, the CARB published its *Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California*.⁸ The CARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of those early action measures, 9 are considered discrete early action measures;⁹ that is, they were adopted by the CARB and enforceable by January 1, 2010. The CARB estimates that the 44 early action measures will result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

CEQA is only discussed once in the Early Action Measures report. The California Air Pollution Control Officer’s Association suggested that CARB work with local air districts on approaches to review GHG

8 California Air Resources Board, *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration* http://www.arb.ca.gov/cc/ccea/meetings/ea_final_report.pdf (October 2007), accessed August 24, 2016.

9 Discrete early actions are regulations to reduce greenhouse gas emissions adopted by the CARB Governing Board and enforceable by January 1, 2010.

impacts under the CEQA process, including significance thresholds for GHGs for projects and to develop a process for capturing reductions that result from CEQA mitigations. CARB's response to this recommendation in the report is as follows:

The Governor's Office of Planning and Research is charged with providing statewide guidance on CEQA implementation. With respect to quantifying any reductions that result from project-level mitigation of GHG emissions, we would like to see air districts take a lead role in tracking such reductions in their regions.¹⁰

The CARB approved the Climate Change Proposed Scoping Plan (Scoping Plan) in December 2008. The Scoping Plan

proposes a comprehensive set of actions designed to reduce overall GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health.¹¹

As noted in the approved 2008 Scoping Plan, the projected total business as usual emissions for year 2020 (estimated as 506.8 MMTCO₂e) must be reduced by approximately 16 percent to achieve the CARB's approved 2020 emission target of 427 MMTCO₂e. CARB updated the 2008 Scoping Plan in May 2014 (Updated 2014 Scoping Plan).¹² The Updated 2014 Scoping Plan adjusted the 1990 GHG emissions level to 431 MMTCO₂e and the updated 2020 GHG emissions forecast is 509 MMTCO₂e, which took credit for certain GHG emission reduction measures already in place (e.g., the Renewable Portfolio Standard). As revised in 2014, the projected total business as-usual emissions for year 2020 must be reduced by approximately 15 percent to achieve the CARB's approved 2020 emission target of 431 MMTCO₂e. The Updated 2014 Scoping Plan also recommend a 40 percent reduction in GHG emissions from 1990 levels by 2030 and a 60 percent reduction in GHG emissions from 1990 levels by 2040.

The 2008 Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the 2008 Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards

10 California Air Resources Board, *Expanded List of Early Action Measures* (October 2007).

11 California Air Resources Board, *Climate Change Scoping Plan: A Framework for Change* (December 2008), http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf, accessed June 10, 2013.

12 CARB, *First Update to the Climate Change Scoping Plan* (May 2014) http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

- Achieving a statewide renewable energy mix of 33 percent
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California’s clean car standards, goods movement measures, and the Low Carbon Fuel Standard
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the state’s long-term commitment to AB 32 implementation

In addition, the Scoping Plan differentiates between “capped” and “uncapped” strategies. “Capped” strategies are subject to the proposed cap-and-trade program.¹³ The 2008 Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. “Uncapped” strategies include additional reductions that will not be subject to the cap-and-trade emissions requirements. They are provided as a margin of safety to help achieve required GHG emission reductions.

Renewable Portfolio Standard

In 2002, Senate Bill (SB) 1078 required electric utilities to increase procurement of power generated by eligible renewable energy sources to 20 percent of total generation by 2017. In 2006, SB 107 accelerated the timetable to require 20 percent renewable energy by 2010. Then, in 2008, the Governor signed Executive Order S-14-08, which increased the required renewables content to 33 percent by 2020. In September 2009, the Governor signed Executive Order S-21-09, which directed the CARB to adopt regulations consistent with the 33 percent renewable energy target in Executive Order S-14-08 by July 31, 2010.

Title 24 Energy Efficiency Standards

Although not originally intended to reduce greenhouse gases, California Code of Regulations (CCR) Title 24 Part 6: California’s Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California’s energy consumption. Since then, Title 24 has been amended with a distinction for energy-efficient buildings that require less electricity and reduce fuel consumption, which in turn decreases GHG emissions. The current 2013 Title 24 standards (effective as of July 1, 2014) were adopted to respond, amongst other reasons, to the

13 The cap-and-trade program is a central element of AB 32 and covers major sources of GHG emissions in the state such as refineries, power plants, industrial facilities, and transportation fuels. The regulation includes an enforceable GHG cap that will decline over time. CARB will distribute allowances, which are tradable permits, equal to the emission allowed under the cap.

requirements of AB 32. The 2013 Building Energy Efficiency Standards focus on several key areas to improve energy efficiency of newly constructed buildings and additions and alterations to existing buildings, and include requirements that would enable both demand reductions during critical peak periods and future solar electric and thermal system installations.¹⁴ Specifically, new development projects constructed within California are subject to the mandatory planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality measures of the California Green Building Standards (“CALGreen”) Code (California Code of Regulations, Title 24, Part 11).

Senate Bill 97

SB 97 was passed in August 2007, and added Section 21083.05 to the *Public Resources Code*. Section 21083.05 states:

(a) On or before July 1, 2009, the Office of Planning and Research (OPR) shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the OPR pursuant to subdivision (a).

CEQA Amendments

As required by SB 97, the Governor’s Office of Planning and Research (OPR) prepared and transmitted recommended Amendments to the *CEQA Guidelines* for GHG emissions to the California Natural Resources Agency on April 13, 2009. The Office of Administrative Law reviewed the Adopted Amendments and the Natural Resources Agency’s rulemaking file. The Adopted Amendments were filed with the Secretary of State, and became effective March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing *CEQA Guidelines* to reference climate change.

A new section, *CEQA Guidelines* Section 15064.4, was added to assist agencies in determining the significance of GHG emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. This section does not provide guidance to public agencies on how to determine whether the project’s estimated GHG emissions are significant or cumulatively considerable.

¹⁴ California Energy Emission, *2013 Building Energy Efficiency Standards for Residential and Nonresidential Buildings*, <http://www.energy.ca.gov/2012publications/CEC-400-2012-004/CEC-400-2012-004-CMF-REV2.pdf>

Also amended were *CEQA Guidelines* Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts, respectively. GHG mitigation measures are referenced in general terms, but no specific measures are identified or required. The revision to the cumulative impact guideline directs public agencies to analyze GHG emissions in an EIR when the incremental contribution of emissions from a project being reviewed may be cumulatively considerable. However, the determination of when emissions are cumulatively considerable is left to the discretion of the public agency reviewing a proposed project.

The Amendments also added Section 15183.5, which permits programmatic GHG analysis and allows for project-specific analysis to tier off this program level analysis, and the preparation of GHG reduction plans for a city or county. Compliance with a GHG reduction plan can then be used to support a determination that an individual project's contribution to GHG impacts is not cumulatively considerable.

In addition, the Amendments revised Appendix F of the *CEQA Guidelines*, which focuses on Energy Conservation, and Appendix G, which includes the sample Environmental Checklist Form.

SB 1368

In 2006, the State Legislature adopted Senate Bill 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission (CPUC) to adopt performance standards for GHG emissions for the future power purchase of California utilities. In an effort to limit carbon emissions associated with electrical energy consumed in California, this bill prohibits purchase arrangements for energy for periods of longer than 5 years from resources that exceed the emissions of a relatively clean, combined-cycle natural gas power plant. A coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as combined-cycle natural gas power plants. Accordingly, the new law will effectively prevent California's utilities from investing in, financially supporting, or purchasing power from new coal plants located in or out of the state. Thus, SB 1368 will lead to lower GHG emissions associated with California's energy demand, by effectively prohibiting California utilities from purchasing power from out-of-state producers that cannot satisfy the required performance standard for GHG emissions.

SB 375

SB 375 was signed into law by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which contributes up to 40 percent of the total GHG emissions in California. Automobiles and light trucks alone contribute almost 30 percent. SB 375 indicates that GHGs from automobiles and light trucks can be reduced by new vehicle technology but significant reductions from a change in land use patterns and improved transportation are necessary. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve

the goals of AB 32.” SB 375 does the following: (1) it requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) it aligns planning for transportation and housing, and (3) it creates specified incentives for the implementation of the strategies.

Non-Legislative

CAPCOA. On January 8, 2008, the California Air Pollution Control Officers Association (CAPCOA) released a paper to provide a common platform of information and tools for public agencies. The disclaimer states that it is not a guidance document, but rather a resource to enable local decision makers to make the best decisions they can in the face of incomplete information during a period of change. The paper indicates that it is an interim resource and does not endorse any particular approach. It discusses three groups of potential thresholds, including a no significance threshold, a threshold of zero emissions, and a non-zero threshold.¹⁵ The nonzero quantitative thresholds as identified in the paper range from 900 to 50,000 metric tons of CO₂ per year. The CAPCOA paper also identified non-zero qualitative thresholds.¹⁶

Attorney General. The Office of the California Attorney General maintains a list of CEQA Mitigations for Global Warming Impacts on its website.¹⁷ The Attorney General’s Office has listed some examples of types of mitigations that local agencies may consider to offset or reduce global warming impacts from a project. The Attorney General’s Office states that the lists are examples and not intended to be exhaustive, but instead are provided as measures and policies that could be undertaken. Moreover, the measures cited may not be appropriate for every project, so the Attorney General suggests that the lead agency should use its own informed judgment in deciding which measures it would analyze, and which measures it would require, for a given project. The mitigation measures are divided into two groups: generally applicable measures and general plan measures. The Attorney General presents “generally applicable” measures in the following areas:

- Energy efficiency
- Renewable energy
- Water conservation and efficiency

15 California Air Pollution Control Officers Association, *CEQA & Climate Change, Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, (January 2008), <http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf/>, accessed August 24, 2106.

16 A non-zero threshold could minimize the resources spent reviewing environmental analyses that do not result in real GHG reductions or to prevent the environmental review system from being overwhelmed.

17 California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures* (August 2010), <http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf>, accessed August 24, 2016.

- Solid waste measures
- Land use measures
- Transportation and motor vehicles
- Carbon offsets

Local

Neither the Ventura County Air Pollution Control District (VCAPCD) nor the City of Santa Paula has adopted any regulations addressing the generation of GHG emissions. The issue of GHG emissions is not addressed in the current City of Santa Paula General Plan.

4.7.3 THRESHOLDS OF SIGNIFICANCE

In order to assist in determining whether a project would have a significant effect on the environment, the *California Environmental Quality Act (CEQA)* identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantially adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant on greenhouse gases if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Criteria to Determine a Significant Generation of GHG Emissions

For greenhouse gas emissions and global warming, there is not, at this time, one established, universally agreed-upon “threshold of significance” by which to measure an impact. While the CARB published some draft thresholds several years ago, they were never adopted and the CARB recommended that local air districts and lead agencies adopt their own thresholds for GHG impacts.

As discussed in **Section 4.3, Air Quality**, the City of Santa Paula relies upon the expert guidance of the VCAPCD regarding the methodology and thresholds of significance for the evaluation of air quality impacts within Ventura County. GHG emissions are air pollutants that are subject to local control by the VCAPCD. As such, the City looks to the VCAPCD for guidance in the evaluation of GHG impacts.

In September 2011, the VCAPCD requested that its staff report back on possible GHG significance thresholds for evaluating GHG impacts of land use projects in Ventura County under CEQA. VCAPCD staff responded to this request by preparing a report titled *Greenhouse Gas Thresholds of Significance Options*

for Land Use Development Projects in Ventura County.¹⁸ This report presents a number of options for GHG significance thresholds and summarizes the most prominent approaches and options either adopted or being considered by all other air districts throughout California. Similar to other air districts, VCAPCD staff members are considering a tiered approach; the main components involve consistency with a locally adopted GHG reduction plan, followed by a bright-line threshold for land use projects that would capture 90 percent of project GHG emissions. VCAPCD staff members are also exploring an efficiency-based metric (e.g., GHG emissions per capita) for land use projects and plans. The South Coast Air Quality Management District (SCAQMD) is also considering these strategies for land use projects.

Given that Ventura County is adjacent to the SCAQMD jurisdiction and is a part of the Southern California Association of Governments (SCAG) region, VCAPCD staff believes it makes sense to set local GHG emissions thresholds of significance for land use development projects at levels consistent with those set by the SCAQMD and the SCAG region. VCAPCD believes that adopting harmonized regional GHG emission thresholds would help streamline project review and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout most of Southern California.

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the SCAQMD staff convened an ongoing GHG CEQA Significance Threshold Working Group. The last proposed significance GHG threshold under discussion by the Working Group, in December 2008, was a screening threshold of 10,000 MTCO₂e per year for industrial sources, and 3,000 MTCO₂e per year for residential and commercial sources. If the amount of GHG emissions generated by a proposed project were under this screening threshold, the impact would not be considered significant. If the project were to exceed the screening threshold, then the impact would be considered potentially significant, and additional analysis would need to be completed to determine significance. The most recent approach being considered by the SCAQMD, in September 2010, is a tiered approach as follows:

- Tier 1:** Does the project qualify for any applicable statutory or categorical exemption under CEQA? If yes, no further action is required, and climate change impacts would be less than significant.
- Tier 2:** Is the project consistent with a GHG reduction plan? (The plan must be consistent with CEQA Guidelines Sections 15064(h)(3), 15125(d), or 15152(s).) If yes, there is a presumption of less than significant impacts with respect to climate change.
- Tier 3:** Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 MTCO₂e per year for industrial projects; 3,000 MTCO₂e

¹⁸ *Greenhouse Gas Thresholds of Significance Options for Land Use Development Projects in Ventura County*, <http://www.vcapcd.org/pubs/Planning/GHGThresholdReportRevised.pdf>

for residential projects/commercial projects; 3,500 MTCO₂e for mixed-use projects)? If yes, there is a presumption of less than significant impacts with respect to climate change.

Tier 4: Does the project meet one of the following performance standards? If yes, there is a presumption of less than significant impacts with respect to climate change.

Option #1: Achieve some percentage reduction in GHG emissions from a base case scenario, including land use sector reductions from AB 32 (e.g., 16 percent reduction as recommended by the CARB Scoping Plan).

Option #2: For individual projects, achieve a project-level efficiency target of 4.8 MTCO₂e per service population by 2020 or a target of 3.0 MTCO₂e per service population by 2035. For plans, achieve a plan-level efficiency target of 6.6 MTCO₂e per service population by 2020 or a target of 4.1 MTCO₂e per service population by 2035.

Option #3: Early compliance with AB 32 through early implementation of CARB's Scoping Plan Measures. The intent of this option is to accelerate GHG emission reduction from the various sectors subject to CARB's Scoping Plan to eliminate GHG emission.

Tier 5: Projects should obtain GHG emission offsets to reduce significant impacts. Offsets in combination with any mitigation measures should achieve the target thresholds for any of the above Tiers. Otherwise, project impacts would remain significant.

The SCAQMD has not announced when a final version of these draft thresholds will be presented to the SCAQMD Governing Board for consideration for adoption.

The SCAQMD has also adopted Rules 2700, 2701, and 2702, which establish a GHG reduction program within the SCAQMD; however, GHG emission reduction protocols pursuant to these rules have only been established for boilers and process heaters, forestry, and manure management reduction projects.

Pursuant to CEQA Guidelines Section 15064.4, the methods suitable for analysis of GHG emissions are:

1. Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The Lead Agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The Lead Agency should explain the limitations of the particular model or methodology selected for use.
2. Rely on a qualitative analysis or performance-based standards.

GHG emissions were modeled using the CARB-approved California Emissions Estimator Model 2013.2.2 (CalEEMod) computer program as recommended by the SCAQMD.¹⁹ CalEEMod is designed to model construction emissions for land use development projects and allows for the input of project-specific information. CalEEMod allows land use selections that include project location specifics and trip generation rates. CalEEMod accounts for area-source emissions from the use of natural gas, landscape maintenance equipment, and consumer products and from mobile-source emissions associated with vehicle trip generation.

GHG emissions were modeled using the CalEEMod computer program and emission factors from California Climate Action Registry (CCAR), as recommended by SCAQMD, which estimates construction and operations emissions of carbon dioxide, among other air pollutants. Project-generated emissions were modeled based on proposed land uses and general information provided in **Section 2.0, Project Description**.

The following assumptions were made in the CalEEMod computer program:

Land Uses

- 187,373-square-foot general light industry
- 219,695-square-foot general light industry
- 276,105-square-foot general light industry
- 2,836-square-foot shopping center
- 5,347-square-foot shopping center
- 10,222-square-foot shopping center
- 13.3-acre parking lot
- 3.65-acre park

19 California Emissions Estimator Model (CalEEMod). <http://www.caleemod.com/>.

Construction

- Construction for each year would occur over six phases: (1) Demolition, (2) Site Preparation, (3) Grading, (4) Building Construction, (5) Paving, and (6) Architectural Coating
- Construction would occur 5 days per week, with 8-hour work days

Operation

The Project trip generation rate was derived from the Traffic Impact Study.²⁰ Direct emissions of CO₂ emitted from operation of the Specific Plan include area source emissions (from natural gas consumption) and mobile source emissions. Area source emissions were calculated using CalEEMod and default assumption for other asphalt surfaces, parking lot, and city park. Mobile source emissions were calculated using CalEEMod, based on the Institute of Transportation and Engineering, 8th edition, trip generation rates. The Specific Plan would also result in indirect GHG emissions due to electricity demand. The emission factor for CO₂, due to electrical demand from Southern California Edison, the electrical utility serving the Specific Plan, was selected in the CalEEMod model. Emission factors for CO₂ are based on CARB's Local Government Operations Protocol. Emission factors for CH₄ and N₂O are based on E-Grid values. The cited factors in the CARB report are based on data collected by the CCAR. The emission factors take into account the current mix of energy sources used to generate electricity and the relative carbon intensities of these sources, and includes natural gas coal, nuclear, large hydroelectric, and other renewable sources of energy. Electricity consumption was adjusted according to the CalEEMod User's Tips by factoring in the type of land and energy use associated with the Specific Plan.

In addition to electrical demand, the Specific Plan would also result in indirect GHG emissions due to water consumption, wastewater treatment, and solid waste generation. Demand values were based on land use type, subtype, lot acreage, square feet, and population growth. GHG emissions from water consumption are due to the electricity needed to convey, treat, and distribute water. The annual electrical demand factors for potable water were obtained from the California Energy Commission (CEC). The default CalEEMod assumptions, based on land uses and project characteristics, were used for GHG emissions from water consumption, wastewater production, and solid waste generation.

As previously discussed, the SCAQMD provides a tiered approach for GHG analysis for all proposed projects. The first tier of analysis indicates if a project qualifies for any applicable statutory or environmental analysis exemption. The Specific Plan does not qualify for an environmental analysis exemption. The second tier indicates if a project is consistent with a GHG reduction plan. The third tier requires quantification of the Project's GHG emissions; if it exceeds 10,000 MTCO₂e per year for industrial projects; and 3,000 MTCO₂e for residential projects/commercial projects then the next tier of analysis is

²⁰ Fehr & Peers, *Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan* (March 2015).

required. The fourth tier of analysis provides three options to determine if a project results in a potentially significant amount of GHG emissions. The first option requires that the project achieve a 16 percent reduction in GHG emissions from a base-case scenario. The second option sets an efficiency target per service population, while the third option determines if the project complies with AB 32 through implementation of CARB's Scoping Plan Measures.

4.7.4 PROJECT IMPACTS

The environmental impact analysis presented below is based on determinations made in the Notice of Preparation (NOP) for issues that were determined to be potentially significant with mitigation incorporated, or for issues identified by reviewing agencies, organizations, or individuals commenting on the NOP that made a reasonable argument that the issue was potentially significant (see Responses to NOP, **Appendix 1.0**).

Threshold: **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Construction

Construction activities for the Specific Plan would include the use of heavy-duty construction equipment. The vast majority of construction equipment (e.g., backhoes, rubber-tire loaders, scrapers, and haul trucks) rely on fossil fuels, primarily diesel, as an energy source. The combustion of fossil fuels in construction equipment results in GHG emissions of CO₂ and smaller amounts of CH₄ and N₂O. Emissions of GHG would also result from the combustion of fossil fuels from haul trucks and vendor trucks delivering materials, and from construction worker vehicles commuting to and from the Project. Typically, light-duty and medium-duty automobiles and trucks would be used for worker trips and heavy-duty trucks would be used for vendor trips. The vast majority of motor vehicles used for worker trips rely on gasoline as an energy source while motor vehicles used for vendor trips would primarily rely on diesel as an energy source. The Specific Plan would result in short-term emissions of GHGs during construction—that is, the emissions would occur only during active construction and would cease after the Specific Plan is built. The GHG emissions were estimated using the CalEEMod model and are located in **Appendix 4.3**.

As presented in **Table 4.7-4, Construction GHG Emissions**, construction activities associated with the Project would generate 2,387.71 MTCO₂e GHG emissions. The SCAQMD recommends annualizing construction-related GHG emissions over a project's lifetime, defined as a 30-year period, in order to include these emissions as part of the annual total operational emissions. Therefore, construction-related GHG emissions have been annualized over this period and included in the annual operational emissions later in this section.

**Table 4.7-4
Construction GHG Emissions**

	CO2e Emissions (Metric Tons)
Total Construction GHG Emissions*	2,387.71
Annualized over Project Lifetime	79.59

*Source: CalEEMod Emissions calculations are provided in **Appendix 4.3**.*

Notes: MTCO2e = metric tons of carbon dioxide emissions.

Totals in table may not appear to add exactly due to rounding in the computer model calculations.

**N2O emissions account for 0.10 MTCO2e/year.*

Operation

The Specific Plan is anticipated to be fully completed and in operation by 2020. Once in operation, the Specific Plan would result in GHG emissions, primarily CO₂, CH₄, and N₂O, as a result of fuel combustion from building heating systems, landscaping equipment, and motor vehicles. Building and motor vehicle air conditioning systems may use HFCs (and HFCs and chlorofluorocarbon [CFCs] to the extent that they have not been completely phased out at later dates); however, these emissions are not quantified because they would occur through accidental leaks. It is not possible to estimate the frequency of accidental leaks without some level of speculation.

The annual net GHG emissions associated with the operation of the Specific Plan are provided in **Table 4.7-5, Operational Greenhouse Gas Emissions (No Project Design Features)**. As shown in **Table 4.7-5**, the Specific Plan would emit 7,969.71 MTCO₂e/year with respect to GHG emissions. This scenario does not include the incorporation of project design features.

**Table 4.7-5
Operational Greenhouse Gas Emissions (No Project Design Features)**

GHG Emissions Source	Emissions (MTCO ₂ e/year)
Construction	79.59
Operational (mobile) sources*	4,008.64
Area sources	0.01
Energy	2,676.93
Waste	394.31
Water	810.23
Annual Total	7,969.71

Source: CalEEMod

Notes: MTCO₂e = metric tons of carbon dioxide emissions.

Emissions calculations are provided in **Appendix 4.3**. Totals in table may not appear to add exactly due to rounding in the computer model calculations. The emissions of the Project represent the net difference between the existing greenhouse generated uses that would be removed and the Project greenhouse gas emissions.

*N₂O emissions account for 0.16 MTCO₂e/year

The following is a list of project design features that would reduce GHG emissions:

- **Energy Efficiency:** The Specific Plan would be designed to meet the requirements of Title 24.
- **Water Conservation:** The Specific Plan would be designed to reduce water consumption compared to conventionally designed projects of similar size and scope. Such features would include low flow faucets, toilets, shower, and water-efficient irrigation systems.
- **Solid Waste Reduction:** The Specific Plan would be designed to reduce solid waste generation by including a recycling and composting program per City of Santa Paula Municipal Code requirements.

The annual net GHG emissions associated with the operation of the proposed Project assuming the project design features are provided in **Table 4.7-6, Project Design Feature Operational Greenhouse Gas Emissions**. The estimates represent emissions with incorporation of the design features during operation of the Project.

Table 4.7-6
Project Design Feature Operational Greenhouse Gas Emissions

GHG Emissions Source	Emissions (MTCO₂e/year)
Construction	79.59
Operational (mobile) sources*	3,584.99
Area Sources	0.01
Energy	2,181.46
Waste	197.15
Water	631.63
Annual Total	6,674.83
Percentage Reduction	16.2

Source: CalEEMod

Notes: GHG = greenhouse gas; MTCO₂e = metric tons of carbon dioxide emissions.

Emissions calculations are provided in **Appendix 4.3**. Totals in table may not appear to add exactly due to rounding in the computer model calculations.

*N₂O emissions account for 0.15 MTCO₂e/year.

As noted earlier, the SCAQMD has developed draft significance thresholds for GHG sources within its jurisdiction. All industrial land use projects that exceed 10,000 MTCO₂e per year would be considered potentially significant under the screening threshold. As shown in **Table 4.7-6**, the estimated Project operational GHG emissions with project design features would be 6,674.83 MTCO₂e per year, which would not exceed the screening threshold. In addition, the proposed Project would generate approximately 1,510 job opportunities²¹ and would achieve a project-level efficiency target of 4.4 MTCO₂e per service population. This would be below the 4.8 MTCO₂e per service population. Potential impacts would be less than significant based on the screening threshold.

Threshold: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The goal of AB 32 is to reduce statewide GHG emissions to 1990 levels by 2020. In December 2008, CARB adopted the Climate Change Scoping Plan ("Scoping Plan"), which details strategies to meet that goal. The Scoping Plan instructs local governments to establish sustainable community strategies to reduce GHG emissions associated with transportation, energy, and water, as required under SB 375. Planning efforts that lead to reduced vehicle trips while preserving personal mobility should be undertaken in addition to programs and designs that enhance and complement land use and transit strategies. The Climate Change Scoping Plan also recommends energy-efficiency measures in buildings such as maximizing the use of

21 US Green Building Council, Building Area Per Employee By Business type, May 13, 2008, <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>, accessed August 24, 2016.

energy efficient appliances and solar water heating as well as complying with green building standards that result in decreased energy consumption compared to Title 24 building codes. In addition, the Scoping Plan encourages the use of solar photovoltaic panels and other renewable sources of energy to provide clean energy and reduce fossil-fuel based energy. The CARB 2014 Updated Scoping Plan, which was updated in May 2014, adjusted the statewide GHG emissions reduction goals to achieve 1990 levels.

In addition to the measures listed in the 2008 Scoping Plan, other state offices have provided recommended measures that would assist lead agencies in determining consistency with the state's GHG reduction goals. The California Attorney General's Office (AGO) has stated that lead agencies can play an important role in "moving the State away from 'business as usual' and toward a low-carbon future."²² The AGO has released a guidance document that provides information to lead agencies that may be helpful in carrying out their duties under CEQA with respect to GHGs and climate change impacts. Provided in the document are measures that can be included as project design features, required changes to the project, or mitigation measures at the project level and at the general-plan level. The measures are not intended to be exhaustive and may not be appropriate for every project or general plan. The AGO affirms that "the decision of whether to approve a project—as proposed or with required changes or mitigation—is for the local agency, exercising its informed judgment in compliance with the law and balancing a variety of public objectives."

The Specific Plan would incorporate measures that reduce GHG emissions compared to a conventional project of similar size and scope. The Project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of a building's life cycle. These designs would increase the structures energy efficiency, water efficiency, and overall sustainability. These measures and features are consistent with existing recommendations to reduce GHG emissions. In addition, the Project would result in less than significant impact. Therefore, the Specific Plan would not conflict with the 2008 Scoping Plan and the 2014 Updated Scoping Plan.

4.7.5 CUMULATIVE IMPACTS

Although the Specific Plan is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. However, currently there are no significance thresholds, specific reduction targets, and no approved policy or guidance to assist in determining significance at the project or cumulative level. Additionally, there is currently no general accepted methodology to determine whether

22 California Office of the Attorney General, The California Environmental Quality Act: Addressing Global Warming Impacts at the Local Agency Level, 2008.

GHG emissions associated with a specific project represent new emissions or existing, displaced emissions. Implementing the project design features and GHG-reducing measures would result in a net decrease in GHG emissions. The Project's design features and GHG reduction measures make the Specific Plan consistent with the goals of AB 32.

Given the Specific Plan's consistency with state and county GHG emission reduction goals and objectives, the Specific Plan's contribution to the cumulative impact of greenhouse gas emissions would not be cumulatively considerable; and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (i.e., the 2014 Updated Scoping Plan). Similarly, related projects would also be anticipated to comply with these same emissions reduction goals and objectives. Therefore, cumulative impacts with respect to greenhouse gas emissions would be less than significant.

4.7.6 MITIGATION MEASURES

Potential impacts will be less than significant and no mitigation measures are required. Mitigation Measures provided in **Section 4.3, Air Quality**, will also reduce GHG emissions along with reductions in air pollutant emissions.

4.7.7 RESIDUAL IMPACTS AFTER MITIGATION

Impacts are less than significant.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section addresses risks to human health and safety associated with potential exposure to hazardous materials. The analysis considers existing and historical land uses within the Santa Paula West Business Park Specific Plan (“Specific Plan”) area (“Project Site”). It also evaluates potential incidents of upset (e.g., accidental spills) involving hazardous materials and their potential impact on area residents and businesses. This section identifies local hazardous materials sites on state or federal agency databases. In addition, an analysis of potential safety hazards associated with wildland fires and the Santa Paula Airport is provided.

The information and analysis provided in this section is largely derived from the *Phase I Environmental Site Assessment [ESA] for the Bannon Ranch, Santa Paula, California*, report by Applied Environmental Technologies, Inc., dated May 2006; a governmental database search report prepared by PW Environmental and Environmental Data Resources, Inc., dated October 31, 2014; and field visits conducted in 2014. Both reports are included in **Appendix 4.8, Phase I Environmental Site Assessment**.

4.8.1 EXISTING CONDITIONS

Definitions

Hazardous Material

A substance is considered hazardous based on factors such as toxicity, ignitability, corrosivity, or reactivity. According to Title 22 of the California Code of Regulations, a hazardous material is defined as “a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating irreversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.”¹ Hazardous materials often appear on a list of hazardous materials prepared by a federal, state, or local regulatory agency, or have characteristics defined as hazardous by such an agency.

Hazardous Waste

The California Health and Safety Code defines a hazardous waste as “any hazardous material that is abandoned, discarded or recycled.”² In addition, hazardous wastes occasionally may be generated by

1 22 California Code of Regulations (CCR), sec. 66084

2 California Health and Safety Code (HSC), sec. 25124.

actions that change the composition of previously nonhazardous materials. The same criteria that render a material hazardous make a waste hazardous: toxicity, ignitability, corrosivity, or reactivity

Recognized Environmental Conditions

The term “recognized environmental conditions” refers to the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into the structures on the property or into the ground, groundwater, or surface water of the property.

Historical Recognized Environmental Condition

The term historical recognized environmental condition is defined as “environmental condition which in the past would have been considered a recognized environmental condition, but which may or may not be considered a recognized environmental condition currently.” The American Society for Testing Materials (ASTM) further defines a historical recognized environmental condition by stating “If a past release of any hazardous substances or petroleum products has occurred in connection with the property and has been remediated, with such remediation accepted by the responsible regulatory agency... this condition shall be considered a historical recognized environmental condition.”

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are man-made organic chemicals that were formerly manufactured for use in various industrial and commercial applications due to of their nonflammability, chemical stability, high boiling point, and electrical insulating properties. While the manufacture of PCBs was banned in 1979, these hazardous materials may be found in products associated with transformers, electrical equipment, motor oil, hydraulic systems, cable and thermal insulation, adhesives and tapes, oil-based paint, caulking, plastics, and floor finish.³

Asbestos-Containing Material (ACM)

Asbestos, a naturally occurring fibrous material known for its useful thermal properties and tensile strength, was used in many commercial products, particularly building materials, manufactured from the 1940s until the 1970s. Asbestos-containing materials (ACMs) can include building materials such as spray acoustic ceilings, acoustic tiles, various plasters, duct wrap, paper backing of linoleum, non-bituminous roofing felt, wallboard, joint compound (joint "mud"), and thermal insulation for pipes and boilers. Use of

3 US Environmental Protection Agency (USEPA), “Polychlorinated Biphenyls,” <http://www.epa.gov/wastes/hazard/tsd/pcbs/about.htm>, accessed January 2015.

asbestos in the manufacturing of building materials was banned by 1978, although some products remained on the shelf and were used in the construction of buildings and homes for several years thereafter. In general, buildings constructed before 1979 have the greatest potential to contain ACMs. Some of the on-site buildings were constructed before 1979.

Asbestos is a known carcinogen, and there is no known threshold level of exposure at which adverse health effects are not anticipated. The USEPA has identified asbestos as a hazardous air pollutant pursuant to Section 112⁴ of the Federal Clean Air Act. Additionally, the California Air Resources Board (CARB) has identified asbestos as a Toxic Air Contaminant (TAC), pursuant to the California Health and Safety Code⁵. A potential for exposure exists when the ACM becomes damaged to the extent that asbestos fibers become airborne and are inhaled. If inhaled, asbestos fibers can result in serious health problems. Applicable regulations pertaining to the removal or disturbance of ACMs are described below under the section “Regulatory Setting.”

Based on the Ventura County Air Pollution Control District (APCD) standards, materials are considered ACMs if, when tested, one or more samples contain greater than 1 percent asbestos. Asbestos can become airborne if it is friable, meaning it can be crumbled, pulverized, or reduced to powder by hand pressure when dry. ACMs can become friable if pulverized during demolition activities. Even if not friable, the removal and disposal of ACMs is regulated by the APCD.

Lead-Based Paint

Lead is a naturally occurring element and heavy metal that was widely used as a major ingredient in most interior and exterior oil-based paints prior to 1950. Lead compounds continued to be used as corrosion inhibitors, pigments, and drying agents from the early 1950s to 1972, when the Consumer Products Safety Commission specified limits on lead content in such products. Lead-based paint (LBP) is of concern both as a source of exposure and as a major contributor to lead in interior dust and exterior soil.

Potential for Hazardous Materials on Site

The Project Site has been used for agricultural production from at least 1938, including orchard and row crop cultivation, along with ancillary uses for processing operations and farmworker housing.⁶ Substances identified by many State and federal agencies as hazardous are routinely used as part of the on-site agriculture. Agricultural operations use pesticides and herbicides to control pests and weeds. No banned pesticides are currently used on site and there is no storage of acutely hazardous materials on site. The

4 40 Code of Federal Regulations [CFR], sec. 61.01

5 HSC sec. 39657 et seq.

6 PW Environmental, *Environmental History Review—Santa Paula West Business Park* (October 2014).

structures and buildings on site, such as the farmworker housing and ancillary structures, may contain items such as cleaners and solvents, which may be considered hazardous substances. These materials are stored on site within appropriate covered and/or enclosed structures. Additionally, fuels, diesel, and oils are stored on site to provide for the various vehicles and equipment that support the agricultural operations.

Historically, the Project Site contained two aboveground storage tanks (ASTs) and one underground storage tank (UST).⁷ In December 2005, one 15,000-gallon and one 20,000-gallon ASTs were abandoned on the Project Site. Total petroleum hydrocarbon (TPH) contamination was identified beneath these former AST locations. Remedial excavation activities were initiated in January 2006, of which TPH contamination decreased on the site. However, further assessments identified sources of diesel and oil contamination originating on the site. The excavated contaminated soil was treated and remediated on site and three groundwater monitoring wells were installed in April 2006.⁸ Results from the groundwater sampling determined that groundwater was not impacted above state maximum contaminant levels (MCLs).⁹

The former 500-gallon UST, which was located in the center of the Project Site, was removed in December 2005.¹⁰ Testing conducted after the removal of the UST indicated that there were no major releases from the UST and that samples were below MCLs; as such, the case has been deemed closed as of May 2007.¹¹

The Project Site currently contains power poles and three wind machines. Two of the wind machines are electric powered, and the third is an abandoned gasoline-powered tower. Soil sampling conducted beneath the gasoline-powered wind machine determined that the tower would not represent an environmental concern.¹² Areas around the transformer locations associated with the on-site power poles may contain PCBs.

Furthermore, given that the Project Site historically has been used for agricultural production for more than 75 years, shallow soils may contain residual legacy pesticides, such as DDT, chlordane, and lead arsenate.¹³ The Project Site currently utilizes spraying of pesticides, but there is no existing occurrence of pesticide storage. Site reconnaissance did not identify any unusual conditions that could potentially

7 Applied Environmental Technologies, Inc. (AET), *Phase I Environmental Site Assessment [ESA] for the Bannon Ranch, Santa Paula, California* (2006).

8 PW Environmental, *Environmental History Review—Santa Paula West Business Park* (October 2014).

9 PW Environmental, *Environmental History Review—Santa Paula West Business Park* (October 2014).

10 PW Environmental, *Environmental History Review—Santa Paula West Business Park* (October 2014).

11 State Water Resources Control Board, *GeoTracker*, Bannon Ranch—T0611116855, http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0611116855, accessed May 2015.

12 AET, *Phase I ESA for the Bannon Ranch* (2006).

13 PW Environmental, *Environmental History Review—Santa Paula West Business Park* (October 2014).

represent an environmental liability, with the exception of potential residual pesticides.¹⁴ As the historic storage and use of pesticides on the Project Site is unknown, a limited Phase II ESA was conducted to determine the presence of residual pesticides around the onsite storage buildings and orchards. All pesticide concentrations measured across the site were below the respective preliminary remediation goals (PRGs), which are used to screen sites for potential environmental concerns prior to development. Therefore, the Phase II ESA determined no impacts related to those onsite residual pesticides.

The single-family residence on the northwest corner of the Project Site dates back to between the years 1947 and 1959.¹⁵ As this residence was constructed prior to year 1970, it is possible that PCBs, ACMs, and LBPs were utilized.

Aircraft and Airport Hazards

The Santa Paula Airport (the Airport) is located approximately 1.5 miles east of the Project Site. The Santa Paula Airport is located south of State Route (SR) 126, in the south-central part of the City. The Airport is bound by Palm Avenue on the west, by Ojai Street on the east, and by the Santa Clara River on the south. The Airport is privately owned but is a public-use airport operated by the Santa Paula Airport Association. The Airport encompasses a total of 38 acres and provides a single asphalt runway (Runway 4/22). The runway is 2,650 feet long and 40 feet wide, and runs generally in an east–west alignment.

The runway is used by piston-and-propeller-, single-, and twin-engine planes. No commercial aircraft use this Airport. The Airport operates under visual flight rule conditions only, indicating that approaches to the runway are only made in weather conditions where cloud cover is greater than 1,000 feet in height and visibility is greater than 3 miles.

The State of California has defined air safety zones in the California Airport Land Use Planning Handbook. Santa Paula Airport has adopted the State of California air safety zones, which include the Inner Safety Zone, the Outer Safety Zone, and the Traffic Pattern Zone. A fourth air safety zone, the Extended Runway Centerline Zone, was not applied by the Ventura County Airport Land Use Commission to Santa Paula Airport because of the lack of both historical aircraft accident data in Ventura County and instrument approaches at the Airport. Only the Traffic Pattern Zone has the potential to overlap the Project Site.

The Traffic Pattern Zone is the area beneath the outer edge of aircraft flight paths. Review of the City's Airport Zone Map indicates that the Project Site is not within an Airport-Influenced Overlay Zone (KI), which corresponds to the Ventura County Airport Land Use Plan's Traffic Pattern Zone. The property is

14 AET, *Phase I ESA for the Bannon Ranch* (2006).

15 PW Environmental, *Environmental Case Review—Santa Paula West Business Park* (October 2014).

not within the County's Height Restriction Zone for the Santa Paula Airport. The KI Overlay Zone requires less-intense uses and development within the area in which airplane traffic is concentrated.

Wildland Fires

The Specific Plan area, which forms the southwest boundary of the City, is surrounded by urban uses to the north and east and by agricultural lands to the west and south. While this area is considered to be in the less-dense County area with minimal urbanization, it is not located within a vegetated area that could provide fuel for fires to spread and cause structural damage or health hazards. Wildland fires are a common occurrence in Ventura County and can occur on a year-round basis. Wildfires can endanger human life and existing structures.

California Public Resources Code 4201–4204 directs the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazards within State Responsibility Areas (SRAs) based on relevant factors such as fuel, terrain, and weather. The zones are referred to as Fire Hazard Severity Zones (FHSZs). They provide the basis for the application of various mitigation strategies to reduce risks to buildings associated with wildland fires, and relate to building code requirements designed to reduce the ignition potential to buildings in the Wildland-Urban Interface Zones. Based on the CAL FIRE map for Ventura County, the Project Site is not located within a local responsibility area (LRA) or SRA.¹⁶ The nearest FHZA within the SRA is located just south of the Project Site. The foothills to the south of the Project Site are designated Moderate Severity, while areas further up the South Mountains carry a Very High Severity classification.¹⁷

The Safety Element of the City of Santa Paula's General Plan currently identifies the West Area Specific Plan area as predominately "Low Range Area."¹⁸ The "High Fire Hazard" areas are located at the foothills along the Topatopa and South Mountains.

City of Santa Paula Hazardous Materials and Emergency Preparedness

The City of Santa Paula Fire Department (SPFD) oversees emergency operations within the City. The SPFD follows the Personnel Training and Emergency Response Plan outlined in the California Code of Regulations, Title 26, Division 19 and 19.1. This includes such information as provisions for informing business personnel and the affected public of safety procedures to follow during a release or threatened

16 California Department of Forestry and Fire Protection, "Fire and Resource Mapping Program, Ventura County, Fire Hazard Severity Zones in LRA," adopted by Cal Fire on October 2010. http://frap.fire.ca.gov/webdata/maps/ventura/fhszs_map.56.pdf.

17 California Department of Forestry and Fire Protection, "Fire and Resource Mapping Program, Ventura County, Fire Hazard Severity Zones in SRA."

18 City of Santa Paula, *General Plan*, "Safety Element" (1998).

release of a hazardous materials, and designation of responsibility for the coordinated release of safety information to the public and to the local Emergency Broadcast System, and the provisions for evacuation plans.

Evacuation centers to be used in the event of disaster vary depending on the location and nature of the disaster. The facilities most likely to be used are the local high schools. These facilities are ideal because they are public facilities and can accommodate lodging, feeding and showering. Other options include junior and elementary schools, churches, community centers, and even commercial lodging facilities.

The seriousness of a hazardous material incident is dependent on a number of factors, including the type and quantity of material involved, the proximity to populated areas, the time of day, weather conditions, and the physical state of the material (i.e., solid, liquid, vapor, or gas). The greater the number of people exposed to the hazardous material, the greater the potential for significant impact. Because of their dispersion characteristics, vapors and gases tend to involve greater hazards. Under a worst-case scenario, an incident could result in mass fatalities and injuries, destruction of private and public improvements, and contamination of the environment.

Although a hazardous materials release could occur anywhere within the City of Santa Paula, certain areas are at greater risk. These include the following:

- SR 126 (which is directly to the south of the Project Site) and SR 150 are major transportation corridors through the Santa Paula area. A hazardous material spill involving transportation would most likely occur along one of these highways.
- Because of the high number of businesses that use or store hazardous materials on Main Street or Harvard Boulevard, these major arterials and adjacent neighborhoods are probably at greater risk than other arterials within the City.
- One facility with acutely hazardous materials is located on Quail Court and poses a higher risk than other facilities within the City. Quail Court is located on the eastern boundary of the City (approximately 2.7 miles from the Project Site), across SR 126 and to the east of the small triangle annexation piece used as a storage area south of SR 126.

Emergency Evacuation

As noted previously, regional access to the Project Site is available via SR 126. Local street access to the Project Site is currently only available through the City of Santa Paula's circulation network via W Telegraph Road. The Ventura County Emergency Response Plan is modeled after the State guidelines for a Multi-Hazard Function Plan (MHFP), which addresses emergency preparedness, response, and evacuation procedures, as well as roles and responsibilities of public safety personnel. The County of

Ventura has an Emergency Response Plan and maintains an Emergency Operations Center, which is administered through the Ventura County Sheriff's Office.¹⁹ The Program is coordinated by a full-time management analyst/emergency preparedness coordinator assigned to the SPFD, which is ultimately responsible for coordinating any evacuations necessitated by an emergency. If delayed during a large disaster, the SPFD chief is responsible for coordinating evacuation efforts in the event of a disaster requiring evacuation.

4.8.2 REGULATORY SETTING

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

Discovery of environmental health damage from disposal sites prompted the US Congress to pass the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or "Superfund"). The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat. The Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List (NPL) for cleanup activities.

Hazardous Materials Transport Regulations

The US Department of Transportation (USDOT) regulates transportation of hazardous materials between states. The USDOT Federal Railroad Administration (FRA) enforces the hazardous materials regulations, which are promulgated by the Pipeline and Hazardous Materials Safety Administration for rail transportation. These regulations include requirements that railroads and other transporters of hazardous materials, as well as shippers, have and adhere to security plans and also train employees involved in offering, accepting, or transporting hazardous materials on both safety and security matters. Additionally, the Federal Hazardous Materials Transportation Law is enforced by the USDOT's Federal Highway Administration (FHWA) with the purpose of protecting risks to life, property, and the environment as a result of the transportation of hazardous materials.

Resource Conservation and Recovery Act

Subtitle C of the Resource Conservation and Recovery Act (RCRA) addresses hazardous waste generation, handling, transportation, storage, treatment, and disposal. It includes requirements for a system that uses hazardous waste manifests to track the movement of waste from its point of generation to its ultimate disposition. The 1984 amendments to the RCRA created a national priority for waste minimization. Subtitle D establishes national minimum requirements for solid waste disposal sites and practices. It

¹⁹ Ventura County Sheriff's Office, "Office of Emergency Services", <http://www.vcsd.org/oes.php>, accessed on July 2016.

requires each state to develop plans for the management of wastes within its jurisdiction. Subtitle I requires monitoring and containment systems for underground storage tanks that hold hazardous materials. Owners of tanks must demonstrate financial assurance for the cleanup of a potential leaking tank.

Federal Hazardous Materials Regulations

The Hazardous Materials Regulations (HMR), issued by the Department of Transportation's Pipeline and Hazardous Materials Safety Administration, govern the transportation of hazardous materials by highway, rail, vessel, and air. The HMR address hazardous materials classification, packaging, hazard communication, emergency response information, and training. The transport of hazardous material is covered by Title 49 of the federal code.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) is a program created to implement the Clean Water Act. The State Water Resources Control Board (SWRCB) and the nine regional boards administer NPDES to regulate and monitor discharged waters and to ensure they meet water quality standards.

State

The California Hazardous Waste Control Law

The Hazardous Waste Control Law (HWCL) is the primary hazardous waste statute in the State of California. The HWCL implements RCRA as a "cradle-to-grave" waste management system in the State, specifying that generators have the primary duty to determine whether their wastes are hazardous and to ensure their proper management. The HWCL also establishes criteria for the reuse and recycling of hazardous wastes used or reused as raw materials. The HWCL exceeds federal requirements by mandating source reduction planning, and furthermore has a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of wastes and waste management activities that are not covered by the federal RCRA.

California Department of Toxic Substances Control

The role of the California Department of Toxic Substances Control (DTSC), a division of the California Environmental Protection Agency (CalEPA), is to protect California and Californians from exposures to hazardous wastes by regulating hazardous waste, cleaning up existing contamination, and looking for ways to reduce the hazardous waste produced in California. The DTSC regulates hazardous waste in California primarily under the authority of the federal RCRA and the California Health and Safety Code. Other laws that affect hazardous waste include regulations on handling, storage, transportation, disposal,

treatment, reduction, cleanup, and emergency planning. In addition, DTSC reviews and monitors legislation to ensure that the legislation reflects the DTSC's goals. Under these laws, DTSC's major program areas develop regulations and consistent program policies and procedures. The regulations spell out what those who handle hazardous waste must do to comply with the laws. Under RCRA, DTSC has the authority to implement permitting, inspection, compliance, and corrective action programs to ensure that people who manage hazardous waste follow State and federal requirements. The DTSC implements RCRA in California via Unified Program Agencies. In the City of Santa Paula, the Unified Agency is the Santa Paula Fire Department.

California Code of Regulations, Title 22

Most State and federal regulations and requirements that apply to hazardous waste are spelled out in the California Code of Regulations (CCR). Title 22 contains the detailed compliance requirements for hazardous waste generators, transporters, and treatment, storage, and disposal facilities. California is a fully authorized state according to RCRA; therefore, most RCRA regulations have been duplicated and integrated into Title 22. However, because the DTSC regulates hazardous waste more stringently than the USEPA, the integration of California and federal hazardous waste regulations that make up Title 22 do not contain as many exemptions or exclusions as does 40 Code of Federal Regulations (CFR) 260. As with the California Health and Safety Code, Title 22 also regulates a wider range of waste types and waste management activities than do the RCRA regulations in 40 CFR 260. To aid the regulated community, California compiled the hazardous-materials-, waste-, and toxics-related regulations contained in CCR Titles 3, 8, 13, 17, 19, 22, 23, 24, and 27 into one consolidated CCR Title 26, "Toxics." However, the California hazardous waste regulations are still commonly referred to as Title 22.

Transportation of Hazardous Materials

The transport of hazardous materials and explosives through the City of Santa Paula is regulated by the California Department of Transportation (Caltrans). The Caltrans Hazardous Waste Management program assists districts statewide with the management of contaminants and wastes encountered on highway projects and Caltrans properties. Technical experts assist or supplement district staff in directing assessment, investigation, or cleanup activities, and develop guidelines for the management of these activities.

Regional and Local

Ventura County Air Pollution Control District

The Ventura County Air Pollution Control District (VCAPCD) regulates asbestos through Rule 62.7, Asbestos – Demolition and Renovation.²⁰ Rule 62.7 regulates asbestos as a toxic material and controls the emissions of asbestos from demolition and renovation activities by specifying agency notifications, appropriate removal procedures, and handling and cleanup procedures. Rule 62.7 applies to owners and operators involved in the demolition or renovation of asbestos-containing structures, asbestos storage facilities, and waste disposal sites.

Ventura County Hazard Mitigation Plan

The 2010 Ventura County Hazard Mitigation Plan (Plan) was prepared to meet the Department of Homeland Security’s Federal Emergency Management Agency (FEMA) requirements with respect to the Disaster Mitigation Act of 2000 and Interim Final Rule. This rule established the minimum hazard mitigation planning requirements for states, tribes, and local entities. The City of Santa Paula is a participating member of the Plan in cooperation with the Ventura County Office of Emergency Services (OES), which is coordinated through the Ventura County Sheriff’s Department.

The Plan addresses four major hazard profiles: earthquakes, flooding, geologic hazards, and wildfires. The Plan is intended to serve many purposes, including the following:

- Enhance Public Awareness and Understanding—to help residents of the county better understand the natural and human-made hazards that threaten public health, safety, and welfare; economic vitality; and the operational capability of important institutions.
- Create a Decision Tool for Management—to provide information that managers and leaders of local government, business and industry, community associations, and other key institutions and organizations need to take action to address vulnerabilities to future disasters.
- Promote Compliance with State and Federal Program Requirements—to ensure that Ventura County and its incorporated cities comply with laws and regulations that encourage or mandate local governments to develop comprehensive mitigation plans.

20 Ventura County Air Pollution Control District (VCAPCD) Rule 62.7, adopted by the VCAPCD on June 16, 1992, establishes requirements regarding demolition and renovation operations associated with asbestos-containing material (ACM). VCAPCD Rule 62.7 incorporates the federal asbestos requirements found in the Code of Federal Regulations, tit. 40, pt. 61, subpt. M, National Emission Standards for Hazardous Air Pollutants (NESHAP).

- Enhance Local Policies for Hazard Mitigation Capability—to provide the policy basis for mitigation actions that should be promulgated by participating jurisdictions and districts to create a more disaster-resistant future.
- Provide Inter-Jurisdictional Coordination of Mitigation-Related Programming—to ensure that proposals for mitigation initiatives are reviewed and coordinated among the participating jurisdictions within the county.
- Achieve Regulatory Compliance—to qualify for the Pre-Disaster Mitigation (PDM) program, local jurisdictions must have an approved mitigation plan to receive a project grant. Local jurisdictions must have approved plans by November 1, 2004, to be eligible for HMGP funding for presidentially declared disasters after this date. Plans approved at any time after November 1, 2004, will make communities eligible to receive PDM and HMGP project grants.

Santa Paula Fire Department

Prevention of hazardous materials releases and fire prevention are functions of the Santa Paula Fire Department (SPFD). Prevention activities occur both at the engine-company level, as well as through our Code Enforcement and Inspection Services departments. Through active prevention and education activities, the SPFD goal is to prevent hazardous materials spills and fire incidents before they occur. At the engine-company level, firefighters are involved in a number of activities, including:

- Building permit review to ensure compliance with the Uniform Fire Code
- Annual business Inspections
- Hazardous materials surveys and inspections
- Fire extinguisher training
- Education programs

The SPFD is the locally Certified Unified Program Agency (CUPA) that administers the RCRA on behalf of the DTSC.

- The Code Enforcement division implements the housing and health standards relating to building construction in the City, including:
- Investigation of alleged violations
- Building inspections
- Collaborating with responsible parties to resolve code violations

Hazardous Materials Business Plan

A Hazardous Materials Business Plan (HMBP) provides the SPFD (as the CUPA) with information on hazardous materials at businesses (including agricultural operations) that store, use, or handle hazardous materials at or above specified threshold amounts. The SPFD uses the information from the HMBP during hazardous materials emergency responses. A HMBP is required for individual hazardous materials at or above the following threshold amounts:

- 55 gallons of liquid
- 500 pounds of solid
- 200 cubic feet of compressed gas
- Extremely Hazardous Substances over the threshold planning quantities
- Radioactive material in quantities requiring an emergency plan as required in the Code of Federal Regulations, Section 10, Parts 30, 40, and 70.

Operations in Santa Paula are required to file annual HMBPs based on the number and types of materials that they store or utilize. The SPFD conducts regular inspections of these facilities to ensure compliance with the fire code and to prepare a response to any hazardous materials incident.

With respect to fire prevention and suppression services, SPFD is responsible for enforcing the following:

- All aspects of the California Fire Code (as adopted)
- Any City of Santa Paula ordinances and/or amendments pertaining to fire prevention and suppression
- California Health and Safety Code, Division 12, Part 2.7 (Fire District Law) and Part 5 (Abatement of Hazardous Weeds and Rubbish)

City of Santa Paula

General Plan

The City of Santa Paula General Plan Safety Element establishes policies that are intended "to reduce death, injuries, property damage, and the economic and social dislocation resulting from natural hazards."²¹ As described in the Safety Element, it is the intent of the City to provide for balanced planning decisions based on the recognition of the importance of public safety, and the need to integrate safety concerns with other local issues. Based on the degree of hazard within a given area, the Safety Element is

21 City of Santa Paula, *General Plan*, "Safety Element," (1998).

integrated with the other elements when addressing where to locate habitable or critical structures (for hazard avoidance and emergency services), and provision of emergency response in the event of a disaster (Circulation Element).

Development Code

The City of Santa Paula's Municipal Code (SPMC) includes the City zoning and development regulations. Title 16, Chapters 96–99, of the City's Development Code establish regulations regarding grading and erosion control for development projects. The purpose of these regulations is to minimize geologic hazards related to slope, erosion, and drainage conditions that would have adverse effects to public safety. The City Engineer or Building Official shall issue grading permits based on the appropriate submittal, including geotechnical and engineering geology reports.

4.8.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the California Environmental Quality Act (CEQA) identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact from hazards and hazardous materials, if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
- For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

4.8.5 PROJECT IMPACTS

Threshold: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

Construction activities would include the use of machinery and other equipment that may require on-site fueling or maintenance/servicing with other petroleum-based products (e.g., grease, oil). These materials are considered hazardous and could cause temporary localized soil and water contamination in the event of an accidental spill. Incidents of spills or other localized contamination may occur during refueling, operation of machinery, undetected fluid leaks, or mechanical failure. In addition, during construction of the Project, paints, solvents, and other materials may be used on-site for building treatments (wood and cement sealers, etc.) and other construction-related activities. Construction activity would be subject to compliance with a number of spill prevention, containment, and cleanup measures. The amounts of hazardous materials that would be stored on-site at any given time for use during construction would be minimal and temporary and would not rise to the level of requiring a Hazardous Materials Business Plan. Also, the SPFD conducts building permit review and regular inspections of these facilities to ensure compliance with the fire code and ensure preparation to respond to any hazardous materials incident.

According to the SPMC Section 54.30, all construction activity that requires a grading permit must be undertaken in accordance with any conditions and requirements, including Best Management Practices (BMPs), established by the Ventura County Municipal Stormwater NPDES Permit (Order No. 94-082, NPDES Permit No. CAS 063339). The BMPs identified in the Ventura County Municipal Stormwater NPDES Permit include the stormwater prevention measures described in the Stormwater Pollution Prevention Plan (SWPPP) and which would be required for all phases of construction. Adherence to the SWPPP and the implementation of standard BMPs during construction would reduce the potential for hazardous materials spills.

Construction of the Project would involve deliveries and disposal of hazardous materials such as fuels, oils, solvents, and other equipment maintenance and building materials. Also, hauling trucks traveling on SR 126 and Telegraph Road during construction are likely to pass near residences and schools, such as:

Briggs Elementary School, Blanchard Elementary School, Glen City Elementary School, and Isbell Middle School. Construction activities may also require deliveries near residences located along Telegraph Road and Beckwith Road. Although truck deliveries associated with the construction of the Project would likely only contain construction materials (e.g., wood, pipes) and other nonhazardous materials required for construction, it is possible that these deliveries could also contain hazardous materials destined for the Project Site or other project sites also under construction. Although incidents related to hazardous materials spills are not frequent, accidents along major transportation corridors can occur. As the major transportation corridor through the Santa Clara River Valley, SR 126 is commonly used to transport a variety of hazardous materials via trucking and are required to be secured and permitted for transport in accordance with State laws.

As such, spills or leakages encountered during construction and hauling would be temporary and would be required to be remediated in accordance with the State and local regulations for hazardous waste cleanup. As such, impacts from the use and handling of hazardous materials would be less than significant.

Operations

The Project proposes the development of a business park that would include commercial and light industrial uses with some areas for passive open space. Operation of the Project would involve the use, transport, production, handling, or storage of hazardous materials that have the potential to create a significant hazard to people on the Project Site. These materials may include the use of fuels, grease, solvents, paints, and pesticides and other various landscaping products. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards.

Furthermore, the Ventura County Transportation Commission (VCTC) owns the 100-foot-wide railroad corridor that bisects the Project. While the railroad has the capacity to serve as a corridor for the transport of hazardous materials, the railroad is currently out of service and would not pose any dangers to people on the Project Site related to the accidental release of hazardous materials, such as a fire, explosion, or chemical spill. However, if the railroad is commissioned for service within the future, any transport of hazardous materials would comply with US Department of Transportation (USDOT) Federal Railroad Administration (FRA) safety regulations. Therefore, the probability of an accident involving the transport of hazardous materials within proximity to the Project Site is considered to be unlikely. Impacts would be less than significant.

Threshold: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction

During construction of the Project, delivered materials to the site could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. The event of a spill or release related to these hazardous materials could cause a short-term threat of exposure to nearby schools and residential areas along SR 126 and W Telegraph Road. Therefore, the Project would have potentially significant impacts related to the transport of hazardous materials during construction activities.

Based on the age of the on-site structures that were built prior to 1970, there is potential for the exposure of ACMs, PCBs, or LBPs at the Project Site. Before the demolition of any additional on-site structures, irrigation pipelines, materials will be tested for any ACMs, PCBs, or LBPs in accordance with standard Ventura County APCD procedures. If any toxic materials are found, they will be removed and disposed of by a contractor licensed to handle such materials. The potential for demolition activities to expose workers to toxic and hazardous materials would be eliminated through standard Federal and State procedures and does not pose a threat to public safety. However, implementation of **Mitigation Measures HM-1** and **HM-2** would ensure that structures on the Project Site would be surveyed for toxic hazardous materials prior to demolition and renovation activities. **Mitigation Measures HM-3** and **HM-4** would ensure that any Pole-mounted transformers, light ballasts or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal.

As the Project Site is currently used for agricultural production, approval of the Specific Plan would result in the conversion of agricultural areas to urban uses. As the historical contamination related to the two onsite ASTs and UST have been remediated and closed since 2007, the Project Site currently does not contain any evident soil or groundwater contamination. However, as the Project Site has been historically used for agricultural uses for over 75 years, it is possible that residual pesticides may be exposed during grading and excavation activities. The limited Phase II ESA that was conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate of every condition within the Project and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on-site. Therefore, potential impacts related to the presence of hazardous substances would be potentially significant. **Mitigation Measure HM-5** provides for the mitigation of hazardous materials in the unlikely event materials are uncovered during grading or clearing activities.

Operations

The Project Site has historically been used for agricultural production. The Specific Plan would similarly result in the conversion of agricultural areas, including the row crops, orchards, and fallow agricultural land. Testing showed trace amounts of organochlorine pesticides, which are persistent, bio-accumulative pesticides and include DDD, DDE, and DDT. The testing shows that samples were at levels that were not anticipated to result in health consequences from upset or accident conditions.

A government database report (contained in **Appendix 4.8**) of available federal, State, and County agency databases was reviewed to identify government-regulated properties having known recognized environmental conditions and potential environmental concerns on or within the vicinity of the Project Site. Existing sites that may potentially contain hazardous materials in the Project Site include a range of sites with a variety of potential sources of contamination, including various forms of chemical waste, oil and gas, auto-repair facilities, and fueling stations. However, any new development occurring on any of these documented hazardous materials sites would have to be preceded by remediation and cleanup under the supervision of the State DTSC or other regulatory agency (as deemed appropriate) before construction activities could begin, if such actions have not already occurred. In addition, these listed areas are down gradient from the Project Site, so exposure to contaminants from migration through surface water or groundwater flow from the contaminated zones is not expected. Therefore, potential for contamination of the Project Site from off-site contamination sources is considered less than significant.

Threshold: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Project Site is not within 0.25 miles of an existing school. Blanchard Elementary School and Briggs Elementary School are the closest schools to the Project Site at distances of approximately 0.60 miles and 0.65 miles, respectively. No other schools are proposed within the surrounding community. As previously described, construction activities would include the use of potentially hazardous materials, such as fuels, solvents, oils, coatings, etc. for the new buildings and paved areas within the Project Site. As provided in **Section 4.3, Air Quality**, construction activity would emit reactive organic compounds (ROCs), nitrogen oxides, carbon monoxide, sulfur oxides, diesel particulates, and dust particulates. A health risk assessment determined that construction emissions would not cause exposure to pollutants at unhealthy levels at any surrounding sensitive land uses, including schools.

As provided previously, the Project would involve the use of hazardous materials onsite typical of industrial-type uses. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards. Therefore, impacts would be less than significant.

Threshold: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As previously discussed, the Project Site contained two historical ASTs and one UST. These historical tanks have either been abandoned or removed from the Project Site as of 2005. Sources of contamination were identified within the areas of the ASTs and UST; however, these areas on the Project Site have been cleaned up and remediated and are not considered an environmental concern.

The State DTSC maintains a listing of hazardous materials sites compiled pursuant to Government Code section 65962.5. These include the list of Hazardous Waste and Substance Sites from the DTSC EnviroStor database; the list of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from the SWRCB's GeoTracker database; the list of Solid Waste Disposal Sites identified by the SWRCB as having waste constituents above hazardous waste levels outside of the waste management unit; and the list of "active" Cease and Desist Orders and Cleanup and Abatement Orders. The Project Site is listed on the GeoTracker list for groundwater contamination; however, the site has been remediated with a case closure date of May 2007. Also, the Phase I ESA indicates that the Project Site is not located within 1 mile of a federal Superfund site. There are two sites within 0.25 miles east of the Project Site that are LUST sites. The sites, located at 411 Beckwith Road and 560 Todd Lane, received case closures in November 1988 and April 1990, respectively, and thus remediation has already been completed for both sites. It is not expected that contamination from these sites would have migrated to the Project Site. According to the EnviroStor database, four sites in nearby surrounding properties of the Project Site store and use materials classified and hazardous materials. These facilities are currently required to report to the EPA to maintain regulatory compliance, which are designed to prevent spills and provide emergency remediation actions, for the use and handling of hazardous materials. Furthermore, the uses allowed under the Specific Plan are similarly light industrial and commercial in nature, have adequate emergency access and evacuation routes, and are not considered sensitive since the uses would likely be occupied by working adults and for portions of the day only. Due to the regulatory status of hazardous materials incidents at the facility (e.g., closed case), the distance between the facility and the site, or the hydro-geologically cross-gradient location from the site, and since site reconnaissance did not reveal the presence of hazardous chemicals, on-site impacts related to nearby hazardous materials sites are considered less than significant.

Threshold: For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Specific Plan is not located within any of the three Safety Zones as established by the Ventura County Airport Land Use Commission (ALUC) within their Comprehensive Land Use Plan (CLUP).²² The three Safety Zones are defined as the Inner Safety Zone, Outer Safety Zone, and the Traffic Pattern Zone. As the Project Site is not located within these designated zones, the Project is not subject to land use guidelines for airport safety compatibility. Therefore, the Specific Plan would not conflict with the requirements set forth in the Ventura County ALUC or the City's General Plan. Impacts would be less than significant.

Threshold: For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No portion of the Specific Plan is within a private airstrip other than the Santa Paula Airport. Potential impacts related to the Santa Paula Airport are discussed above. Thus, implementation of the Project would result in less than significant impacts related to the exposure of employees or visitors to hazards from plane accidents due to the proximity of any private airstrips.

Threshold: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Construction activities of the Project may require the closure of vehicle travel lanes. In particular, Beckwith Road and Faulkner Road, located to the east and south of the site, respectively, would require a period of partial closures due to the extension of the road to connect with Faulkner Road. This could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. During the construction period (anticipated to be throughout a span of 10 years), construction activities may require temporary road detours and/or closures resulting in localized increase in traffic and circuitous traffic routes. In addition, during certain periods of construction, the transport of oversized materials and equipment will be required, which will necessitate the use of large and often slow-moving vehicles. Combined, these activities could result in short-term adverse and significant impacts on the implementation of an evacuation plan.

²² City of Santa Paula, *General Plan*, "Safety Element," (1998).

The City requires preparation of a detailed Construction Traffic Management Plan, which would be submitted to the City for review and approvals consistent with the City's existing standards and emergency response plans. The plan would provide notification to the City of Santa Paula Police Department (SPPD), which oversees emergency operations within the City in cooperation with the Ventura County OES.²³ The OES is coordinated through the Ventura County Sheriff's Department and is responsible for countywide disaster planning, mitigation, response, and recovery activities through the implementation of the Ventura County Hazard Mitigation Plan. The City's designated evacuation routes are along SR 126 and SR 150. While, SR 126 runs along the southern boundary of the Project Site, construction activities of the Project are not anticipated to interfere with access to the roadway or interfere with operation of the County's Hazard Mitigation Plan. Emergency access and potential traffic access impacts would be less than significant.

Operation

As with much of southern California, the Specific Plan area has the potential for residents and employees to encounter human-made and natural hazards, which could cause undue hardship to residents and employees. Human-made hazards include the potential release of hazardous materials; the potential for biological or chemical attacks from foreign and domestic terrorism; and the potential for fires started by humans. Natural hazards include flooding, seismic activity, extreme weather conditions, and fires that are started naturally.

The City of Santa Paula implements emergency responses for a variety of disasters through the Ventura County Hazard Mitigation Plan. The OES is responsible for organizing and maintaining effective emergency management, mitigation, preparedness, and response and recovery within the County. The OES allocates resources and ensures that the general population would be protected at any time during an emergency. The working population within the Specific Plan would be made aware of such disaster plans through public education and outreach activities. In addition, the Project would comply with the SPFD's recommended standards for emergency accessibility and circulation. Thus, the Project's operational impacts on the implementation of the Ventura County Hazard Mitigation Plan would be considered less than significant.

Threshold: Increased fire hazard in areas with flammable brush?

The Specific Plan is located not within a CAL FIRE designated LRA or SRA. The nearest FHZA within the SRA is located just south of the Specific Plan area. The foothills to the south of the Specific Plan area are

23 City of Santa Paula, *General Plan*, "Safety Element," (1998).

designated Moderate Severity, while areas further up the South Mountains carry a Very High Severity classification. Based on the City of Santa Paula General Plan, the Project Site is located within an area with minimal fire hazard risk. As the Project involves the development of commercial and light industrial uses across the site's estimated 54 acres. Thus, there would be minimal vegetation that could pose a flammable hazard.

Additionally, the Project would be developed in accordance with the City's Building Regulations as stated in Title 15, Chapter 150 of the SPMC. The SPFD must also be consulted prior to new development to ensure fire safety standards are incorporated into the Project design, such as fire hydrant requirements and emergency accessible ingress and egress points to the Project Site. As the Project would not expose employees or visitors to any increased risks to fire hazards on the site, impacts are considered to be less than significant.

4.8.6 CUMULATIVE IMPACTS

The potential for cumulative impacts associated with hazards and hazardous materials was assessed based on consideration of related projects provided in **Section 3.0, Related Projects**. It is anticipated that related projects would result in an overall Citywide incremental increase in the amount of hazardous materials transported, used, treated, stored, and disposed of. Although each related project has potentially unique hazardous materials considerations, it is anticipated that all hazardous materials delivered and hazardous waste removed from the Specific Plan area and each related project would be in accordance with Title 24 of the Code of Federal Regulations.

Related projects may be located on or near a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Development of any of the related projects would be required to comply with applicable laws and regulations pertaining to hazardous wastes, and the risk with identified hazardous material sites would be eliminated or reduced through proper handling, disposal practice, and/or clean up procedures. Accordingly, cumulative impacts to the public or environment associated with development on or near listed contaminated sites would be less than significant.

Businesses would also be required to prepare a HMBP including an annual inventory of hazardous materials used on site and submit a business emergency plan to the City for an annual review, as required by the Emergency Planning and Right-to-Know Act (SARA Title III) and Chapter 6.95 of the California Health and Safety Code. For these reasons, cumulative impacts associated with related projects would be less than significant.

Furthermore, development under the Specific Plan would comply with all applicable laws and regulations related to the transport, use, treatment, storage, and disposal of hazardous materials and fire prevention.

The Specific Plan would not result in a considerable contribution to cumulative hazards and hazardous materials when considered in combination with operations of related projects.

4.8.7 MITIGATION MEASURES

HM-1: Prior to demolition and construction activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that an asbestos survey has been conducted on any buildings and irrigation pipelines that are to be demolished or removed from the Project Site. If asbestos is found, the Applicant shall follow all procedural requirements and regulations of the VCAPCD Rule 62.7 to properly dispose of all on-site ACM's before general demolition activities commence.

HM-2: Prior to demolition and any renovation activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that a lead-based paint survey has been conducted at all existing buildings located on the Project Site. If lead-based paint is found, the Applicant shall follow all OSHA procedural requirements and regulations for its proper removal and disposal before general demolition activities commence.

HM-3: Prior to disposal, all fluorescent light fixtures within the existing buildings shall be inspected for PCB content labels throughout demolition of the Project Site.

HM-4: Pole-mounted transformers, light ballasts, or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal. All equipment found to contain PCBs must be removed and disposed in accordance with all applicable local, State and Federal regulations, including but not limited to California Code of Regulations Title 22, 40 CFR Part 261, and EPA 40 CFR. Utility Plans prepared as part of building permit review must include notes requiring inspection and plan for removal and disposal.

HM-5: In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or designee, for approval as required before continued work in the area.

4.8.8 RESIDUAL IMPACTS AFTER MITIGATION

With implementation of existing regulations and standards identified above along with **Mitigation Measures HM-1, HM-2, HM-3, HM-4, and HM-5** would reduce potential impacts associated with hazards and hazardous materials during demolition to less than significant.

4.9 HYDROLOGY AND WATER QUALITY

This section summarizes information from available hydrology, drainage, and water quality studies addressing the Santa Paula West Business Park Specific Plan (“Specific Plan”) area (“Project Site”). This section includes an evaluation of the existing conditions on the Project Site, a comparison of the pre-Project and the post-Project conditions, a determination of the potential impacts of the Project, and recommended mitigation measures. The purpose of this evaluation is to determine the impact of the proposed Project on surface water drainage, stormwater quality, and groundwater resources near the Project Area and within the Santa Clara watershed.

This section incorporates information from several studies, including the *Adams Barranca Existing Condition Hydrology Study* by Jensen Design & Survey, Inc., dated September 2011; and *Preliminary Hydrology Report for Santa Paula West Business Park* by Jensen Design & Survey, Inc., dated February 3, 2011, and updated November 19, 2015. These studies are provided in **Appendix 4.9**.

4.9.1 EXISTING CONDITIONS

4.9.1.1 Surface Hydrology

Watershed Description

The Specific Plan is located in the Santa Paula Creek tributary of the Santa Clara River watershed. The Santa Clara River flows approximately 100 miles from its headwater at Pacifico Mountain in the San Gabriel Mountains toward the Oxnard Plain before discharging into the Pacific Ocean near the Ventura Marina. Approximately 60 percent of the 1,634 square miles (sq. mi.) of the Santa Clara River watershed is located in Los Angeles County, and the remaining 40 percent is in Ventura County. **Figure 4.9-1, Santa Clara River Watershed**, shows the Santa Clara River watershed. The watershed comprises five major subwatersheds: Upper Santa Clara, Piru, Sespe, Santa Paula, and Oxnard Plain. Each of these subwatersheds consists of individual tributaries and reaches, as noted in **Table 4.9-1, Tributaries for Each Subwatershed**, and **Table 4.9-2, Reaches Associated with Each Subwatershed**, respectively.

Table 4.9-1
Tributaries for Each Subwatershed

Subwatershed Name	Associated Tributaries
Oxnard Plain	N/A
Santa Paula	Santa Paula Creek
Sespe	Sespe Creek, Pole Creek
Piru	Piru Creek, Hopper Creek
Upper Santa Clara	Castaic Creek, San Francisquito Creek, Bouquet Canyon Creek, Mint Canyon Creek, South Fork Santa Clara River

Source: Ventura County Watershed Protection Division, *Comprehensive Water Quality Monitoring Plan for the Santa Clara River Watershed (March 2006)*.

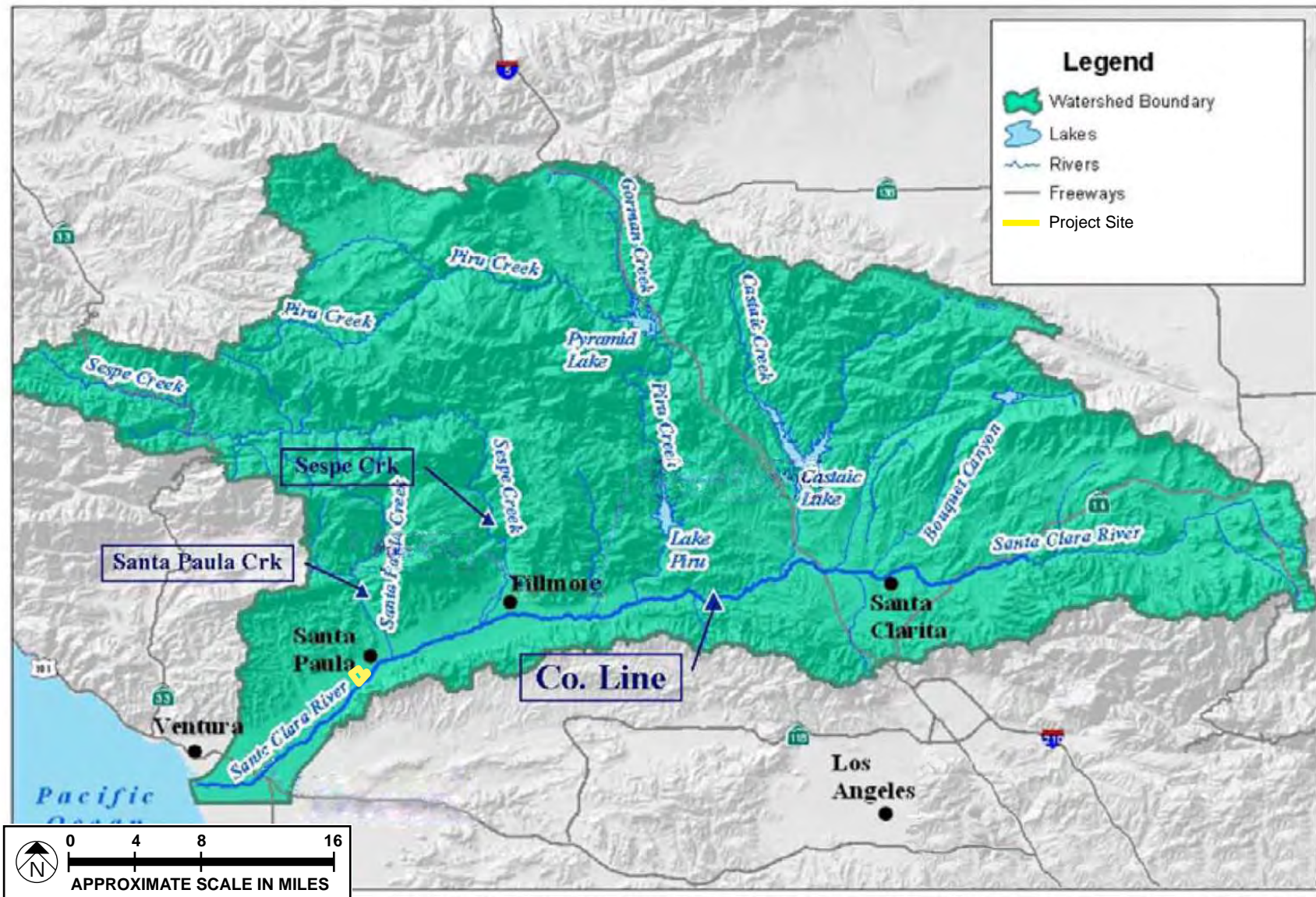
Table 4.9-2
Reach Associated with Each Subwatershed

Reach Number	Reach Description	Subwatershed
1	Between SR 101 Bridge and Santa Clara River Estuary	Oxnard Plain
2	Between Freeman Diversion Dam near Saticoy and SR 101 Bridge	Santa Paula/Oxnard Plain
3	Between A Street, Fillmore and Freeman Diversion Dam near Saticoy	Sespe/Santa Paula
4	Between Blue Cut Gauging Station and A Street, Fillmore	Piru/Sespe
5	Between West Pier Highway 99 and Blue Cut gauging station	Upper Santa Clara/Piru
6	Between Bouquet Canyon Road Bridge and West Pier	Upper Santa Clara
7	Between Lang Gauging Station and Bouquet Canyon Road	Upper Santa Clara
8	Above Lang Gauging Station	Upper Santa Clara
9	Santa Paula Creek above Santa Paula Waterworks Dam	Santa Paula
10	Sespe Creek above gauging station, downstream from Little Sespe Creek	Sespe
11	Piru Creek above gauging station below Santa Felicia Dam	Piru

Source: Ventura County Watershed Protection District, *Comprehensive Water Quality Monitoring Plan for the Santa Clara River Watershed, March 2006*.

Historic records indicate that the climatic and basin characteristics of the Santa Clara River Watershed generally produce intermittent flows in the river; however, flows can increase rapidly in response to high-intensity rainfall with the potential for severe flooding.¹

¹ Watersheds Coalition of Ventura County, *Integrated Regional Water Management Plan* (2014), p. 3-21.



SOURCE: Santa Clara River Hydrology Update, Ventura County Water Shed Protection District (2006) & P&D Consultants, Inc. (2007)

FIGURE 4.9-1

More specifically, the Santa Paula West Business Park site is located within the greater Santa Clara River watershed. The 53.81-acre Project Site is currently used for agriculture and varies in land gradient, sloping north to south, with the railroad and State Route (SR) 126 being higher than adjacent grade and acting as dams. The on-site drainage is a tributary to the Santa Clara River, which has been divided into four drainage areas: Adams Canyon Barranca (Area A), SR 126 west culverts (Area B), SR 126 east culvert (Area C), and Todd Lane Drain (Area D).

The railroad has two culverts to transport onsite water from the north to the south, not including the crossings for Adams Barranca. These culverts are approximately 50 percent blocked with sediment and currently do not function at full capacity. In addition, four existing culverts of various sizes under SR 126 are blocked with sediment and do not function at capacity, causing ponding north of the highway during storm events. The outlets of the culverts are located on the south side of SR 126 and drain through historic agricultural drainage channels ending in the Santa Clara River, which does not connect to Adams Barranca.

Table 4.9-3, Existing Condition Flow Summary, shows the calculated existing acreage, 10-year (Q10), 50-year (Q50), and 100-year (Q100) storm-event flow for each of these drainage areas at the outlet point for each area. The existing hydrology conditions for the Santa Paula West Business Park were determined according to the Ventura County Watershed Protection District (VCWPD) Manual methodology.

**Table 4.9-3
Existing Condition Flow Summary**

Existing Watershed	Subarea	Area (acres)	10-Year Q10 (cfs)	50-Year Q50 (cfs)	100-Year Q100 (cfs)
Adams Barranca	A	2.82	2.8	4.8	6.5
West 126 Culverts (2,8)	B1	16.4	14.0	23.5	30.4
	B2	10.88	9.3	15.6	20.2
East 126 Culverts (5,6)	C1a	10.7	7.8	14.5	19.0
	C1b	4.1	3.0	5.5	7.3
	C1c	0.91	0.7	1.2	1.6
	C2	7.6	5.6	10.3	13.5
	D	7.26	7.9	14.0	19.6

Source: Jensen Design & Survey Inc., Preliminary Hydrology Report for Santa Paula West Business Park, February 2011 (updated November 2015).

Note: cfs = cubic feet per second.

As shown in **Table 4.9-3**, a small portion of the Santa Paula West Business Park existing property drains west into Adams Barranca. Adams Barranca is a raised channel; on average, the top of the channel is 2 feet higher than the adjacent grade on the property. This portion of the property is subject to flooding

during a 100-year storm event from Adams Barranca.² The SR 126 westerly culverts (Area B) handle the flow from approximately 27 acres. Overflow from pipe inlet blockage travels easterly to two other culverts under SR 126 or farther east to the inlet at the end of Faulkner Road into a 72-inch reinforced concrete pipe (RCP) leading to Todd Lane Drain. The SR 126 easterly culverts (Areas C and D) handle flows from approximately 31 acres. Overflow from pipe inlet blockage travels easterly to the inlet at the end of Faulkner Road into a 72-inch RCP leading to Todd Lane Drain.

Santa Paula Creek

The Santa Paula Creek watershed is an approximately 45-square-mile subbasin of the Santa Clara River watershed. Santa Paula Creek is approximately 15.5 stream miles in length and is a tributary to the Santa Clara River. Santa Paula Creek is characterized by rugged, steeply sloped terrain at the headwaters, which are situated in the Topatopa Mountains. The major tributaries within the lower Santa Paula Creek watershed include (from upstream to downstream) Sisar Creek (11.5-square-mile watershed), Anlauf Canyon (1.4-square-mile watershed), and Mud Creek (2.7-square-mile watershed).³

Santa Paula Creek experiences a high degree of annual flow variability, multiyear droughts, and extreme seasonal flooding. Annual precipitation within the watershed ranges from approximately 36 inches within the Topatopa Mountains to approximately 18 inches at the mouth, with over 90 percent of the annual precipitation occurring within 6 months at both locations (November to April).⁴

The 100-year flood⁵ along Santa Paula Creek was defined as having a peak flow of 28,000 cubic feet per second (cfs). However, since the completion of the construction of the United States Army Corps of Engineers (USACE) channel modifications in 2002, erosive flood events had caused damage within the channel and the largest flood event recorded along the creek, which had a measured peak flow of 27,500 cfs occurring in January 2005. These events prompted continued evaluation of the hydrology and sediment transport mechanics along Santa Paula Creek by the USACE. In 2009, the VCWPD performed a hydrologic frequency analysis of peak flows along Santa Paula Creek that incorporated the January 2005 flood, which had a measured peak flow of 27,500 cfs. After completing this hydrologic re-analysis, Ventura County determined that the peak flow for the 100-year flood was 38,800 cfs. Following additional hydrologic analysis, including evaluation of recorded peak-flood events, the USACE confirmed in a letter

2 FEMA Flood Map Service Center (Map Numbers 0611C0778E and 0611C0779E), <https://msc.fema.gov/portal/search?AddressQuery=Faulkner%20Road%2C%20Santa%20Paula>.

3 Stillwater Sciences, *Santa Paula Creek Watershed Planning Project: Geomorphology and Channel Stability Assessment*, prepared for California Fish and Game, Santa Paula Creek Fish Ladder Joint Powers Authority (2007).

4 Stillwater Sciences, *Santa Paula Creek Watershed Planning Project* (2007).

5 The 100-year flood is alternatively referred to as the 1 percent annual chance flood event and is the flow event used to map the water surface elevation that is shown on FEMA Flood Insurance Rate Maps as the “Base Flood Elevation” (BFE). The 1 percent annual chance flood event represents a flood event with a probability of being equaled or exceeded once every 100 years, on average. The BFE is the water surface elevation of the 100-year flood rounded to the nearest foot.

dated March 14, 2011, to the VCWPD that the 100-year flood for Santa Paula Creek at the confluence of the creek with the Santa Clara River is 39,400 cfs.

In November 2013, the VCWPD issued a draft update of the District's hydrology manual that included new peak flows across the county based on updated National Oceanic and Atmospheric Administration (NOAA) Atlas 14 rainfall data; revised runoff coefficients to better reflect and characterize land use and land cover; and updated hydrologic modeling statistical data. The updated 100-year flood along Santa Paula Creek is identified as 38,400 cfs in this manual.

Santa Clara River

The Santa Clara River is the largest natural river remaining in Southern California. Areas located in the National Forest portion of the watershed are home to California condors and other rare species. The river travels through two counties—Los Angeles and Ventura—and efforts are underway between the two counties to work collaboratively to address issues of mutual concern and benefit, such as water quality improvement.

The majority of the watershed drainage area (approximately 90 percent) consists of the surrounding mountains, which range up to 8,800 feet high, with the remaining portions (approximately 10 percent) lying within the valley floor and coastal plain with the main stem of the Santa Clara River. The watershed is surrounded to the north, east, and south by largely undeveloped hills and canyons; approximately 47 percent of the watershed is located within the Los Padres and Los Angeles National Forests.

In Los Angeles County, the river traverses national forestland, large areas of moderately developed private rural lands, the City of Santa Clarita, and large tracts of rural farmland extending west to the county line. In Ventura County, the river primarily runs through large agricultural tracts, the cities of Fillmore, Santa Paula, Oxnard, and San Buenaventura (Ventura), before discharging into the Pacific Ocean. Major tributaries include Castaic Creek and San Francisquito Creek in Los Angeles County, and Piru Creek, Sespe Creek, and Santa Paula Creek in Ventura County.

The Project Site is located in the Santa Paula Creek tributary and is within Reach Number 9 at Santa Paula Creek, above the Santa Paula Waterworks Dam. More precisely, the Specific Plan area is located approximately 2.9 miles west of Santa Paula Creek. Adams Creek also runs along the western edge of the property.

At certain times of the year, the river may have continuous surface flow to the Pacific Ocean from natural watershed discharge. Controlled releases of water from Lake Piru supplement surface flows in the river reach in Ventura County. Incidental flows are supplied from water reclamation plant discharges and

imported water runoff in the middle reach from the Santa Clarita vicinity to the Los Angeles County and Ventura County lines.

The lower Santa Clara River receives water from winter storm flow runoff from the Santa Clara River watershed and from summer and fall releases from Lake Piru through Santa Felicia Dam. The flows have been highly variable through time, as would be expected during dry and wet years. Since 1995, the water year average annual streamflow is 330,570 acre-feet (af), and the median annual streamflow is 152,222 af.⁶ The maximum annual streamflow for the period of record was in 2005 at 1,255,484 af. The minimum annual streamflow for the period of record was in 2007 at 51,084 af.

Santa Clara River streamflow for water year 2011 at 33,044 af is 173 percent of the historical average streamflow from 1995 to 2011 of 19,065 af, and 388 percent of historical median stream flow from 1928 to 2011 of 8,510 af.⁷

Floodplain & Flood Hazards

Floodplain

Santa Paula has historically been susceptible to flood hazards because the City is located at the confluence of Santa Paula Creek and the Santa Clara River. Approximately half of the City is located in the 100-year floodplain of Santa Paula Creek.

As a result of the flooding in the late 1930s and early 1940s, the United States Congress authorized a flood-protection project on Santa Paula Creek in 1948. Over the decades that followed, a variety of flood-control strategies were proposed and funding was appropriated for the construction of infrastructure to provide regional flood hazard protection along Santa Paula Creek and its vicinity.

Beginning in 1990, the USACE, working with Ventura County and the City of Santa Paula, identified new channel improvements that would remove the concrete-lined section of the channel, construct short levees and floodwalls providing protection from the 100-year flood, accommodate the widening of the Santa Paula Branch Line railroad bridge, modify the channel at Telegraph Road, and construct a fish ladder at the northern edge of the improved section of the channel to facilitate fish migration. Channel modifications were completed in 1999, and the fish ladder construction was completed in the summer of 2002. These channel improvements were designed to provide protection for the 100-year flood event with a magnitude of 28,000 cfs and accumulation of 120,000 cubic yards of sediment (25 percent of the total 100-year flood event sediment volume of 480,000 cubic yards).

6 United Water Conservation District, *2011 Santa Paula Basin Annual Report*, Professional Paper 2012-001 (September 2103), 7.

7 United Water Conservation District, *2011 Santa Paula Basin Annual Report* (September 2013), 7.

As shown in **Figure 4.9-2, Current FEMA Flood Insurance Map**, the western portion of the Specific Plan site located adjacent to Adams Creek is currently located within a FEMA-designated 100-year floodplain area, the result Adams Creek overtopping its banks during a 100-year storm event.⁸ However, a review of historic flooding, existing contours, and site features concludes the Flood Zone limit shown on the FIRM maps is inaccurate.

4.9.1.2 Groundwater Resources

Santa Paula Basin

The Specific Plan lies within the Santa Paula Groundwater Basin (SPGWB). The SPGWB surface elevation ranges from 140 to 280 feet mean sea level (amsl), although the maximum drainage basin elevation reaches 2,750 feet amsl on Sulphur Mountain. The SPGWB covers an area of approximately 13,000 acres, extending 10 miles from northeast to southwest and 2 miles from northwest to southeast. Water-bearing geologic formations include Recent Alluvium, Older Alluvium and San Pedro Formation. Recent Alluvium consisting of sands and gravels occurs in the southern part of the SPGWB along the Santa Clara River and has a typical thickness of 60 to 80 feet. Older Alluvium lies beneath Recent Alluvium and is exposed at the surface in the north part of the SPGWB. The Older Alluvium has a typical thickness of approximately 200 feet. The upper part of the Older Alluvium is predominantly clay, whereas the lower part consists of gravel. The San Pedro Formation is of Pleistocene age, consisting of gravels, sands and clays, and extends as deep as 4,000 feet.⁹

The groundwater system is considered to be mostly confined to semiconfined, although areas of unconfined conditions exist in the Recent Alluvium. The average specific yield of the uppermost saturated zone has been estimated at 10 percent. The total groundwater storage capacity of the SPGWB has been estimated at 800,000 af, based on an area of 13,500 acres, an aquifer depth of 365 feet, and a specific yield of 15 percent.¹⁰

Regional groundwater flow in the SPGWB is generally northeast to southwest. Groundwater can move out of the SPGWB and into Mound Basin, located to the west, as underflow in the Recent Alluvium. The SPGWB is in hydraulic connection with and receives underflow from the up-gradient Fillmore Groundwater Basin (FGWB).

8 A floodplain is the area adjacent to a watercourse or other body of water that is subject to recurring floods. Floodplains may change over time due to natural processes, changes in the characteristics of a watershed, or human activity, such as construction of bridges or channels. In areas where flow contains a high sediment load, such as along the Santa Clara River in Ventura County, the course of a river or stream may shift dramatically during a single flood event.

9 Panaro, D., Fox Canyon Groundwater Management Agency, written communication to R.R. Davis (DWRD), March 21, 2000.

10 Panaro, D., Fox Canyon Groundwater Management Agency, written communication to R.R. Davis (DWRD), March 21, 2000.

Groundwater recharge to the SPGWB occurs through stream flow percolation, rainfall percolation, and underflow from the FGWB. Most of the stream flow percolation occurs through the Santa Clara River and Santa Paula Creek, with minor contributions from other tributaries. Yield studies reported that during the period 1997 to 2003, estimated to be 21,612 afy,¹¹ and the safe yield appeared to be no less than 26,000 afy. These yield studies indicate the Basin was not in a state of overdraft.¹²

4.9.2 REGULATORY SETTING

A number of state and local plans and regulations, relating to parks and recreation, are applicable to the Project; they provide a regulatory framework for addressing all aspects of parks and recreational services that would be affected by implementation of the Project.

Federal Regulations, Plans, and Policies

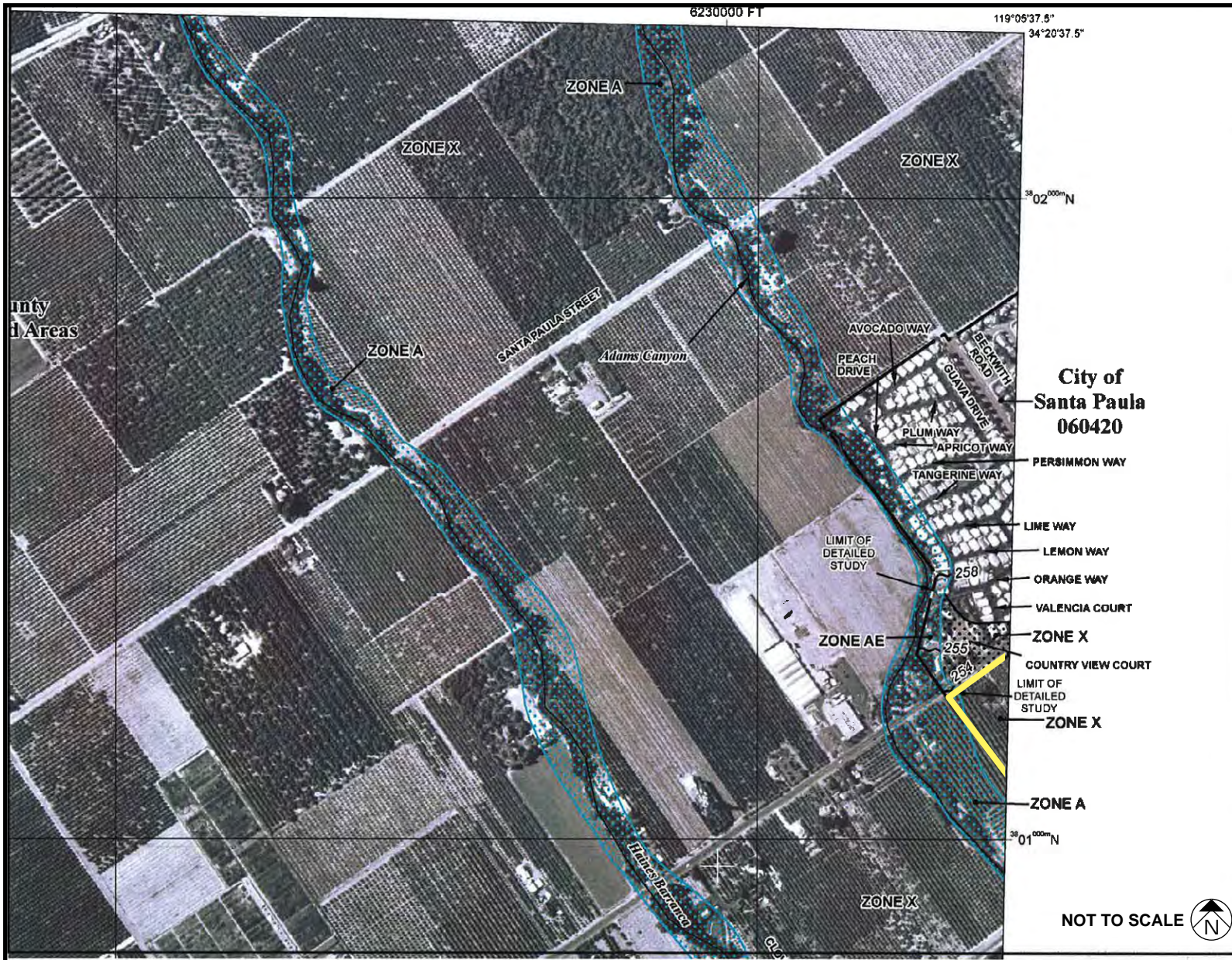
Federal Water Pollution Control Act

The federal Clean Water Act (CWA) is intended to restore and maintain the cleanliness of the nation's bodies of water to achieve a level of water quality that provides for recreation in and on the water and the propagation of fish and wildlife. Section 208 of the CWA and the requirements of the Code of Federal Regulations require local water management plans. Preparation of these water management plans is delegated to individual states by the US Environmental Protection Agency (USEPA), which is charged with implementing the CWA.

The CWA requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

11 State of California, Resources Agency, Department of Water Resources, *California Groundwater*, Bulletin 118 Update 2003, (October 2003).

12 United Water Conservation District, *Piru and Fillmore Basins Annual Groundwater Conditions Report Water Year 2003*, (December 2004), 3.



all Flood Insurance Program at 1-800-638-6620.

NFIP

PANEL 0778E

FIRM
FLOOD INSURANCE RATE MAP

VENTURA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 778 OF 1275
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0778	E
VENTURA COUNTY	060413	0778	E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06111C0778E

EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

Legend

Santa Paula West Business Park Specific Plan Boundary

This is an official copy of a portion of the above referenced Flood map. It was extracted using FIRM On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program Flood maps check the FEMA Flood Map Store at www.msc.fema.gov

SOURCE: Jensen Design & Survey, Inc., Preliminary Hydrology Report, Santa Paula West Business Park - 2011

FIGURE 4.9-2

National Pollutant Discharge Elimination System

In 1972, the Federal Water Pollution Control Act was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge complies with the National Pollution Discharge Elimination System (NPDES) permit. The CWA was amended in 1987, adding Section 402(p) to provide a framework for regulating municipal and industrial stormwater discharges. In November 1990, the USEPA published final regulations that establish requirements for specific categories of industries, including construction projects that encompass greater than or equal to 5 acres of land. The Phase II Rule became final in December 1999, expanding regulated construction sites to those greater than or equal to 1 acre. The regulations require that stormwater and nonstormwater runoff associated with construction activity, which discharges either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4), must be regulated by an NPDES permit.

The USEPA has delegated management of California's NPDES program to the State Water Resources Control Board (SWRCB) and the nine regional board offices; the Specific Plan is located within the Los Angeles Regional Water Quality Control Board (RWQCB), or Region 4.

Flood Plain Management Act

Executive Order 11988, also known as the Floodplain Management Act, requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

Under this Order, the USACE takes action to avoid development in the base (100-year) floodplain unless it is the only practicable alternative; to reduce hazard and risk associated with floods; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial value of the base floodplain.

Flood Zone Identification

When a community participates in Federal Emergency Management Agency's (FEMA's) flood insurance program, all land is classified according to its flood risk. Risk is divided into three categories: high risk, moderate to low risk and undetermined risk. The definitions of each category are shown in **Table 4.9-4, Definitions of FEMA Flood Zone Designations**. High-risk areas have at least a 1 percent annual (100-year event) chance of flooding.

**Table 4.9-4
Definitions of FEMA Flood Zone Designations**

Zone	Description
Moderate- to Low-Risk Area Designations	
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. Are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than 1 foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
High-Risk Area Designations	
A	Areas with a 1 percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE zones are now used on new format FIRMs instead of A1–A30 zones.
A1–A30	These are known as numbered A zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1 percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AH	Areas with a 1 percent annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1 percent or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26 percent chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood-control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with zone AR floodplain management regulations.
A99	Areas with a 1 percent annual chance of flooding that will be protected by a Federal flood-control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.
Undetermined Risk Area	
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.
<p><i>Source: FEMA Map Center (2012). https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations.</i></p>	

State Regulations, Plans, and Policies

California Water Quality Control Board

The State Water Resource Control Board (SWRCB) administers the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. To obtain coverage under this General Permit, parties discharging storm runoff are required to electronically file the permit registration documents (PRDs), which include a Notice of Intent (NOI), Storm Water Pollution Prevention Plan (SWPPP), and other compliance-related documents required by this General Permit, and mail the appropriate permit fee to the SWRCB.

Los Angeles Regional Water Quality Control Board

The Specific Plan is located within the Los Angeles region, which is governed by the Los Angeles RWQCB, also known as Region 4. The Los Angeles RWQCB has jurisdiction over a majority of Ventura and Los Angeles Counties. The Los Angeles RWQCB has adopted a Water Quality Control Plan (“Basin Plan”) to provide definitive guidelines and give direction to the scope of Los Angeles RWQCB activities that will optimize the beneficial uses of the state waters within the Los Angeles Basin by preserving and protecting the quality of these waters.

Local Regulations

Ventura County Watershed Protection District

The VCWPD provides for the control and conservation of flood- and stormwaters and for the protection of watercourses, watersheds, public highways, life, and property in the district from damage or destruction caused by these waters.

Various ordinances relating to the protection and regulation of flood-control facilities and watercourses provide the VCWPD authority and the requirement to obtain permits for any encroachment into VCWPD jurisdictional channels, including rights-of-way.

The Ventura County Stormwater Quality Management Plan defines the requirements of the Ventura County Municipal Storm Water NPDES Permit adopted by the Los Angeles RWQCB, pursuant to Division 7 of the California Water Code. Program elements included in the Stormwater Quality Management Plan (SQMP) include NPDES permit coverage and provisions, institutional arrangements, program structure, monitoring and reporting, fiscal resources, and legal authority. The Ventura County SQMP addresses specific stormwater pollution requirements for new developments.

Ventura County is subject to a Municipal Stormwater Permit No. CAS004002 for Stormwater (Wet-Weather) and Non-Stormwater (Dry-Weather) Discharges from the Municipal Separate Storm Sewer Systems.

In November 2012, the Los Angeles RWQCB adopted a new Municipal Stormwater Permit (Order No. R4-2012-0175) introducing new regulations including the new requirements for the non-stormwater discharge prohibition. The Ventura County Stormwater Quality Management (SWQM) Ordinance has updated its hydromodification manual to meet requirements of the new Municipal Stormwater Permit as required by the Los Angeles RWQCB.

City of Santa Paula

General Plan

Safety Element

The City of Santa Paula's Safety Element addresses safety issues with respect to Santa Paula. The Safety Element guides the City in planning for hazards, including flooding. The Safety Element defines goals, policies, and objectives to reduce risks from flood hazards and manage flood plains of the local water courses.

Conservation and Open Space Element

The Conservation and Open Space Element of the City's General Plan addresses conservation and open space issues, including hydrology and water resources. The purpose of the Conservation and Open Space Element is to maintain the overall quality of life for Santa Paula residents through the management and protection of natural resources and open space lands.

Urban Water Management Plan

The City of Santa Paula's 2010 Urban Water Management Plan Update (UWMP)¹³ was prepared in compliance with California Water Code,¹⁴ which requires urban water suppliers to prepare an UWMP to promote water conservation and efficient water use. The UWMP provides planning information on the reliability and future availability of the City's water supply. The 2010 UWMP Update is a public statement of the goals, objectives, and strategies needed to maintain a reliable water supply for the City's urban customers. This UWMP should be viewed as a long-term, general planning document, rather than as a policy for supply and demand management.

13 City of Santa Paula, *Final 2010 Urban Water Management Plan Update* (June 2011).

14 California Water Code, sec. 10610–10656.

4.9.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the California Environmental Quality Act (CEQA) identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements?
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
- Otherwise substantially degrade water quality?
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows?
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?
- Inundation by seiche, tsunami, or mudflow?

Methodology

The hydraulic modeling was prepared using USACE Hydrologic Engineering Center–River Analysis System (HEC-RAS) hydraulic modeling software. The existing conditions of the Santa Paula West Business Park Specific Plan were determined according to the VCWPD 2010 Hydrology Manual and the City of Santa Paula Master Plan for Drainage, and the County of Ventura Time of Concentration Calculator.

The watershed was subdivided into approximately 98 subareas ranging from 5.5 to 108 acres using Lidar topography. Ventura County standards prefer subareas to range from 40 to 80 acres, which applies to 84 percent of the subareas, but allow for an absolute maximum subarea of 120 acres. Each subarea was broken down into an overland flow path and a channel flow path to calculate the Time of Concentration.

The VCRat 2.6 program was used to calculate the 100-year peak flow rate and volume for the entire watershed area. Runoff hydrographs were computed within the model for each subarea, routed through a conveyance system and combined with other subarea hydrographs as the analysis proceeded downstream through the watershed.

An aerial reduction is a factor that account for the varying intensities over watersheds greater than 640 acres. Ventura County allows for an aerial reduction. Each confluence point has a differential aerial reduction factor due to the difference in contributing drainage areas.

The weighted average 100-year 24-hour rainfall values was calculated using GIS, which was then used to calculate the fattening factor. The fattening factor was used to provide more accurate volumes of each watershed location. The composite soil type for each basing was converted to the corresponding NRCS hydrologic soil group (Group C) and appropriate curve numbers were calculated on the basis of land use, vegetation type, and soil condition.

4.9.4 PROJECT IMPACTS

Threshold: **Violate any water quality standards or waste discharge requirements?**

Water quality standards are attained when designated beneficial uses are achieved and water quality objectives are being met. Beneficial uses include drinking, swimming, industrial, and agricultural water supply, and the support of fresh and saline aquatic habitats.

The Specific Plan area is currently in agriculture use. Potential impacts from development of the Specific Plan include an increase of impervious surfaces, which will increase the amount of surface runoff generated from the Project Site. Paved areas and streets will collect dust, soil, and other impurities that will then be assimilated into surface runoff during rainfall events. Pollutants such as trash and debris, oil and grease, metals, sediment, pathogens, organic compounds, nutrients, pesticides, and oxygen-demanding substances can be expected to be present in surface water runoff once Project development occurs. Best Management Practices (BMPs) have been designed to address the POCs. Water quality features designed into the Specific Plan follow the BMPs listed in the Ventura County Stormwater Quality Urban Impact Mitigation Plan (SQUIMP). Water quality treatment will either be flow based, volume based, or a combination of the two according to SQUIMP guidelines.

Construction

Development of the Specific Plan would involve construction activities over an estimated 2.5-year period. Proposed grading and construction activities would involve earth movement and the use of heavy equipment. Peak stormwater runoff could result in short-term sheet erosion with areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential. Given the above, pollutants such as soil, sediments, and other substances associated with construction activities (e.g. oil, gasoline, grease, and surface litter) could be present in stormwater runoff from the site.

To reduce the discharge of pollutants during construction of the proposed development, a site-specific SWPPP would be developed in accordance with the NPDES Program General permit authorized under the Clean Water Act for Construction Activities. The General Permit¹⁵ requires the development and implementation of a site-specific SWPPP to identify an effective combination of erosion and sediment control BMPs to minimize or eliminate the discharge of pollutants into receiving waters. In addition, BMPs for managing sources of nonstormwater discharges and waste are required to be identified in the SWPPP. Examples of construction BMPs include silt, fencing, gravel bag berms, fiber rolls, and street sweeping. In addition, the SWPPP is required to identify postconstruction BMPs, which are permanent features maintained in perpetuity by the owner, developer, or building occupant.

Through compliance with the SWRCB and USEPA permits and SWPPP requirements, potential impacts to water quality during Project construction would be less than significant.

Operation

The development of the Project would increase the number of impervious surfaces on the Project Site, which has the potential to increase runoff within the Project Site. Bioswales would be designed in various parking landscape areas to provide cleansing of stormwater runoff prior to discharge into Adams Barranca and Santa Clara River. Biofilter inserts would be used in curb inlets to capture oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens. In addition, storm drain inlets and catch basins would have proper signage and stenciling to discourage illegal dumping. Filters and signage would be checked and/or replaced annually.

Two surface detention basins would be located at the center of the Project Site north of the railroad and north of the highway, respectively. An underground basin would be located east of Beckwith Drive, north of the highway. Flow rates through the basin will be reduced because of the plants inundated in the stormwater to allow for contact time with the vegetation, which will maximize infiltration and sediment

15 State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction Activity (General Permit).

settling and reduce flows. The final sizing of the detention basins and landscape areas would be provided with the Tentative Map design.

Overall, the BMPs and the project design features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all applicable federal, state, and local water quality rules and regulations to effectively minimize the Project's impact on water quality. Accordingly, impacts would be less than significant.

Threshold: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

The Santa Paula Basin is primarily recharged through subsurface flows of the Santa Clara River, Santa Paula Creek, and other minor tributary streams, as well as subsurface flow from the Fillmore Basin.¹⁶ Some of the surface flow in the Santa Clara River originates as release from Lake Piru and contains natural runoff of precipitation and imported State Water Project water.¹⁷ Percolation of precipitation and unused irrigation waters provides additional recharge. Groundwater in the Santa Paula Basin generally flows toward the southwest.¹⁸

The Specific Plan area is currently served by existing groundwater wells. No new groundwater wells are proposed as part of the Project. The area served by existing groundwater wells will be removed from well water and replaced by water from the City's municipal water system.

Based on the above, the Project will not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, the Specific Plan would incorporate design features such as bioswales, bioretention cells, infiltration trenches and permeable pavement to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge. Therefore, impacts would be less than significant.

16 State of California, Resources Agency, Department of Water Resources, *California Groundwater* (October 2003).

17 United Water Conservation District, Surface and Groundwater Conditions Report, Water Year 2000 Supplement.

18 State of California, Resources Agency, Department of Water Resources, *California Groundwater* (October 2003).

Threshold: **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

Construction

Site-clearing and grading operations have the greatest potential for discharging sediment downstream during storm events. As discussed above, construction and grading activities would involve earth movement and the use of heavy equipment. Peak stormwater runoff could result in short-term sheet erosion with areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential.

The Project would be required to develop a site-specific SWPPP in accordance with the NPDES Program General permits authorized under the Clean Water Act for Construction Activities. Adherence to the SWPPP and implementation of standard BMPs during construction would reduce the potential for increased siltation, erosion, and hazardous material spills. Through compliance with the SWPPP and standard BMPs, potential erosion and siltation, potential impacts will be less than significant.

Post Development

The operation of the Specific Plan will contain a number of features to reduce the amount of runoff that will occur within the Specific Plan area, and limit the amount and rate of surface water flow downstream of the Specific Plan. The Specific Plan would include open space and landscaped areas, pervious concrete and asphalt paving, and the Project-related water quality design features (e.g., detention basins). The detention basins will be sized to treat 10 percent of the 50-year storm event from the storm drain, consistent with the Ventura County SQUIMP guidelines. The detention basins would significantly reduce peak runoffs downstream by storing the peak-event flows and delaying their release until after the peak storm event. One acre of land within the Specific Plan boundary has been set aside for detention basins totaling approximately 6 af in volume for detention and retention requirements. In addition, the Specific Plan will implement the use of bioswales to collect and filter water runoff and the use of infiltration/sedimentation basins to allow for infiltration and sediment settling.

As shown in **Figure 4.9-3, Conceptual Grading & Drainage Plan**, storm drain facilities would be sized to meet City of Santa Paula standards and accommodate the increased runoff generated by the increase in impervious surfaces. The storm drain system would collect onsite runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, potential impacts are considered less than significant.

Threshold: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

As mentioned previously, the Specific Plan would not substantially alter drainage patterns within the Project area. The Specific Plan would provide future development in accordance with proposed land use designations for the Specific Plan area. Given that the Specific Plan area consists of undeveloped agricultural land, development would result in an increase in the rate and amount of surface runoff generated by the Specific Plan Area.

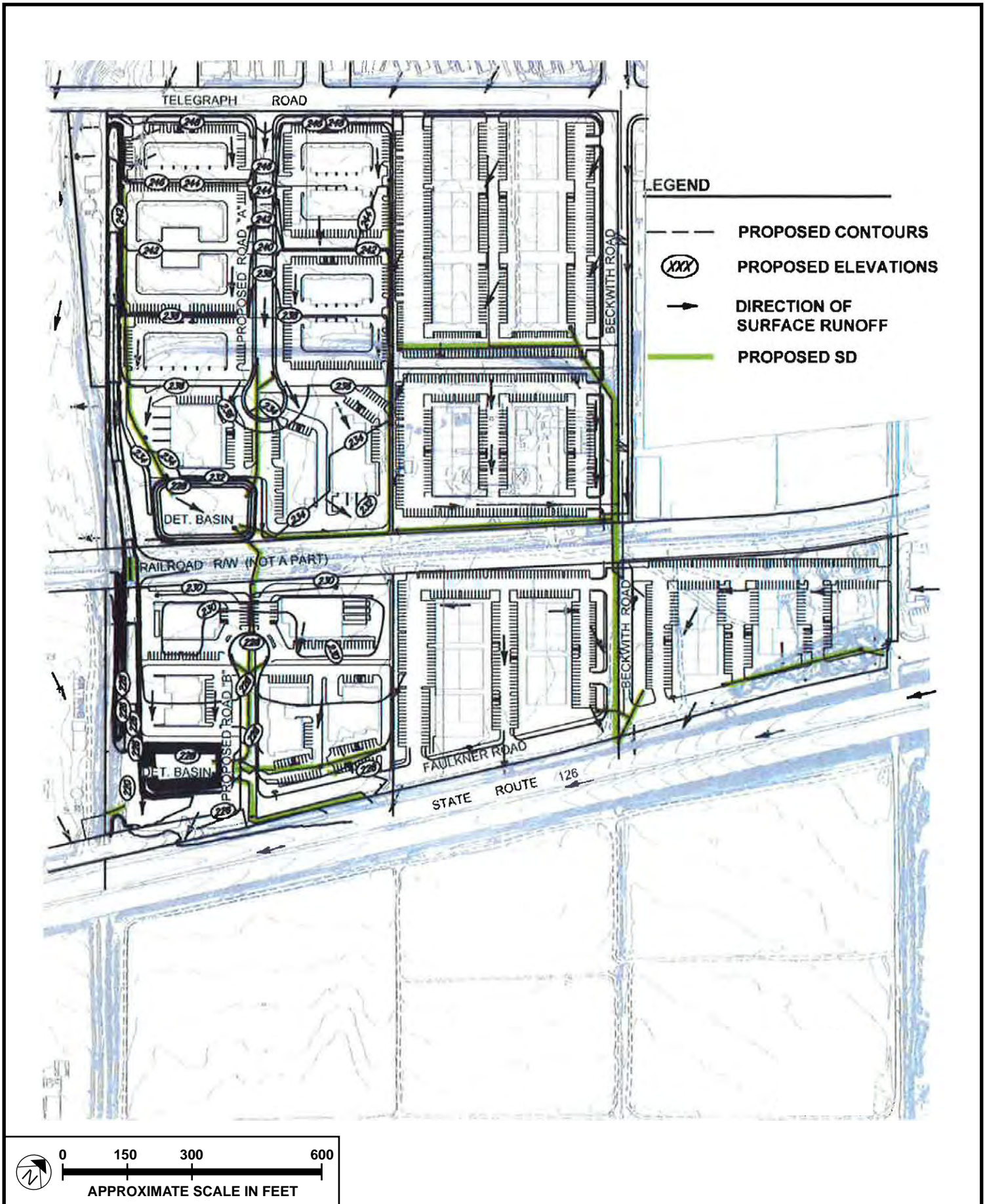
Detention basins would significantly reduce peak runoffs downstream by storing the peak storm event flows and delaying their release after the peak storm has passed. To accomplish this design, 1 acre of land within the Specific Plan boundary has been set aside for detention basins totaling approximately 6 af in volume for detention and retention requirements.

In addition, as shown in **Figure 4.9-4, Storm Drain Plan**, the storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, impacts are considered less than significant.

Threshold: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The Project incorporates detention basins sized to treat 10 percent of the Q50 (50-year storm event) from the storm drain system consistent with the Ventura County SQUIMP guidelines. The slopes of the detention basins will be planted with various plant species, as outlined in the County of Ventura Technical Guidance Manual. As stormwater flows increase, and plants are inundated with stormwater, the flow rate would be reduced through the basin to allow contact with the vegetation. In addition, these detention basins would significantly reduce peak runoffs downstream by storing the peak event flows and delaying their release after the peak storm event. These improvements would adequately mitigate any increase in stormwater peak flows and/or volumes and would not result in on-site flooding or cause impacts related to water quality.

In addition, storm drain facilities would be sized to meet City of Santa Paula standards and accommodate the increased runoff generated by the increase in impervious surfaces, as shown in **Figure 4.9-4**. Currently, there are four storm drain culverts under SR 126, all varying in size.



SOURCE: Jensen Design and Survey – October 2016

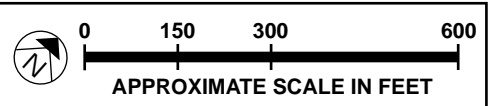
FIGURE 4.9-3



- Notes:**
- Detention and storm water treatment to be provided on a phased basis, dependent on build-out.
 - If the first phase of development is different from what is identified here, then storm drain is subject to city engineer approval.
 - Storm drain for subsequent phases will be subject to city engineer approval.

LEGEND

- → → Existing storm drain
- Proposed storm drain



SOURCE: Jensen Design and Survey – October 2016

FIGURE 4.9-4

Years of sedimentation in these culverts have caused the water to pond on site. The proposed detention basins would be incorporated into the underground storm drain system, preventing any sedimentation to occur. Consequently, impacts related to water quality would be less than significant.

Threshold: Otherwise substantially degrade water quality?

As discussed above, to reduce the discharge of expected pollutants during grading and other construction activities, such as sediment into receiving waters during construction, the Project Applicant will be required to prepare a SWPPP consistent with the Ventura County NPDES permit and the Technical Guidance Manual for Storm Water Quality Control Measures to minimize or eliminate the discharge of pollutants into receiving waters. In addition, the project would utilize BMPs, including bioswales, detention basins, and storm drain systems. The bioswales would be used to mitigate concentration of nutrients through contact with vegetation and cleanse storm runoff before discharge into the five outlet points, which include Adams Canyon, the Todd Lane Drain (Pipe 9) and the three existing culvert locations under SR 126 (pipes 2,5, and 8). The design features would comply with all NPDES permit requirements and no significant impacts to water quality will result.

Threshold: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The western portion of the site is designated as Flood Zone A, whereas the rest of the site is designated as Zone X. However, the Specific Plan would not introduce new housing into the area. Therefore, impacts would be considered less than significant.

Threshold: Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Development projects can have a major effect, which can be either positive or negative, on flood problems.¹⁹ Properly designed projects can solve existing problems to the benefit of the general public. Poorly designed projects, on the other hand, can cause new problems where none previously existed. Some flood-control projects can be constructed in conjunction with land development to the benefit of the general public.

Currently there are four storm drain culverts under SR 126, all varying in size. Stormwater runoff drains towards these culverts with the intention of crossing under SR 126; however, years of sedimentation in these culverts have caused the water to pond onsite. In some cases, the water ponds high enough to flow

19 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998), p. CO-27.

east into the Todd Lane Drain. The proposed improvements, including the installation of detention basins, would prevent possible sedimentation blocking SR 126.

Adams Creek runs along the western edge of the proposed Project area. As shown in **Figure 4.9-2**, the western portion of the site is designated as Flood Zone A due to inaccurate determination of current existing conditions, due to Adams Creek overtopping its banks during a 100-year storm event. This flooding is caused by lack of capacity within the channel, lack of capacity at the SR 126 undercrossing, and debris issues at the Railroad Bridge. The Project design proposes an adjacent and parallel trapezoidal channel approximately 6 feet in depth, with a 15-foot bottom width and 2:1 side slopes, that would accommodate floodwaters in a large storm event, protect the buildings on site, and remove a portion of the property from the floodplain through a LOMR (Letter of Map Revision) with FEMA. The new channel would join with the existing Adams Barranca at the railroad crossing and the SR 126 crossing.

The new channel design would have the capacity to handle flows that overtop the bank on the east side and the water that ponds due to the undersized culvert at SR 126. A geotextile would be used in the channel to stabilize the soil for high velocities. Accordingly, impacts would be less than significant.

Threshold: **Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

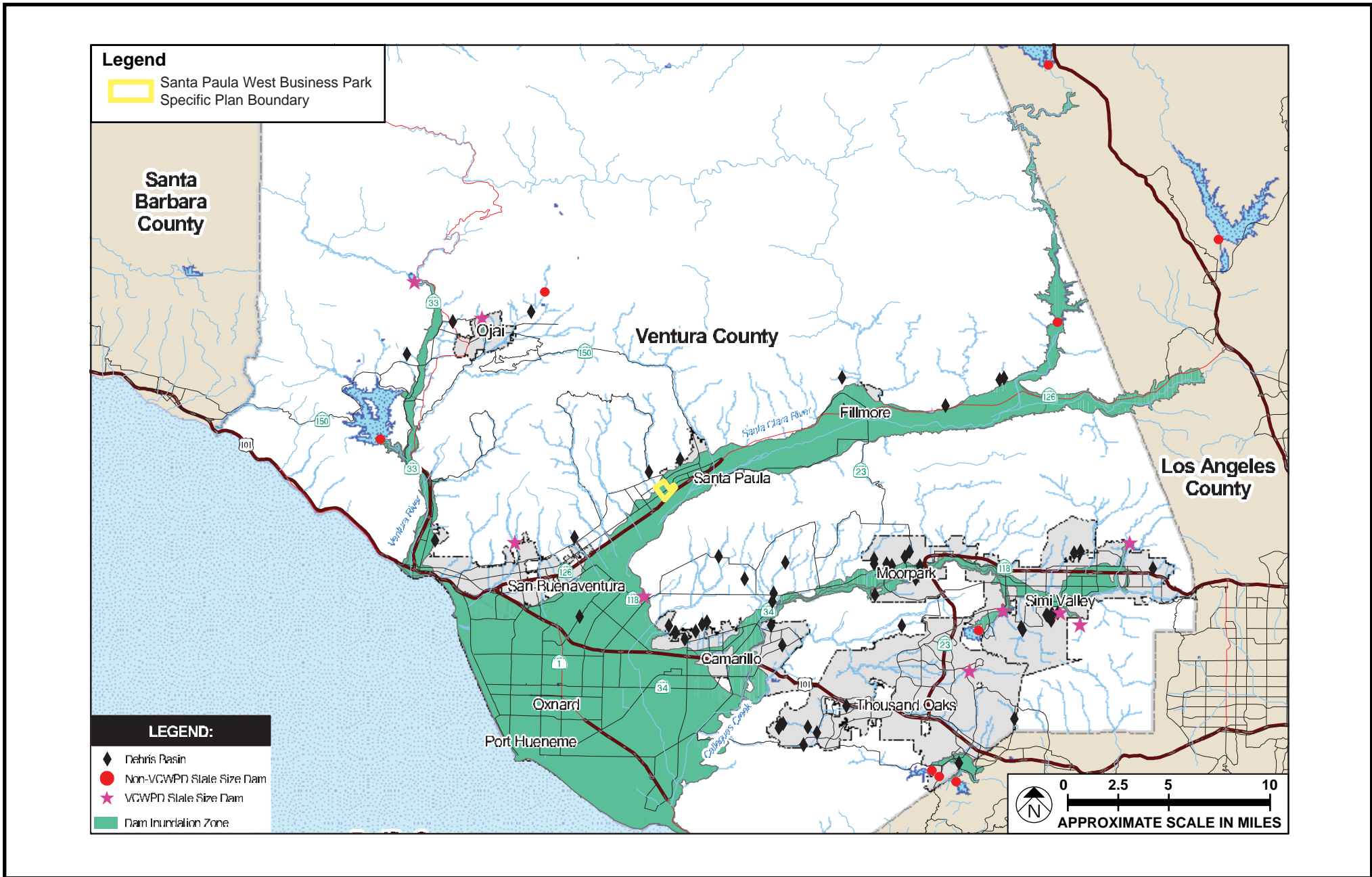
Failure of any of the upstream dams could have significant and/or disastrous inundation impact on the City of Santa Paula.²⁰ Based on the City of Santa Paula General Safety Plan, at least four dams northeast of the Santa Paula area have the potential to result in dam inundation to the City or surrounding environments: Lake Pyramid Dam, Lake Castaic Dam, Bouquet Canyon Dam, and Santa Felicia (Lake Piru).

The Specific Plan area is located within a dam failure hazard area,²¹ as shown in **Figure 4.9-5, Ventura County Dam Failure Hazard Profile**. However, as noted in the Ventura County Multi-Jurisdictional Hazard Mitigation Plan,²² to cause a significant flood, dam failure would have to occur during extreme storm events that cause inflow to the basin above the outlet capacity.

20 City of Santa Paula, *General Plan, "Safety Element"* (1998), p. S-15.

21 Ventura County, *Multi-Jurisdictional Hazard Mitigation Plan for Ventura County, California* (March 2005), Fig. 4-3.

22 Ventura County, *Multi-Jurisdictional Hazard Mitigation Plan* (March 2005), p. 4-21.



SOURCE: Ventura County Multi-Jurisdictional Hazard Mitigation Plan, 2005, Figure 4-3

FIGURE 4.9-5

In addition, the Conservation and Open Space Element notes that flooding from a dam failure is also a possibility in Santa Paula.²³ Should one of the large dams fail suddenly, the City would have less than 2 hours' warning, in which time two-thirds to three-quarters of the population must be evacuated.

The Ventura County Multi-Jurisdictional Hazard Mitigation Plan identifies mitigation goals to reduce the possibility of damage due to dam failure. Mitigation goals are defined as general guidelines of goals to be achieved in terms of hazard and loss prevention.

The Specific Plan does not propose any residential land uses. Therefore, no new residential uses would be located in the hazard zone. As such, impacts would be less than significant.

Threshold: Inundation by seiche, tsunami, or mudflow?

The Project Site is approximately 12 miles inland from the Pacific Ocean and is approximately 230 to 350 feet amsl. There are no lakes, ponds, or dams adjacent to the Project Site. Therefore, the risk that the Project Site would be inundated by a seiche is considered negligible, and impacts associated with tsunamis or seiches would be less than significant.

The Adams Barranca drainages adjacent to the Project Site are unimproved and have the potential for mud and debris flow and is designated as a High Post-Fire Debris Flow Hazard area. The proposed parallel channel and debris basin are incorporated into plans to improving the Adams Barranca. In addition, no on-site stormwater would be directed to the Adams Barranca. Therefore, impacts associated with mudflows would be less than significant.

4.9.5 CUMULATIVE IMPACTS

The cumulative impact analysis in this Section considers related development projects in the area. With regard to water quality, the related projects would be required to comply with the NPDES General Construction Permit, including implementation of a site-specific SWPPP, to prevent polluted runoff from entering local stormwater drainage systems during construction activities. Additionally, each related project would be subject to NPDES requirements and applicable SPMC requirements. Given that each related project would be required to comply with NPDES requirements and local regulations designed to prevent polluted runoff from entering local storm drain systems and receiving water bodies during construction and after development, the cumulative impact to water quality would be less than significant. Furthermore, in compliance with NPDES, the cumulative impact related to erosion and siltation would also be less than significant.

23 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998). CO-27.

The proposed development, in combination with other long-term cumulative development in the Santa Clara River watershed, would generally increase impermeable surface area throughout the watershed. Increased irrigation as the watershed builds out would further increase the overall volume of surface runoff as well as the low flow rate during the dry season. However, implementation of applicable City requirements, including the standards of the Ventura County SQUIMP, on all new development within the watershed would reduce cumulative impacts to area hydrology to a less than significant level. With the implementation of project features such as detention basins, the drainage system for the development site would function to release increased stormwater flows in a nonerosive manner ahead of upper watershed peak flows, thereby minimizing effects to downstream areas. Thus, development buildout would not contribute to increased cumulative flooding potential.

Section 4.14, Utilities and Service Systems, includes a detailed analysis of the water demand associated with the related projects and the effect on groundwater supply and recharge. As discussed, the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume of the local groundwater table level. Development projects, including commercial, industrial, and residential, individually and cumulatively will create more impervious surfaces, thus reducing the total groundwater recharge area. However, projects located within the local watershed also have the possibility of adding to the local groundwater basin through the addition of imported and/or recycled water. The water used for irrigation could offset the difference in the reduction of groundwater recharge area to rainfall-related recharge that occurs today.

4.9.6 MITIGATION MEASURES

Potential impacts will be less than significant, and no mitigation measures are required.

4.9.7 RESIDUAL IMPACTS AFTER MITIGATION

Impacts are less than significant.

4.10 LAND USE AND PLANNING

This section describes existing and planned land use conditions within the Santa Paula West Business Park Specific Plan (“Specific Plan”), along with applicable local, county, and regional plans and policies that regulate or guide the uses of land in the Project area. Potential land use impacts are examined with respect to whether development under the Project would physically divide an existing community; would conflict with existing land use in the surrounding area; is consistent with applicable land use plans and policies; or would conflict with any habitat conservation or natural community conservation plans. Information presented in this section is primarily derived from the City of Santa Paula General Plan and the General Plan Environmental Impact Report (EIR; February 1998), Santa Paula Municipal Code (SPMC), the proposed Santa Paula West Business Park Specific Plan (August 2014, amended October 2016), the County of Ventura General Plan (October 2013), and the Non-Coastal Zoning Ordinance (March 2014).

4.10.1 EXISTING CONDITIONS

The City of Santa Paula is a relatively compact community. Located between State Route (SR) 126 and Telegraph Road on the western portion of the City, the Santa Paula West Business Park Specific Plan area is within West Area 2, which is recognized in the Santa Paula General Plan as one of four potential expansion areas for Santa Paula.

SR 126 provides regional access to the City of Santa Paula, as well as to the Project site. On-site circulation is currently provided by a series of unpaved roads, which provide access to the existing agricultural operations. To the north of SR 126, access is provided by Telegraph Road. Additional access is provided by Beckwith Road along the east boundary. The Ventura County Transportation Commission (VCTC) railroad right-of-way, containing railway tracks, bisects the Project Site. The west boundary is approximately bounded by the lower reaches of Adams Barranca, an improved channel that runs generally north–south.

On-Site Uses

The Project Site comprises 53.81 acres and consists of relatively undeveloped land that is currently used for agricultural production. While the Project Site is directly west of the City’s limit, it is within the City’s Sphere of Influence (SOI) and City Urban Restriction Boundary (CURB). The Project Site is not located within the boundaries of the Santa Paula–Ventura Greenbelt, as amended in February 2006 by Ventura County Ordinance No. 4338.¹

On-site uses primarily include agricultural operations consisting of orchards, row crops, and a limited amount of livestock. There are also two single-family residences: one located in the northwest corner of

1 Ventura County Board of Supervisors, Ordinance No. 4338 (February 2006).

the Project Site where Telegraph Road crosses Adams Barranca, and a farmworker housing unit located within these agricultural operations, near Beckwith Road. The Project Site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land in the northeastern portion of the site and herbs on approximately 12.3 acres within the southeastern portion of the site. Approximately 4.5 acres of the Bender Farms portion of the Project Site consists of agricultural operations maintenance equipment storage facilities, offices, and other ancillary uses, such as packing facilities and related farming materials. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land that make up roughly the western half of the Project Site.

Surrounding Land Uses

Figure 4.10-1, Existing Surrounding Land Uses, provides an aerial photograph of the Project Site and labels of the predominant surrounding land uses. Opposite the Project Site, along Telegraph Road to the north, are primarily single-family residences accessed from Country View Court, as well as a mobile home park accessed from Valencia Way.

The southern portion of the Project Site, which consists of agricultural uses, is bound by SR 126. These agricultural uses contain various row crops, avocados, and citrus. A limited number of single-family residential units lie within some of the agricultural properties.

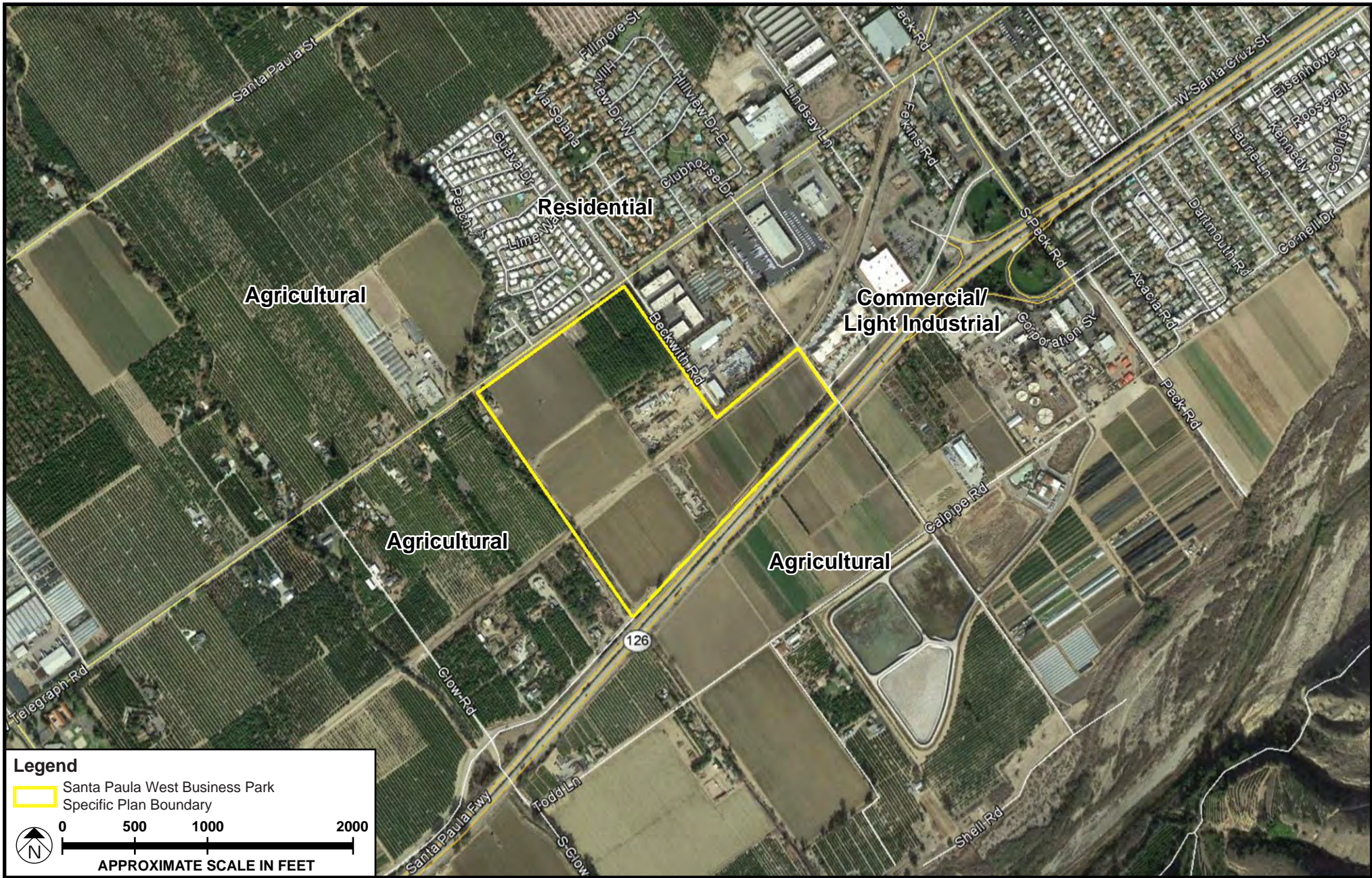
To the east, opposite the Project Site along Beckwith Road, are light industrial uses to the east, including offices, warehouse buildings, construction equipment storage, and maintenance facilities.

The Adams Barranca is located adjacent to the western boundary of the Project Site. Agricultural uses and limited single-family residences, consisting of orchards and limited amount of livestock, are located immediately west of the Adams Barranca.

General Plan and Zoning Designations

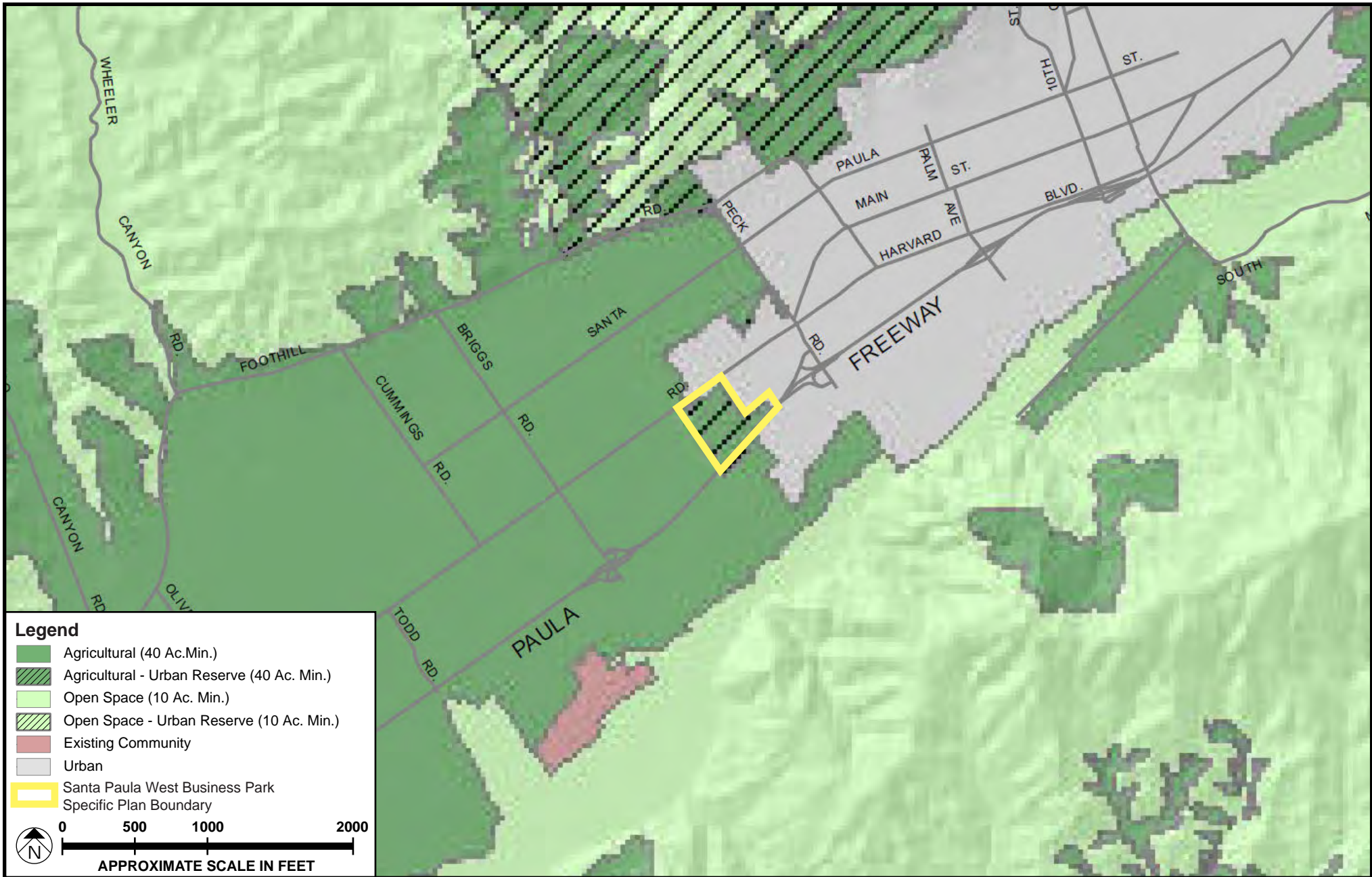
Ventura County

In the area of the Project, the Ventura County General Plan defines six land use designations: Agriculture, Open Space, Rural, Existing Community, State or Federal Facility, and Urban. As shown in **Figure 4.10-2, Existing Ventura County General Plan Land Use Designations**, the County designates the Project Site for Agriculture–Urban Reserve uses. **Table 4.10-1, Existing Ventura County General Plan and Non-Coastal Zoning Designations**, shows each of the five assessor’s parcel numbers (APNs) that compose the Project Site is designated as Agriculture–Urban Reserve (40-acre minimum) by the County’s General Plan, and Agriculture Exclusive (AE) by the Non-Coastal Zoning Ordinance.



SOURCE: Google Earth - 2014; Meridian Consultants, LLC - 2014

FIGURE 4.10-1



SOURCE: Ventura County General Plan, Land Use Map (South Half) - 2013

FIGURE 4.10-2

Table 4-10-1
Existing Ventura County General Plan and Non-Coastal Zoning Designations

Assessor Parcel Number (APN)	General Plan Land Use Designation	Non-Coastal Zoning Ordinance Designation (Minimum Lot Area)
098-0-010-15	Agriculture–Urban Reserve	AE (40-acre minimum)
098-0-010-16	Agriculture–Urban Reserve	AE (40-acre minimum)
098-0-010-18	Agriculture–Urban Reserve	AE (40-acre minimum)
098-0-010-19	Agriculture–Urban Reserve	AE (40-acre minimum)
098-0-020-04	Agriculture–Urban Reserve	AE (40-acre minimum)

Source: County of Ventura General Plan, (2013) & County of Ventura Non-Coastal Zoning Ordinance (2014).

AE = Agriculture Exclusive

The General Plan’s Agricultural land use designation is applied to all unincorporated land within a City’s adopted Sphere of Influence (SOI).² The purpose of the AE zone, as designated by the Non-Coastal Zoning Ordinance, is to preserve and protect commercial agriculture lands as a limited and irreplaceable resource; to preserve and maintain agriculture as a major industry in Ventura County; and to protect these areas from the encroachment of nonrelated uses which, by their nature, would have detrimental effects upon the agriculture industry.³

Furthermore, as shown in **Figure 4.10-2**, the surrounding lands to the north (beyond the City limits), south, and west of the Project Site are designated by the County of Ventura General Plan as Agricultural with the zoning designation of AE, similar to County land use designations for the Project Site. Areas immediately east of the Project Site and along portions of the northern and southern boundaries are designated as Urban and are within the City limits of Santa Paula.

City of Santa Paula

The Santa Paula General Plan, which was adopted in 1998, serves as the long-term planning document of the community’s vision for development to 2020. As identified in **Table 4.10-2, City of Santa Paula General Plan Expansion and Planning Areas**, the General Plan identifies the four expansion areas which are currently located outside of the City’s limits, but which are planned for future annexation.

² County of Ventura, *General Plan, “Goals, Policies, and Programs”* (October 2013).

³ County of Ventura, *Non-Coastal Zoning Ordinance, “Article 4: Purposes of Zones,”* (March 2014).

Table 4.10-2
City of Santa Paula General Plan Expansion and Planning Areas

Expansion Area	1998 General Plan Acreage
Adams Canyon	5,413 acres
Fagan Canyon	2,173 acres
West Area 2 ¹	125 acres
South Mountain	1,292 acres
Planning Area	General Plan Acreage
East Area 2	26 acres

Source: City of Santa Paula, *General Plan, "Land Use Element"* (2013).

¹ Expansion Area includes the Santa Paula West Business Park Specific Plan

The Project Site is identified in the General Plan as a part of the West Area 2 Expansion Area. As shown in **Figure 4.10-3, Existing City of Santa Paula General Plan Designations**, the City's General Plan Land Use Element currently designates the Project Site for Mixed-Use Commercial/Light Industrial uses. The General Plan allows for the buildout of this expansion area's 125 acres of 1,905,750 square feet with a floor-area-ratio (FAR) of 0.35.⁴ The zoning surrounding the Project Site is Mobile Home Park (MHP) to the north and Commercial–Light Industrial (C-LI) and Highway Commercial (C-H) to the east, as illustrated in **Figure 4.10-3**.

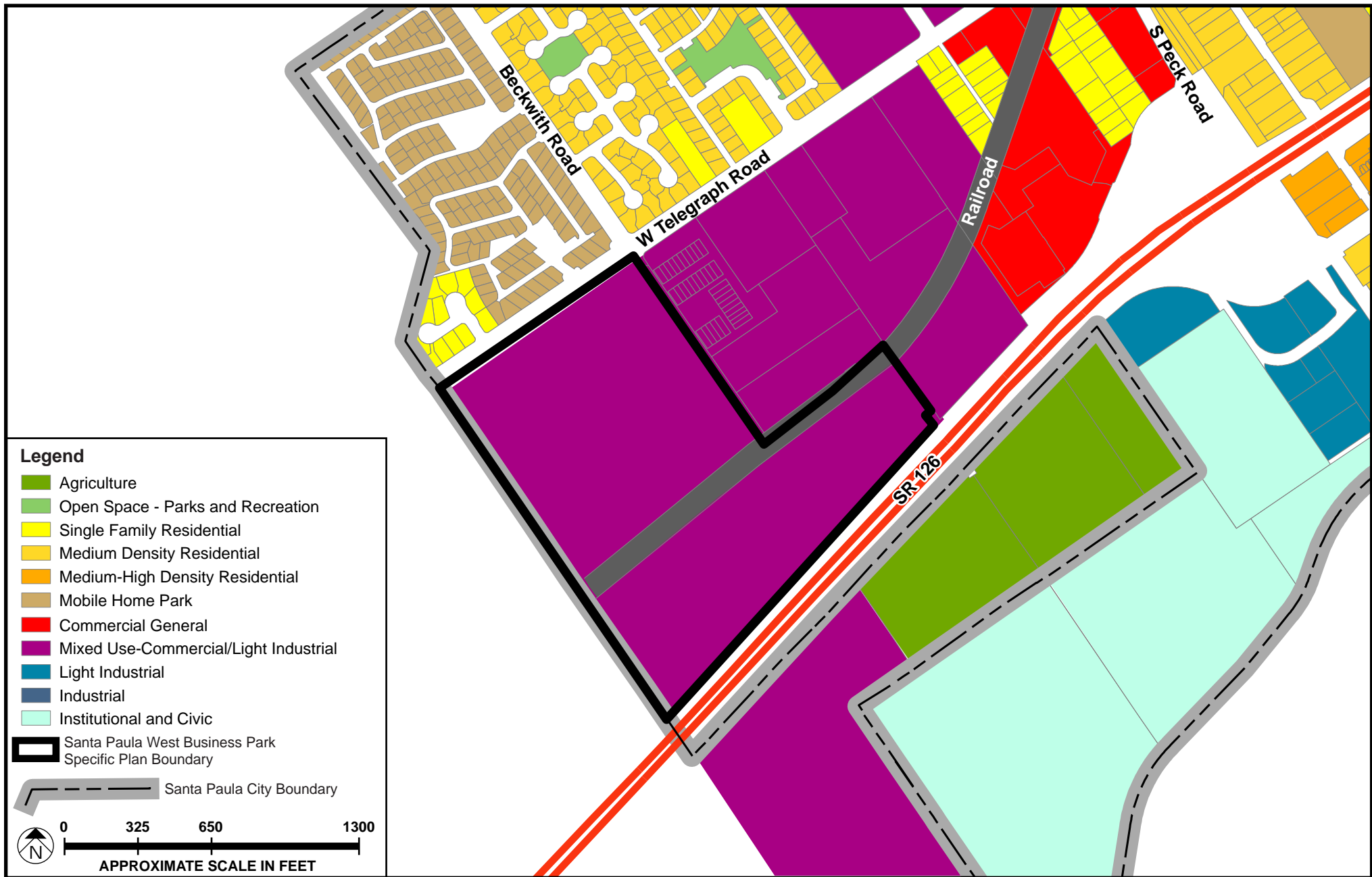
The expansion areas are shown in **Figure 4.10-4, City of Santa Paula General Plan Expansion Areas, Planning Areas, and Sphere of Influence**. The General Plan provides for urbanization and development within these five expansion and planning areas, with the exception of the South Mountain Expansion Area, which is planned for open space and recreational land uses.⁵

Chapter 16.21 of the SPMC establishes standards for the City's industrial zones to ensure compatibility between manufacturing/industrial uses and other surrounding land uses. The C-LI zoning designation allows for heavy commercial uses that may involve outdoor storage activity and low-intensity industrial businesses, including small-scale manufacturing, warehousing, and storage. The West Area 2 Expansion Area, which contains the Project Site, is designated on the City's zoning map as Specific Plan Overlay 6 (SP-6).⁶ The SP-6 zone would be designated for C-LI land uses and would comply with the development standards established in Chapter 16.21 of the SPMC.

4 City of Santa Paula, *General Plan, "Land Use Element"* (2013).

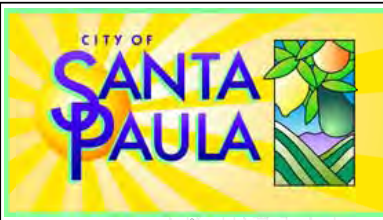
5 City of Santa Paula, *General Plan, "General Plan Map—Land Use Plan and Expansion Areas"* (February 2014).

6 City of Santa Paula, *Municipal Code, Chapter 16.25.020—Specific Plan Zones Established* (2013).



SOURCE: Santa Paula General Plan, Land Use Plan - 2010

FIGURE 4.10-3



General Plan Map Land Use Plan and Expansion Areas

Legend

General Plan

- Open Space - Passive and Golf Course
- Agriculture
- Open Space - Parks and Recreation
- Residential Canyon
- Hillside Residential
- Single Family Residential
- Residential Medium Density
- Medium-High Density Residential
- High Density - Residential
- Mobile Home Park
- Neighborhood Commercial
- Commercial Office
- Commercial
- Mixed Use Office / Residential
- Mixed Use Commercial / Light Industrial
- Industrial Park
- Light Industrial
- Industrial
- Airport Operational
- Airport Related
- Institutional and Civic

--- Public Levee and Bank Protection*

▨ Specific Plan

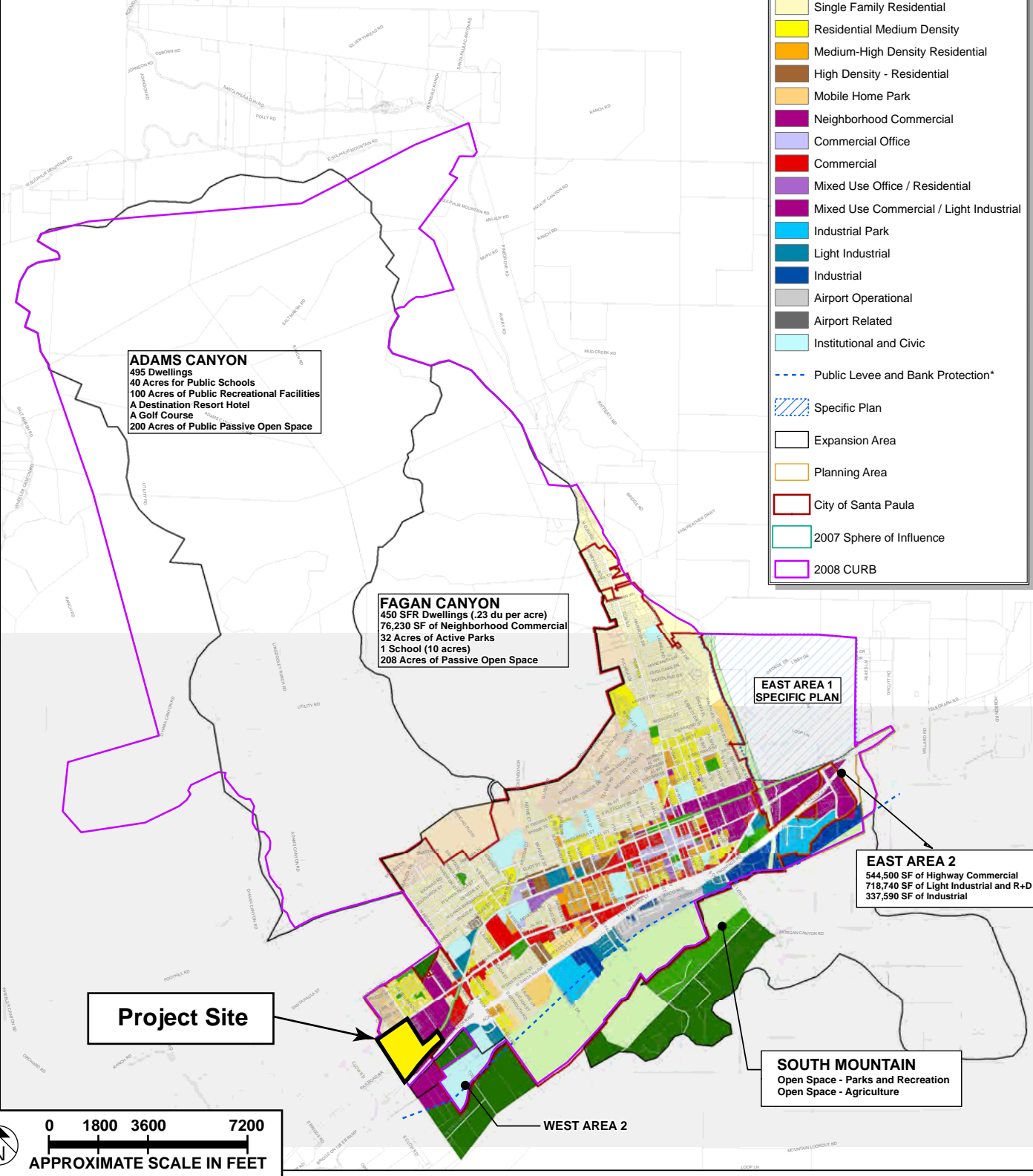
□ Expansion Area

□ Planning Area

□ City of Santa Paula

□ 2007 Sphere of Influence

□ 2008 CURB



SOURCE: Santa Paula General Plan, Land Use Element - 2010

FIGURE 4.10-4

Santa Paula General Plan Expansion Areas, Planning Areas, and Sphere of Influence

The City's General Plan designates the Project Site for C-LI uses, which is consistent with the land uses proposed within the Santa Paula West Business Park Specific Plan, as identified in **Table 4.10-3, Santa Paula West Business Park Specific Plan Land Uses.**

Table 4.10-3
Santa Paula West Business Park Specific Plan Land Uses

Land Use Type	Acres	Percent of Project Site
Commercial/Light Industrial	41.96	78
Roadways (approximate)	6.95	12.9
Open Space/Passive	4.90	9.1
Gross Area of Project Site	53.81	100

Source: Santa Paula West Specific Plan (October 2016).

4.10.2 REGULATORY SETTING

State

Government Code Section 65450

Government Code Section 65450 et seq. establishes required contents of a specific plan and describes its relation to the general plan.

Southern California Association of Governments

In addition to locally adopted plans, ordinances, and regulations, a number of regional plans also influence land use planning in the City of Santa Paula. Regional planning agencies, such as the Southern California Association of Governments (SCAG), recognize that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues such as affordable housing, transportation, and air pollution have resulted in the adoption of regional plans that affect the City of Santa Paula and the County of Ventura.

SCAG has evolved as the largest council of governments in the United States, functioning as the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial, and including 191 cities. The region encompasses a population exceeding 18 million persons in an area of more than 38,000 square miles.⁷ As the designated MPO, SCAG prepares plans for transportation, growth management, hazardous waste management, and air quality. Accordingly, SCAG has prepared comprehensive regional plans to address these concerns.

⁷ Southern California Association of Governments, "About SCAG," <http://www.scag.ca.gov/about/Pages/Home.aspx>.

SCAG is also responsible for the designated Regional Transportation Plan (RTP), which includes the Sustainable Communities Strategy (SCS) component as pursuant to Senate Bill (SB) 375. The SCS has been formulated to reduce GHG emissions from passenger vehicles by 8 percent per capita by 2020, by 18 percent per capita by 2035, and by 21 percent per capita by 2040 compared to 2005 targets set by the California Air Resources Control Board (CARB).

The 2016–2040 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socioeconomic, geographic, and commercial limitations. The goals included in the 2016 RTP/SCS may be pertinent to the proposed Project. These goals are meant to provide guidance for considering the Project within the context of goals and policies.

County of Ventura General Plan

The County of Ventura General Plan, which was last amended in October 2013, sets forth goals, policies, and programs to be implemented Countywide to manage future growth and land uses of unincorporated Ventura County.⁸ The County’s General Plan currently designates the Project site for Agriculture–Urban Reserve (40-acre minimum), with the zoning of Agricultural Exclusive (AE).

Land Use Categories

The County’s land use designation and zone district classifications that apply to the Project Site are described below:

Agriculture

This land use designation is generally applied to irrigated land that is suitable for crop production and/or livestock management, and primarily to lands that are designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, on the State of California’s Important Farmland Inventory. A minimum parcel size of 40 acres is considered appropriate in agricultural areas. The AE zone district classification corresponds to this land use category and prescribes permitted land uses and standards for land development, including a specification for minimum 40-acre-size parcels.

Urban Reserve Overlay

This category is applied to all unincorporated land within a city’s adopted Sphere of Influence that have been determined by the Ventura County Local Agency Formation Commission (LAFCo) to be appropriate

8 County of Ventura, *General Plan*, “Goals, Policies, and Programs,” (October 2013).

for eventual annexation and urbanization. Under the Agriculture designation, more intense development could not occur on affected lands until they are annexed.

City of Santa Paula General Plan

The Santa Paula General Plan was adopted in 1998 and is the “guiding document” of the City’s policies to guide long-term growth within its planning area. The General Plan is the decision-making framework to guide best uses of the City’s physical and economic resources. It is intended as a ‘blueprint’ to guide decisions concerning:

- Decisions about the use of land;
- Conservation and development of new housing;
- Provision of supporting infrastructure and public and human services;
- Protection of environmental resources;
- Protection of people and property from natural and man-made hazards;
- Allocation of fiscal resources;
- Population growth; and
- Expansion of City boundaries.

Land Use Categories

The City’s General Plan currently designates the Project site as C-LI .

Commercial–Light Industrial (C-LI)

A majority of the Santa Paula West Specific Plan would provide for C-LI uses. The individual projects within the Specific Plan would consist of low intensity manufacturing, research and development, professional offices, and limited commercial uses. Development intensity is limited to a FAR of 0.35.

Santa Paula Municipal Code

The SPMC establishes zones that facilitate the logical, coordinated planning of large areas for a variety of land uses and types of development. The SPMC establishes zoning regulations setting forth detailed standards and regulations for development activities in a manner consistent with the policies of the General Plan. The West Area 2 Expansion Area is zoned SP-6 by the SPMC.

Measure I—Save Open-Space and Agricultural Resources

The Save Open-Space and Agricultural Resources Santa Paula City Urban Restriction Boundary Initiative (SOAR) amended the General Plan in 2000 (adding Section III to the Land Use Element of the General Plan) by, among other things, creating a City Urban Restriction Boundary (CURB). The CURB was established coterminous with and in the same location as the SOI established by the Ventura LAFCo on February 2, 2000.⁹ Property located within the CURB may be developed in accordance with the General Plan and SPMC; any proposed extension of urban services or urbanized use to property located outside of the CURB generally requires voter approval.¹⁰

Ventura Local Agency Formation Commission

The Ventura LAFCo is responsible for establishing jurisdictional boundaries of public agencies in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000.¹¹ One of LAFCo's duties is to encourage the orderly formation and expansion of local government agencies.

In addition to complying with those policies set forth in Government Code 56668, to facilitate thoughtful and efficient deliberations and decision-making, Ventura LAFCo developed a Handbook for its commissioners that identifies the following general standards considered favorable for approval of an annexation request:

- The proposal would eliminate islands, corridors, or other distortions of existing boundaries.
- The affected territory is urban in character or urban development is imminent, requiring municipal or urban-type services.
- The affected territory can be provided by all public services by the city or district as shown by the city's or district's service plans, and the proposal would enhance the efficient provision of urban services.
- The proposal is consistent with state law, adopted spheres of influence, applicable general and specific plans, and these policies.
- The proposal is for the annexation of city- or district-owned property, used or to be used for public purposes.

10 Santa Paula General Plan, "Land Use Element" (1998).

11 California Code of Regulations, Government Code Section 56000, et seq.

Standards that are considered favorable with respect to boundary adjustments include:

- The proposal would create logical boundaries that coincide with existing and planned services and, where possible, eliminate previously existing islands.
- The proposed boundaries follow natural and man-made features such as ridgelines, drainage areas, watercourses, and edges of right-of-way, provided they coincide with lines of assessment or ownership, or are described by metes and bounds legal descriptions that can be easily used for mapping lines of assessment or ownership.
- The proposed boundaries include adjacent urbanized areas which are receiving or which may require urban services such as public water and/or sewer services.

For annexation proposals involving agricultural and open space lands, the LAFCo Commissioners Handbook indicates that such proposals may be approved if they would lead to planned, orderly, and efficient development, to be determined in accordance with these criteria:

- The territory involved is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.
- The territory is likely to be developed within 5 years and has been rezoned for nonagricultural or open space use. In the case of very large developments, annexation should be phased wherever possible.
- Insufficient nonprime agricultural or vacant land exists within the existing boundaries of the agency that is planned and developable for the same general type of use.
- The territory involved is not subject to voter approval for the extension of services or for changing general plan land use designations. Where such voter approval is required by local ordinance, such voter approval must be obtained prior to LAFCo action on any proposal unless exceptional circumstances are shown to exist.
- The proposal will have no significant adverse effects on the physical and economic integrity of other prime agricultural or open space lands.

4.10.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact to land use and planning if it would:

- Physically divide an established community?
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
- Conflict with any applicable habitat conservation plan or natural community conservation plan?

4.10.4 PROJECT IMPACTS

The Project impact analysis considered whether the Project would divide an existing neighborhood, community, or other land use or result in secondary impacts on surrounding land uses. In addition, the analysis considers whether the Project may disrupt the physical arrangement of an established community by introducing new infrastructure or isolating existing land uses. Specific “secondary” impacts on resources such as aesthetics, air quality, or traffic are evaluated in the pertinent subsections of **Section 4.0** of this EIR.

Threshold: Physically divide an established community?

The Project Site is located adjacent to the western boundary of the Santa Paula City limits. The land that currently makes up the Project Site is unincorporated territory under the jurisdiction of the County of Ventura. The Project includes the annexation of the Project Site into the City limits, to allow for the future development of light industrial and commercial uses. The parcels within the Specific Plan boundary would be subdivided with a Tentative Tract Map and roadways within the plan area would be created. Access to the Project Site from the SR 126 and West Telegraph Road would be maintained with driveways constructed per the SPMC standards. No new streets, flood control channels, utility lines, or other major infrastructure are proposed that would involve substantial physical alterations to the existing surrounding community. Essentially the Project would result in an expansion of the City’s urban area west through with use of existing infrastructure and access already in place and serving uses adjacent to the Project. Furthermore, there is no direct connectivity between the type of land uses that surround the Project Site. The surrounding land uses are in distinctive neighborhoods residential to the north) or commercial and light industrial areas (areas east), or agricultural lands (south and west) that are not directly connected physically. As such, allowed construction within the Specific Plan area would not create a physical separation or barrier between existing neighborhoods or other communities.

The Specific Plan area straddles the 100-foot-wide railroad corridor that is owned by the VCTC. However, this railroad line is currently out of commission and Project development would not encroach on the rail rights-of-way. The Specific Plan includes provisions for a landscaped screen along the railroad right of way

to soften any appearance of the allowed structures should the railroad ever become operable for passenger trains.

Furthermore, the Project entails the development of a business park that would involve an inner-circulatory system to maximize walkability and access throughout the site. The Project would integrate into the existing circulatory system that provides regional access to the City of Santa Paula. Faulkner Road would be extended through the Project Site to provide access to the Site from the development to the east. Thus, access points along SR 126 and West Telegraph Road, which bound the Project to the south and north respectively, would not be altered by the Project's circulatory system or by the Faulkner Road extension.

As the surrounding property to the east of the Project Site is also zoned by the City for Commercial/Light Industrial uses, there would be a transition between the existing uses and the Project to develop a consistent community. Annexation of the Project site in accordance with the General Plan would expand the City limits to coincide with the City's adopted SOI and CURB. The frontage would appear similar in mass and scale to the existing commercial and light industrial uses that align Telegraph Road, Beckwith Road, and Faulkner Road to the east.

Therefore, the Project would not physically divide the existing community of Santa Paula or any smaller enclaves outside the City limits. Based on these factors, the Project would not create incompatible land use relationships between the Project site and existing off-site uses, and as a result would not disrupt, divide, or isolate existing neighborhoods or communities. Therefore, impacts related to dividing an established community would be less than significant.

Threshold: **Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

Consistency with County of Ventura General Plan and Non-Coastal Zoning Ordinance

The 53.81-acre Specific Plan area would be annexed into the City of Santa Paula and removed from the County of Ventura Agricultural and Urban Reserve designations. With LAFCo's approval of the reorganization, the Project Site would no longer be subject to the County of Ventura's land use and zoning controls. Therefore, if approved by LAFCo and upon annexation, the Project would not conflict with the County of Ventura General Plan and Non-Coastal Zoning Ordinance.

Consistency with the City of Santa Paula General Plan and SPMC

The Specific Plan is proposed for adoption as an amendment to the City of Santa Paula's General Plan. Upon adoption by the City, the Project would retain City General Plan Land Use Element designations and City zone district classifications to the affected properties, replacing the existing Ventura County land use and zoning designations.

The City's proposed zoning designations for the Project Site were previously shown on **Figure 2.0-4, Land Use Master Plan**, and are consistent with the proposed General Plan Land Use designations for the majority of the area proposed for annexation. The Specific Plan would be zoned and designated as SP-6 SPWBSP Plan on the City's zoning map. While the Project Site is currently not subject to the SPMC, upon adoption of the Specific Plan into the General Plan and annexation of the into the City's boundaries it would be consistent with the SPMC. Therefore, the Project would result in less than significant impacts related to zoning regulations identified in the SPMC.

The Specific Plan area includes five parcels that are adjacent to the western boundary of the City of Santa Paula. The City's General Plan identifies urbanization and development for the West Area 2 Expansion Area and indicates that the City currently has 135 acres dedicated for commercial uses, 161 acres dedicated for industrial uses, and 141 acres dedicated for open space uses. As shown previously in **Table 4.10-3**, the Project would include 41.96 acres for Commercial/Light Industrial Uses across the Site and 4.9 acres of the Project Site along the Adams Barranca on the west would be dedicated for Open Space/Passive uses. The proposed City land use designations and zone district classifications match the designations for the Project Site, as shown on the City's General Plan Land Use Map. Therefore, the Specific Plan would be consistent with the General Plan and would not result in any conflicts. Upon adoption by the City, the Specific Plan would serve as the regulating land use and zoning document utilized for all development within the Specific Plan area.

The Project proposes the construction of urbanized uses within an Expansion Area that is currently within the CURB. Thus, no voter approval is required to amend the CURB.

This Specific Plan provides appropriate development standards and uniform design standards to ensure high quality development at the western entry to the City of Santa Paula on SR 126. The Specific Plan area would be designated SPWBSP Specific Plan on the City's General Plan Land Use Plan. Plans for future development of specific parcels within the proposed annexation area will be determined over time, as applications are submitted to the City. Future development will be subject to the proposed land use and zoning designations, which will ensure consistency with the Santa Paula General Plan land use policies for land use types and intensities.

Furthermore, the proposed Project is consistent with the long-term growth policies of the City's General Plan Land Use Element, as set forth in Section III.A. City Boundaries and Sphere of Influence, as discussed below:

1. The Project Site consists of land that is contiguous along the western portion of the current City boundary
2. There is little remaining vacant land within the existing City limits, and none of that is situated which that it could contribute to the successful development of proposed business park as set forth by the Project. This is as a result of physical constraints such as inadequate site area, inconvenient vehicular access, and likely incompatibilities with surrounding land uses.
3. The proposed annexation area, at the western edge of the existing City limits, was identified for expansion of the City's urbanized area in the City's General Plan when it was adopted in 1998. The approximately 125 acres of land was planned for major urban land development with a mixture of high quality commercial and light industrial land uses that optimize the economic value of that location in ways that benefit the entire community. Municipal services and urban infrastructure provided by the City of Santa Paula will be necessary to support the mixture and intensity of uses envisioned by the General Plan and annexation of the project is necessary to enable and facilitate the investment of the City's resources to the project site. With approval of the Santa Paula West Business Park Specific Plan to guide development of the commercial and light industrial uses within the Project Site, the Proposed Project will provide a complementary mixture of land uses that could employ future residents of that community and also provide a variety of products and services that would be conveniently accessible to that new community, as well as the existing City residents. As such, this Project represents an orderly and efficient implementation of the City's ultimate land use pattern as it is envisioned in the General Plan.
4. Future service needs of the Project area were fully considered, along with the costs of providing those services and the revenues that would be generated through implementation of the land use policies that would govern the development of the affected land.
5. As discussed in **Section 4.14, Utilities and Service Systems**, the City determined that its water supplies will be sufficient to meet the needs of the Project Site when fully developed, without jeopardizing water supplies available to landowners and water consumers within the existing City limits, including future businesses and residents within the East Area 1 and East Gateway Specific Plans. As discussed in **Section 4.12, Public Services**, the City's Police and Fire Departments will have adequate resources to respond to increased demand for services as the Project Site builds out, without adversely affecting levels of service to the rest of the City.
6. The proposed annexation area would be socially and environmentally interdependent with the existing urban area of the City of Santa Paula. This interdependence will be achieved by providing

suitable sites for commercial and light industrial businesses to meet the needs of the community not presently available in the City of Santa Paula, and by facilitating development of retail and other commercial uses that complement the residential, public facility, and small amount of commercial uses.

7. As discussed in **Section 4.2, Agricultural Resources**, farmlands on the Project Site have been designated on the State Important Farmland Map to include Prime Farmland, Farmland of Statewide Importance, and Urban and Built-up Land. The Project site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land, and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. As established in the City's General Plan, the Project Site is proposed to be converted from agricultural uses to urban uses. The General Plan identifies that development of the West Area 2 Expansion Area would result in the conversion of some agricultural land. Conversion of the Project Site to commercial and light industrial uses that would be permitted by the proposed Specific Plan and would be considered a significant unavoidable impact on agricultural resources, as discussed in **Section 4.2**. However, it is considered to be appropriate and timely to develop the Project Site, since there is no other land of suitable size and location available within the City of Santa Paula and the City's Sphere of Influence to allow development of a large business park.
8. The Project Site was identified in the City's General Plan as part of the West Area 2 Expansion Area, since the General Plan was adopted in 1998. Therefore, the City has considered incorporation of West Area 2 into the City limits, which is currently pre-zoned in the SPMC as SP-6 for commercial and light industrial uses. The Project Site is located within West Area 2 and consists of uses consistent with those proposed for the Expansion Area.

The Proposed Project is consistent with the long-term growth policies of the City's General Plan set forth in Section III.B. Expansion and Planning Areas, as discussed below:

1. The Project Site is located within West Area 2 specifically identified in the Santa Paula General Plan as an expansion area intended for eventual expansion of the City's urbanized development limits.
2. A comprehensive Specific Plan has been prepared to guide the orderly and efficient development of the proposed annexation area adjacent to the western boundary of the City. The proposed Santa Paula West Business Park Specific Plan contains all of the elements required by the Government Code in a Specific Plan.¹²

¹² California Government Code Sections 65640, et seq.

Consistency with SCAG RTP/SCS

In 2016, SCAG adopted the 2016 Regional Transportation Plan, including the Sustainable Community Strategy. The RTP/SCS provides goals toward sustaining mobility at a regional level. The consistency of the Santa Paula West Business Park Specific Plan with the regional goals of the RTP/SCS is discussed in **Table 4.10-4, Consistency with SCAG RTP/SCS**.

Table 4.10-4
Consistency with SCAG RTP/SCS

RTP/SCS Goal	Specific Plan Amendment Consistency
<p>G1: Align the plan investments and policies with improving regional economic development and competitiveness</p>	<p>Consistent: The Project would create a light industrial and commercial development that would stimulate economic development opportunities for the City and the greater community. The Project Site is located along SR 126, which provides regional access to the Santa Clara Valley. The Specific Plan, which comprises of the western edge of the existing City limits, was identified for expansion of the City’s urbanized area in the City’s 1998 General Plan to accommodate expected growth and economy demands in the City and region. This Project Site was identified as a suitable location for expansion of the City, given the access to the regional transportation system, existing utilities, and road infrastructure. The Specific Plan will create a desirable business park that will provide for location opportunities for various commercial and light industrial businesses. The Project will increase the competitiveness of the region and attract high-value employees as the Project would provide an employment center close to a range of desirable residential uses, as a result of the approval of the East Area 1 Specific Plan Amendment, and potentially other future residential development. Thus, the Project is aligned with plan investments and policies with improving regional economic development and competitiveness.</p>
<p>G2: Maximize mobility and accessibility for all people and goods in the region</p>	<p>Consistent: Development of the Project would ensure that mobility and accessibility for people and goods would be maximized. The transportation planning approach for the Specific Plan provides internal streets which will encourage a balanced and safe mix of vehicular, delivery trucks or other equipment appurtenant to allowed uses. As provided in Section 4.13, Transportation and Traffic, the Specific Plan Area will be served by public transportation as the City expands the local operations in the future. Additionally, the Project would incorporate 4.9 acres of open and passive space uses, as well as a safe and adequate system for pedestrian and bicycle circulation. These design features will maximize mobility and accessibility to all people, as well as the delivery of goods from allowed uses within the Project Site.</p>
<p>G3: Ensure travel safety and reliability for all people and goods in the region</p>	<p>Consistent: All modes of transportation would be required to follow safety standards set by corresponding regulatory documents. Streets, pedestrian walkways, and bicycle routes would follow safety precautions and standards established by local and regional agencies. Streets, pedestrian walkways, and bicycle routes would follow safety</p>

precautions and standards established by local and regional agencies. Based on an updated traffic study, the Specific Plan will include mitigation to a number of intersections and roadway segments that are within the regional transportation system, such as SR 126. Mitigation would ensure that all intersections and roadway segments affected by Project development would operate an acceptable level of service (LOS). Consequently, the travel safety and reliability for all people and delivery of goods will be maintained.

G4: Preserve and ensure a sustainable regional transportation system

Consistent: As discussed in **Section 4.13, Transportation and Traffic**, an updated traffic study evaluates the impact of the type and intensity of land uses that would be allowed by the Specific Plan and related projects on the local and regional transportation system. The Ventura County Transportation Commission (VCTC), as the designated Congestion Management Authority (CMA) for Ventura County, is responsible for coordinating land use, transportation planning, and air quality to mitigate traffic congestion. VCTC prepares and manages the Ventura County Congestion Management Program (VCCMP)^a to provide local government agencies with the resources to improve traffic congestion throughout Ventura County. Mitigation requiring improvements to the regional transportation system will be coordinated with VCTC and the California Department of Transportation (Caltrans) to ensure the sustainability of the system is maintained. The Specific Plan will not result in any significant impacts to the CMP roadway network or Caltrans facilities, or to regional transportation, traffic, circulation, and mobility.

G5: Maximize the productivity of our transportation system

Consistent: The Specific Plan would maximize the productivity of the public transportation system for local residents, visitors, and employees that travel to the Project Site for work, for patronage, or to conduct business. As the local population increases over the life of the Project, the productivity of the transportation system will be improved; more people and goods requiring transport will contribute to the system to expand connections to the eastern portion of the City. The Project will allow for the maximum use of the local transportation system.

G6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)

Consistent: The reduction of energy use, improvements in air quality, and promotion of more environmentally sustainable development would be supported through planning efforts encouraging the use of alternative transportation mode and green design for buildings. Approximately 7 percent of the Specific Plan area is dedicated to open space/passive uses to provide on-site recreational opportunities for visitors and employees. Sidewalks would also be incorporated into the Specific Plan's circulation plan. The arrangement of uses combined with the on-site amenities will promote use of nonmotorized transportation modes, which will improve vehicle air emissions and promote a healthier environment.

G7: Actively encourage and create incentives for energy efficiency, where possible

Consistent: The Project would allow for the circulation of automobiles and service vehicles in a safe and efficient manner. The street patterns within the Project site would be organized to provide efficient circulation and access to each of the Project's neighborhood planning areas. Individual project would be designed to increase energy efficiency, water efficiency, and overall sustainability. The Project is

	also located in an urban area that would reduce vehicle trips and vehicle miles traveled due to the nature of the Project incorporating an interconnected network of streets and blocks that provides multiple routes for pedestrians, bicyclists, and motorists. This interconnected network would minimize vehicular trips throughout the Project site, thus reducing energy use.
G8: Encourage land use and growth patterns that facilitate transit and active transportation	Consistent: The Project would implement a thoroughfare system that encourages all forms of nonmotorized transportation. The Ventura Intercity Service Transit Authority (VISTA) provides public transit service to the City of Santa Paula. While there are currently no stops that service the Project Site, VISTA makes two stops in the City as part of the SR 126 route. As future developments within the Specific Plan occur, transit service will be extended to serve the Project Site. As provided in Section 4.4, Transportation and Traffic , the Project development will participate in accommodating an expansion of the VISTA transit system.
G9: Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordinating with other security agencies	Consistent: The VCTC, as the designated CMA for Ventura County, provides local government agencies with the resources to improve traffic congestion throughout Ventura County. Through the VCCMP, The VCTC includes a system for monitoring the significant corridors and goods movement routes, current congestion levels. Development of the Project would maintain, preserve, and ensure a sustainable regional transportation system, such as SR-126. It would maximize productivity by implementing the Specific Plan as approved by the City, thus it would be consistent with the City's plans for development of the site. The Project would not result in significant impacts to the regional transportation system.

Source: Ventura County Transportation Commission, 2009 Update—Ventura County Congestion Management Plan, (adopted July 2009).

Therefore, the Project would be consistent with all nine SCAG RTP/SCS policies evaluated above. Impacts would be less than significant.

Consistency with Ventura LAFCo Analysis

Annexation of the Project Site to the City of Santa Paula would be subject to LAFCo approval, which requires consistency with state laws, as well as relevant LAFCo policies and procedures. As the Project Site is currently located within the City's LAFCo approved SOI, implementation of the Project would not conflict with state law or LAFCo's Annexation Policies and Procedures. Government Code 56668, which LAFCo is required to consider in its decision to approve a boundary reorganization request.

As previously discussed, LAFCo considers various criteria upon the decision-making process of approving an annexation request. The Project would annex land that is contiguous with the existing City boundary, thus not creating any islands, corridors, or other boundary distortions. The Project Site would connect with existing utility infrastructure and public service access provided by the City.

While the Project Site is currently utilized for agricultural production, the Site is pre-zoned by the City for urbanized uses and is adjacent to other developed lands. The City considered the conversion of agricultural lands into urban uses within the West Area 2 Expansion Area upon adoption of the 1998 General Plan. Therefore, implementation of the Project would not conflict with LAFCo's criteria regarding annexation of the agricultural lands.

As the proposed Project would annex unincorporated territory into the City of Santa Paula from the County of Ventura, the Project would apply City General Plan Land Use designations and City zone district classifications to the affected parcels, replacing the existing Ventura County land use and zoning designations. Consequently, LAFCo's approval of the annexation would entail that implementation of the Project would not conflict with the Ventura County General Plan or Non-Coastal Zoning Ordinance.

LAFCo Commissioners Handbook Standards

The Project is consistent with the Handbook policies that favor annexations to cities, as set forth in Section 3.3.1 General Standards for Annexation to Cities and Districts, because it would:

- Eliminate islands of unincorporated territory and fill in gaps within the City of Santa Paula's jurisdictional boundaries. While the VCTC railway that bisects the Project Site is not a part of the Project, the areas along the railroad right-of-way would be improved with landscaped screening to ensure compatibility with the Project. Additionally, an existing at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road. Implementation of the Project around the VCTC railway would not result in any conflicts with surrounding City uses.
- Facilitate urbanized development in the western portion to the City of Santa Paula, consistent with the City's existing General Plan policies that envision this area for urban expansion to accommodate City growth through 2020. Buildout of the Specific Plan area is imminent, based upon future market and economic conditions, with concurrent infrastructure improvements and extension of public services to maintain desired levels of service.
- Extensions of municipal services are needed to support the range and intensities of land uses envisioned for this area by the City's General Plan, and the City of Santa Paula has the resources to provide such services in an efficient manner. The Project Site is located within the City's SOI and is proposed for expansion within the General Plan. The Proposed Project would benefit the community as it would be used for public purposes.

The Proposed Project is consistent with Handbook policies set forth in Section 3.3.2 General Boundary Criteria, because it would:

- Create logical municipal service boundaries within the City's established SOI, eliminate existing and future islands of unincorporated territory, and 'fill in' the city limits in the strategic eastern gateway to Santa Paula.
- The proposed boundaries would follow existing rights-of-way and land ownership lines and affect only land that is contiguous to existing city boundary lines.
- The affected land can be efficiently served by the City's municipal services, most critically, water and sewer infrastructure.

The Project is consistent with Handbook policies set forth in Section 3.3.5 Agriculture and Open Space Preservation, because:

- The Proposed Project would facilitate orderly, planned and efficient development of the affected area, which has been targeted for urban expansion by the City of Santa Paula, since its General Plan was originally adopted in 1998.
- As discussed in **Section 4.2**, the Project Site is currently utilized for the agricultural production of various row crops, avocados, and citrus. While implementation of the Proposed Project would result in the conversion of agricultural land to urban uses, this conversion would be consistent with those planned land uses established within the City's General Plan.
- The agricultural land within the proposed Specific Plan is adjacent to already urbanized land to the east and north and is located in the western boundary of the City along SR 126 that is identified for urban expansion in the Santa Paula General Plan. Buildout of the Specific Plan would occur as market conditions allow. However, with the demand for additional commercial and light industrial uses within the City of Santa Paula, development of the Specific Plan within the next five years is thus considered timely.
- There is insufficient non-prime agricultural or vacant land within the City's existing boundaries that is planned and developable for the same general type of use. Not including the recently approved East Area 1 Specific Plan Amendment area, an inventory of vacant land conducted for the City's 2013-2021 Housing Element Update found approximately 60 acres of vacant, residentially zoned land and several small vacant commercial properties, throughout the current city limits. Those vacant sites are dispersed and could not provide sufficient site area to enable orderly, efficient and planned development of the commercial and light industrial uses envisioned for the Project area in the Santa Paula General Plan.
- Other undeveloped land is available within the City's Sphere of Influence does not have the locational characteristics required for light industrial uses, or are not large enough to accommodate these uses. The other major expansion areas identified in the Santa Paula General Plan, Adams and Fagan Canyons, are located well north of SR 126 and have limited access. Because of the existing

characteristics of these expansion areas, the Santa Paula General Plan limits development in Adams Canyon to single-family homes, a destination resort hotel, and a golf course, along with public facilities. Development permitted in Fagan Canyon by the General Plan includes single-family residences with supporting public facilities and a limited amount of neighborhood commercial uses.

- The affected territory is not subject to voter approval for the extension of services or for the proposed minor changes in existing City General Plan land use designations. As discussed above, the proposed Specific Plan would include the annexation of land located within the CURB. Measure L6 is not triggered by the Proposed Project for the reasons discussed above.

Threshold: **Conflict with any applicable habitat conservation plan or natural community conservation plan?**

Within the City, open space can be found in parks, along river and creek floodways, on steep hillside slopes, in public gathering spaces, and on agricultural parcels. The Santa Paula General Plan Open Space and Conservation Element designates the Adams Barranca as a natural resources area.

In addition, the Santa Paula-Ventura Greenbelt, the first greenbelt in Ventura County, was adopted in 1967, and recently amended in 2006, to maintain the land generally between the Franklin Barranca and Adams Barranca in agricultural production. As such, Adams Barranca represents the eastern reaches of the Santa Paula-Ventura Greenbelt. Although the Adams Barranca has been improved, it contains natural riparian vegetation. It likely also provides habitat for an array of local wildlife species. The natural resource and biological quality of the Barranca and other areas within the Project Site are discussed in more detail in **Section 4.4, Biological Resources**.

As provided in **Figure 2.0-4**, the Specific Plan includes a dedication of Open Space/Passive uses over 4.9 acres that includes the Adams Barranca and buffer areas on the western portion of the Project Site. This dedication would preserve the habitat and natural community as envisioned in the City's Open Space and Conservation Element of the General Plan. Therefore, impacts related to habitats conservation or natural community conservation plans would be less than significant.

4.10.5 CUMULATIVE IMPACTS

As noted in **Table 3.0-1, Related Projects**, a number of specific development projects are planned within the City of Santa Paula that may be constructed within the timeframe of the Santa Paula West Business Park Specific Plan. The majority of these related projects are comprised of smaller infill projects within the City. Many of these projects will be similar in scale, nature, and use to existing and surrounding land uses. These related projects will also be developed in accordance with the City's zoning standards. A majority

of other projects currently being planned or anticipated for future development are located throughout the existing Santa Paula area to the west of Santa Paula Creek, as previously shown on **Figure 3.0-1**.

Development within the City may also occur within the five Expansion and Planning Areas identified in the City's General Plan, including Adams Canyon, Fagan Canyon, South Mountain, West Area 2 and East Area 2 (East Gateway). No significant cumulative land use impacts from future development within these expansion areas would result as these areas will be developed in accordance with the City's General Plan. The Santa Paula General Plan considered the existing environmental characteristics of these expansion areas and, based on these characteristics, defines the type and allowed intensity of uses in these expansion areas. The Environmental Impact Report (EIR) prepared for the General Plan evaluated the impact of development of these expansion areas. In addition, the General Plan requires the preparation of Specific Plans for these expansion areas to further minimize environmental impacts. Additional environmental review will also be required and will be conducted prior to the adoption of these Specific Plans.

The remainder of the West Area 2 Expansion Area, which includes the Project Site, is proposed for annexation and development of light industrial and commercial uses. The East Area 1 Specific Plan Amendment area on the eastern portion of the City would include the development of various residential, commercial, light industrial, commercial, and civic uses across a 501-acre area. The East Area 1 Specific Plan Amendment will increase the on-site open space amenities and achieve greater compatibility with the nearby East Gateway light industrial and commercial development in terms of providing a balance of land uses. Therefore, the contribution of the development from the Specific Plan to cumulative land use impacts for all related projects and other General Plan anticipated land uses in the area would be less than significant.

4.10.6 MITIGATION MEASURES

Implementation of the Project would not result in significant adverse impacts related to land use and planning and mitigation measures are not required.

4.10.7 RESIDUAL IMPACTS AFTER MITIGATION

No significant impacts would result from the Project.

This section evaluates the potential for the proposed Project to result in noise impacts within the Project Site and surrounding communities. This evaluation uses procedures and methodologies as specified by the California Department of Transportation (“Caltrans”), the Federal Transit Administration (FTA), and the Federal Highway Administration (FHWA). Noise monitoring and roadway noise modeling datasheets are included in **Appendix 4.11**.

4.11.1 EXISTING CONDITIONS

Noise and Vibration Basic

Fundamentals of Noise

Sound is mechanical energy transmitted by pressure waves in a compressible medium, such as air. Noise can be defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level is the most common descriptor used to characterize the loudness of an ambient sound level.

The unit of sound pressure expressed as a ratio to the faintest sound detectable to a person with normal hearing is called a decibel (dB). Sound or noise can vary in intensity by over 1 million times within the range of human hearing. A logarithmic loudness scale similar to the Richter scale for earthquake magnitude is used to keep sound intensity numbers at a convenient and manageable level. The human ear is not equally sensitive to all frequencies in the entire spectrum, so noise measurements are weighted more heavily for frequencies to which humans are sensitive in a process called A-weighting, written dB(A). The A-weighted sound level is measured on a logarithmic scale such that a doubling of sound energy results in a 3.0 dB(A) increase in noise level. In general, changes in a noise level less than 3.0 dB(A) are not typically noticed by the human ear.¹ Changes from 3 to 5 dB(A) may be noticed by some individuals who are extremely sensitive to changes in noise. An increase greater than 5 dB(A) is readily noticeable, while the human ear perceives a 10 dB(A) increase in sound level to be a doubling of sound volume. Common noise levels associated with certain activities are shown on **Figure 4.11-1, Common Noise Levels**.

1 US Department of Transportation, Federal Highway Administration, *Fundamentals and Abatement of Highway Traffic Noise* (Springfield, VA: US Department of Transportation, Federal Highway Administration, September 1980), 81.

Noise Terminology

Different types of scales are used to characterize the time-varying nature of sound. Applicable scales include the maximum noise level (L_{max}), equivalent noise level (Leq), and the Community Noise Equivalent Level (CNEL). L_{max} is the maximum noise level measured during a specified period. Leq is the average A-weighted sound level measured over a given time interval. Leq can be measured over any period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods. CNEL is an average A-weighted sound level measured over a 24-hour period. However, this noise scale is adjusted to account for some individuals' increased sensitivity to noise levels during the evening and nighttime hours. A CNEL noise measurement is obtained by adding 5 dB(A) to sound levels occurring during the evening, from 7:00 PM to 10:00 PM, and 10 dB(A) to sound levels occurring during the nighttime, from 10:00 PM to 7:00 AM. The 5 dB(A) and 10 dB(A) "penalties" are applied to account for increased noise sensitivity during the evening and nighttime hours. Day-night average level (L_{dn}) is the A-weighted equivalent sound level for a 24-hour period with an additional 10 dB imposed on the equivalent sound levels for nighttime hours of 10:00 PM to 7:00 AM.

Table 4.11-1, Noise Descriptors, identifies various noise descriptors developed to measure sound levels over different periods of time.

**Table 4.11-1
Noise Descriptors**

Term	Definition
Sound	A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measure sound to a reference pressure.
A-Weighted Decibel (dB[A])	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Continuous Sound Level (Leq)	The sound level containing the same total energy as a time varying signal over a given time period. The L _{eq} is the value that expresses the time averaged total energy of a fluctuating sound level. L _{eq} can be measured over any time period, but is typically measured for 1-minute, 15-minute, 1-hour, or 24-hour periods.

Term	Definition
Day-Night Level (Ldn)	The energy average of the A-weighted sound levels occurring during a 24-hour period with 10 dB(A) added sound levels occurring from 10 PM to 7 AM.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments add 5 dB(A) for the evening, 7:00 PM to 10:00 PM, and add 10 dB(A) for the night, 10:00 PM to 7:00 AM. The 5 and 10 decibel penalties are applied to account for increased noise sensitivity during the evening and nighttime hours. The logarithmic effect of adding these penalties to the 1-hour L_{eq} measurements typically results in a CNEL measurement that is within approximately 3 dB(A) of the peak-hour L_{eq} . ¹
sound pressure level	The sound pressure is the force of sound on a surface area perpendicular to the direction of the sound. The sound pressure level is expressed in dB.
Ambient Noise	The level of noise that is all encompassing within a given environment, being usually a composite of sounds from many and varied sources near to and far from the observer. No specific source is identified in the ambient environment.

Source: California Department of Transportation, Technical Noise Supplement; A Technical Supplement to the Traffic Noise Analysis Protocol, (Sacramento, CA: November 2009), pp. N5–N54.

Noise Barrier Attenuation

The introduction of a barrier between a noise source and a sensitive receptor redistributes the sound energy into several paths, including a diffracted path over the top of the barrier, a transmitted path through the barrier, and a reflected path directed away from the sensitive receptor. Diffraction is the bending of sound waves over the top of a barrier. The area behind the barrier in which diffraction occurs is known as a “shadow zone,” and sensitive receptors located in this area will experience some sound attenuation. The amount of attenuation is related to the magnitude of the diffraction angle. The diffraction angle will increase if the barrier height increases or if the distance from sensitive receptors is decreased to the barrier.

Sound can also travel through the barrier itself. The level of sound transmission through the barrier depends on factors relating to the composition of the barrier (such as its weight and stiffness), the angle of incidence of the sound, and the frequency spectrum of the sound. The rating of a material’s ability to transmit noise is called transmission loss. Transmission loss is related to the ratio of the incident noise energy to the transmitted noise energy, and it is normally expressed in decibels, which represents the amount noise levels will be reduced when the sound waves pass through the material of the barrier. For example, sound energy can also be reflected by a barrier wall. The reflected sound energy would not affect the sensitive receptor on the other side of the barrier but may affect sensitive receptors to the left and

right of it.² Man-made or natural barriers can also attenuate sound levels, as illustrated in **Figure 4.11-2, Noise Attenuation by Barriers**. A solid wall or berm may reduce noise levels by 5 to 10 dB(A).³

Contemporary wood frame construction techniques in California typically provide about 25 dB(A) reduction in exterior to interior noise levels. This is due to structural means used to comply with California regulations, such as the Title 24 energy conservation standards. The minimum attenuation of exterior to interior noise provided by typical structures in California is provided in **Table 4.11-2, Attenuation of Typical Structures**.

Table 4.11-2
Noise Attenuation of Typical Structures

Building Type	Open Windows (dB[A])	Closed Windows (dB[A])^a
Residences	17.0	25.0
Churches	20.0	30.0
Hospitals/Convalescent homes	17.0	25.0
Offices	17.0	25.0
Theaters	20.0	30.0
Hotels/Motels	17.0	25.0

Source: Bolt Beranek and Newman, Inc., Highway Noise: A Design Guide for Highway Engineers, NCHRP Report No. 117, (1971). Prepared for Highway Research Board, National Academy of Sciences, Washington, D.C.

^a As shown, structures with closed windows can attenuate exterior noise by a minimum of 25.0 to 30.0 dB(A).

Vibration

Vibration consists of waves transmitted through a solid medium. Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves. A vibration may be a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in hertz (Hz). Most environmental vibrations consist of a composite, or “spectrum,” of many frequencies and are generally classified as broadband or random vibrations. The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz. Vibration is often measured in terms of the peak

2 U.S. Department of Housing and Urban Development, Office of Community Planning and Development, *The Noise Guidebook* (n.d.), p. 21–23.

3 Carl E. Hanson, David A. Towers, and Lance D. Meister, *Transit Noise and Vibration Impact Assessment*, Report No. FTA-VA-90-1003-06 (Washington, DC: U.S. Department of Transportation, Federal Transit Administration, Office of Planning and Environment, 2006), 7–8. http://www.fta.dot.gov/documents/FTA_Noise_and_Vibration_Manual.pdf.

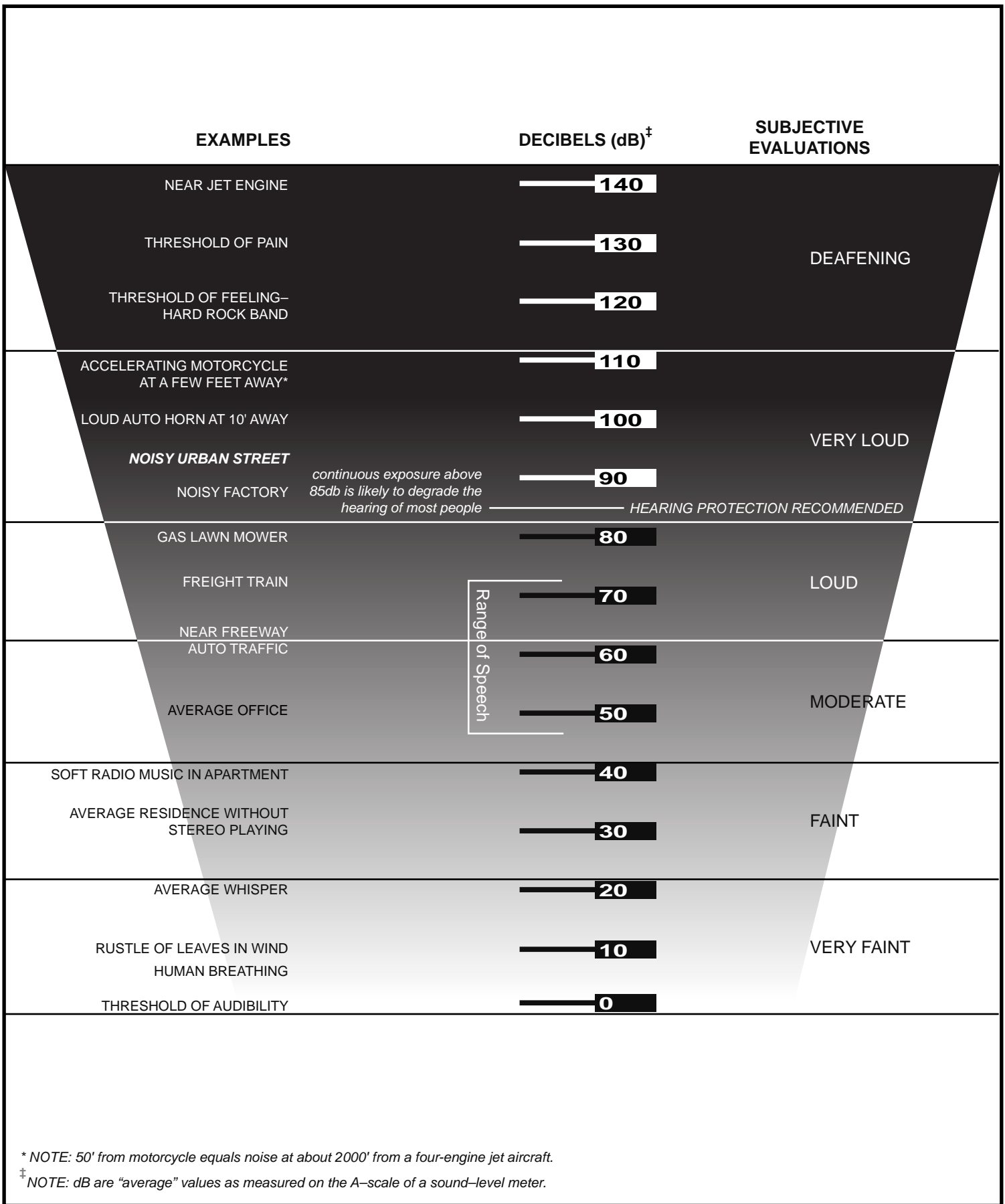
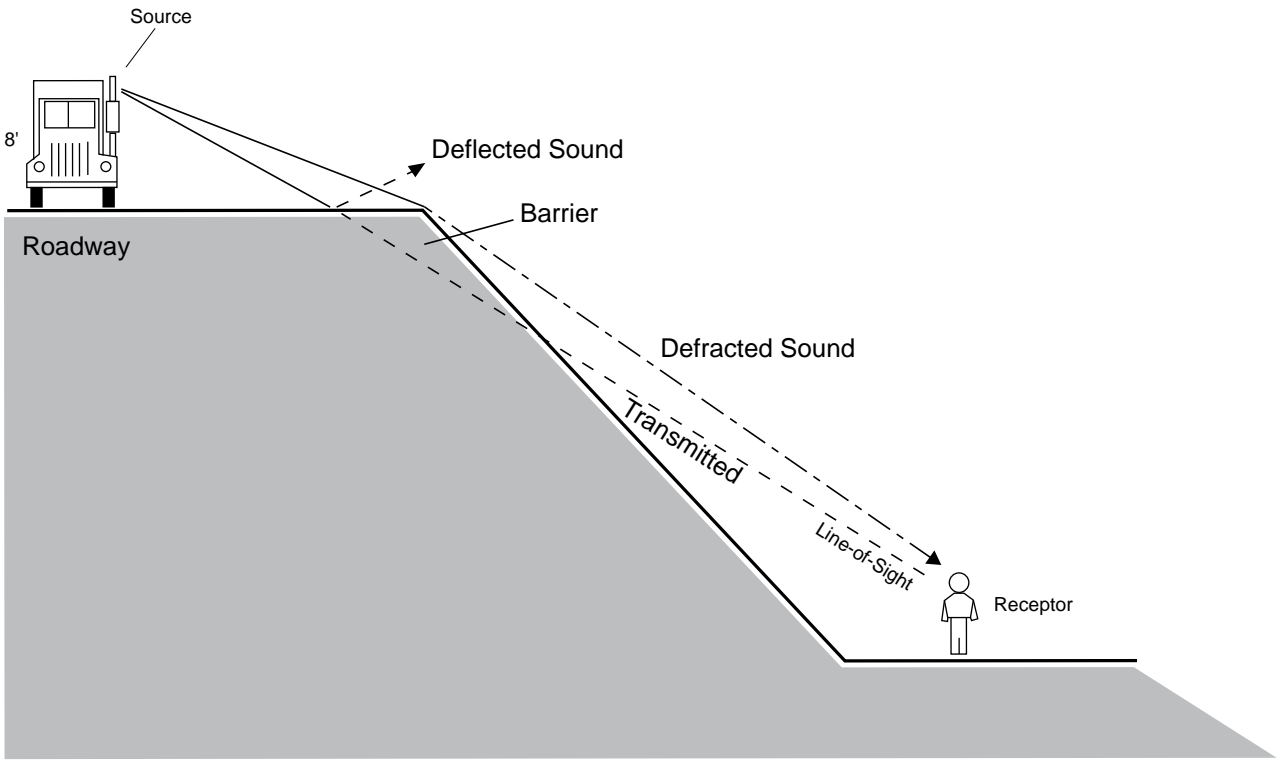
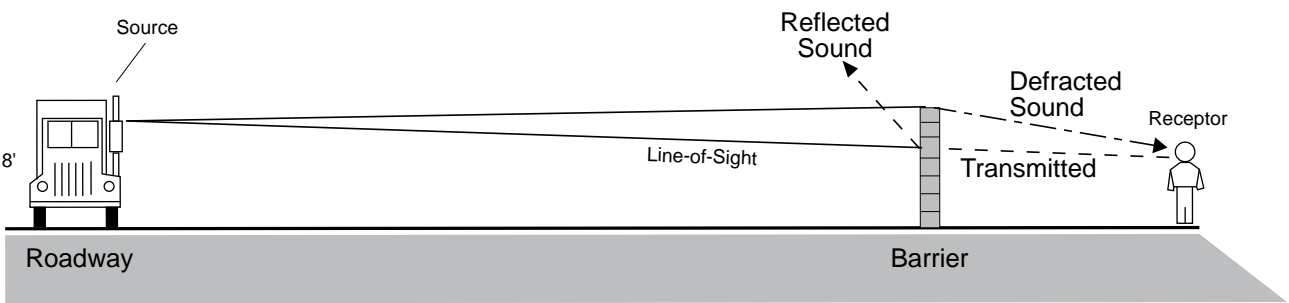


FIGURE 4.11-1



"Barrier Effect" Resulting from Differences in Elevation.



"Barrier Effect" Resulting from Typical Soundwall.

FIGURE 4.11-2

particle velocity (PPV) in inches per second (in/sec), because it is related to the stresses that are experienced by buildings. Vibration is also measured in vibration decibels (VdB).

The human threshold of perception is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Vibration levels are acceptable at approximately 85 VdB if there are an infrequent number of events per day.⁴

Vibration energy attenuates as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source.⁵ High-frequency vibrations reduce much more rapidly than low-frequency vibrations, so that in the far-field from a source, the low frequencies tend to dominate. Soil properties also affect the propagation of vibration. When groundborne vibration interacts with a building, there is usually a ground-to-foundation coupling loss, but the vibration can also be amplified by the structural resonances of the walls and floors.⁶ Vibration in buildings is typically perceived as rattling of windows or of items on shelves, or as the motion of building surfaces.

Groundborne vibration is generally limited to areas within a few hundred feet of certain types of construction activities, especially pile driving. Road vehicles rarely create enough groundborne vibration to be perceptible to humans unless the road surface is poorly maintained and there are potholes or bumps.⁷ If traffic, typically heavy trucks, induces perceptible vibration in buildings, such as window rattling or shaking of small loose items, then it is most likely an effect of low-frequency airborne noise or ground characteristics. Human annoyance by vibration is related to the vibration energy and the number and duration of events, as well as the setting in which the person experiences the vibration. As discussed in the previous paragraph, vibration can be amplified by the structural resonances of the walls and floors of buildings. The more the events or the greater the duration, the more annoying it will be to humans. **Figure 4.11-3, Typical Levels of Groundborne Vibration**, identifies typical groundbourne vibration levels.

Sensitive Receptors

Some land uses are recognized as being more sensitive than others to noise levels and vibration. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, parks, and outdoor recreation areas are generally more sensitive to noise and vibration than are commercial and industrial land uses. Existing land uses surrounding the Project Site include single-family residences to the north and scattered single-family residences to the immediate west of the Project Site.

4 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* (2006).

5 California Department of Transportation, *Earthborne Vibrations* (1990), VII-27.

6 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* (2006), 7-1, 7-2.

7 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment* (2006), 7-9.

The primary noise sources affecting sensitive receptors (homes, schools, hospitals) in the city are traffic on State Route (SR) 126 and SR 150, as well as aircraft operations at the Santa Paula Airport. Some industrial, commercial, and agricultural uses are also identified as noise contributors, although such sources have not generally been identified as significant noise problems.⁸ With respect to the Project, the primary sources of noise include roadway noise, railroad operations, the Santa Paula Airport, and agricultural operations. The Santa Paula Branch Line (SPBL) is currently not operable. Sensitive receptors include single-family residences to the directly to the north across Telegraph Road, and scattered residences directly to the west.

Existing Conditions

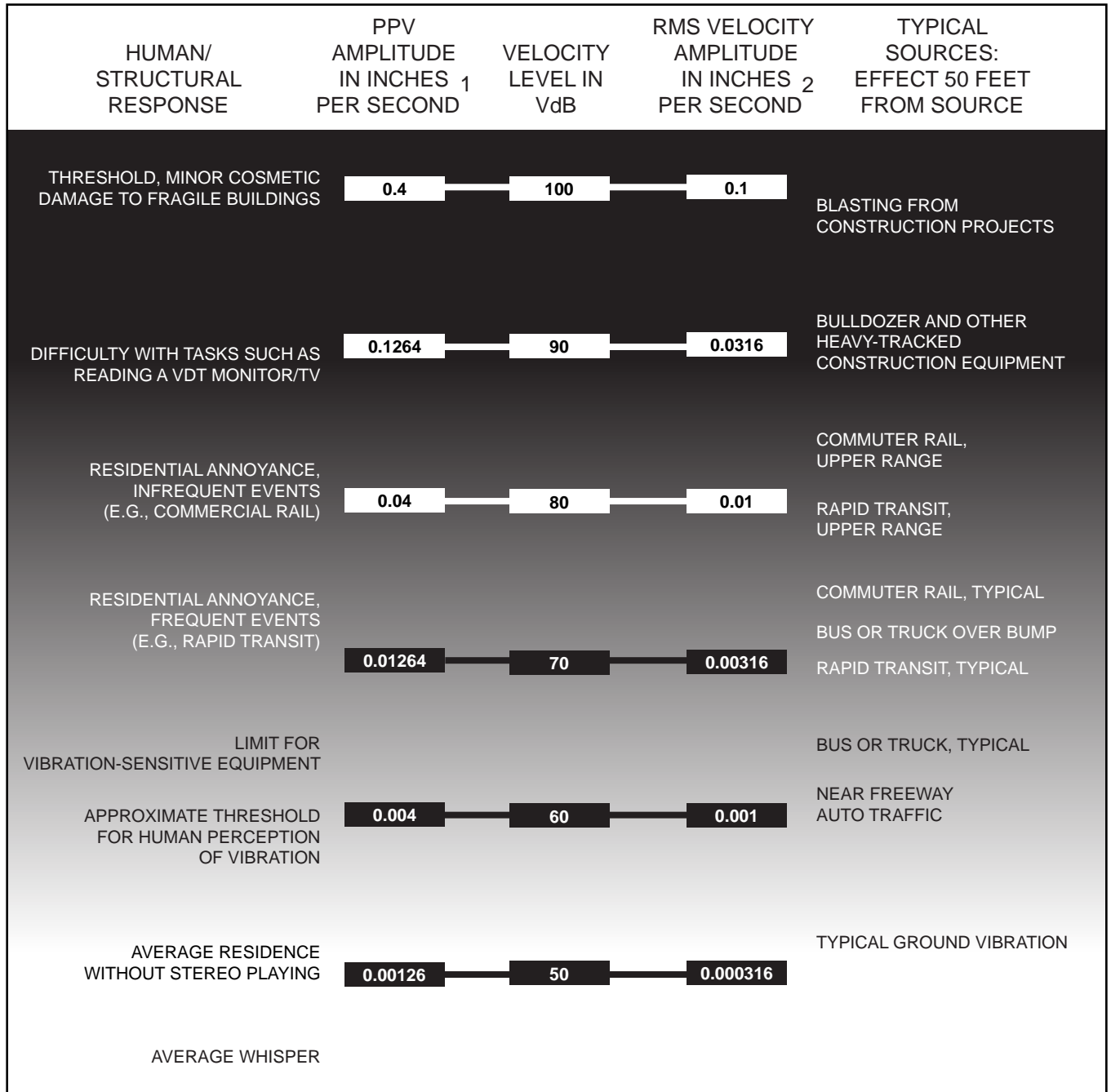
The Santa Paula West Business Park is located within the Ventura County Local Agency Formation Commission Sphere of Influence for the City of Santa Paula and the City Urban Restriction Boundary with frontage along SR 126 and Telegraph Road and is bisected by the railroad right-of-way. While it is just west of the Santa Paula City limits, the area is within the City of Santa Paula Sphere of Influence, and is outside of the Santa Paula–Ventura Greenbelt.

The General Plan Noise Element identifies the primary noise concern associated with the airport as aerobatics, which are periodically practiced east of the City. Figure N-2 of the Noise Element shows noise contours from SR 126, SR 150 and the airport. The combined 60 dB(A) CNEL noise contour extends into the eastern portion of the Project Site. Other noise sources of noise include operations on the SPBL, and some industrial, commercial, and agricultural uses equipment when equipment is operating. Currently, there are no rail operations on the SPBL.

Existing Off-Site Roadway Noise Levels

Roadway noise is the predominant source of noise for the general vicinity of the Project Site. The estimated existing ambient roadways noise levels were modeled for the roadways that will be affected by traffic generated by the Project Site. Roadway noise modeling involved the calculation of existing and future vehicular noise levels along individual roadway segments using the FHWA Traffic Noise Model (TNM). This model calculates the average noise levels at specific locations based on traffic volumes, average speeds, roadway, geometry, and site conditions. The estimated existing roadway noise levels are provided in **Table 4.11-3, Modeled Existing Roadway Noise Levels**. As shown in **Table 4.11-3**, the existing vehicle-generated noise levels during the peak hour along roadway segments near the Project Site range from 52.8 dB(A) CNEL (Briggs Rd. s/o SR 126 WB On/Off Ramps) to a high of 65.0 dB(A) CNEL (Harvard Blvd. w/o Palm Ave.) at a distance of 75 feet from each roadway's centerline.

⁸ City of Santa Paula, "Noise Element," *City of Santa Paula General Plan* (April 13, 1998), p. N-3



¹ PPV is typically a factor 1.7 to 6 times greater than RMS vibration velocity. A factor of 4 was used to calculate noise levels.

² Vibration levels in terms of velocity levels are defined as: $V=20 \times \log_{10} (a/r)$
 V=velocity levels in decibels
 a=RMS velocity amplitude
 r=reference amplitude (accepted reference quantities for vibration velocity are 1×10^{-6} inches/second in the United States)

FIGURE 4.11-3

**Table 4.11-3
Modeled Existing Roadway Noise Levels**

Roadway Segment	Roadway Noise Level at 75 feet from Center (dB[A] CNEL)
Harvard Blvd. w/o 10th St.	63.1
Harvard Blvd. e/o 8th St.	63.7
8th St. s/o Main St.	55.2
8th St. n/o Harvard Blvd.	54.9
Harvard Blvd. w/o 8th St.	64.0
Harvard Blvd. e/o Palm Ave.	64.2
Palm Ave. n/o Harvard Blvd.	59.9
Palm Ave. s/o Main St.	59.8
Main St. e/o Palm Ave.	57.8
Main St. w/o 8th St.	57.1
Harvard Blvd. w/o Palm Ave.	65.0
Harvard Blvd. e/o Steckel Dr.	64.0
Steckel Dr. n/o Harvard Blvd.	54.8
Steckel Dr. s/o Main St.	53.3
Main St. e/o Steckel Dr.	60.5
Main St. w/o Palm Ave.	61.0
Harvard Blvd. w/o Steckel Dr.	63.6
Harvard Blvd. e/o Peck Rd.	63.1
Peck Rd. s/o Harvard Blvd.	59.2
Peck Rd. n/o Faulkner Rd.	59.4
Peck Rd. s/o Faulkner Rd.	58.2
Peck Rd. n/o SR 126 EB On/Off Ramp	58.3
Harvard Blvd./Telegraph Rd. w/o Peck Rd.	59.2
Telegraph Rd. e/o Beckwith Rd.	58.5
Telegraph Rd. w/o Beckwith Rd.	58.1
Telegraph Rd. e/o Briggs Rd.	62.9
Briggs Rd. s/o Telegraph Rd.	53.4
Briggs Rd. n/o Faulkner Rd.	53.4
Briggs Rd. s/o Faulkner Rd	53.6
Briggs Rd. n/o SR 126 WB On/Off ramps	53.7
Briggs Rd. s/o SR 126 WB On/Off Ramps	52.8
Briggs Rd. n/o SR 126 WB On/Off Ramps	53.1

Source: Fehr & Peers, Draft Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan (March 2015).

Notes: n/o = north of; s/o = south of; e/o = east of; w/o = west of.

Noise-modeled results are provided in **Appendix 4.11**.

Santa Paula Airport

The Santa Paula Airport is located on a 38-acre site south of SR 126, approximately 1.5 miles east of the Project Site. The Santa Paula Airport currently operates as an uncontrolled public-use facility and is not used for commercial purposes. A single 2,650-foot runway generally supports propeller-driven aircraft. According to the Noise Element of the Santa Paula General Plan, aircraft noise is generally not a problem in the City because the aircraft travel pattern is mainly south of the City, over the Santa Clara River, and the required approach and departure altitude is at least 1,500 feet above mean sea level (msl) when planes are over the City limits. Once near Peck Road, near the western City limits, planes transition toward 850 feet above msl and align with the farmland south of the Santa Clara River, and then continue their descent toward land uses that are not sensitive to noise.⁹

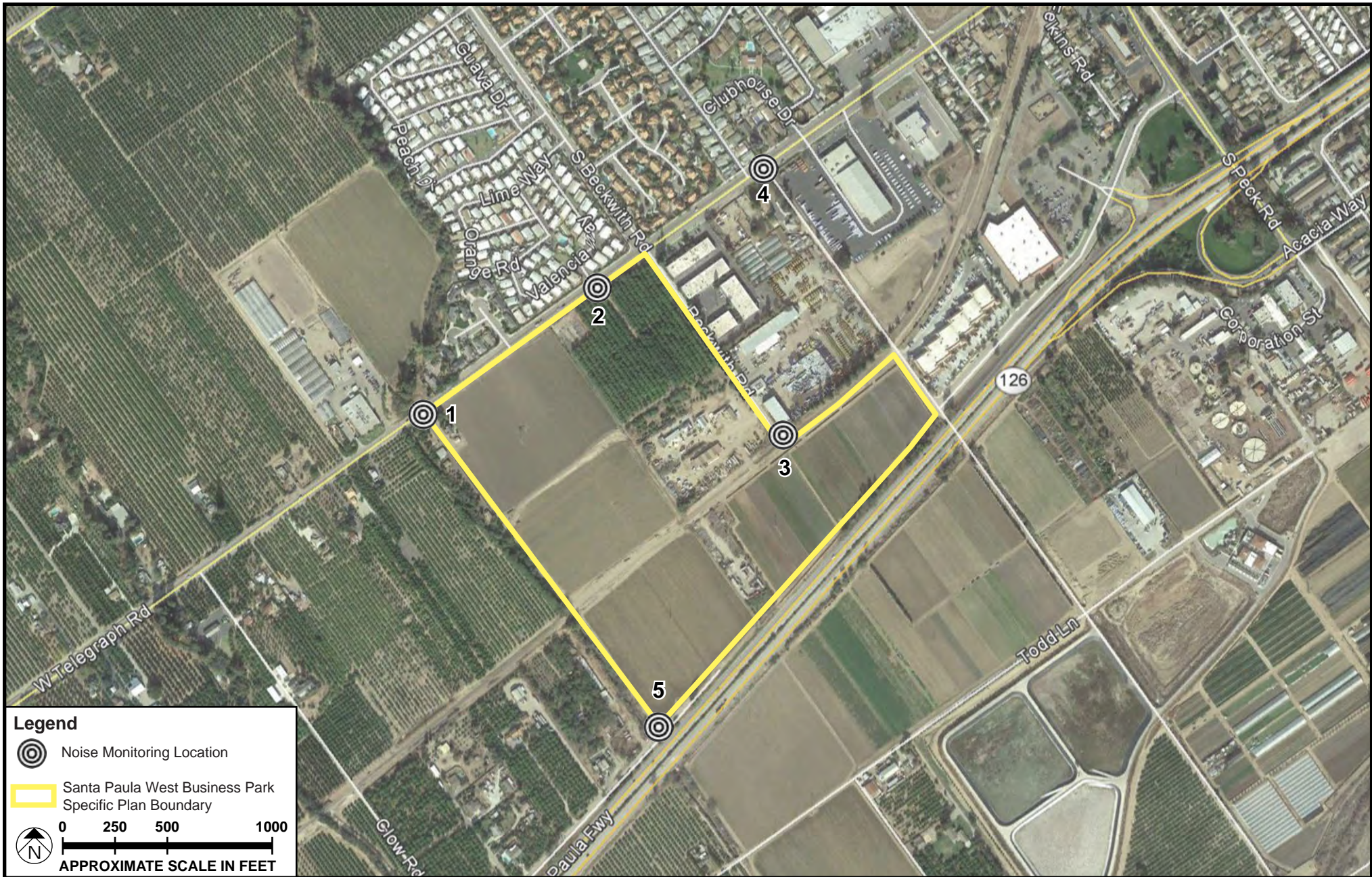
Santa Paula Branch of the Southern Pacific Railroad

The Santa Paula Branch of the Southern Pacific Railroad tracks is owned by the Ventura County Transportation Commission (VCTC). The railroad tracks, have historically been a source of noise running through the Project Site. However, no rail operations are currently generating train noise and it is uncertain what the ultimate use of the rail corridor will be.

Noise Monitoring

Existing on-site noise sources include farm equipment, motor vehicles, and activities associated with the on-site residences. Noise measurements were taken during weekdays in May 2015 with Larson Davis Type I meter. This meter satisfies the American National Standards Institute standard for general environmental noise measurement instrumentation. Random incidence microphones with windscreens were used, given the outdoor (i.e., free field) conditions of the monitoring. The microphones were positioned approximately 1.5 meters above ground level. Wind speeds during noise monitoring ranged from 5 to 15 miles per hour, and conditions were sunny. There was no construction or other abnormal noise conditions present during monitoring. The locations of the noise measurements are shown in **Figure 4.11-4, Ambient Noise Monitoring Locations**. Noise measurements were taken from 7:00 AM to 5:00 PM. **Table 4.11-4, Noise Measurements in Project Vicinity**, contain the results of the existing conditions monitoring conducted for on- and off-site areas of the Project Site.

9 Santa Paula Airport, Traffic Pattern, Runways 22 and 04, July 2014.



SOURCE: Google Earth - 2015

FIGURE 4.11-4

**Table 4.11-4
Noise Measurements in Project Vicinity**

Location	Leq (15-minute)
Site 1	57.9
Site 2	58.1
Site 3	57.5
Site 4	59.2
Site 5	67.6

Note: Noise measurements are provided in Appendix 4.11.

4.11.2 REGULATORY SETTING

Federal

Department of Housing and Urban Development

The US Department of Housing and Urban Development (HUD) has set a goal of 65 dB(A) CNEL as the desirable maximum exterior standard for residential uses developed under HUD funding. While HUD does not specify acceptable interior noise levels, residential construction typically meet Title 24 standards, which provide in excess of 20 dB(A) of attenuation with the windows closed. Based on this premise, the interior CNEL should not exceed 45 dB(A) CNEL.¹⁰ This is generally the federal standard used for determining impacts to off-site residences and is consistent with City regulations as well.

Federal Transit Administration

The Federal Transit Administration (FTA) has published guidelines for assessing the impacts of groundborne vibration associated with construction activities, which have been applied by other jurisdictions to other types of projects. The FTA's measure of the threshold of architectural damage for conventional sensitive structures (e.g., residential units) is 0.2 inch per second PPV.¹¹ The vibration threshold of perception is 0.01 inch per second PPV. With respect to human annoyance, the FTA provides criteria for various land use categories based on the frequency of vibration events. According to the FTA, a vibration criterion of 72 VdB should be used for residential land uses. With respect to potential building damage (primarily from construction activities), the FTA provides guidelines for the evaluation of potential groundborne vibration damage applicable to various building categories. According to FTA guidelines, a vibration criterion of 0.20 inches per second, or 106 VdB, should be considered as the significant impact level for nonengineered timber and masonry buildings. Structures engineered with concrete and masonry

¹⁰ Code of Federal Regulations, tit. 24, sec. 51, Housing and Urban Development, Environmental Criteria and Standards (revised April 1, 2004).

¹¹ Hanson et al., *Transit Noise and Vibration* (2006).

(no plaster) have vibration damage criteria of 0.30 inches per second, or 110 VdB. All structures or buildings constructed of reinforced concrete, steel, or timber have vibration damage criteria of 0.50 inches per second, or 114 VdB.

State

California Building Code

California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, California Building Code. These noise standards are applied to new construction in California to ensure interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dB(A) CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dB(A) CNEL.

California Code of Regulations





The California Noise Insulation Standards¹² require that interior noise levels from the exterior source do not exceed 45 decibels CNEL/Ldn in any habitable room of a multi-residential use facility (e.g., hotels, motels, dormitories, long-term facilities, and apartment houses and other dwellings, except detached single-family dwellings) with doors and windows closed. Where exterior noise levels exceed 60 dB(A) CNEL/Ldn, an acoustical analysis is required to show that the proposed construction will reduce interior noise levels to 45 dB(A) CNEL/Ldn or less. If the interior 45 dB(A) CNEL limit can be achieved only with the windows closed, the residence must include mechanical ventilation that meets applicable Uniform Building Code (UBC) requirements.

California Department of Health Services

The State of California Department of Health Services, Environmental Health Division, has published recommended guidelines for noise and land use compatibility, referred to as the *State Land Use Compatibility Guidelines for Noise* ("State Noise Guidelines"). The *State Noise Guidelines*, illustrated in **Figure 4.11-5, Land Use Compatibility to Noise**, indicate that residential land uses and other noise-sensitive receptors generally should locate in areas where outdoor ambient noise levels do not exceed 65 to 70 dB(A) CNEL. According to the *State Noise Guidelines*, an exterior noise level of 60 dB(A) CNEL is

¹² California Code of Regulations, tit. 24, sec. 3501 et seq.

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE Ldn or CNEL, dB						
	50	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes	50-55	55-60	60-65	65-70	70-75	75-80	80+
Residential - Multi Family	50-55	55-60	60-65	65-70	70-75	75-80	80+
Transient Lodging - Motels, Hotels	50-55	55-60	60-65	65-70	70-75	75-80	80+
Schools, Libraries Churches, Hospitals, Nursing Homes	50-55	55-60	60-65	65-70	70-75	75-80	80+
Auditoriums, Concert Halls, Amphitheatres	50-55	55-60	60-65	65-70	70-75	75-80	80+
Sports Arena, Outdoor Spectator Sports	50-55	55-60	60-65	65-70	70-75	75-80	80+
Playgrounds, Neighborhood Parks	50-55	55-60	60-65	65-70	70-75	75-80	80+
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-55	55-60	60-65	65-70	70-75	75-80	80+
Office Buildings, Business Commercial and Professional	50-55	55-60	60-65	65-70	70-75	75-80	80+
Industrial, Manufacturing Utilities, Agriculture	50-55	55-60	60-65	65-70	70-75	75-80	80+

-  **NORMALLY ACCEPTABLE**
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **CONDITIONALLY ACCEPTABLE**
New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
-  **NORMALLY UNACCEPTABLE**
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise reduction features included in the design.
-  **CLEARLY UNACCEPTABLE**
New construction or development should generally not be undertaken.

SOURCE: California Governor's Office of Planning and Research, State of California General Plan Guidelines, Appendix C: Guidelines for the Preparation and Content of Noise Elements of the General Plan, October 2003.

FIGURE 4.11-5

considered to be “normally acceptable” for single-family, duplex, and mobile homes involving normal, conventional construction, without any special noise insulation requirements. Exterior noise levels up to 65 dB(A) CNEL are typically considered “normally acceptable” for multi-family units and transient lodging without any special noise insulation requirements. Between these values and 70 dB(A) CNEL, exterior noise levels are typically considered “conditionally acceptable,” and residential construction should only occur after a detailed analysis of the noise reduction requirements and needed noise attenuation features have been included in the Project design. Exterior noise attenuation features include, but are not limited to, setbacks to place structures outside the conditionally acceptable noise contour, orienting structures so no windows open to the noise source, and/or installing noise barriers such as berms and/or solid walls.

Department of Transportation

Streets and Highways Code Section 216 requires the Caltrans to abate freeway traffic noise within school classrooms under certain circumstances. These circumstances include when a new freeway or modification to existing freeway occur that effect an existing school uses; this is not applicable to the Santa Paula West Specific Plan. Classrooms, libraries, multipurpose rooms, and other spaces used for pupil personnel services at a public or private elementary or secondary school are eligible when noise levels, or projected noise levels within produced from the freeway traffic or freeway construction exceed 52 dB(A) Leq(h).¹³ Allowable abatement measures include, but are not limited to, installing acoustical material, replacing or eliminating windows, installing air conditioning, or constructing sound-baffling structures.

Local

City of Santa Paula General Plan

Noise Element

As required by Government Code,¹⁴ the Noise Element of the City of Santa Paula General Plan evaluates the existing and future noise environment associated noise sources and sets goals, objectives, and policies to limit noise exposure and address specific noise sources in the City.

Santa Paula Municipal Code

Annexation of the Santa Paula West Business Park into the City of Santa Paula is planned to occur as part of the Specific Plan approval process. Santa Paula Municipal Code (SPMC) Chapter 93 sets noise standards for the City. SPMC Section 93.21 establishes the acceptable exterior noise standard for residential uses of 65 dB(A) from 7:00 AM through 10:00 PM, and of 60 dB(A) from 10:00 PM through 7:00 AM. The exterior noise standard for other noise-sensitive uses, including schools, libraries, hospitals, community care

13 California Streets and Highway Code, title 24, sec. 216.

14 California Government Code, sec. 65302(f).

facilities, and assembly halls, is 65 dB(A) at all times. According to the SPMC, commercial and office uses cannot exceed an outdoor noise level of 70 dB(A), and neighborhood commercial uses cannot experience an external noise level of more than 65 dB(A). Industrial uses cannot to exceed an external noise level of more than 75 dB(A). The SPMC does not set acceptable interior noise level standards.

SPMC section 93.23 states that construction activities between 8:00 AM and 6:00 PM Monday through Friday are exempt from the noise standards set in SPMC section 93.21. A notice listing the times between which construction activities can take place, titled in letters at least 1 inch in height and placed at least 5 feet above ground level, must be posted at all entrances to a construction site.

4.11.3 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of CEQA Guidelines, a significant impact related to noise would occur if the proposed project would:

- Expose people to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Expose people to or generation of excessive ground-borne vibration or ground-borne noise levels;
- Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- If located within an airport land use plan or, if such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise; or
- If located within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels.

The following local noise standards are used for this analysis to constitute quantitative thresholds for determining impacts from exposure to excessive noise and groundborne vibration.

On-Site Noise Thresholds

According to the City's Noise Element Noise Standard, office buildings, business commercial and professional uses are "acceptable" with exterior noise levels of up to 70 dB(A) Ldn/CNEL. Industrial uses identify 75 dB(A) as the "acceptable" exterior noise level threshold. For residential uses, the noise guidelines identify 60 dB(A) Ldn/CNEL as the "acceptable" exterior noise level threshold. In addition, as presented in the Noise Element, the maximum interior noise threshold is 45 dB(A) CNEL for noise-sensitive uses.

Off-Site Traffic Noise Thresholds

Off-site noise thresholds consider the City Noise Compatibility Matrix, *County of Ventura General Plan* community responses to changes in noise levels for potentially affected County areas, and CEQA standards. Changes in a noise level of less than 3 dB(A) are not typically noticed by the human ear.¹⁵ Some individuals who are extremely sensitive to changes in noise may notice changes from 3 to 5 dB(A).

Based on this information, the following thresholds have been established for this analysis to assess traffic related noise increases:

- An increase of 3 dB(A) or greater in traffic noise levels that occur from project-related activities would be significant if the resulting noise levels exceeded the City Noise Compatibility Matrix for “acceptable” exterior noise levels. In addition, an increase of 5 dB(A) or less in traffic noise levels that occur from project-related activities would not be significant if the resulting noise levels remain below the “acceptable” thresholds established by the City. Increases in traffic noise greater than 5 dB(A) would be considered to be significant.
- Stationary noise sources proposed as part of the Project that result in increases in noise levels at on-site or adjacent sensitive land uses that exceed 3 dB(A) would be considered significant.

Ventura County Construction Noise Threshold Criteria and Control Plan

Specific construction noise limits for noise-sensitive locations are not currently specified in the General Plan or administrative code of the County of Ventura. The Construction Noise Threshold Criteria and Control Plan¹⁶ is intended to establish construction noise thresholds and standard noise monitoring and control measures. The threshold criteria, monitoring, and control measures shall be applied to all discretionary development projects (public projects, Planned Development permits, Conditional Use Permits) and should be applied to ministerial development permits by amending the County building code (including excavation and grading).

The daytime,¹⁷ evening, and nighttime¹⁸ noise threshold criteria for construction activity are provided in **Table 4.11-5 Construction Activity Noise Threshold Criteria**. If the respective construction noise threshold criteria are exceeded, then noise abatement measures are to be implemented and adequate noise

15 Federal Highway Administration. *Fundamentals and Abatement of Highway Traffic Noise* (September 1980).

16 County of Ventura, *Construction Noise Threshold Criteria and Control Plan*, adopted 2005, amended 2010.

17 Daytime hours are considered from 7:00 AM to 7:00 PM Monday through Friday, and from 9:00 AM to 7:00 PM Saturday, Sunday and local holidays.

18 Evening hours are considered from 7:00 PM to 10:00 PM. Nighttime hours are considered from 10:00 PM to 7:00 AM Monday through Friday, and from 10:00 PM to 9:00 AM Saturday, Sunday, and local holidays.

reduction achieved to bring the construction activities into compliance with the construction noise threshold criteria.¹⁹

**Table 4.11-5
Construction Activity Noise Threshold Criteria**

<i>Noise Threshold Criteria shall be the greater of these noise levels at the nearest receptor area or 10 feet from the nearest noise-sensitive building.</i>		
Construction Duration Affecting Noise-Sensitive Receptors	Fixed Leq(h), dB(A)	Hourly equivalent Noise Level (Leq), dB(A)^{a,b}
Daytime		
0 to 3 days	75	Ambient Leq(h) + 3 dB
4 to 7 days	70	Ambient Leq(h) + 3 dB
1 to 2 weeks	65	Ambient Leq(h) + 3 dB
2 to 8 weeks	60	Ambient Leq(h) + 3 dB
Longer than 8 weeks	55	Ambient Leq(h) + 3 dB
Evening^c		
Residential receptor	50	Ambient Leq(h) + 3 dB
Nighttime^d		
Resident; live-in institutional	45	Ambient Leq(h) + 3 dB

Source: County of Ventura, *Construction Noise Threshold Criteria and Control Plan*, Figure 4-6.

^a The instantaneous L_{max} shall not exceed the noise threshold criteria (NTC) by 20 dB(A) more than 8 times per daytime hour.

^b Local ambient Leq measurements shall be made on any mid-week day prior to project work.

^c The instantaneous L_{max} shall not exceed the NTC by 20 dB(A) more than 6 times per evening hour.

^d The instantaneous L_{max} shall not exceed the NTC by 20 dB(A) more than 4 times per nighttime hour.

Vibration Thresholds

The CEQA Guidelines do not define the levels at which ground-borne vibration is considered “excessive.” This analysis uses the Federal Railway Administration’s vibration impact thresholds for sensitive buildings, residences, and institutional land uses. These thresholds are 80 VdB at residences and buildings where people normally sleep (e.g., nearby residences) and 83 VdB at institutional buildings.

¹⁹ County of Ventura, *Construction Noise Threshold Criteria and Control Plan*, Appendix D—Construction Noise Mitigation Measures.

4.11.4 PROJECT IMPACTS

Threshold: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

Construction

Construction requires site clearing, grading, asphalt paving, and construction of buildings. Construction will typically involve the use of heavy construction equipment, such as scrapers, tractors, dozers, pavers, and cranes. While construction is temporary, the use of this equipment would generate both steady-state and episodic noise that will be heard from within the Project Site and at off-site locations in the surrounding areas.

The construction noise model is based on information obtained from the FTA Roadway Noise Construction Model (RNCM). The FHWA has compiled data on noise-generating characteristics of specific types of construction equipment.²⁰

The dominant source of noise from most construction equipment is engine sound, often without sufficient muffling. Construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in one location for one or more days at a time, with either a fixed power operation (e.g., pumps, generators, compressors) or a variable power operation (e.g., pile drivers, pavement breakers). Mobile construction equipment (e.g., scrapers, bulldozers, loaders, trucks) would move throughout the construction site, and would travel to and from the Project Site for deliveries, hauling, and construction equipment mobilization. **Figure 4.11-6, Noise Levels of Typical Construction Equipment**, shows the typical noise levels of different types of construction equipment at a distance of 50 feet from the source.

Noise levels generated by heavy equipment can range from approximately 70 dB(A) to more than 100 dB(A) when measured at a distance of 50 feet from the noise source. The noise levels diminish with distance at a rate of approximately 6.0 to 7.5 dB(A) per doubling of distance for acoustically hard and soft sites, respectively. An example of an acoustically hard site would be a parking lot, while an acoustically soft site would be a park. Assuming an acoustically hard site, a noise level of 75 dB(A) measured at 50 feet from the noise source would be reduced to 69 dB(A) at 100 feet and to 63 dB(A) at 200 feet. Construction will occur in phases with various types of equipment used at any given time. The equipment would generate both steady state and episodic noise that would be heard off site. The usage factor is the

²⁰ Federal Highway Administration, Roadway Noise Construction Model (RNCM), Software Version 1.1 (December 8, 2008).

percentage of time that particular equipment is anticipated to be in full power operation during a typical construction hour during the day.

Noise at Surrounding Noise Sensitive Uses

Existing sensitive receptors include single-family residences to the north across Telegraph Rd, and to the immediate west of the Project Site, west of Adams Barranca. Construction noise levels at sensitive receptors would vary based on the location of construction activity and the number of equipment in operation.

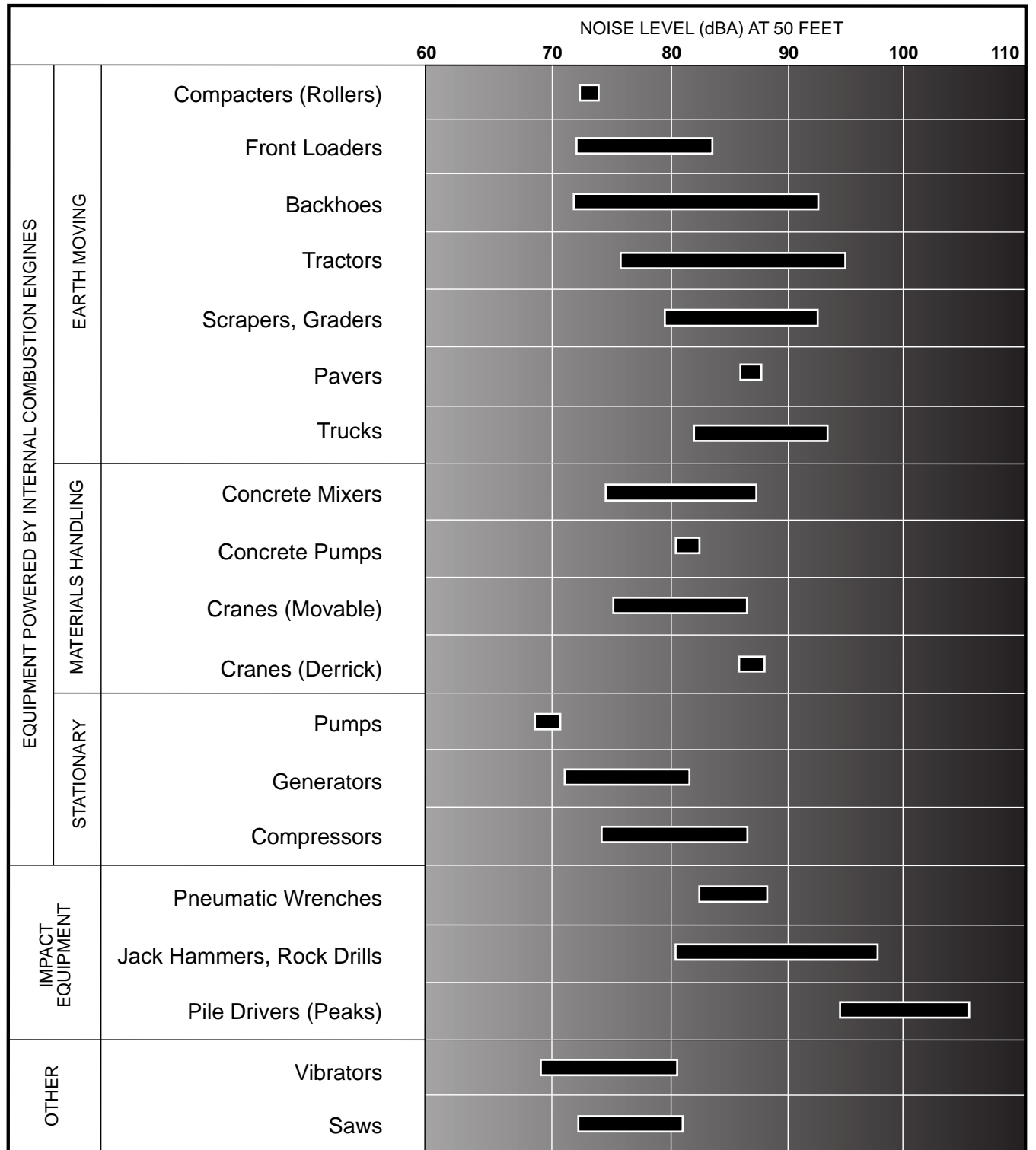
Although the City considers construction noise temporary and intermittent, future development within the Project Site would be required to comply with SPMC section 93.21, which generally requires construction noise to be restricted to the hours of 8:00 A.M. to 6:00 P.M. Monday through Friday (though a temporary noise permit can be obtained pursuant to SPMC section 93.06). This will reduce noise impacts for both surrounding uses.

West of the Project Site are scattered residential areas within large agricultural lands in the County. Construction noise could exceed construction noise thresholds for the County with an increase of greater than 3 dB(A) at residences located within the agricultural operations to the west. There is a residence located near the northwest boundary of the Project Site within 75 feet that would be subject to construction noise in excess of 65 dB(A) for exterior areas. Therefore, construction noise impacts to residences to the west are considered potentially significant.

Operational Noise

Roadway Noise

Traffic noise levels were modeled using the FHWA Noise Prediction Model (FHWA-RD-77-108). This model calculates the average noise level in dB(A) CNEL along a given roadway segment based on traffic volumes, vehicle mix, posted speed limits, roadway geometry, and site conditions. The model calculates noise associated with a specific line source, and the results characterize noise generated by motor vehicle traffic along the specific roadway segment. The model incorporates an alpha factor that characterizes the surface conditions of the area. An acoustically hard site uses an alpha factor of zero, while an acoustically soft site uses an alpha factor of 0.5. The greater the alpha factor, the greater the noise attenuates with increasing distance. Average vehicle noise rates utilized in the FHWA model have been modified to reflect average vehicle noise rates identified for California by Caltrans.



Note: Based on limited available data samples.

SOURCE: United States Environmental Protection Agency, 1971, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," NTID 300-1.

FIGURE 4.11-6

According to data collected by Caltrans, California automobile noise is 0.8 to 1.0 dB(A) louder than national levels, while medium and heavy truck noise is 0.3 to 3.0 dB(A) quieter than national levels.²¹

Traffic scenarios were analyzed for potential project-related traffic impacts on the local and regional street system surrounding the Project Site based on the projected average daily trips (ADT). The following traffic scenarios were analyzed for the weekday AM peak hour (between 7:00 and 9:00 AM) and the weekday PM peak hour (between 4:00 and 6:00 PM):

- Existing Conditions
- Existing plus Project Conditions
- Cumulative Conditions (Year 2031)
- Cumulative plus Project Conditions (Year 2031)

The 24-hour traffic distribution was based on the FHWA model default parameters and differs from those contained within the City of Santa Paula General Plan. If the distribution contained within the General Plan were used, actual noise levels from those included within this study would be reduced by approximately 0.3 dB(A). Consequently, the use of the default provides a conservative worst-case scenario.

Table 4.11-6, Existing plus Project, provides the change in CNEL from existing traffic volumes and from traffic generated by the Project. The difference in traffic noise between Existing Conditions and Existing plus Project conditions represents the increase in noise attributable to Project-related traffic.

**Table 4.11-6
Existing plus Project**

Roadway Segment	Roadway Noise Level 75 feet from Center (dB[A] CNEL)			Significant Impact?
	Existing	Existing plus Project	Noise Level Increase	
Harvard Blvd. w/o 10th St.	63.1	63.4	0.3	No
Harvard Blvd. e/o 8th St.	63.7	63.9	0.2	No
8th St. s/o Main St.	55.2	55.2	0.0	No
8th St. n/o Harvard Blvd.	54.9	54.9	0.0	No
Harvard Blvd. w/o 8th St.	64.0	64.2	0.2	No
Harvard Blvd. e/o Palm Ave.	64.2	64.6	0.4	No

21 Rudolf W. Hendriks, *California Vehicle Noise Emission Levels*, HWA/CA/TL-87/03 (Sacramento: California Department of Transportation, Office of Transportation Laboratory, 1987).

Roadway Segment	Roadway Noise Level 75 feet from Center (dB[A] CNEL)			Significant Impact?
	Existing	Existing plus Project	Noise Level Increase	
Palm Ave. n/o Harvard Blvd.	59.9	59.9	0.0	No
Palm Ave. s/o Main St.	59.8	59.8	0.0	No
Main St. e/o Palm Ave.	57.8	58.0	0.2	No
Main St. w/o 8th St.	57.1	57.3	0.2	No
Harvard Blvd. w/o Palm Ave.	65.0	65.3	0.3	No
Harvard Blvd. e/o Steckel Dr.	64.0	64.6	0.6	No
Steckel Dr. n/o Harvard Blvd.	54.8	54.9	0.1	No
Steckel Dr. s/o Main St.	53.3	53.4	0.1	No
Main St. e/o Steckel Dr.	60.5	60.8	0.3	No
Main St. w/o Palm Ave.	61.0	61.3	0.3	No
Harvard Blvd. w/o Steckel Dr.	63.6	64.2	0.6	No
Harvard Blvd. e/o Peck Rd.	63.1	63.8	0.7	No
Peck Rd. s/o Harvard Blvd.	59.2	59.4	0.2	No
Peck Rd. n/o Faulkner Rd.	59.4	59.6	0.2	No
Peck Rd. s/o Faulkner Rd.	58.2	59.2	1.0	No
Peck Rd. n/o SR 126 EB On/Off Ramps	58.3	59.2	0.9	No
Harvard Blvd./Telegraph Rd. w/o Peck Rd.	59.2	60.6	1.4	No
Telegraph Rd. e/o Beckwith Rd.	58.5	60.2	0.7	No
Telegraph Rd. w/o Beckwith Rd.	58.1	59.3	1.2	No
Telegraph Rd. e/o Briggs Rd.	62.9	63.5	0.6	No
Briggs Rd. s/o Telegraph Rd.	53.4	53.9	0.5	No
Briggs Rd. n/o Faulkner Rd.	53.4	54.0	0.6	No
Briggs Rd. s/o Faulkner Rd.	53.6	54.2	0.6	No
Briggs Rd. n/o SR 126 WB On/Off Ramps	53.7	54.3	0.6	No
Briggs Rd. s/o SR 126 WB On/Off Ramps	52.8	52.9	0.1	No
Briggs Rd. n/o SR 126 WB On/Off Ramps	53.1	53.2	0.1	No

Source: Fehr & Peers, Draft Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan, (March 2015).

Notes: n/o = north of; s/o = south of; e/o = east of; w/o = west of.

Noise-modeled results are provided in **Appendix 4.11**.

As previously discussed, an increase of 3 dB(A) or greater in traffic noise levels that occurs from Project-related activities would be considered significant if the resulting noise levels that occurs from Project-related activities would exceed the City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels. These roadway systems do not experience an increase in noise levels of 3 dB(A) or greater. In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road

extension and would not cause an increase of 3 dB(A) or greater due to Project-related activities. Therefore, the Santa Paula West Specific Plan Area would not result in noise impacts in the local and regional street system. Impacts along these roadway systems are considered less than significant.

Railroad Noise

Exterior Noise

While there is currently no use of the Santa Paula Branch of the Southern Pacific Railroad tracks, noise from rail operations will represent an intermittent noise source if operated. While there has been no recent freight use of the portion of the SPBL adjacent to the Project Site and there is no planned freight use on the SPBL, potential impacts from use of the SPBL for freight operations were considered in this analysis.

The SPBL is classified as Federal Railroad Administration Track Class 1, the lowest track classification. Class 1 has a maximum speed of 10 mph for freight trains, and 15 mph for passenger trains.²² Light industrial and commercial uses would be allowed near the southern boundary of the Project Site, north of the Santa Paula Branch of the Southern Pacific Railroad tracks. Predicted noise levels at 50 feet from the railway centerline to the southern boundary would be approximately 69.4 dB(A). Due to its proximity to the rail road track, uses allowed within the southern boundary of the Project Site are not sensitive to that estimate level.

Interior Noise

As mentioned previously, exterior-to-interior reduction of noise is generally 25 dB(A) or more. Assuming noise levels at 69.4 dB(A) within 50 feet from the railway centerline, interior noise could be reduced to 44.4 dB(A), below the General Plan noise threshold of 45 dB(A). Therefore, potential interior noise within the proposed development would be considered less than significant.

Threshold: **Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

Construction-related groundborne vibration impacts were evaluated using the FTA's Transit Noise and Vibration Impact Assessment guidance document. Construction equipment may create groundborne vibration during construction of the Project Site.

Construction activities can generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The

22 Ventura County Transportation Commission, *Draft Final Report Santa Paula Branch Line Rail Study* (March 2007).

results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. The primary and most intensive vibration source associated with the development of the Project would be the use of earth-moving equipment during construction, as identified in **Table 4.11-7, Vibration Source Levels for Construction Equipment.**

**Table 4.11-7
Vibration Source Levels for Construction Equipment**

Equipment	VdB at 25 feet
Excavator	80
Large bulldozer	87
Backhoe	80
Loaded trucks	86
Roller	74
Small bulldozer	58

Source: Office of Planning and Environment, Federal Transit Administration, Transit Noise and Vibration Impact Assessment (May 2006) FTA-VA-90-1003-06, p. 2-9.

Loaded trucks and large bulldozers are capable of producing approximately 86 and 87 VdB, respectively, at 25 feet. The surrounding land uses within 25 feet of the Project Site include the scattered residential uses immediately to the west. The construction near this portion of this site may include some earthwork and grading activities. While offsite surrounding land uses may experience vibration events, these would not be frequent and impacts would be considered less than significant.

Operational Vibration

The primary sources of vibration from operations of the Project could include passenger vehicles and delivery trucks for industrial and commercial uses. Operations within the light-industrial and commercial uses would include typical commercial-grade stationary mechanical and electrical equipment such as air handling units, air condenser units, exhaust air fans, and electrical power generators that could produce vibration. Ground-borne vibration typically attenuates rapidly as a function of distance from the vibration source. Furthermore, the majority of the Project's operational-related vibration sources, such as mechanical and electrical equipment, would incorporate vibration attenuation mounts, as required by the particular equipment specifications. Therefore, operation of the Project Site would not increase the existing vibration levels at off-site surrounding uses; and as such, vibration impacts associated with operations would be less than significant.

Railroad Vibration

As previously noted, operating trains are a source of ground-borne vibration. The VCTC railroad tracks runs east/west of the Project Site. The tracks are not currently being operated, but should trains be operated on the tracks in the future, trains could potentially create vibration at the Project Site. To maintain compatibility with the railroad tracks, the Santa Paula West Business Park Specific Plan provides for predominantly light industrial and commercial uses.

According to the 2002 *Caltrans Transportation Related Earthborne Vibrations* study, train-generated vibration passes below the threshold of perception or 65 VdB at a distance of 90 meters, or 295 feet, from train tracks.²³ The Caltrans study identifies the threshold of annoyance or approximately 80 VdB as 20 meters, or 66 feet, from train tracks, given that vibration is constant. Given vibration from the railroad track would not be constant and would be approximately 50 feet from the track, uses allowed within Santa Paula West Specific Plan Area would not be susceptible to these conditions. Therefore, impacts would be considered less than significant.

Threshold: **A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

Refer to the discussion above regarding the potential noise impacts for long-term operation of the Santa Paula West Specific Plan. The noise that could be generated from within the Specific Plan area and mobile source noise impacts would not substantially increase the ambient noise conditions in the surrounding area. Any permanent increase in ambient noise levels is considered less than significant.

Threshold: **A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

Construction of the land uses as well as on- and off-site infrastructure improvements (water line, storm drainage, etc.), associated with the Specific Plan, would occur over a span of several years. The construction-related noise levels associated with implementation of the Project would vary during the construction period and would depend on the construction phase. Activities during site preparation include excavation, earthmoving, and soils compaction. Other construction phases that would be included with the development of the Project would include grading, building construction, and asphalt paving.

Construction typically involves use of both mobile and stationary equipment. Mobile equipment, such as bulldozers, scrapers, and graders, are operated in a cyclical schedule during which a period of full power is followed by a period of reduced power. Stationary equipment can be subdivided into two groups. One

23 California Department of Transportation, Division of Environmental Analysis, *Transportation Related Earthborne Vibrations* (February 20, 2002), 17.

group contains such items as pumps, generators, compressors, and similar equipment that generally operates at a fixed power level and produces a constant sound level under normal operations. The other group contains impact equipment, such as jackhammers, pavement breakers, etc., which are operated in a cyclical fashion.

Noise levels generated during each of the Project phases are presented in **Table 4.11-8, Typical Maximum Noise Levels for Construction Phases**. Equipment estimates used for the analysis include site preparation/clearing, excavation, building construction, and asphalt paving noise levels representative of worst-case conditions since they assume several pieces of equipment operating simultaneously, which is very unlikely.

**Table 4.11-8
Typical Maximum Noise Levels for Construction Phases**

Construction Phase	Approximate Leq dB(A) without Noise Attenuation			
	25 Feet	50 Feet	100 Feet	200 Feet
Site Preparation/Clearing	94	88	82	78
Excavation	94	88	82	78
Building construction	94	88	82	78
Asphalt paving	85	79	73	67

Source: Knauer et al., FHWA Construction Noise Handbook, ch. 9.0 (August 2006).

Noise levels within the Project Site and adjacent areas would experience noise level increases during construction activities. These noise level increases would be temporary and intermittent. Future development under the Project must comply with SPMC section 93.21, which generally requires construction noise to be restricted to the hours of 8:00 AM to 6:00 PM Monday through Friday (though a temporary noise permit can be obtained pursuant to SPMC section 93.06). Therefore, no violation of the SPMC's noise regulations would occur, and temporary increases in noise during construction are not considered significant. Sensitive land uses surrounding the Project Site, such as the residential units to the north, may experience construction noise levels in excess of 3 dB(A) over existing ambient noise conditions, resulting in potentially significant construction noise impacts. However, these impacts would be short-term and not constant in duration.

In addition to equipment-generated noise associated with construction activities, construction traffic would generate noise along access routes to the Project Site. The major pieces of heavy equipment would be moved onto the development only one time for each construction activity (i.e., grading). Daily transportation of construction workers and the hauling of materials both on and off the Project Site are expected to cause increases in noise levels along study-area roadways, although noise levels from such

trips would be less than peak-hour noise levels generated by Project trips during Project operation. Average daily trips associated with construction activities would not result in a doubling of trip volume along study-area roadways. Given that it takes a doubling of average daily trips on roadways to increase noise by 3 dB(A), the noise-level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and nearby roadways that are within the area (unincorporated County of Ventura) would be less than 3 dB(A), and potential impacts will be less than significant.

Threshold: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Threshold: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The Project Site is not located within an airport land use plan. The Santa Paul Airport is located on a 38-acre site south of SR 126, approximately 1.5 miles east of the Project Site. The Airport is used by piston and propeller, single-, and twin-engine planes. There are no commercial aircraft in operation at the airport. The general aircraft travel pattern is south of the City, with a required approach and departure altitude of 1,500 feet.²⁴ Noise levels for the Airport, where most of the flight activities occur, are below 60 dB(A). Thus, people residing, attending school, or working within the future land uses of the Specific Plan area would not be exposed to excessive noise due to the aircraft travel pattern. Therefore, implementation of the Specific Plan would result in less than significant impacts related to noise generated by the Santa Paula Airport.

4.11.5 CUMULATIVE IMPACTS

Table 4.11-9, Future (Year 3031) plus Project, illustrates the change in CNEL from Year 2031 ambient conditions with the Project. The Year 2031 ambient conditions represent traffic growth or cumulative development within the Project Site. Based on the ambient growth, the greatest increase in noise would occur along Harvard Boulevard, west of Steckel Drive, with a roadway noise increase of 1.8 dB(A).

24 City of Santa Paula, "Noise Element," *City of Santa Paula General Plan* (April 13, 1998), p. N-7.

**Table 4.11-9
Future (Year 2031) plus Project**

Roadway Segment	Roadway Noise Level 75 feet from Center (dB[A] CNEL)					Significant Impact?
	Existing	Year 2031 Base	Year 2031 with Project	Increase in CNEL from Existing	Increase in CNEL due to Project	
Harvard Blvd. w/o 10th St.	63.1	64.7	64.9	1.8	0.2	No
Harvard Blvd. e/o 8th St.	63.7	65.5	65.7	0.8	0.2	No
8th St. s/o Main St.	55.2	56.4	56.4	1.2	0.0	No
8th St. n/o Harvard Blvd.	54.9	55.9	55.9	1.0	0.0	No
Harvard Blvd. w/o 8th St.	64.0	65.5	65.7	1.7	0.2	No
Harvard Blvd. e/o Palm Ave.	64.2	64.6	65.8	1.6	1.2	No
Palm Ave. n/o Harvard Blvd.	59.9	61.3	61.3	1.4	0.0	No
Palm Ave. s/o Main St.	59.8	61.2	61.2	1.4	0.0	No
Main St. e/o Palm Ave.	57.8	58.8	59.0	1.2	0.2	No
Main St. w/o 8th St.	57.1	58.2	58.3	1.2	0.1	No
Harvard Blvd. w/o Palm Ave.	65.0	66.0	66.3	1.3	0.3	No
Harvard Blvd. e/o Steckel Dr.	64.0	64.4	65.9	1.9	1.5	No
Steckel Dr. n/o Harvard Blvd.	54.8	56.6	56.2	1.4	-0.4	No
Steckel Dr. s/o Main St.	53.3	54.8	54.8	1.5	0.0	No
Main St. e/o Steckel Dr.	60.5	61.2	61.5	1.0	0.3	No
Main St. w/o Palm Ave.	61.0	61.8	62.1	1.1	0.3	No
Harvard Blvd. w/o Steckel Dr.	63.6	63.5	65.3	1.7	1.8	No
Harvard Blvd. e/o Peck Rd.	63.1	64.3	64.8	1.7	0.5	No
Peck Rd. s/o Harvard Blvd.	59.2	60.8	60.9	1.7	0.1	No
Peck Rd. n/o Faulkner Rd.	59.4	60.9	61.0	1.6	0.1	No
Peck Rd. s/o Faulkner Rd.	58.2	59.6	60.3	1.9	0.7	No
Peck Rd. n/o SR 126 EB On/Off Ramp	58.3	59.7	60.4	2.1	0.7	No
Harvard Blvd./Telegraph Rd. w/o Peck Rd.	59.2	60.1	61.3	2.1	1.2	No
Telegraph Rd. e/o Beckwith Rd.	58.5	60.4	59.1	0.6	-1.3	No
Telegraph Rd. w/o Beckwith Rd.	58.1	59.7	58.8	0.7	-0.9	No
Telegraph Rd. e/o Briggs Rd.	62.9	63.6	64.0	1.1	0.4	No
Briggs Rd. s/o Telegraph Rd.	53.4	57.4	57.6	4.2	0.2	No
Briggs Rd. n/o Faulkner Rd.	53.4	57.4	57.7	4.3	0.3	No
Briggs Rd. s/o Faulkner Rd.	53.6	57.5	57.7	4.1	0.2	No
Briggs Rd. n/o SR 126 WB On/Off Ramps	53.7	57.6	57.8	4.1	0.2	No

Roadway Segment	Roadway Noise Level 75 feet from Center (dB[A] CNEL)					Significant Impact?
	Existing	Year 2031 Base	Year 2031 with Project	Increase in CNEL from Existing	Increase in CNEL due to Project	
Briggs Rd. s/o SR 126 WB. On/Off Ramps	52.8	55.9	56.0	3.1	0.1	No
Briggs Rd. n/o SR 126 WB On/Off Ramps	53.1	56.1	56.1	3.0	0.0	No

Source: Fehr & Peers, Draft Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan, (March 2015).

Notes: n/o = north of; s/o = south of; e/o = east of; w/o = west of.

Noise-modeled results are provided in **Appendix 4.11**.

As indicated in **Table 4.11-9**, cumulative development would not result in significant noise increases of more than 3.0 dB(A). In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road extension and would not cause an increase of 3 dB(A) or greater due to project-related activities. Overall, the Project's contribution would not be considered to be cumulatively considerable and significant.

With regard to stationary sources, cumulatively significant noise impacts may result from cumulative development. Stationary sources of noise that could be introduced in the area by cumulative projects could include mechanical equipment, loading docks, and parking lots. Since these projects would be required to adhere to Santa Paula's noise standards, all the stationary sources would be required to provide shielding or other noise-abatement measures so as not to cause a substantial increase in ambient noise levels. Moreover, due to distance, it is unlikely that noise from multiple cumulative projects would interact to create a significant combined noise impact. As such, it is not anticipated that a significant cumulative increase in permanent ambient noise levels would occur and, therefore, the impact would be less than significant.

4.11.6 MITIGATION MEASURES

Construction noise impacts will be mitigated by compliance with the Santa Paula Municipal Code.

- N-1:** Stationary construction equipment, such as pumps, generators, or compressors, shall be placed as far from noise sensitive uses as feasible during all phases of project construction.
- N-2:** All construction equipment shall be equipped with appropriate mufflers in good working condition.

- N-3:** Before any site activity, the contractor shall be required to submit a material haul route plan to the City of Santa Paula and Ventura County for review and approval. The contractor shall ensure that the approved haul routes are used for all materials hauling, to minimize exposure of sensitive receivers to potential adverse noise levels from hauling operations.
- N-4:** During all site preparation, grading and construction, the construction contractor shall locate all stockpiling and vehicle staging areas away from existing residences, to the extent feasible.

4.11.7 RESIDUAL IMPACTS AFTER MITIGATION

Implementation of **Mitigation Measures N-1** to **N-4** will reduce noise related impacts generated during construction to below a level of significance.

4.12 PUBLIC SERVICES

This section evaluates potential effects on public services due to the long-term development of the Project Site following the annexation of the Santa Paula West Business Park Specific Plan area (“Specific Plan”) into the City of Santa Paula (“City”). Effects on fire department services, police department services, public schools, parks and recreation, libraries, and general government services are discussed with respect to the Project’s demand for services, adequacy of existing and planned resources to meet service demand, and whether there is a need to construct any new facilities to provide adequate levels of service. The information provided in this section is based on correspondence and consultation with the Santa Paula Police Department, Santa Paula Fire Department, the Santa Paula Unified School District, and the local library. Each section includes an introduction, followed by discussions of existing conditions, regulatory framework, methodology, environmental impacts, cumulative impacts, project design features, and mitigation measures.

4.12.1 EXISTING CONDITIONS

Fire Protection and Emergency Medical Services

Fire Protection Services

Because it is currently located in unincorporated Ventura County, the Project Site falls within the boundaries of the County of Ventura Fire Protection District for fire prevention and suppression services. Upon implementation of the Project, the Project Site would fall within the jurisdiction of the Santa Paula Fire Department (SPFD). The SPFD provides comprehensive emergency services, including fire prevention and suppression services and emergency medical services. The SPFD’s duties also include emergency medical and rescue services, as well as nonemergency services, such as business hazardous materials regulation, code enforcement, plan checking, fire safety inspections, information programs, fire investigations, and disaster preparedness. The SPFD also responds to statewide disasters as part of regional strike teams, including wildfires, earthquakes and other natural disasters. In recent years, SPFD has responded to more than 2,500 emergency calls annually. With the strategic placement of its two fire stations, the average response time to emergency calls throughout the City is less than 5 minutes.¹ The SPFD responds to incidents outside the City limits in in cooperation with surrounding agencies per the Auto-Aid Agreement. The SPFD responses outside the City limits are assigned by the closest unit to the incident.

1 City of Santa Paula Fire Department, “About Us,” <http://www.santapaulafire.com/about-us.html>. Accessed July 2016.

The Ventura County Environmental Health Division is the designated Certified Unified Program Agency (CUPA) serving the Project Site and is responsible for regulation and inspection of all phases of hazardous materials and wastes through the implementation of various programs, such as the Hazardous Materials Business Plan (HMBP), California Accidental Release Prevention (Cal ARP), and Underground Storage Tank (UST) programs. In addition, the SPFD is responsible for code enforcement related to any construction or alteration of buildings and structures within the City.

The SPFD consists of two fire stations that cover the City's 4 square miles of jurisdiction, as summarized in **Table 4.12-1, Fire Protection and Emergency Medical Service Locations and Equipment**. Administration and Prevention offices are at the Community Development Building Annex. Fire Stations 81 and 82 house most of the department's equipment. Station 81 houses a 2015 Pierce pumper and a 1992 Pierce Pumper. Station 82 houses a 2008 E-ONE pumper, a 2002 Ferrera pumper, a light and air unit, and a mass casualty trailer. The Department also maintains a 1954 Mack Pumper and a 1923 Seagrave pumper as historical engines, along with two command vehicles and two support vehicles. Routine fire, medical, and other calls are handled by the two on-duty Engine Companies on a rotating 24-hour shift system. Engine 81 responds out of Station 81 with a full-time Captain, Engineer, and Firefighter/EMT; and Engine 82 responds out of Station 82 with a full-time Captain, Engineer, and Firefighter/EMT. When available, reserve firefighters supplement both stations and serve as the fourth firefighter. The Public Works Department's Equipment Maintenance Division provides mechanics' services.²

**Table 4.12-1
Fire Protection and Emergency Medical Service Locations and Equipment**

Station Number	Location	Distance from Project Site (miles)	Equipment/Staff
81	114 South 10th Street	2.1	Engine 81, Reserve Engine 181; 1 full-time captain, engineer, and Firefighter/EMT; staff supplemented by reserves
82	536 West Main Street	1.0	Engine 82, Reserve Engine 182, Light and Air 82; 1 full-time Captain, Engineer, and Firefighter/EMT; staff supplemented by reserves

Source: City of Santa Paula, Proposed Budget for Fiscal Year 2015–2016 (June 2015).

Total SPFD staffing resources consist of 20 full-time personnel and up to 45 reserve firefighters/ EMTs and one volunteer fire chaplain. The 20 full-time personnel are the fire chief, assistant fire chief, 6 captains, 6 engineers, and 6 full-time firefighters. Station 82's crew is also responsible for responding to

² City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

Automatic/Mutual aid calls in Santa Paula’s light and air unit when requested. This duty alternates daily between the SPFD and Fillmore Fire Department.³

Incoming 911 calls generated within the City are routed to Santa Paula Police dispatch. Fire and medical calls are transferred to the Ventura County Fire Protection District’s (VCFPD) fire communications center, which handles dispatching for most fire departments and all ambulance agencies within Ventura County. For Santa Paula, this dispatching service is provided pursuant to a contract by which SPFD provides certain automatic aid services in exchange. The City also contracts with the VCFPD on a fee-for-service basis for hazardous materials responses requiring more than the City’s own resources, ~~and for continuing EMT training.~~⁴ The SPFD maintains agreements with Ventura City Fire, Oxnard Fire, Federal Fire of Ventura County, and Fillmore Fire that allow these other jurisdictions to utilize the SPFD’s engine companies and light and air heavy-duty pick up service unit when needed.⁵ Furthermore, the SPFD participates in an automatic and mutual aid agreement in the Operational Area (Countywide) as a strategy for providing assistance during emergencies when their services require additional support.

Emergency Medical Services

The SPFD and the American Medical Response (AMR) ambulance company provide emergency medical services to the City. In 2014, SPFD was dispatched to approximately 2,500 incidents, of which approximately two-thirds were emergency medical calls.⁶ All of the firefighter personnel are certified EMTs and can provide Basic life support care. The average response time of the SPFD for medical emergency services is approximately 5 minutes.⁷ The SPFD follows the Personnel Training and Emergency Response Plan outlined in the California Code of Regulations Title 26, Divisions 19 and 19.1. The SPFD is ultimately responsible for coordinating any evacuation necessitated by an emergency.

The Santa Paula Hospital (SPH) currently provides medical care services to all residents within the Santa Clara Valley.⁸ SPH is considered an acute-care hospital equipped to care for injured and seriously ill people. The hospital is located at 825 N. Tenth Street and is a campus of Ventura County Medical Center, which is governed by the Ventura County Board of Supervisors. SPH has state-of-the-art equipment, a comprehensive roster of services and dedicated intensive care unit (ICU), and maternity/surgical units. The hospital offers a comprehensive list of inpatient and outpatient services, with full-service

3 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

4 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

5 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

6 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

7 City of Santa Paula Fire Department, “About Us,” <http://www.santapaulafire.com/about-us.html>. Accessed July 2016.

8 Ventura County Health Care Agency, “Santa Paula Hospital,” <http://www.vchca.org/hospitals/santa-paula-hospital>. Accessed July 2016.

departments for diagnostic procedures, treatment, aftercare and ongoing care, including radiology, surgery, obstetrics and gynecology, oncology, critical care, 24/7 emergency room, laboratory, and dietetics.

Fire Flow

Fire flow is an important factor in the SPFD's ability to deliver effective fire suppression activities. Fire flow is defined as the quantity of water available for fire protection in a given area and is normally measured in gallons per minute (gpm). The SPFD requires provisions of fire flows to serve individual developments in accordance with the Santa Paula General Plan Safety Element. These fire flow provisions are further determined by the specifications of the Uniform Fire Code, which considers the type of building construction, proximity to other structures, firewalls, and fire protection devices.⁹ Fire flow requirements range from 1,000 gpm for buildings less than 3,600 square feet to between 1,500 gpm and 8,000 gpm for buildings greater than 3,600 square feet. These fire flow requirements are also based on maximum response distance to a SPFD fire station. In addition to the review of required fire flow for development on the Project Site, the Project Applicant must submit plans to the SPFD for the review and approval of fire hydrant locations.¹⁰

Police Protection

The Santa Paula Police Department (SPPD) provides police protection services to the community within the City limits and to some adjacent unincorporated territory. The Project Site currently lies outside of the City's SOI but is designated by the City as a proposed Expansion Area. Therefore, the Project is currently served by the Ventura County Sheriff's Office as well as by the SPPD because it is within an unincorporated area of Ventura County. The main SPPD station is located at 214 S. Tenth Street (approximately 2 miles northeast of the Project Site) and is composed of a patrol division, investigations program, and a support division. In addition to the 7,500-square-foot facility on S. Tenth Street, the SPPD also operates out of the 1,440-square-foot Community Policing Building at Las Piedras Park. The SPPD maintains a force of approximately 34 full-time sworn police officers, 20 reserve officers, 9 full-time civilian employees, and 11 part-time civilian employees.¹¹ The City's current level of service is about 1 officer per 1,000 residents, and the target goal is to increase the level of service to 1.25 officers per 1,000 residents.¹²

The SPPD Patrol Division comprises patrol operations, the special response team (SRT), and the communications center. Patrol operations incorporates the reserve program, school resource officers,

9 City of Santa Paula, *General Plan, "Safety Element"* (1998). S-15.

10 City of Santa Paula, *General Plan, "Safety Element"* (1998). S-16.

11 Electronic communication with Chris Cook, Dispatch Supervisor, Santa Paula Police Department, September 12, 2014.

12 City of Santa Paula, *General Plan, "Land Use Element"* (1998). LU-13.

and K-9 units. The Patrol Division is currently deployed with 4 sergeants, 4 senior officers, and 12 full-time police officers. Two officers are assigned as K-9 handlers.¹³ The reserves program was established to provide additional resources to the SPPD for normal and emergency circumstances. Officers have the same authority, liability coverage, and protection as regularly commissioned SPPD officers. The SRT provides highly trained personnel with the tactical skills needed to resolve high-risk law enforcement incidents within the City of Santa Paula. The communications center is responsible for receiving all 911 and nonemergency calls within the City. Under the direction of the communications supervisor, 4 full-time dispatchers and 1 dispatcher-trainee staff the Santa Paula Police Communications Center. Animal control is supervised by the police commander and is staffed by one full-time animal control officer.¹⁴

The investigations unit (Major Crimes) is made up of one acting sergeant and three detectives. Additionally, two officers are assigned as gang officers, and one officer is assigned to narcotic investigations. They all have specialized training that allows for the investigation of all major crimes, crime-scene processing, and specialized areas (i.e., white collar crime, computer and fraud crime, sex crimes, etc.). The gang officers are assigned to identify and suppress gang-related activities, and to conduct all gang-related investigations. The narcotic officer is assigned to the Ventura County Narcotic Task Force responsible for all narcotics-related investigations. Three part-time community service officers (CSOs) are also assigned to specialized support areas (1 as court liaison and 2 as evidence management). A CSO is assigned full time to the investigations unit; duties performed include sex offender registrations and compliance checks, probation and drug offender registrations, and other duties as needed within the unit.¹⁵

The role of the SPPD Support Division is to manage City records, property and, evidence, and accomplish investigations of major crimes and felonies committed within the City. The records unit currently contains one records supervisor and two part-time CSOs.

The SPPD currently operates under the 2010 Strategic Plan, which was developed by the department's leadership team to identify future community and department needs.¹⁶ As a result of the City's budget cuts, the goals and steps reflected in the Strategic Plan are designed to help the SPPD anticipate any challenges related to the delivery of police protection services. The Plan also provides performance measures to indicate the success of the department on an annual basis. Additionally, public comments

13 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

14 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

15 City of Santa Paula, *Proposed Budget for Fiscal Year 2015–2016* (June 2015).

16 City of Santa Paula Police Department, "Strategic Plan," (2010). <http://www.ci.santa-paula.ca.us/police/StrategicPlan.pdf>.

and input, gathered from surveys and verbal discussion, were incorporated into the document to assist the SPPD on areas that need improvement or adjustments.

As shown in **Table 4.12-2, Average Response Times to Calls for Service**, response times vary based on category, priority, and the benchmark used to measure response time (received/dispatched, received/arrived, etc.). There is no recognized County or City standard for response times, nor does the SPPD track this time as a measure of service delivery.

Table 4.12-2
Average Response Times to Calls for Service

Category	Priority	Number of Calls (year to date)	Average Response Time			
			Received/ Dispatched	Received/ Arrived	Dispatched/ Arrived	Dispatched/ Clear
Dispatched	1	493	4:32	7:26	2:54	35:45
Dispatched	2	2,662	11:10	15:26	4:37	22:03
Dispatched	3	5,586	13:56	18:42	5:04	26:01
Self-Initiated	1	52	0:00	0:00	0:00	08:27
Self-Initiated	2	647	0:03	0:00	0:00	05:34
Self-Initiated	3	4,941	0:05	0:04	0:00	13:43

Source: Electronic communication with Chris Cook (September, 2014).

Mutual aid agreements exist with all other cities within the County of Ventura and the Ventura County Sheriff's Department. The agreements are intended to assist participating jurisdictions during emergencies in which their services and/or capabilities require assistance. With the current economic stagnation, the SPPD is seeking the ability to maintain existing service levels, while investigating options to increase staffing and continue to improve police service levels.

Table 4.12-3, Part I Offences 2012–2013, and **Table 4.12-4, Part II Offences and Traffic Incidents 2012**, provide information in regards to crime statistics reported throughout the SPPD's service area in 2012 and 2013. SPPD reported a total of 2,552 calls for service during the calendar month of August 2014. **Table 4.12-5, Historical Review of Crime Reporting: 2000–2013**, provides a historical summary of crimes reported between 2000 and 2013. Total Part I crimes decreased by approximately 5 percent between 2012 and 2013, despite increases in violent crimes such as homicide, rape, assault, and auto theft. Although the population in the City increased from approximately 29,980 residents in 2012 to 30,091 residents in 2013, the crime rate declined from 22.9 crimes per 1,000 residents in 2012 to 21.7 crimes per 1,000 residents in 2013.

**Table 4.12-3
Part I Offences 2012–2013**

Part I Offenses	2012	2013	Percent Change
Violent Crimes			
Criminal homicide	1	6	500
Rape	4	6	50
Robbery	28	33	17.9
Aggravated assault	57	64	12.3
Subtotal	90	109	21.1
Property Crimes			
Burglary	104	104	0
Larceny theft	425	359	-15.5
Auto theft	64	76	18.8
Arson	3	5	66.7
Subtotal	596	182	-8.7
Total Part I Crimes:	686	653	-4.8

Source: Electronic communication with Chis Cook (September 12, 2014).

**Table 4.12-4
Part II Offenses and Traffic Accident Incidents 2012**

Part II Offense	Number of Offenses
Animal	4
Civil matters	32
Death (not suspicious)	13
Foreign investigation	15
Fraud	90
Recovered/Possession of stolen property	3
Narcotics/Drug violations	252
Weapon violations	70
Drunk driving	69
Disorderly conduct	156
Juvenile (assistance/out of control)	162
Kidnapping	2
Miscellaneous	12
Moral sex offenses	18
Obstructing police	48
Persons cared for	79
Property damage	161
Suspicious incidents	26

Part II Offense	Number of Offenses
Traffic citation	27
Warrant/Parole arrests	17
Total Part II Offenses	1,256

Traffic Accident Data	Number of Accidents
Accidents involving DUI	7
Hit and run accidents	15
Traffic accidents (public streets)	87
Traffic accidents (private streets)	10
Accidents involving a city vehicle	5
Total Traffic Accident Incidents	124

Source: Electronic communication with Chris Cook (September, 2014).

Table 4.12-5
Historical Review of Crime Reporting: 2000–2013

Part I Crimes per Thousand People				
Year	Population	Total Part I Crimes	Crime Rate	Percentage Change (Crime Rate)
2013	30,091	653	46.1	33.4
2000	28,754	884	30.7	—

Total Annual Crimes Reported		
Year	Total Part I Crimes	Percentage Change from Prior Year
2013	653	-4.8
2012	686	+11.9
2011	604	-4.88
2010	635	-14.9
2009	746	-15.03
2008	878	+7.17
2007	815	+6.87
2006	759	+1.2
2005	750	+1.73
2004	737	+17.5
2003	608	-32.96
2002	907	—

Source: Electronic communication with Chris Cook (September 2014).

Public Schools

The Project Site is located within the boundaries of the Santa Paula Unified School District (SPUSD), which provides public education services to portions of the surrounding County of Ventura, well as to the City's residents. The SPUSD was established July 1, 2013, by the voters of Santa Paula to include the former Santa Paula Elementary School District (SPESD) and Santa Paula Union High School District (SPUHSD). The SPUSD also receives students from the Briggs, Mupu, and Santa Clara Elementary School Districts (also referred to as "the feeder elementary districts").¹⁷

According to SPUSD, the Project Site falls within the attendance boundaries of Barbara Webster Elementary (1150 Saticoy Street), Isbell Middle School (221 S. 4th Street), and Santa Paula High School (404 N. Sixth Street).

During the 2014–2015 school year, the SPUSD had a total enrollment of 5,459 students in the elementary and high schools. The enrollment of the Santa Paula Unified School District shows that between 2012 and 2013, combined enrollment declined from 5,503 to 5,459.¹⁸

The student enrollment per school is indicated in **Table 4.12-6, SPUSD Schools**. The SPUSD operates six elementary schools and one middle school with a total enrollment of 3,793. Santa Paula High School and Renaissance High School are the two high schools serving Santa Paula. Santa Paula High School is a comprehensive high school with more than 1,500 students, and Renaissance High School is a continuation high school serving more than 120 students. As of October 2013, the feeder elementary districts served a total of 783 students in grades K–8.

The California Department of Education has established capacity standards to improve school performance through the individual capacity of teachers and school leaders and through the institutional capacity of schools, districts, and state agencies to provide the most efficient and effective delivery of education to students.¹⁹ As reflected in **Table 4.12-6**, many of the schools within the SPUSD are currently operating over capacity.

17 Santa Paula Unified School District, "Level I Developer Fee Justification Study for Santa Paula Unified School District" (April 2014), <http://www.spuhsd.k12.ca.us/cms/lib2/CA01001761/Centricity/Domain/32/Santa%20Paula%20USD%20DF1%20Study%202014.pdf>.

18 California Department of Education, Educational Demographics Unit, "California Basic Educational Data System (CBED)," <http://www.cde.ca.gov/ds/dc/cb/>.

19 California Department of Education, "Accountability and School Improvement." <http://www.cde.ca.gov/eo/in/bp/bpstrategy4.asp>.

Table 4.12-6
SPUSD Schools

School Name	Maximum Capacity	Enrollment (2014-2015)	Remaining Capacity
Elementary School (K–5)^a			
McKeveitt Elementary	416	407	9
Grace Thille Elementary	442	402	40
Glen City Elementary	670	623	47
Blanchard Elementary	494	459	35
Thelma B. Bedell Elementary	394	342	52
Barbara Webster Elementary	471	417	54
Middle School (6–8)			
Isbell Middle ^b	1400	1,541	-141
High School (9–12)			
Santa Paula High ^c	1,700	1,541	159
Renaissance High (Continuation School) ^d	125	121	4

Sources:

a Monique Terrazas, attendance accounting specialist, phone conversation, July 27, 2016.

b Isbell Middle School office staff, phone conversation, July 27, 2016.

c Dr. Williams, assistant principal, phone conversation, July 28, 2016.

d Renaissance High School office staff, phone conversation, July 28, 2016.

Developer fees are collected by the City to improve school facilities to meet the SPUSD's growing demands. The developer fees are capped by the State Allocation Board at a maximum of \$3.36 per square foot of new residential construction and \$0.54 per square foot of commercial/industrial construction. The SPUSD is entitled to collect that amount on all construction within the boundaries of its high school attendance area, with the exception of construction within the boundaries of the Briggs Elementary, Mupu Elementary, and Santa Clara Elementary School Districts. An agreement with these SPUSD elementary feeders allocates one-third of the maximum amount to the SPUSD, with two-thirds allocated to the respective elementary district.²⁰

Parks and Recreation Facilities

The City of Santa Paula's park system includes two neighborhood parks, eight mini-parks and two special Interest parks, none of which are in or adjacent to the Project Site. Local public school facilities are also available for indoor and outdoor public recreation activities through a joint-use agreement between the City and the SPUSD. Santa Paula is located near several regional recreation opportunities, including the

²⁰ Santa Paula Unified School District, *Level I Developer Fee Justification Study* (April 2014).

Pacific Ocean, Channel Islands National Park, Ventura County Parks, Six Flags Magic Mountain Theme Park, Lake Piru, and the Ronald Reagan Presidential Library and Museum. There are currently no parks or recreational facilities within or adjacent to the Project Site.

Libraries

The Blanchard/Santa Paula Public Library District (Blanchard Community Library), located at 119 N. 8th Street in Santa Paula, provides library services to the residents of Santa Paula, as well as to surrounding areas. In fiscal year 2012–2013, the library recorded 22,258 borrowers/patrons and circulated 69,559 items to borrowers.

The 22,554-square-foot facility includes computers for free public use, a local history room, a literacy center, and one meeting room. Library program services include a children's story time, a teen program, homework center assistance, adult and family literacy programs, basic Internet and computer classes, and ESL (English as a second language) classes. Library facilities and services are funded through a share of local property taxes, as assessed and collected by the County tax assessor. The library has recently completed an electrical retrofit to upgrade the electrical system that supports the building facility, as well as the surrounding parking lots. Energy efficiency and conservation features to be constructed within the building are planned to occur when sufficient funding becomes available. Furthermore, an interior expansion and facilities upgrade, which is currently still in the planning stages, would convert an undeveloped storage area into a literacy office, a multipurpose room, and a work/storage area for the Friends of the Library.

Using the 2013 City population estimate of 29,953 persons, the library has a ratio of 0.75 square feet of public library space per capita. This figure is above the commonly accepted industry standard of 0.60 square feet of public library space per capita.

Library facilities and services are funded through a share of local property taxes, as assessed and collected by the County tax assessor. The library generates revenue from current secured property taxes collected by the County of Ventura and from a flat \$40 per parcel tax levied on the approximately 7,500 parcels within the district boundaries. In March 2004, Santa Paula voters approved Measure B4, which increased the parcel tax from \$25 to \$40 and enhanced annual revenues by more than \$110,000. As a result of the increased revenues, the library was able to avoid cuts in service hours and programs. In November 2004, Santa Paula voters approved Measure L, which increased the ceiling of the spending limit by \$350,000 to utilize the anticipated increased revenues for the period from July 2006 to June 2010.

Ventura County Resource Conservation District

As with other unincorporated lands in Ventura County, the Project limits are within the boundaries of the Ventura County Resource Conservation District (VCRCD), which is a special district of the state and is primarily funded by grants. It provides assistance to help both rural and urban communities conserve, protect, and restore natural resources. The VCRCD is a local unit of government and is administered under the Public Resource Code.²¹ VCRCD is one of 128 Resource Conservation Districts in California and belongs to the California Association of Resource Conservation Districts (CARCD) and the National Association of Resource Conservation Districts (NACD). The NACD represents more than 3,000 Resource Conservation Districts in the country. Formation of the VCRCD was accomplished in steps involving a merger and consolidation of the Ojai and South Ventura County Resource Conservation Districts and annexation of all remaining unincorporated land in Ventura County. The three divisions of the VCRCD coincide with these three geographical areas (Ojai, Santa Clara Valley, and South Ventura County).

Ventura County landowners experiencing difficulty with soil, drainage, or related problems may obtain technical assistance from VCRCD with:

- Controlling erosion and reducing sedimentation;
- Water conservation;
- Preventing flood damage in upstream areas;
- Minimizing the risk of fire by promoting fire zone planning;
- Rangeland conservation;
- Wetlands and habitat restoration;
- Selecting plant varieties, seeding methods and rates, and solving problems related to the management of cropland, pasture, woodland, wildlife habitat and other land;
- Soil use potentials and limitations;
- Other conservation projects.

General Government Services and Facilities

General government services for the project area are currently administered by the County of Ventura at their Government Center in the City of San Buenaventura. This includes planning, public works, building and safety, tax assessment and collection, and a variety of other human and animal services. Since most

²¹ California Public Resources Code, div. 9.

of the Project area is undeveloped and there is no development activity at present, there is little need for, or cost associated with, provision of these services within the Project area.

4.12.2 REGULATORY SETTING

State and local plans and regulations relating to municipal police protection, which are applicable to the Project, provide a regulatory framework for addressing all aspects of police protection services that would be affected by construction and implementation of the Project.

State

California Building Standards Code

The California Building Standards Code (CBSC) is included within the Title 24 of the California Code of Regulations (CCR), which is maintained by the California Building Standards Commission. The CBSC contains regulations that govern the construction of buildings to protect the public health, safety, and general welfare within the State of California. These regulations are based on set standards that have been previously adopted by state agencies that implement or enforce building standards. The California Fire Code (Part 9 of the Title 24, CBSC) contains fire-safety-related building standards consistent with national practices and policies that protect the public and property from fire hazards and hazardous conditions.

Cal-OSHA

The mandated Cal-OSHA requirement for firefighter safety is known as the “two-in/two-out rule.” This rule requires a minimum of two personnel to be available outside a structure prior to entry by firefighters to provide an immediate rescue for trapped or fallen firefighters, as well as immediate assistance in rescue operations.

California Penal Code

The California Penal Code, Sections 830-832.17 sets forth the requirement of the organization and operation of law enforcement agencies within the State of California.²² This code sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and county officers are State Peace Officers.

22 State of California, State Penal Code. <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=pen&group=00001-01000&file=830-832.17>.

Local

City of Santa Paula General Plan

The City of Santa Paula's General Plan Land Use and Safety Elements set forth a number of goals and policies that relate to police protection services. These goals and policies are intended to implement city-wide programs that will guide efficient and effective police protection for the general public.

Land Use Element

The Land Use Element of the General Plan provides discussion of the public service systems in the City. In addition to police and fire protection and schools, the Land Use Element recognizes parks and recreational facilities, along with civic buildings such as city hall, community centers, and fire stations within the land use category of Institutional and Civic Uses.²³

Safety Element

The Safety Element addresses anticipated increased personnel needs, facility upgrades, and need for advocacy programs to promote a high level of community safety.

Development Impact Fees

The City and the area school districts have implemented development impact fees consistent with State government and education code sections. The City's fees include recreation, transportation, fire, library, public administration, and police fees. The school districts collect school facilities fees based on an adopted fee program that is independent of the City's program. Potential impacts and applicable fees discussed in this section include fire, police, library, and school fees.

4.12.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the City determines a project may be deemed to have a significant impact on public services, including police protection services, if it would:

- Result in substantial adverse impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Fire Protection?

23 City of Santa Paula, *General Plan*, "Land Use Element" (adopted 1998 and updated through Resolution No. 6700, September 20, 2010, corrected April 12, 2011), p. LU-13.

- Police Protection?
- Schools?
- Parks?
- Other Public Facilities?

4.12.4 PROJECT IMPACTS

Potential Project impacts were evaluated based on the ability of the Santa Paula Fire and Police Departments to maintain adequate service ratios, response times, or other performance objectives in the City resulting from development of the Project. Factors taken into consideration affecting fire and police safety protection include the Project size, required fire flow, response time, response distance vehicles, emergency access, and school and library capacity.

Threshold: **Result in substantial adverse impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:**

Fire Services

Impact

The Specific Plan will allow for the development of light industrial and commercial uses over a 53.81-acre Project Site. The build-out of the Specific Plan area will require specific tract maps that provide more detailed design of the building footprints and internal circulation. Before buildings are constructed building plans will be submitted for review and approval, which will ensure compliance with all UFC standards. The SPFD will review all tract maps and all building permit and improvement applications to ensure designs meet fire code requirements. Review of future development plans under the Specific Plan will be required to provide defensible space, serviceable access, adequate fire hydrants, adequate building addressing, adequate interior fire sprinkler systems, adequate fire or emergency alarm system, and approved locking systems for any gated access ways, among other standard conditions. All access and internal driveway widths are designed to allow for emergency vehicle access throughout the Project Site.

The Specific Plan will result in an increase in the need for services from existing SPFD facilities, equipment, and staff personnel. The anticipated level of service calls is not expected to exceed 2–4 times per week, however, multiple calls through the City at any given time could exacerbate response times and require greater dependence on mutual aid (i.e., adjacent jurisdictions). Because mutual aid responders would be

coming from as far as the cities of Fillmore or San Buenaventura (approximately 10 miles east and west of the City, respectively), this circumstance could result in substantial response delays.

Common guidelines for serious medical emergencies (e.g., heart attack) recommend response times within 5 minutes of notification. Similarly, national standards for fire response also have a 5-minute response benchmark for intervention of incipient fires to prevent rapid fire escalation and extensive or life-threatening fire development. However, national guidance on emergency vehicle response speeds recommends no response speed greater than 20 miles per hour beyond the posted speed limit. Stations 81 and 82 are located approximately 2.1 and 1.2 miles from the Project Site, respectively. It is estimated that response times to the Project Site from Stations 81 and 82 would be approximately 5.0 minutes or less. Based on national standards and the SPFD's average incident response times, implementation of the Specific Plan would not likely exceed response time standards for both Station 81 and Station 82.

Furthermore, as part of the review of the Specific Plan, the City of Santa Paula and Project Applicant will enter into a Development Agreement with the property owner that addresses the funding of public services, including fire protection services. Under the terms of the Development Agreement, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection facilities and personnel costs. No new facilities would be required to serve the Project Site as a result of the implementation of the Specific Plan. As such, mitigation is not required.

While emergency vehicle response times could increase because of increased traffic on the local roadways as a result of development under the Specific Plan, these impacts would be reduced to less than significant with implementation of the traffic mitigation measures provide in **Section 4.13, Transportation and Traffic**, which will ensure all roadways and intersections operate at acceptable levels of service.

The SPFD utilizes the California Fire Code Appendix B to determine the required fire flow for new structures. Appendix B utilizes type of construction and total building area to identify the required flow from public water systems used for firefighting. SPFD's standards for water flow rates range from 1,500 to 4,500 gallons per minute (gpm) for a duration capability of 2 and 4 hours, respectively. As previously discussed, the SPFD will review all future building plans and require adequate fire-flow pressure and flow rates through automatic fire sprinkler systems, fire hydrants, and other design features where appropriate (as required by appropriate federal, state, and local fire code and building code requirements. As such, potential impacts with regard to fire-flow requirements will be less than significant.

Police Services

Impacts

Development of the Specific Plan would increase the demand for services and resources provided by the SPPD. This would include initial review of development plans to identify requirements to ensure adequate access and surveillance opportunities, building and field inspections to ensure compliance with approved plans and local standards, and to respond to a variety of potential property-related and personal crimes, traffic accidents, and any number of possible public safety and “disturbance of the peace” circumstances. Similar to service demands for fire protection services, the exact service demands for police protection services cannot be predicted, particularly with respect to calls for service, over the operating life of the fully developed Project area. This increased need for police officers would occur incrementally over a period of years as the Project area develops based on market conditions, rather than all at once.

As previously discussed, there is no adopted response time standard, and the SPPD does not track this as a measure of service delivery.

Because the Project would not require construction of new or expanded police protection facilities, project-related police protection impacts would be less than significant.

Schools

Impacts

Because no new residential zoning or new residential development is proposed, the Project would not generate new housing with residents who would have a need for public school facilities. There is a possibility that some future employees who work in the Project area could occupy homes in the existing City limits and could have school-age children who attend local schools in the SPUSD. The School capacity and student generation estimate is based on the residential units, and it is expected that employees of occupants within the Specific Plan uses would either travel from of outside the City or would reside within the existing and future housing stock in the City, and as such, would not add students to the local school system. Future households would occupy homes within the SPUSD current service boundaries, and there would be no need to construct additional school facilities that already serve those areas or the Project. Therefore, the Project would not significantly impact the local school districts.

Parks

Impacts

Because the Project does not include any new residential zoning or any new residential development projects, it would not result in an increase in the residential population that could visit the City’s parks

and recreation facilities. Businesses do not typically generate any regular or significant demand on parks and recreation facilities, as the occupants are normally at the business site throughout the work day, or perhaps travel briefly off site from time-to-time for meals or errands. Also, the Specific Plan includes approximately 4.9 acres of open space that could be used by occupants of the facilities allowed under the Specific Plan during lunch breaks for passive recreation. Therefore, implementation of the Specific Plan would not result in a substantial increase in level of use of existing parks and would not increase demand to a level that would generate a need for new or expanded parks facilities. Project impacts would be less than significant.

Other Public Facilities

Impacts

Annexation of the Project area would shift all local government services to the City of Santa Paula. There would be increased demand for a variety of City resources, especially during the development planning, permitting, and inspection phases, and much less so thereafter. All services can be provided from the City's existing administrative facilities. All of these added costs would be more than offset by one-time and annually recurring tax revenues generated as the Project area is developed.

The proposed detachment of the Project area from the VCRCO would likely decrease the need for the services provided by that agency because the urbanization of this area would not require the technical assistance for the land resource conservation that VCRCO provides.

Because no new governmental facilities would need to be constructed to administer governmental services for the Project area, there would be no environmental impacts related to public facilities construction projects.

4.12.5 CUMULATIVE IMPACTS

Implementation of the Project, including long-term development of the Project area in accordance with the Specific Plan and the proposed zone district standards for the other affected properties, would contribute to a cumulative increase in the demand for local government services, local libraries, and police and fire protection due to the effects of existing, planned, and future development throughout the City limits. Given that no new police, fire, library or general governmental facilities would need to be constructed to provide adequate levels of service to the Project Site, and also given that the tax revenues generated by the fully developed Project area would contribute to offset the increased cost of public services to this area, the Project's effects would be less than cumulatively considerable. As discussed earlier in this section, this Project would result in negligible effects on public schools and on parks and

recreation facilities because it does not include any new residential zoning or residential development; it will not be cumulatively considerable.

The City has regulations and ordinances in place to address impacts on public services (e.g., police, fire), including the provision and acquisition of new facilities and equipment. All planned development would be reviewed by the respective agencies and corresponding mitigation design features and payment of fees would be required. Therefore, cumulative impacts associated with public services would be less than significant.

4.12.6 MITIGATION MEASURES

No mitigation is required.

4.12.7 RESIDUAL IMPACTS

Impacts would be less than significant.

4.13 TRANSPORTATION AND TRAFFIC

This section describes the existing transportation and circulation characteristics of the Santa Paula West Project area (“Project Site”), potential environmental impacts, recommended mitigation measures to help reduce or avoid identified impacts, and the level of significance of impacts after mitigation. The traffic impact analysis study prepared to evaluate potential traffic impacts and mitigation measures associated with the proposed project is contained in **Appendix 4.13**.

4.13.1 EXISTING CONDITIONS

Traffic data was collected to develop a detailed description of existing traffic conditions in the study area. The following discussion provides a description of the local street system that will serve land uses within the Santa Paula West Project area, a review of traffic volumes on the study-area street system, an assessment of the resulting operating conditions, and a description of the current public transit system that services the study area.

Existing Street System

Primary regional access is provided by State Route (SR) 126, which runs east–west. Secondary regional access is provided by Ojai Road (SR 150)/10th Street and 12th Street/South Mountain Road in the north and south directions, respectively. Immediately to the north of the Project Site is Telegraph Road, and immediately south of the Project Site is SR 126. Faulkner Road also fronts the Project Site just north of SR 126. The closest adjacent north–south streets providing access to the Project Site are Briggs Road to the west and Peck Road to the east. Beckwith Road provides direct access onto the Project Site onto Telegraph Road and Faulkner Road. The following provides a brief description of the streets adjacent to the Project Site and those providing regional access to the site:

State Highways

SR 126 (Santa Paula Freeway)

SR 126 is an east–west freeway providing access to Fillmore and Santa Clarita to the east and to Ventura and Oxnard to the west. SR 126 is a four-lane divided freeway west of Hallock Drive with a speed limit of 65 mph. East of Hallock Drive, it is a four-lane highway divided by a two-way left-turn lane with a speed limit of 60 mph.

10th Street/Ojai Road (SR 150)

10th Street (SR 150), classified as a Collector, is a north–south street extending from Santa Maria Street in the south to its terminus north of Vista Point Place. 10th Street lies east of the Project Site and is a two-

lane road divided by a double yellow line or a two-way left-turn lane. On-street parking is generally allowed on both sides of 10th Street, and the speed limit is 30 mph. At the intersection of 10th Street/Ojai Road and Santa Paula Street, SR 150 deviates from 10th Street along Ojai Road. Ojai Road (SR 150) is a north–south highway extending from Santa Paula Street to Meiners Oaks in the north. 10th Street lies east of the Project Site and is a two-lane street divided by a double yellow line. On-street parking is generally allowed, and the posted speed limit ranges from 30 to 40 mph.

Major Roadways

Harvard Boulevard

Harvard Boulevard, classified as an Arterial, is an east–west street extending from Peck Road to the east where it joins with Telegraph. Harvard Boulevard lies east of the Project Site and is a four-lane road divided by a two-way left-turn lane. On-street parking is generally allowed on both sides of the street and the speed limit is 35 miles per hour (mph).

Telegraph Road/Main Street

Telegraph Road, classified as an Arterial, is an east–west oriented street extending westward from Peck Road. Telegraph Road lies north of the Project Site and is a two-lane road divided by a single dashed yellow line. On-street parking is available on both sides of the street and the speed limit ranges from 35 to 50 mph. East of Harvard Boulevard, the roadway is named Main Street. Main Street continues as a two-lane road divided with either a single dashed yellow line or a double yellow line. On-street parking is generally allowed on both sides of the street, and the speed limit ranges from 25 mph to 35 mph.

Faulkner Road

Faulkner Road, classified as an Arterial, is an east–west street extending from Peck Road to its current terminus west of the SR 126 Westbound Ramps. Faulkner Road lies south of the Project Site and is a four-lane road divided by a double yellow line or a two-lane road divided by a double yellow line. On-street parking is not allowed on Faulkner Road, and the speed limit is 25 mph.

Briggs Road

Briggs Road, classified as a Local Street, is a north–south street extending from SR 126 in the south to Foothill Road in the north. Briggs Road lies west of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is not allowed along Briggs Road, and the speed limit is 25 mph.

Peck Road

Peck Road, classified as an Arterial, is a north–south street extending from SR 126 in the south to Foothill Road in the north. Peck Road lies east of the project Site and is a two-lane road divided by a double yellow line. On-street parking is generally not allowed along Peck Road, and the speed limit is 30 mph.

Steckel Drive

Steckel Drive, classified as a Collector, is a north–south street extending from SR 126 in the south to Foothill Road in the north. Steckel Drive lies east of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is generally not allowed along Steckel Drive, and the speed limit is 30 mph.

Palm Avenue

Palm Avenue, classified as an Arterial, is a north–south street extending from SR 126 in the south to its terminus north of Santa Paula Street. Palm Avenue lies east of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of Palm Avenue, and the speed limit is 30 mph.

8th Street

8th Street, classified as a Collector, is a north–south street extending from Santa Maria Street in the south to its terminus north of Santa Paula Street. 8th Street lies east of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of 8th Street, and the speed limit is 30 mph.

12th Street/South Mountain Road

12th Street, classified as a Collector, is a north–south street extending from Richmond Road in the north to its terminus at Santa Maria Street, where it becomes South Mountain Drive. 12th Street lies east of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of 12th Street, and the speed limit is 25 mph. South Mountain Drive, classified as an Arterial, is generally an east–west rural road extending from Santa Maria Street in the west toward Fillmore in the east. South Mountain Drive is east of the Project Site and is a two-lane road divided by a double yellow line. On-street parking is not allowed on South Mountain Drive, and the speed limit is 25 mph.

Study Intersections

The area of study encompasses most of Santa Paula, spanning from Briggs Avenue in the west to 10th Street in the east. The study includes 16 study intersections that were analyzed for each of the traffic

scenarios described above. The selection of these intersections was based on input received from the City, as well as a review of previous studies. The study area is consistent with previous studies conducted for projects in the City. These study intersections are shown in **Figure 4.13-1, Study Intersections**, and are listed below with by numbers that correspond to the locations shown in the figure:

1. 10th Street & Harvard Boulevard
2. 8th Street & Main Street
3. 8th Street & Harvard Boulevard
4. Palm Avenue & Main Street
5. Palm Avenue & Harvard Boulevard
6. Steckel Drive & Main Street
7. Steckel Drive & Harvard Boulevard
8. Peck Road & Harvard Boulevard/Telegraph Road
9. Peck Road & Faulkner Road
10. Peck Road & SR 126 Eastbound On/Off Ramps
11. Faulkner Road & SR 126 Westbound On/Off Ramps
12. Beckwith Road & Telegraph Road
13. Briggs Road & Telegraph Road
14. Briggs Road & Faulkner Road
15. Briggs Road & SR 126 Westbound On/Off Ramps
16. Briggs Road & SR 126 Eastbound On/Off Ramps

Of the 16 intersections, 9 operate under signal control; the remaining 7 operate under stop control.

Existing Traffic Volumes and Level of Service

Weekday peak-period traffic counts (from 7:00 to 9:00 AM and from 4:00 to 6:00 PM) were collected in late August 2014 for 5 of the 16 analyzed intersections in this study. For the remaining 11 intersections, traffic counts used in *Transportation Analysis Report for the Santa Paula West Business Park Specific Plan* (Fehr & Peers, March 2015), which were collected in March 2014, were used. All traffic counts were collected outside of weeks with major holidays to represent typical conditions. Existing AM and PM peak-hour traffic volumes for the study intersections are shown in **Figure 4.13-2, Existing Peak-Hour Traffic Volumes**.



NOT TO SCALE



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-1



NOT TO SCALE



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-2



Existing Peak-Hour Traffic Volumes

Intersections

Table 4.13-1, Intersection Level of Service Analysis—Existing Conditions, summarizes the results of the analysis of the existing weekday morning and afternoon peak-hour LOS at each of the analyzed intersections. Of the nine signalized intersections, all currently operate at LOS C or better during both the AM and PM peak hours. Of the seven stop-controlled intersections, all but one currently operate at LOS C or better during both the AM and PM peak hours. The exception is Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way (Intersection 10), which operates at LOS D in the PM peak hour.

Table 4.13-1
Intersection Level of Service Analysis—Existing Conditions

Intersection	Peak Hour	V/C or delay	LOS
1 10th Street & Harvard Boulevard	AM	0.752	C
	PM	0.764	C
2 8th Street & Main Street	AM	0.316	A
	PM	0.389	A
3 8th Street & Harvard Boulevard	AM	0.261	A
	PM	0.351	A
4 Palm Avenue & Main Street	AM	0.457	A
	PM	0.430	A
5 Palm Avenue & Harvard Boulevard	AM	0.539	A
	PM	0.542	A
6 Steckel Drive & Main Street	AM	10.6	B
	PM	11.2	B
7 Steckel Drive & Harvard Boulevard	AM	0.341	A
	PM	0.354	A
8 Peck Road & Harvard Boulevard/Telegraph Road/Main Street	AM	0.666	B
	PM	0.483	A
9 Peck Road & Faulkner Road	AM	0.338	A
	PM	0.453	A
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way	AM	9.6	A
	PM	26.1	D
11 Faulkner Road & SR 126 WB On/Off Ramps	AM	19.0	C
	PM	10.0	B

Intersection		Peak Hour	V/C or delay	LOS
12	Beckwith Road & Telegraph Road	AM	11.6	B
		PM	14.8	B
13	Briggs Road & Telegraph Road	AM	0.280	A
		PM	0.369	A
14	Briggs Road & Faulkner Road	AM	9.9	A
		PM	10.1	B
15	Briggs Road & SR 126 WB On/Off Ramps	AM	10.0	A
		PM	10.0	A
16	Briggs Road & SR 126 EB On/Off Ramps	AM	9.6	A
		PM	10.2	B

Source: Fehr & Peer, Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan (March 2015).

Freeways and Multilane Highway Segments and Ramps

Table 4.13-2, Existing Level of Service Freeway and Multilane Highway Segments, provides a summary of the current operating conditions of freeway and multilane highways. As shown in Table 4.13-2, all freeway segments currently operate at LOS C or better in both directions during both peak hours.

Table 4.13-2
Existing Level of Service Freeway and Multilane Highway Segments

	Roadway Segment	Peak Hour	Eastbound			Westbound		
			Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS
1	SR 126: Hallock Drive to 10th Street (SR 150)	AM	932	7.5	A	1,509	12.2	B
		PM	1,729	14.0	B	1,729	14.0	B
2	SR 126: 10th Street (SR 150) to Palm Avenue	AM	1,136	9.2	A	2,102	17.0	B
		PM	1,729	14.0	B	1,729	14.0	B
3	SR 126: Palm Avenue to Peck Road	AM	1,253	10.1	A	2,429	19.6	C
		PM	1,729	14.0	B	1,729	14.0	B
4	SR 126: Peck Road to Briggs Road	AM	1,354	10.9	A	2,802	22.8	C
		PM	1,729	14.0	B	1,729	14.0	B
5	SR 126: Briggs Road to Wells Road	AM	1,410	11.4	B	2,820	22.9	C
		PM	1,729	14.0	B	1,729	14.0	B

Roadway Segment	Peak Hour	Eastbound			Westbound		
		Volume	Density (pc/mi/ln)	LOS	Volume	Density (pc/mi/ln)	LOS

Source: Fehr & Peers, *Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan* (March 2015).

Alternative Transportation Systems

Transit Service

Existing transit service in the City includes Dial-A-Ride service; the Santa Paula Commuter Bus, which provides service for local students only on school days; and the Vista Highway 126 commuter bus that provides service between Ventura and Fillmore during the week, with reduced service on Saturday. Transit service is not currently provided near East Area 1 due to the lack of demand.

Bicycle Facilities

Designated bicycle facilities in the City of Santa Paula are located on Santa Paula Street and along the railroad tracks between Peck Road and 9th Street. There are no existing bicycle facilities on the Project Site.

Pedestrian Facilities

The Project area lacks a complete network of pedestrian facilities around the Project Site, such as sidewalks, crosswalks, and pedestrian safety features. The north side of Telegraph Road and the east side of Beckwith Road provide sidewalks.

Santa Paula Airport

The Santa Paula Airport is located within the south-central portion of the City of Santa Paula, and is bounded by SR 126 on the north, Palm Avenue on the west, Ojai Street on the east, and the Santa Clara River on the south. The airport is a public-use airport that is privately owned and operated by the Santa Paula Airport Association. Santa Paula Airport is classified by the Federal Aviation Administration (FAA) in the National Plan of Integrated Airport Systems (NPIAS) as a general aviation airport.¹

¹ Federal Aviation Administration, *National Plan of Integrated Airport Systems (NPIAS)* (1995).

The State of California has defined air safety zones in the *Airport Land Use Planning Handbook*.² Santa Paula Airport has adopted the State of California Air Safety Zones to define areas near the airport where land use restrictions are established for public safety. The Ventura County Airport Land Use Commission (ALUC) has established land use guidelines for the various safety zones in the Comprehensive Land Use Plan (CLUP).³ The CLUP for Santa Paula Airport establishes the various safety zones for approaching and departing aircraft and provides restrictions on development within the zones, including Air Safety and Height Restriction Zone. The Project Site is not located within any of the safety or height restriction zones identified in the CLUP.

4.13.2 REGULATORY SETTING

State

Caltrans, Guide for the Preparation of Traffic Impact Studies

The California Department of Transportation (“Caltrans”) reviews federal, state, and local agency development projects, and land use change proposals for their potential impact to State highway facilities. Caltrans developed the Guide for the Preparation of Traffic Impact Studies for the purpose of improving the Caltrans local development review process.⁴ This Guide states that Caltrans endeavors to maintain a target level of service standard for state highway facilities “at the transition between LOS ‘C’ and LOS ‘D.’” but does not identify any specific LOS standard. However, Caltrans recognizes it may not always be feasible to maintain this level of service and determines the appropriate target level of service for highway facilities with cities and counties. If an existing State highway facility is operating at less than the desired target level of service, then the goal is to maintain the existing level of service.⁵

2 State of California, Department of Transportation, Division of Aeronautics, *California Airport Land Use Planning Handbook* (October 2011).

3 Ventura County Airport Land Use Commission, *Airport Comprehensive Land Use Plan for Ventura County—Final Report*, prepared by Coffman Associates, Inc., adopted July 7, 2000.

4 Caltrans, *Guide for the Preparation of Traffic Impact Studies* (2002), 1.

5 Caltrans, *Guide for the Preparation of Traffic Impact Studies* (2002).

Local

Ventura County Transportation Commission

Congestion Management Plan

The Ventura County Transportation Commission (VCTC), as the designated Congestion Management Authority (CMA) for Ventura County, is responsible for coordinating land use, transportation planning, and air quality to mitigate traffic congestion. The Ventura County Congestion Management Program (VCCMP) provides local government agencies and private developers with the resources to track and analyze traffic congestion throughout Ventura County.

The VCTC designated the VCCMP road network in 1991 as part of the development of the first CMP.⁶ The network is comprised of the state highway system and principal arterials in Ventura County, including State Route 126 (SR 126), State Route 150 (SR 150), and Harvard Boulevard/Telegraph Road west of SR 150.⁷

City of Santa Paula General Plan

Circulation Element

The City of Santa Paula General Plan Circulation Element⁸ defines the basic circulation system of the City and provides for the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, other local public utilities and facilities in the City.

4.13.3 THRESHOLDS OF SIGNIFICANCE

CEQA Guidelines

To assist in determining whether a project would have a significant effect on the environment, the California Environmental Quality Act (CEQA) identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantially adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant on transportation and traffic if it would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but

6 Ventura County Transportation Commission (VCTC), 2009 Update—Ventura County Congestion Management Plan (VCCMP), adopted July 2009.

7 VCTC, 2009 Update—VCCMP, adopted July 2009, Exhibit 9.

8 City of Santa Paula, *General Plan*, “Circulation Element.”

not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?

- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- Result in inadequate emergency access?
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

As adopted in the Santa Paula General Plan Circulation Element,⁹ the minimum acceptable level of service at intersections in the City is LOS C. If traffic from the project results in an intersection operating at LOS D or worse, this is identified as a significant impact.

The minimum desirable level of service on the analyzed freeway segments is LOS E, as described in the VCCMP. If the addition of project traffic were to cause or significantly worsen LOS F, it would be considered a significant impact. Although the VCTC has adopted LOS E as a minimum system-wide level of service on all VCCMP roadways it does not provide specific criteria regarding when an individual project's impact may be deemed significant. Therefore, for the purpose of this analysis, the significance threshold from 2010 Los Angeles Congestion Management Program (CMP) for Los Angeles County (Los Angeles County Metropolitan Transportation Authority, 2010) was used. The Los Angeles County CMP states that a project impact would be considered significant if the facility were projected to operate at LOS F after the addition of project traffic, and if the project causes a net increase in traffic demand of 2 percent of capacity or more (i.e., V/C ratio increase greater than or equal to 0.02).

4.13.4 PROJECT IMPACTS

The traffic study analyzed potential Project-related traffic impacts on the local and regional street system surrounding the Project Site. The following traffic scenarios were analyzed for the weekday AM (between 7:00 AM and 9:00 AM) and weekday PM r (between 4:00 PM and 6:00 PM) peak hours.

- Existing plus Project Conditions
- Cumulative Base Conditions (Year 2031)

9 City of Santa Paula, *General Plan*, "Circulation Element."

- Cumulative plus Project Trip Generation (Year 2031)

Trip Generation

Trip generation rates and equations from the ITE *Trip Generation Manual*¹⁰ were used to develop trip generation estimates for the land uses that would be permitted in the Project area.

Internal capture credits were applied to several of the Project land uses. Internal credits reflect the tendency of users of one land use to visit other land uses within the Project. Service areas also factored into the application of the trip credits.

As provided in **Table 4.13-3, Daily Trip Generation**, the projected number of daily trips is approximately 5,546, including 646 AM peak-hour trips and 732 PM peak-hour trips.

Traffic Distribution

The geographic distribution of traffic generated by a proposed project depends on several factors, including the nature of the proposed land uses, the location of site access points in relation to the surrounding street system, the geographic distribution of existing and future population centers, existing travel patterns, and topographic constraints.

The estimated trip distribution pattern is shown in **Figure 4.13-3, Project Trip Distribution**, and includes:

- 60 percent local trips within town
- 3 percent to/from the north
- 2 percent to/from the south
- 10 percent to/from the east
- 25 percent to/from the west

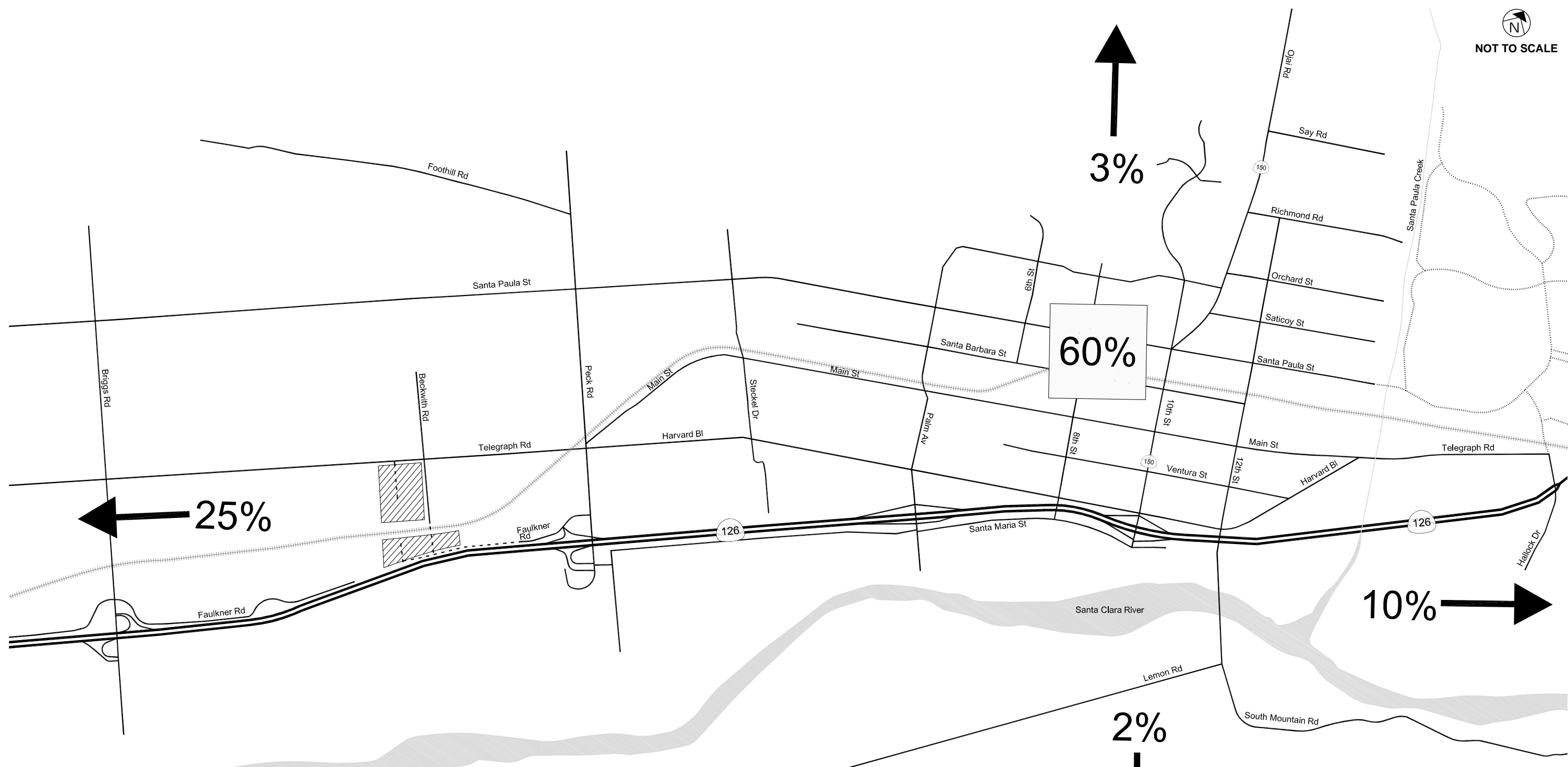
10 Institute of Transportation Engineers, *Trip Generation Manual*, 9th ed. (Washington, DC: Institute of Transportation Engineers, 2012).

**Table 4.13-3
Daily Trip Generation Estimates**

Land Use	Size	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Northeast of Railroad Tracks								
General Light Industrial (ITE 110)	187,373 sq. ft.	1,306	151	21	172	22	160	182
Shopping Center (ITE 820)	2,836 sq. ft.	121	2	1	3	1	10	11
Total Project Trips Northeast of Railroad Tracks		1,427	153	22	175	23	170	193
Northwest of Railroad Tracks								
General Light Industrial (ITE 110)	219,695 sq. ft.	1,531	178	24	202	26	187	213
Shopping Center (ITE 820)	5,347 sq. ft.	228	3	2	5	3	17	20
Total Project Trips Northwest of Railroad Tracks		1,759	181	26	207	29	204	233
South of Railroad Tracks								
General Light Industrial (ITE 110)	276,105 sq. ft.	1,924	224	30	254	32	236	268
Shopping Center (ITE 820)	10,222 sq. ft.	436	6	4	10	18	20	38
Total Project Trips South of Railroad Tracks		2,360	230	34	264	50	256	306
TotaProject Trips		5,546	564	82	646	102	630	732



NOT TO SCALE



LEGEND

- ##% → Regional Trips
- ##% Local Trips
- ▨ Project Site
- - - - - Faulkner Road Extension
- New Roadway

SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-3



Project Trip Distribution

Project Traffic Assignment

The traffic generation and distribution pattern were used to assign the Project-generated traffic to the local and regional street system. The estimated Project-generated peak-hour traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours are shown in **Figure 4.13-4, Project-Only Peak-Hour Traffic Volumes**.

Another future scenario considers impacts on the roadway network that would occur if Beckwith Road were not extended to Faulkner Road. This scenario would not require a new at-grade crossing of the VCTC railroad, and project traffic would be divided between future development on parcels north of the railroad and parcels south of the railroad, as the circulation patterns would change for access to the respective Project areas. The number and location of analyzed intersections and roadway segments is identical to what was analyzed for the cumulative base plus project conditions with Beckwith Road extension.

Figure 4.13-5, Project-Only Peak-Hour Traffic Volumes (without Beckwith Extension), shows the estimated project-only volumes without the Beckwith Road extension traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours. The Project-only volumes without the Beckwith Road extension differ from the volumes shown in **Figure 4.13-4**, which assumes the extension would be in place.

Threshold: **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Existing plus Project Conditions

Intersections

To determine the impact of traffic from the Project, traffic generated by Project uses was added to the existing traffic volumes to determine the resulting LOS. These Existing plus Project traffic volumes are provided in **Figure 4.13-6, Existing plus Project Peak-Hour Traffic Volumes**. These traffic volumes were analyzed to determine the V/C (volume to capacity) ratios and LOS for each study intersection. The results are shown in **Table 4.13-4, Existing plus Project Impacts**.

**Table 4.13-4
Existing plus Project Impacts**

	Intersection	Existing			Existing plus Project			Significant Impact	
		Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Existing	Project
1	10th Street & Harvard Boulevard	AM	0.752	C	0.797	C	0.045	No	No
		PM	0.764	C	0.815	D	0.051	No	Yes
2	8th Street & Main Street	AM	0.316	A	0.323	A	0.007	No	No
		PM	0.389	A	0.405	A	0.016	No	No
3	8th Street & Harvard Boulevard	AM	0.216	A	0.280	A	0.019	No	No
		PM	0.351	A	0.355	A	0.004	No	No
4	Palm Avenue & Main Street	AM	0.457	A	0.478	A	0.021	No	No
		PM	0.430	A	0.488	A	0.018	No	No
5	Palm Avenue & Harvard Boulevard	AM	0.539	A	0.568	A	0.029	No	No
		PM	0.542	A	0.553	A	0.011	No	No
6	Steckel Drive & Main Street	AM	10.6	B	11.1	B	0.5	No	No
		PM	11.2	B	11.9	B	0.7	No	No
7	Steckel Drive & Harvard Boulevard	AM	0.341	A	0.386	A	0.045	No	No
		PM	0.354	A	0.381	A	0.027	No	No
8	Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.669	B	0.834	D	0.165	No	Yes
		PM	0.483	A	0.552	A	0.069	No	No
9	Peck Road & Faulkner Road	AM	0.338	A	0.419	A	0.081	No	No
		PM	0.453	A	0.464	A	0.011	No	No
10	Peck Road & SR 126 EB On/Off Ramps/Acacia Way	AM	9.6	A	11.7	B	2.1	No	No
		PM	26.1	D	40.7	E	14.6	Yes	Yes
11	Faulkner Road & SR 126 WB On/Off Ramps	AM	19.0	C	22.0	C	3.0	No	No
		PM	10.0	B	11.6	B	1.6	No	No
12	Beckwith Road & Telegraph Road	AM	11.6	B	18.7	C	7.1	No	No
		PM	14.8	B	30.2	D	15.4	No	Yes
13	Briggs Road & Telegraph Road	AM	0.280	A	0.310	A	0.030	No	No
		PM	0.369	A	0.398	A	0.029	No	No
14	Briggs Road & Faulkner Road	AM	9.9	A	10.1	B	0.2	No	No
		PM	10.1	B	10.4	B	0.3	No	No

	Intersection	Existing			Existing plus Project				
		Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Significant Impact	
								Existing	Project
15	Briggs Road & SR 126 WB On/Off Ramps	AM	10.0	A	10.3	B	0.3	No	No
		PM	10.0	A	10.3	B	0.3	No	No
16	Briggs Road & SR 126 EB On/Off Ramps	AM	9.6	A	9.9	A	0.3	No	No
		PM	10.2	B	10.2	B	0.3	No	No

Source: Fehr & Peers, *Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan*, (March 2015).

As shown on **Table 4.13-4**, a total of 12 intersections are projected to operate at LOS C or better during both the AM and PM peak hours. The four intersections listed below are projected to operate at LOS D or worse during one or both peak hours:

- Intersection 1: 10th Street and Harvard Boulevard (LOS D AM)
- Intersection 8: Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS D AM)
- Intersection 10: Peck Road & SR 126 Eastbound On/Off Ramps/Acacia Way (LOS E PM)
- Intersection 12: Beckwith Road & Telegraph Road (LOS D PM)

Because the City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these four intersections. All of the impacted intersections have Project-specific impacts (impacts directly related to the addition of Project traffic).

Intersections without Beckwith Road Extension

Under this scenario, the future traffic conditions are considered if Beckwith Road is ultimately not extended south to Faulkner Road. This scenario would not require a new at-grade crossing of the VCTC railroad tracks that bisect the Project Site. To determine the impact of traffic from the Project, traffic generated by Project uses was added to the existing traffic volumes to determine the resulting LOS. These Existing plus Project traffic volumes are shown in **Figure 4.13-7, Existing plus Project Peak-Hour Traffic Volumes (without Beckwith Extension)**. These traffic volumes were analyzed to determine the V/C (volume to capacity) ratios and LOS for each study intersection. The results are shown in **Table 4.13-5, Existing plus Project Impacts (without Beckwith Extension)**.

**Table 4.13-5
Existing plus Project Impacts (without Beckwith Extension)**

Intersection	Existing			Existing plus Project				
	Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Significant Impact	
							Existing	Project
1 10th Street & Harvard Boulevard	AM	0.752	C	0.788	C	0.036	No	No
	PM	0.764	C	0.800	C	0.036	No	No
2 8th Street & Main Street	AM	0.316	A	0.328	A	0.012	No	No
	PM	0.389	A	0.411	A	0.022	No	No
3 8th Street & Harvard Boulevard	AM	0.261	A	0.281	A	0.020	No	No
	PM	0.351	A	0.355	A	0.004	No	No
4 Palm Avenue & Main Street	AM	0.457	A	0.480	A	0.023	No	No
	PM	0.430	A	0.455	A	0.025	No	No
5 Palm Avenue & Harvard Boulevard	AM	0.539	A	0.570	A	0.031	No	No
	PM	0.542	A	0.553	A	0.011	No	No
6 Steckel Drive & Main Street [1]	AM	10.6	B	11.1	B	0.5	No	No
	PM	11.2	B	12.0	B	0.8	No	No
7 Steckel Drive & Harvard Boulevard	AM	0.341	A	0.386	A	0.045	No	No
	PM	0.354	A	0.381	A	0.027	No	No
8 Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.669	B	0.885	D	0.216	No	Yes
	PM	0.483	A	0.599	A	0.116	No	No
9 Peck Road & Faulkner Road	AM	0.338	A	0.441	A	0.103	No	No
	PM	0.453	A	0.522	A	0.069	No	No
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way [1]	AM	9.6	A	11.8	B	2.2	No	No
	PM	26.1	D	40.3	E	14.2	Yes	Yes
11 Faulkner Road & SR 126 WB On/Off Ramps [1]	AM	19.0	C	21.7.0	C	2.7	No	No
	PM	10.0	B	12.4	B	2.4	No	No
12 Beckwith Road & Telegraph Road [1]	AM	11.6	B	18.8	C	7.2	No	No
	PM	14.8	B	30.0	D	15.2	No	Yes
13 Briggs Road & Telegraph Road	AM	0.280	A	0.306	B	0.026	No	No
	PM	0.369	A	0.401	B	0.032	No	No
14 Briggs Road & Faulkner Road [1]	AM	9.9	A	10.1	B	0.2	No	No
	PM	10.1	B	10.4	B	0.3	No	No

Intersection	Existing			Existing plus Project				Significant Impact	
	Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Existing	Project	
15 Briggs Road & SR 126 WB On/Off Ramps ^a	AM	10.0	A	10.3	B	0.3	No	No	
	PM	10.0	A	10.3	B	0.3	No	No	
16 Briggs Road & SR 126 EB On/Off Ramps ^a	AM	9.6	A	9.9	A	0.3	No	No	
	PM	10.2	B	10.2	B	0.0	No	No	

Source: Fehr & Peers, Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan (March 2015).

^a Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

A total of 13 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The three intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

Intersection 8: Peck Road and Harvard Boulevard/Telegraph Road/Main Street (LOS D AM)

Intersection 10: Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way (LOS E PM)

Intersection 12: Beckwith Road and Telegraph Road (LOS D PM)

Because the City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these three intersections. With the exception of Peck Road and SR 126 Eastbound On/Off Ramps intersection because the existing has an LOS D in the PM peak hour, all of the impacted intersections have Project-specific impacts (impacts directly related to the addition of Project traffic).



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-4



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-5

Project-Only Peak-Hour Traffic Volumes (without Beckwith Extension)





NOT TO SCALE



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-6



Existing plus Project Peak-Hour Traffic Volumes



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-7

Existing plus Project Peak-Hour Traffic Volumes (without Beckwith Extension)

**Table 4.13-6
Existing plus Project Level of Service Analysis—Freeway and Multilane Highway Segments**

Roadway Segment	Peak Hour	Existing				Existing plus Project				Project Impact?
		Eastbound		Westbound		Eastbound		Westbound		
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	
1 SR 126 - Hallock Drive to 10th Street (SR 150)	AM	7.5	A	12.2	B	7.6	A	13.0	B	NO
	PM	14.0	B	14.0	B	15.2	B	15.2	B	NO
2 SR 126 - 10th Street (SR 150) to Palm Avenue	AM	9.2	A	17.0	B	9.3	A	18.2	C	NO
	PM	14.0	B	14.0	B	15.2	B	15.2	B	NO
3 SR 126 - Palm Avenue to Peck Road	AM	10.1	A	19.6	C	10.3	A	20.9	C	NO
	PM	14.0	B	14.0	B	15.2	B	15.2	B	NO
4 SR 126 - Peck Road to Briggs Road	AM	10.9	A	22.8	C	11.8	B	22.9	C	NO
	PM	14.0	B	14.0	B	15.2	B	15.2	B	NO
5 SR 126 - Briggs Road to Wells Road	AM	11.4	B	22.9	C	12.5	B	23.1	C	NO
	PM	14.0	B	14.0	B	15.2	B	15.2	B	NO

Source: Fehr & Peers, Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan (March 2015).

Freeway and Multilane Segments and Ramps

The summary of the freeway and multilane highway impacts analyses is provided in **Table 4.13-6, Existing plus Project Impacts—Freeway and Multilane Segments**. The five freeway segments currently operate at LOS C or better in both directions. Based on the significance threshold for the Los Angeles County CMP, the Project does not operate at LOS F after the addition of project traffic and the Project does not cause a net increase in traffic demand of 2 percent of capacity or more. Therefore, the Project would result in less than significant impacts to freeway and multilane segments.

The freeway LOS results for the scenario that does not include the Beckwith Road extension are the same as those shown in **Table 4.13-6** where the extension would be constructed.

Threshold: **Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?**

Congestion Management Plan

An analysis was completed to comply with the monitoring requirements found in the Ventura County Transportation Commission's (VCTC) 2009 VCCMP. The VCTC has adopted LOS E as a minimum system-wide level of service on all VCCMP roadways. In the study area, SR 126 and SR 150, as well as Harvard Boulevard/Telegraph Road west of SR 150, are part of the CMP roadway network

The results of the intersection analysis are provided in **Table 4.13-6** and the freeway analysis presented in **Table 4.13-9** (included later in this Section), indicate that these facilities would operate at LOS C or better during both peak hours under the Existing plus Project scenario and cumulative base plus project conditions in the year 2031. Therefore, impacts to the VCCMP would be less than significant.

Threshold: **Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

The nearest airport is the Santa Paula Airport, located to the southeast of the Project Site. The Project Site is not located within any of the various safety zones established by the Comprehensive Land Use Plan (CLUP), nor is it within the Safety Zone, which includes the Inner Safety Zone (ISZ), the Outer Safety Zone (OSZ), and the Traffic Pattern Zone (TPZ), as provided in the City's General Plan Safety Element. Furthermore, the Project would not significantly change development patterns nor would it increase the heights of any structures beyond three stories. Therefore, the Project would result in a less than significant impact to air traffic patterns or safety risks.

Threshold: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The internal circulation network would be constructed in compliance with the Santa Paula Municipal Code and would not contain dangerous design features (e.g., sharp curves, dangerous intersections) and would be designed to accommodate traffic of the Project, including any delivery trucks related other commercial vehicles related to the uses allowed under the Specific Plan. There is no farmland proposed on the Project Site, and therefore; there would be no incompatible uses such as farm equipment. Implementation of the Project would result in less than significant impacts related to roadway design features and incompatible uses.

Threshold: Result in inadequate emergency access?

No changes are proposed that would impact emergency access. Primary access would be provided by Faulkner Road, Telegraph Road, Beckwith Road. The City of Santa Paula Fire Department (SPFD) provides minimum standards for emergency access. All structures will be required to maintain setbacks between buildings to accommodate fire protection access from all sides of each separate structure and roads will be required to meet standards for emergency access regarding roadway widths, length of roadway, secondary access, and turnarounds, among others.

In addition, as required by the City's Fire Code all individual building permit applications will include a review by the SPFD to ensure adequate setbacks between structures are maintained and that all sides of a building can be accessed by emergency personnel and emergency equipment. No structures would be located beyond 150 feet from a location in which a fire engine could be parked. Impacts with regard to emergency accessibility would be less than significant.

Threshold: Conflict with adopted policies, plan, or program regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The City's General Plan includes goals to ensure that City residents have alternative transportation opportunities, such as transit, bikeways, and pedestrian routes.

The annexation of the area as proposed will not conflict with any policies regarding public transit, bicycle or pedestrian facilities. The Specific Plan will establish standards for vehicular access and pedestrian facilities located within the plan area. The Specific Plan area can accommodate a range of uses that are accessible by auto, bike, or foot, and which generally share a common supply of parking integrated into the divisions within the Specific Plan boundary. The Specific Plan would not conflict with any existing

designated bike lanes or pedestrian facilities. Therefore, impacts to public transit, bicycle, or pedestrian facilities would be less than significant.

4.13.5 CUMULATIVE IMPACTS

The cumulative base traffic projections normally reflect changes to existing traffic conditions that can be expected from two sources. The first source is the ambient growth in traffic, which reflects increases in traffic due to regional growth and development. The second source is traffic generated by specific development located within or near the study area. These projected traffic volumes represent cumulative base conditions.

Information on related projects to determine cumulative traffic growth was obtained from the City of Santa Paula Planning Department. These related projects are included in **Section 3.0, Related Projects**. These developments are assumed to be in place by year 2031 and are included in the forecasts. Trip generation estimates were prepared for the related projects in the City using standard trip generation rates from Trip Generation, 9th Edition (Institute of Transportation Engineers [ITE], 2012). The cumulative projects are estimated to add approximately 4,509 AM peak-hour trips and 5,235 PM peak-hour trips. Detailed trip estimates for related projects are included in **Appendix 4.13**.

To develop the ambient growth rate for Santa Paula for 2031, the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Travel Demand Model was used. The SCAG model is maintained SCAG and is reviewed by local agencies throughout the SCAG region. Land use projections for the City in that model were compared with projections in the countywide model maintained by the Ventura County Transportation Commission and found to be more conservative. A review of forecast traffic volume growth on roadways within the City indicated an ambient growth rate of approximately 0.5% percent per year, or 8.5 percent over the 17-year planning horizon for this study. This growth was applied to the existing baseline traffic volumes to reflect the effects of regional growth through 2031. The projected traffic volumes representing the cumulative base conditions (Year 2031) without the Project are shown in **Figure 4.13-8, Cumulative Base Peak-Hour Traffic Volumes**.

Future (Year 2031) Traffic Conditions

Roadway Infrastructure Improvements

Physical street system improvements expected to be implemented by 2031 in the study area, based on approved programs and/or Project revisions, were included in the analysis of cumulative base conditions.

Future (Year 2031) plus Project Conditions

To evaluate the potential impact of the Project on the local street system, future traffic conditions were projected with and without the traffic from the Project.

The year 2031 future peak-hour traffic volumes were analyzed to determine the projected V/C ratio and LOS for each of the analyzed intersections. The Project traffic volumes were added to the year 2025 future base traffic projections, resulting in future plus project AM and PM peak-hour traffic volumes. These traffic volumes are shown in **Figure 4.13-9, Cumulative plus Project Peak-Hour Traffic Volumes**.



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-8



SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-9

A summary of the future 2031 intersection impact analysis is provided in **Table 4.13-7, Future (Year 2031) plus Project Impacts**. This analysis provides the Project V/C ratio and LOS for each of the analyzed intersections based on peak-hour traffic volumes.

**Table 4.13-7
Future (Year 2031) plus Project Impacts**

Intersection	Cumulative Base (Year 2031)			Cumulative plus Project (Year 2031)				
	Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Significant Impact	
							Cumulative	Project
1 10th Street & Harvard Boulevard	AM	0.992	E	1.037	F	0.045	Yes	Yes
	PM	1.033	F	1.082	F	0.049	Yes	Yes
2 8th Street & Main Street	AM	0.423	A	0.425	A	0.002	No	No
	PM	0.496	A	0.512	A	0.016	No	No
3 8th Street & Harvard Boulevard	AM	0.387	A	0.406	A	0.019	No	No
	PM	0.492	A	0.495	A	0.003	No	No
4 Palm Avenue & Main Street	AM	0.607	B	0.629	B	0.022	No	No
	PM	0.569	A	0.588	A	0.019	No	No
5 Palm Avenue & Harvard Boulevard	AM	0.757	C	0.766	C	0.009	No	No
	PM	0.757	C	0.767	C	0.010	No	No
6 Steckel Drive & Main Street	AM	14.1	B	15.2	C	1.1	No	No
	PM	16.7	C	18.6	C	1.9	No	No
7 Steckel Drive & Harvard Boulevard	AM	0.444	A	0.489	A	0.045	No	No
	PM	0.488	A	0.500	A	0.012	No	No
8 Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.908	E	1.079	F	0.171	Yes	Yes
	PM	0.741	C	0.810	D	0.069	No	No
9 Peck Road & Faulkner Road	AM	0.439	A	0.519	A	0.080	No	No
	PM	0.627	B	0.637	B	0.010	No	No
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way	AM	12.2	B	16.6	C	4.4	No	No
	PM	97.6	F	127.3	F	29.7	Yes	Yes
11 Faulkner Road & SR 126 WB On/Off Ramps	AM	56.3	F	66.9	F	10.6	Yes	Yes
	PM	14.1	B	17.4	C	3.3	No	No
12 Beckwith Road & Telegraph Road	AM	12.3	B	21.0	C	8.7	No	No
	PM	16.9	C	40.1	E	23.2	No	Yes

Intersection	Cumulative Base (Year 2031)			Cumulative plus Project (Year 2031)				
	Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Significant Impact	
							Cumulative	Project
13 Briggs Road & Telegraph Road	AM	0.487	A	0.507	A	0.020	No	No
	PM	0.565	A	0.594	A	0.029	No	No
14 Briggs Road & Faulkner Road	AM	13.3	B	13.7	B	0.4	No	No
	PM	14.3	B	14.8	B	0.5	No	No
15 Briggs Road & & SR 126 WB On/Off Ramps	AM	19.5	C	21.0	C	1.5	No	No
	PM	15.5	C	16.7	C	1.2	No	No
16 Briggs Road & & SR 126 EB On/Off Ramps	AM	11.7	B	12.2	B	0.5	No	No
	PM	13.7	B	13.8	B	0.1	No	No

Source: Fehr & Peers, Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan (March 2015).

As shown in **Table 4.13-7**, 12 of the 16 intersections are projected to operate at LOS C or better during the morning and afternoon peak hours under the future baseline conditions. The following four intersections are projected to operate at LOS D or worse during one or both of the analyzed peak hours in 2031 without traffic from the Project:

1. 10th Street & Harvard Boulevard (LOS E AM LOS F PM)
8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS E AM)
10. Peck Road & SR 126 EB On/Off Ramps/Acacia Way (LOS F PM)
11. Faulkner Road & SR 126 WB On/Off Ramps (LOS F AM)

As shown in **Table 4.13-7**, with the addition of Project traffic, 11 of the 16 intersections are projected to operate at LOS C or better during both the morning and afternoon peak hours. Of the 16 intersections, the addition of traffic from the Project would result in significant impacts at the following five intersections:

Intersection 1: 10th Street & Harvard Boulevard (LOS F AM and PM)

Intersection 8: Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS F AM)

Intersection 10: Peck Road & SR 126 EB On/Off Ramps/Acacia Way (LOS F PM)

Intersection 11: Faulkner Road & SR 126 WB On/Off Ramps (LOS F AM)

Intersection 12: Beckwith Road & Telegraph Road (LOS F PM)

As defined by the City of Santa Paula's definition of minimum desirable intersection level of service (LOS C), traffic generated by the Project would cause or contribute to significant traffic impacts at each of these intersections. Of the five impacted intersections, Project-specific impacts (impacts directly related to the addition of project traffic) are identified at the following intersection:

12. Beckwith Road & Telegraph Road (LOS F PM)

The Project-related traffic added to this intersection during the PM peak hour would contribute to a projected decline below LOS C operation under cumulative plus project conditions. The addition of Project-related traffic to the other impacted intersections would contribute to the projected undesirable levels of service.

Future (Year 2031) plus Project (without Beckwith Extension)

Figure 4.13-10, Cumulative plus Project Peak-Hour Traffic Volumes (without Beckwith Extension), provides the estimated future project-generated peak-hour traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours without the Beckwith Road extension. The Project-only volumes differ from those that would occur with the Beckwith Road extension.

These volumes were analyzed to determine the projected future operating conditions under this scenario. The results of the intersection analysis are summarized in **Table 4.13-8, Future (Year 2031) plus Project Intersection Impacts (without Beckwith Extension)**.

**Table 4.13-8
Future (Year 2031) plus Project Impacts (without Beckwith Extension)**

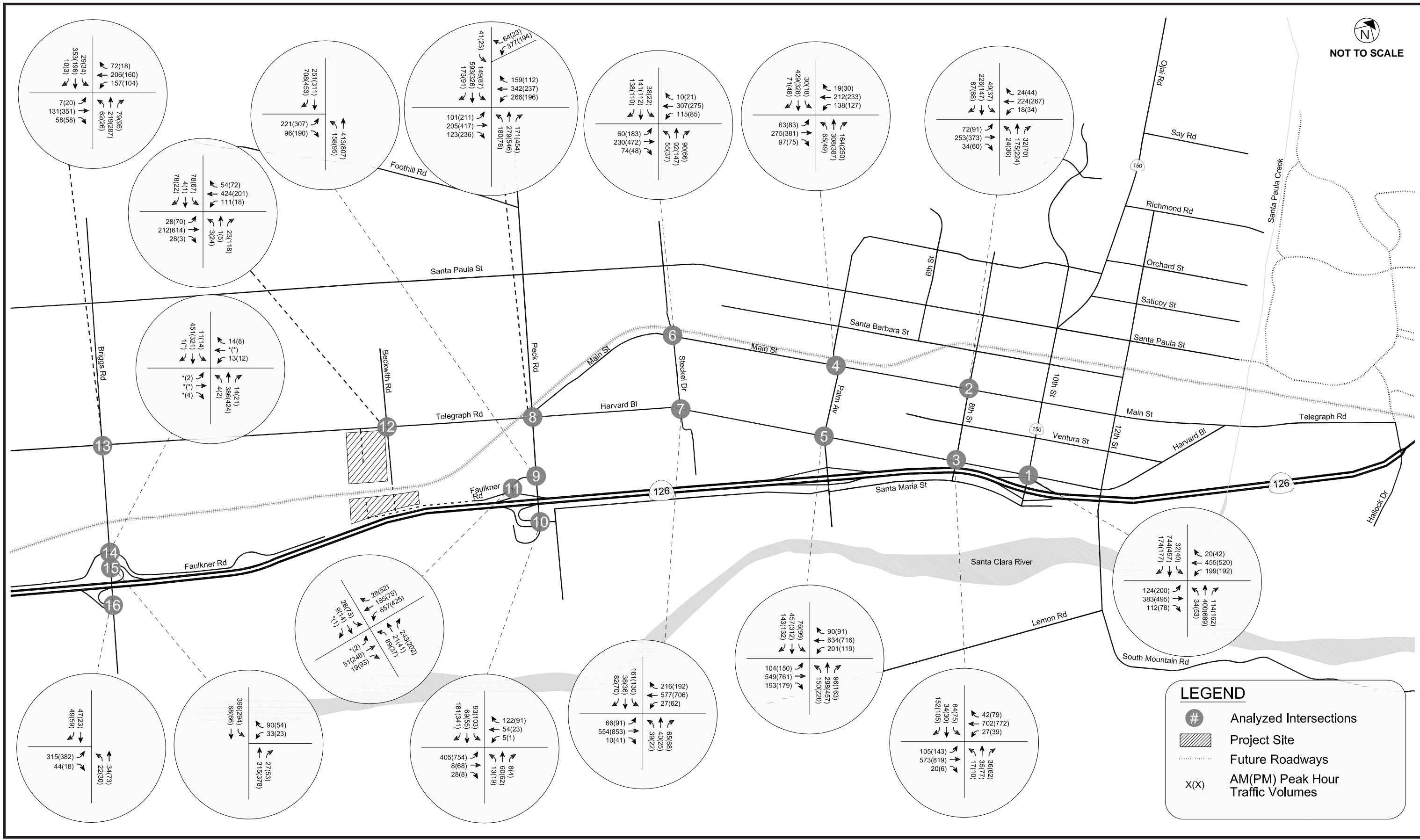
Intersection	Cumulative Base (Year 2031)			Cumulative plus Project (Year 2031)			Significant Impact	
	Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Cumulative	Project
1 10th Street & Harvard Boulevard	AM	0.992	E	1.028	F	0.036	Yes	Yes
	PM	1.033	F	1.068	F	0.035	Yes	Yes
2 8th Street & Main Street	AM	0.423	A	0.425	A	0.002	No	No
	PM	0.496	A	0.518	A	0.022	No	No
3 8th Street & Harvard Boulevard	AM	0.387	A	0.407	A	0.020	No	No
	PM	0.492	A	0.495	A	0.003	No	No
4 Palm Avenue & Main Street	AM	0.607	B	0.630	B	0.023	No	No
	PM	0.569	A	0.594	A	0.025	No	No

	Intersection	Cumulative Base (Year 2031)			Cumulative plus Project (Year 2031)				
		Peak Hour	V/C or delay	LOS	V/C or delay	LOS	Change	Significant Impact	
								Cumulative	Project
5	Palm Avenue & Harvard Boulevard	AM	0.757	C	0.767	C	0.010	No	No
		PM	0.757	C	0.768	C	0.011	No	No
6	Steckel Drive & Main Street	AM	14.1	B	15.2	C	1.1	No	No
		PM	16.7	C	18.9	C	2.2	No	No
7	Steckel Drive & Harvard Boulevard	AM	0.444	A	0.489	A	0.045	No	No
		PM	0.488	A	0.500	A	0.012	No	No
8	Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.908	E	1.131	F	0.223	Yes	Yes
		PM	0.741	C	0.857	D	0.116	No	Yes
9	Peck Road & Faulkner Road	AM	0.439	A	0.541	A	0.102	No	No
		PM	0.627	B	0.696	B	0.069	No	No
10	Peck Road & SR 126 EB On/Off Ramps/Acacia Way	AM	12.2	B	17.0	C	4.8	No	No
		PM	97.6	F	126.6	F	29.0	Yes	Yes
11	Faulkner Road & SR 126 WB On/Off Ramps	AM	56.3	F	66.8	F	10.5	Yes	Yes
		PM	14.1	B	21.1	C	7.0	No	No
12	Beckwith Road & Telegraph Road	AM	12.3	B	21.1	C	8.8	No	No
		PM	16.9	C	39.3	E	22.4	No	Yes
13	Briggs Road & Telegraph Road	AM	0.487	A	0.500	A	0.013	No	No
		PM	0.565	A	0.597	A	0.032	No	No
14	Briggs Road & Faulkner Road	AM	13.3	B	13.8	B	0.5	No	No
		PM	14.3	B	14.9	B	0.6	No	No
15	Briggs Road & & SR 126 WB On/Off Ramps	AM	19.5	C	21.2	C	1.7	No	No
		PM	15.5	C	16.9	C	1.4	No	No
16	Briggs Road & & SR 126 EB On/Off Ramps	AM	11.7	B	12.2	B	0.5	No	No
		PM	13.7	B	13.8	B	0.1	No	No

Source: Fehr & Peers, Traffic Impact Analysis for the Santa Paula Business Park Specific Plan (March 2015).



NOT TO SCALE



LEGEND

- # Analyzed Intersections
- Project Site
- Future Roadways
- X(X) AM(PM) Peak Hour Traffic Volumes

SOURCE: Fehr & Peers - March 2015

FIGURE 4.13-10

Cumulative plus Project Peak-Hour Traffic Volumes (without Beckwith Extension)



A total of 11 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The five intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

Intersection 1: 10th Street and Harvard Boulevard (LOS F AM and PM)

Intersection 8: Peck Road and Harvard Boulevard/Telegraph Road/Main Street (LOS F AM and LOS D PM)

Intersection 10: Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way (LOS F PM)

Intersection 11: Faulkner Road and SR 126 Westbound On/Off Ramps (LOS F AM)

Intersection 12: Beckwith Road and Telegraph Road (LOS E PM)

As defined by the City of Santa Paula's definition of minimum desirable intersection level of service (LOS C), traffic generated by the Project would cause or contribute to significant traffic impacts at each of these intersections. Of the five impacted intersections, Project-specific impacts (impacts directly related to the addition of project traffic) are identified at one intersection:

Intersection 12: Beckwith Road and Telegraph Road (LOS E PM)

The Project-related traffic added to this intersection during the PM peak hour would contribute to a projected decline below LOS C operation under cumulative plus project conditions. The addition of Project-related traffic to the other impacted intersections would contribute to the projected undesirable levels of service.

Future 2031 Freeway and Multilane Highway Segments and Ramps

A summary of impacts to five freeway and multilane highway segments is provided in **Table 4.13-9, Future (Year 2031) Freeway and Multilane Highway Segments.**

Of the 10 directional freeway segments selected for analysis, all are projected to operate at LOS E or better during both the AM and PM peak hours under cumulative base conditions. As defined in the VCCMP, the minimum desirable level of service on freeway segments is LOS E. Therefore, no freeway segments would be significantly impacted due to cumulative development.

**Table 4.13-9
Future (Year 2031) Freeway and Multilane Highway Segments (without Beckwith Extension)**

Roadway Segment	Peak Hour	Cumulative Base Year 2031				Cumulative Base plus Project				Significant Impacts	
		Eastbound		Westbound		Eastbound		Westbound		Cumulative Impact?	Project Impact ?
		Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS	Density (pc/mi/ln)	LOS		
1 SR 126 - Hallock Drive to 10th Street (SR 150)	AM	17.7	B	17.7	B	18.5	C	18.5	C	NO	NO
	PM	23.2	C	23.2	C	24.7	C	24.7	C	NO	NO
2 SR 126 - 10th Street (SR 150) to Palm Avenue	AM	24.3	C	24.3	C	25.9	C	25.9	C	NO	NO
	PM	23.2	C	23.2	C	24.7	C	24.7	C	NO	NO
3 SR 126 - Palm Avenue to Peck Road	AM	27.2	D	27.2	D	29.0	D	29.0	D	NO	NO
	PM	23.2	C	23.2	C	24.7	C	24.7	C	NO	NO
4 SR 126 - Peck Road to Briggs Road	AM	33.3	D	33.3	D	33.5	D	33.5	D	NO	NO
	PM	23.2	C	23.2	C	24.7	C	24.7	C	NO	NO
5 SR 126 - Briggs Road to Wells Road	AM	38.7	E	38.7	E	39.1	E	39.1	E	NO	NO
	PM	23.2	C	23.2	C	24.7	C	24.7	C	NO	NO

Note: pc/mi/ln = passenger cars per mile per lane.

4.13.6 MITIGATION MEASURES

The following recommended mitigation measures would fully mitigate all but one of the identified existing undesirable LOS and project and cumulative impacts.

MM TRA-1 Peck Road & Harvard Boulevard/Telegraph Road/Main Street (Intersection 8). This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane.

Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.

MM TRA-2 Peck Road & SR 126 EB On/Off Ramps/Acacia Way (Intersection 10). This intersection could be mitigated to LOS C or better by installing a traffic signal. A peak-hour signal-warrant analysis is provided in Appendix D of the Traffic Impact Analysis and indicates that the installation of a traffic signal would be warranted under existing plus project conditions during the PM peak hour.

Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.

MM TRA-3 Beckwith Road & Telegraph Road (Intersection 12). This intersection could be mitigated to LOS C or better by installing a traffic signal and reconfiguring the westbound approach. A peak-hour signal-warrant analysis is provided in Appendix E and indicates that the installation of a traffic signal would be warranted under existing plus project conditions. The westbound approach can be restriped to provide one right-turn lane, one through lane, and one left-turn lane (a reconfiguration of the existing two-way left-turn lane). With the development of the Santa Paula West Business Park, Beckwith Road will be widened to full City standards, which provide for a 64-foot roadway within an 84-foot right-of-way. With the additional roadway width, the northbound approach could be widened from its current single-lane configuration to provide one left-turn lane and one shared through/right-turn lane. With this configuration as mitigation, the intersection would operate at LOS C or better under existing plus project conditions.

Since the impacts at this intersection are project-related impacts (rather than cumulative impacts to which the project would contribute), the Project applicant shall be responsible for providing 100 percent of these mitigation improvements.

MM TRA-4 Faulkner Road & SR-126 Westbound On/Off Ramps (Intersection 11) – This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach. The westbound approach can be restriped to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two lanes, this improvement would require coordination with and approval by Caltrans.

Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.

10th Street & Harvard Boulevard (Intersection 1) – Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project including bicycle lanes is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated. Alternatively, a peak-hour parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B under the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.

Mitigation without Beckwith Road Extension

For the Existing plus Project scenario without the Beckwith Road extension, the mitigation measures MM TRA -1 through MM TRA-3 listed for the three significantly impacted intersections would similarly mitigate all intersection impacts.

For the Cumulative plus Project Scenario without the Beckwith Road extension, mitigation measures MM TRA -1 through MM TRA-3 would similarly mitigate all but two intersection impacts:

Intersection 1: 10th Street and Harvard Boulevard and

Intersection 8: Peck Road and Harvard Boulevard/Telegraph Road/Main Street.

These impacts would remain significant and unavoidable for the Cumulative plus Project Scenario without the Beckwith Road extension due to the City's beautification project including bicycle lanes is planned along 10th Street at this location.

4.13.7 RESIDUAL IMPACTS AFTER MITIGATION

Residual impacts after mitigation are provided in **Table 4.13-10** through **Table 4.13-13**.

Residual Impacts for Intersection 10 (Peck Road & SR 126 EB On/Off Ramps/Acacia Way) Intersection 11 (Faulkner Road & SR 126 WB On/Off Ramps), and Intersection 12 (Beckwith Road & Telegraph Road) would be reduced to less than significant. However, impacts at Intersection 1 (10th Street and Harvard Boulevard) and Intersection 8 (Peck Road and Harvard Boulevard/Telegraph Road/Main Street) would remain significant and unavoidable as described below.

Intersection 1—10th Street & Harvard Boulevard

Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak-hour parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation. The constraints of the intersection and the proposed bicycle lanes discussed under the Existing plus Project scenario would also apply to the Cumulative plus Project scenario. Therefore, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable.

Intersection 8—Peck Road & Harvard Boulevard/Telegraph Road/Main Street

This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation. Given the constraints of the intersection, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable.

Residual Impacts—Existing plus Project Impacts with Mitigation

Table 4.13-10
Existing plus Project Impacts with Mitigation

Intersection	Peak Hour	V/C or Delay	Existing plus Project				With Mitigation			
			LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
					Cumulative ?	Project?				
1 10th Street and Harvard Boulevard	AM	0.797	C	0.045	No	No	0.797	C	0.045	No
	PM	0.815	D	0.051	No	Yes	0.815	D	0.051	Yes
8 Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.834	C	0.165	No	Yes	0.669	B	0.000	No
	PM	0.552	A	0.069	No	No	0.510	A	0.027	No
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way ^a	AM	11.7	B	2.1	No	No	0.411	A	—	No
	PM	40.7	E	14.6	No	Yes	0.665	B	—	No
12 Beckwith Road & Telegraph Road ^a	AM	18.7	C	7.1	No	No	0.300	A	—	No
	PM	30.2	D	15.4	No	Yes	0.496	A	—	No

^a Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

Residual Impacts without Beckwith Road Extension

Table 4.13-11
Existing plus Project Impacts with Mitigation (without Beckwith Extension)

Intersection	Peak Hour	V/C or Delay	Existing plus Project				With Mitigation			
			LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
					Cumulative?	Project?				
8 Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	0.885	D	0.216	No	Yes	0.647	B	-0.022	No
	PM	0.599	A	0.116	No	No	0.590	A	0.107	No
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way ^a	AM	11.8	B	2.2	No	No	0.415	A	—	No
	PM	40.3	E	14.2	Yes	Yes	0.659	B	—	No
12 Beckwith Road & Telegraph Road ^a	AM	18.8	C	7.2	No	No	0.328	A	—	No
	PM	30.0	D	15.2	No	Yes	0.495	A	—	No

^a Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

Residual Impacts—Future (2031) Cumulative plus Project Impacts with Mitigation

Table 4.13-12
Future (Year 2031) Cumulative plus Project Impacts with Mitigation

Intersection	Peak Hour	V/C or Delay	Cumulative plus Project				With Mitigation			
			LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
					Cumulative?	Project?				
1 10th Street & Harvard Boulevard	AM	1.037	F	0.045	Yes	Yes	1.037	F	0.045	Yes
	PM	1.082	F	0.049	Yes	Yes	1.082	F	0.049	Yes
8 Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	1.079	F	0.171	Yes	Yes	0.842	D	-0.066	Yes
	PM	0.810	D	0.069	No	Yes	0.650	B	-0.091	No
10 Peck Road & SR 126 EB On/Off Ramps/Acacia Way ^a	AM	16.6	C	4.4	No	No	0.460	A	—	No
	PM	127.3	F	29.7	Yes	Yes	0.646	B	—	No
11 Faulkner Road & SR 126 WB On/Off Ramps ^a	AM	66.9	F	10.6	Yes	Yes	15.1	C	-41.2	No
	PM	17.4	C	3.3	No	No	12.8	B	-1.3	No
12 Beckwith Road & Telegraph Road ^a	AM	21.0	C	8.7	No	No	0.325	A	—	No
	PM	40.1	E	23.2	No	Yes	0.533	A	—	No

^a Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

Residual Impacts—Future (2031) Cumulative plus Project Impacts with Mitigation (without Beckwith Extension)

Table 4.13-13
Future (Year 2031) Cumulative plus Project Impacts with Mitigation (without Beckwith Extension)

	Intersection	Peak Hour	V/C or Delay	Cumulative plus Project			With Mitigation				
				LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
						Cumulative?	Project?				
1	10th Street & Harvard Boulevard	AM	1.028	F	1.036	Yes	Yes	1.028	F	0.036	Yes
		PM	1.068	F	1.035	Yes	Yes	1.068	F	0.035	Yes
8	Peck Road & Harvard Boulevard/ Telegraph Road/Main Street	AM	1.131	F	0.223	Yes	Yes	0.891	D	-0.017	Yes
		PM	0.857	D	0.116	No	Yes	0.687	B	-0.054	No
10	Peck Road & SR 126 EB On/Off Ramps/Acacia Way ^a	AM	17.0	C	4.8	No	No	0.464	A	—	No
		PM	126.6	F	29.0	Yes	Yes	0.647	B	—	No
11	Faulkner Road & SR 126 WB On/Off Ramps ^a	AM	66.8	F	10.5	Yes	Yes	15.1	C	-41.2	No
		PM	21.1	C	7.0	No	No	13.1	B	-1.0	No
12	Beckwith Road & Telegraph Road ^a	AM	21.1	C	8.8	No	No	0.349	A	—	No
		PM	39.3	E	22.4	No	Yes	0.531	A	—	No

^a Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

4.14 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities and service systems located on and immediately surrounding the Santa Paula West Business Park Specific Plan (“Specific Plan”) area. The section addresses the potential impacts of the Project on water service, sewer service, and solid waste. Each subsection includes an introduction, followed by discussions of existing conditions, regulatory framework, methodology, potential environmental impacts, cumulative impacts, and recommended mitigation measures to help reduce or avoid identified impacts, and the level of significance of adverse impacts after mitigation.

Information presented in this section derives from the City of Santa Paula’s General Plan (1998), the City of Santa Paula’s *Draft Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project* (“Draft WSA”; November 2016), the Final 2010 Urban Water Management Plan (UWMP) Update (June 2011), the 2005 Potable Water System Master Plan Amendment (June 2012), the Wastewater System Master Plan (2012), the *Sanitary Sewer Technical Report* prepared by Jensen Design & Survey, Inc. (May 2015), CalRecycle, well-pumping data through year 2014, and the proposed Santa Paula West Business Park Specific Plan (October 2016). The Draft WSA is included in **Appendix 4.14**.

4.14.1 EXISTING CONDITIONS

Water

On-Site Water Availability

The Project Site currently contains two small farmworker dwelling units that use potable water and approximately 49 acres under agricultural production that also use water for irrigation. The remainder of the Project Site consists of nonirrigated open space and improvements such as roads and equipment storage areas associated with farming operations.

Within the Santa Paula Groundwater Basin, water for the Project Site is currently provided by an on-site water well that supplies water for existing agricultural irrigation uses and for domestic consumption (residents). This existing water well also provides water for off-site users other than those on the Project Site. This existing well has been in service for a long period of time and, for the purposes of future conditions, has run its design life.

Water Demand

The City’s water distribution system provides domestic water service to approximately 7,278 end users.¹ As provided in **Table 4.14-1, 2010 City Water Demand**, the total 2010 water demand within the City was

¹ City of Santa Paula, *Final 2010 Urban Water Management Plan Update (UWMP)*, June 2011.

4,416 acre-feet (af).² The largest land use in the City for water demand is single-family residential, which accounted for approximately 57 percent of the total 2010 water demands. Multifamily residential accounts represented approximately 20 percent of the 2010 demands. Commercial/Institutional accounts represented approximately 14 percent of the 2010 demands. Industrial, landscape and agricultural irrigation, unmetered, and “other” accounts represented the balance of the demands.

Table 4.14-1
2010 City Water Demand

Customer Classification	Demand (acre-feet)	Percent of Total Water Demand
Single-family residential	2,504	56.7
Multifamily residential	887	20.1
Commercial/Institutional	601	13.6
Industrial	44	1
Landscape irrigation	22	0.5
Other	41	0.9
Agricultural irrigation	0	0
Unmetered	317	7.2
Total	4,416	100.00

Source: City of Santa Paula, Final 2010 Urban Wastewater Management Plan (UWMP) Update, June 2011, Table 3-1.

The City does not generally provide wholesale water to any other agencies, nor does it purchase water from any wholesale agency. However, in 2010, the City provided 39 af to the Middleroad Mutual Water Company.³ The City does not use potable supplies for saline barriers, groundwater recharge, conjunctive use, raw water, or recycled water uses.

The 2010 UWMP Update includes estimated future water demand based on the City’s General Plan (see **Table 4.14-2, Estimated Future Potable Water Demand**).⁴ Future water requirements are estimated through 2035 according to future land use, population projections, and water demand characteristics. Potable water demands for potential developments were estimated to be a net increase of 1,697 af.

² City of Santa Paula, Final 2010 UWMP Update (June 2011).

³ City of Santa Paula, Final 2010 UWMP Update (June 2011).

⁴ City of Santa Paula, Final 2010 UWMP Update (June 2011).

**Table 4.14-2
Estimated Future Potable Water Demand**

Land Use	Potential Development^{a,b,c,d}	Estimated Potable Water Demand (afy)^e
Existing Demand		4,416
Potential Future Demand		
Residential		
Adams Canyon	495 du	
East Area 1	1,500 du	
Fagan Canyon	450 du	
Other	200 du	
Subtotal	2,645 du	1,349
Commercial/Industrial/Institutional^e		
Adams Canyon ^f	100,000 sq. ft.	
East Area 1 ^g	811,000 sq. ft.	
East Area 2	1,602,000 sq. ft.	
Fagan Canyon ^h	100,000 sq. ft.	
West Area 2	1,906,000 sq. ft.	
Other	1,200,000 sq. ft.	
Subtotal	5,706,300 sq. ft.	267
Parks and Recreation^e		
Adams Canyon ⁱ	200 acres	
East Area 1	89 acres	
Fagan Canyon	7 acres	
South Mountain	115 acres	
Other	0 acres	
Subtotal	411 acres ¹	0
Unaccounted Water ^j		81
Subtotal Potential Future Demand		1,696
Total Future Potable Demands		6,112

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 2-4.

Notes: afy = acre-feet per year; du = dwelling units; sq. ft. = square feet.

^a Source: City of Santa Paula General Plan, "Land Use Element" (2011).

^b Source: City of Santa Paula General Plan (1998).

^c East Area 1 Specific Plan (2007).

^d Source: personal communication (City, 2011b)

^e All new community landscape areas, including golf courses, will be irrigated with recycled water. However, this water demand will be approximately 900 afy.

^f Includes school and destination resort hotel.

^g Includes two schools, a community college, and an assisted living facility. It should be noted that the community college is not a part of the East Area 1 Specific Plan Amendment.

^h Includes school.

ⁱ Includes golf course (Adams Canyon).

¹ Source: Assume 5 percent.

As shown in **Table 4.14-3, Potable Water Demands 2015–2035**, the estimated total potable water demand (existing plus potential) is approximately 4,840 af in 2015 and will increase to approximately 6,116 af by 2035. Future water demand values represent the total potable water demand, including anticipated future development.

Table 4.14-3
Potable Water Demands 2015–2035 (afy)

	2015	2020	2025	2030	2035
Total Demand	4,840	5,265	5,689	6,116	6,116

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 3-2.

Note: afy = acre-feet per year.

Water Supply

The City of Santa Paula (City) Public Works, Water Division, supplies water to the City. The City of Santa Paula currently has secured water rights from two sources: groundwater allocation from the Santa Paula Basin, and surface water through an agreement with the Canyon Irrigation Company. Currently the Santa Paula Basin is the City’s sole source of water supply.⁵

The total amount of water produced by the City was 4,455 af in 2010. In comparison, the City produced 5,046 af in 2005, an amount that is 591 af more than was produced in 2010. The highest annual water demand for the period 2000 to 2010 was recorded in 2002, when 5,359 af was produced.

The City’s current groundwater supply includes production from five active wells. Domestic water is pumped from Wells 1-B, 11, 12, 13, and 14, which can produce up to 10.6 million gallons per day.⁶ **Table 4.14-4, City Groundwater Well Production**, summarizes the City’s groundwater resources by well, including current status, well capacity, and 2010 production. Wells 12 and 14 produced 81 percent of the water for the City in 2010. The City no longer operates Wells 2, 8, and 9 because of a history of elevated nitrate levels in water extracted from these sources; these wells were sold to an agricultural enterprise.

⁵ City of Santa Paula, 2010 UWMP Update (June 2011).

⁶ City of Santa Paula, 2010 UWMP Update (June 2011).

**Table 4.14-4
City Groundwater Well Production**

Well No.	Status	Capacity (gpm)	2010 Production (acre-feet)
1-B	Active	1,288	114.9
11	Active	1,232	393.2
12	Active	1,448	1,768.8
13	Active	1,932	353.3
14	Active	3,219	1,825.3
Total			4,455.5

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 4-3.

The Project Site is located outside of the incorporated City boundary but is within West Area 2, which is a future expansion area under the City's General Plan, and is within the City's Sphere of Influence. The entire Project Site would be located within the City's service area after annexation of the site to the City.

Construction of the City's centralized water conditioning facility and the Well 14 pumping plant was completed in 2000. The centralized water conditioning facility was designed to remove manganese and iron from up to 10 million gallons of water per day from Wells 11, 13, and 14, and future Well 15. Well 14 is anticipated to contribute an added 4.5 million gallons of water per day to the system. This added production capacity will help the City's water system to meet peak water use demands in hot summer weather. Both facilities are housed in a new building located along Main Street. Well 1-B was recently rehabilitated. Annual production from existing and planned wells will be limited by the City's current groundwater allocation (5,412 acre-feet per year [afy]) in the Santa Paula Basin.

There are several options that the City may consider for meeting future water demands including: long-term transfer of water rights; short-term transfer of water rights; State Water Project (SWP) water; use of recycled water; and supporting water demand management programs.⁷ Implemented over time, these programs are expected to provide the City with sufficient supplies to meet future water demands.

Water Supply Assessment

A Draft WSA was prepared for the Specific Plan in accordance with the requirements of Section 10910 of the California Water Code (Senate Bills [SB] 610 and 221) to verify the sufficiency of the local water supply

⁷ City of Santa Paula, 2010 UWMP Update (June 2011).

to meet the demand associated with the land uses allowed under the Specific Plan.⁸ The Draft WSA considered water supplies for the entire 53.81-acre Specific Plan area and specifically for the areas of light industrial, commercial, and landscaped areas that would be allowed for development under the Specific Plan. The Draft WSA also considered the Project water demand in light of the existing water demand for the agriculture and related uses currently on the Project Site.

The Draft WSA reported the 20-year water supply and demand estimates from the City's 2010 UWMP, prepared in 2011 in accordance with California Water Code Sections 10610 and 10656. The Draft WSA concluded that there would be no decrease in availability of groundwater supplies through the year 2037. Furthermore, the Draft WSA determined that the City of Santa Paula's projected water supply for 20 years is adequate to meet the demand for the Project, as well as existing and planned future uses in the City in normal, single dry, and multiple dry years.

Section 15155 (d) of the California Environmental Quality Act (CEQA) Guidelines states that when a WSA has been prepared for a project, no additional WSA is required if the water demands of the project have not substantially increased and there have been no changes in circumstances or conditions that would substantially affect the ability of City to supply the water needed for the project.

The Specific Plan Draft WSA provided water demand estimates for the City of Santa Paula through 2037, which corresponded with the 20-year forecast required in a WSA if the Project were to be initiated in 2017. The 2010 UWMP addresses new requirements developed by the State of California Department of Water Resources (DWR) as published in their *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan* (March 2011).

On January 17, 2014, the Governor of the State of California proclaimed a state of emergency due to current drought conditions and called on Californians to reduce their water usage by 20 percent. On March 1, 2014, the Governor signed into law emergency drought legislation that finds and declares that California is experiencing an unprecedented dry period and shortage of water for its citizens, local governments, agriculture, environment, and other uses.

Additionally, the Fox Canyon Groundwater Management Agency (GMA), the local agency responsible for groundwater management for aquifers on the Santa Paula Basin, adopted an emergency pumping ordinance (Emergency Ordinance E) on April 11, 2014, that implements a phased 20 percent reduction over 18 months, consistent with Governor Brown's January 2014 drought declaration, other agencies' efforts, and the GMA's need to achieve groundwater basin sustainability.

8 City of Santa Paula, *Draft Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project* (November 2016).

On December 22, 2014, Governor Brown issued Executive Order B-28-14, which extended the suspension of certain activities subject to the CEQA contained in the January 2014 and April 2014 proclamations, including the State Water Resources Control Board's (SWRCB's) adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers (i.e., those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 af of water annually, excluding wholesalers) to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed Executive Order B-29-15, directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, as compared to the amount used in 2013. The Governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the Governor's January 2014 proclamation, April 2014 proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the Governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015. The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers, each of which is assigned a conservation standard ranging between 4 and 36 percent.⁹

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB; from March to June 2016, the City achieved 24.2 percent water savings. The Governor issued a

9 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015).
http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approve_d_regs2015.pdf.

new Executive Order, as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions, and the City now has a zero percent conservation standard.¹⁰

In September 2016, Governor Brown signed SB 1262 (Pavley). Details of this bill are discussed below under Regulatory Setting. It should be noted here, however, that SB 1262 is not effective until January 2017.

Project Site Water Supply and Demand

The existing land uses within the Specific Plan area includes approximately 54 acres of agricultural land, fallow agricultural land, and a small amount of industrial uses.

Water supply for irrigation on the Specific Plan area has been historically supplied from an on-site well that overlies the Santa Paula Basin. The existing well in the area (E11S) is owned and operated by McGaelic Group and Bender combined.

Approximately 49 acres of the Santa Paula West Specific Plan site is under cultivation for avocados, herbs, and a variety of row crops. Production records for the irrigation well for the period 2010 to 2014 are shown on **Table 4.14-5, Existing Well Pumping Records 2010–2014**. Water usage has been from one well but delivered to several parcels, including McGaelic West (McGrath owners), Bender Farms, and Jaime Santana; only the McGaelic West and Bender parcels are within the Project Site. As shown on Table 4.14-5, over the last five years (2010 to 2014), the total water used on site has averaged 281.1 afy.

**Table 4.14-5
Existing Well Pumping Records 2010–2014**

Year	McGaelic West (acre-feet)	Bender (acre-feet)	Total Usage (acre-feet)
2010	N/A	112.9	112.9
2011	122.9	89.4	212.3
2012	176.5	162.9	339.4
2013	187.8	232.7	420.5
2014	120.8	199.6	320.4
Total	608.0	797.5	1,405.5
2010–2014 Average per Year	121.6	159.5	281.1

Source: Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015)

¹⁰ State Water Resources Control Board, Self-Certification Conservation Standards—“Stress-test” (by supplier), Pulled on October 18, 2016, http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf.

Groundwater Allocation Transfers from Developed Properties

In accordance with Santa Paula Municipal Code Section 52.021, landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. This regulation is intended to ensure that new urban land users provide sufficient water resources for their needs. If the associated water rights are not sufficient to serve the proposed development's anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must either purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This regulation applies to developments inside and outside City limits that seek to receive potable water service from the City.

Purchased Groundwater Allocations

Water availability is complicated by the fact that the actual safe yield of the Santa Paula Groundwater Basin is unknown.¹¹ Disagreement over the issue between the UWCD and the water users, including the City and the City of San Buenaventura (Ventura), led to the adjudication of the Santa Paula Groundwater Basin. The Stipulated Judgment¹² represents the beginning of a program of basin management, including the regulation of pumping, that is aimed at meeting the reasonable water supply needs of the parties, including protection for historic users, without harm to the Santa Paula Groundwater Basin.

The 2010 UWMP recognizes that in 2005, it was determined that 497 afy of potentially available groundwater allocations held by others within the Santa Paula Basin boundary were not being utilized.¹³ The City has the option to independently pursue the acquisition of groundwater allocations at any time in the future.

The available water resources and demand for water resources in the City is estimated in the Draft WSA. **Table 4.14-6, Existing and Projected City Water Resources and Demand**, provides a summary of existing and projected water demand through the year 2037.

11 City of Santa Paula, *2010 UWMP Update* (June 2011), 32.

12 *United Water Conservation District v. City of San Buenaventura* (California, 1996; 2010).

13 City of Santa Paula, *Draft Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project* (November 2016).

**Table 4.14-6
Existing and Projected City Water Resources and Demand (afy)**

Percent	2015	*2017	2020	2025	*2027	2030	2035	*2037
Existing Supplies								
City Wells	5,483	5,483	5,483	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek	500	500	500	500	500	500	500	500
Subtotal	5,983	5,983	5,983	5,983	5,983	5,983	5,983	5,983
Projected Supplies								
Groundwater Allocation Transfers	454	544.8	908	1,362	1,816	1,816	1,816	1,816
Purchased Groundwater Allocations	200	225	300	400	497	497	497	497
SWP	0	0	0	0	0	0	0	0
Recycled Water	400	480	800	1,200	1,622	1,622	1,622	1,622
Subtotal	1,054	1,244.8	2,008	2,962	3,935	3,935	3,935	3,935
Total Projected Supplies	7,037	7,228	7,991	8,945	9,918	9,918	9,918	9,918
Estimated Demand								
City of Santa Paula	4,840	4,925	5,265	5,689	6,113	6,113	6,113	6,113
West Area 2 Allocation	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
Projected Santa Paula West Project Area	0	39.8	39.8	39.8	39.8	39.8	39.8	39.8
Total Estimated Demand (Projected + City Demand)	4,840.00	4,964.80	5,304.80	5,728.80	6,152.80	6,152.80	6,152.80	6,152.80
Project Demand as % of West Area 2	0%	44.82%	44.82%	44.82%	44.82%	44.82%	44.82%	44.82%
Project Demand as % of Total City Supply	0%	0.81%	0.76%	0.70%	0.65%	0.65%	0.65%	0.65%
Difference (Supply – Demand)	2,197	2,263	2,686	3,216	3,765	3,765	3,765	3,765

Source: City of Santa Paula, Final 2010 Urban Water Management Plan Update (June 2011).

*Projected data

Notes:

All values rounded to the nearest 1 AF.

Santa Paula West Area Business Park Specific Plan would start construction in 2017 and be completed by 2027. Conservatively assumed full build out Project Demand numbers in 2017.

The City's current (2011) allocation is 5,483 AFY.

The City currently wheels the 500 AFY of surface water from Santa Paula Creek to farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 AFY groundwater pumping credits in the Santa Paula Basin.

Total of 1,815 AFY allocation transfers achieved over 4 equal 5-year periods (approximately 454 AFY per 5-year period).

The City anticipates purchasing groundwater allocations. It is anticipated that approximately 200 AFY could be developed by 2015, 300 AFY by 2020, 400 AFY by 2025, and 497 by 2030.

The City has rights to 2,198 AFY. However, actual delivery may be only 60 percent of water rights (DWR, 2010) in an average year, 7 percent in a single dry year, and 34 percent in multiple dry years. For the purposes of this UWMP, the City does not anticipate receiving SWP water in the near future.

The City purchased the WRF in 2015, however, currently there is no infrastructure to supply recycled water to the City. The 2010 UWMP anticipated that approximately 400 afy could be developed by 2015, 800 afy by 2020, 1,200 afy by 2025, and 1,622 afy by 2030.

The 2010 UWMP Update anticipates that the City will acquire through allocation transfers 454 AFY by 2015, 908 AFY by 2020, 1,362 AFY by 2025, and 1,815 AFY by 2030 and 2035 through allocation transfers within the Santa Paula Basin as provided for in the Judgment.

Implementation of these water supply programs is anticipated to provide the City with sufficient water supplies to meet future water demand. As shown in **Table 4.14-7, Existing and Potential City Water Resources and Demands**, the potential water supplies available to the City exceed the estimated water demand at City build-out conditions.

**Table 4.14-7
Existing and Potential City Water Resources and Demands**

Supplies	2010	2015	2020	2025	2030	2035
Existing Supplies						
City wells ^a	5,483	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek ^b	500	500	500	500	500	500
<i>Subtotal</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>
Potential Future Supplies						
Groundwater allocation transfers	0	454	908	1,362	1,816	1,816
Purchased groundwater allocations	0	200	300	400	497	497
SWP ^c	0	0	0	0	0	0
Recycled water ^d	0	400	800	1,200	1,622	1,622
<i>Subtotal</i>	<i>0</i>	<i>1,054</i>	<i>2,008</i>	<i>2,962</i>	<i>3,935</i>	<i>3,935</i>
Total Potential Supplies	5,983	7,037	7,991	8,945	9,918	9,918
Total Estimated Demands	4,416	4,480	5,265	5,689	6,113	6,113
Net Surplus	1,567	2,197	2,726	3,256	3,805	3,805

Source: City of Santa Paula, Final 2010 UWMP Update, 2011, Table 4-4.

^a The City's current allocation is 5,483 afy (State of California, Superior Court. 2010. Amended and Restated Judgment, United Water Conservation District vs. City of San Buenaventura)

^b The City currently wheels the 500 afy of surface water from Santa Paula Creek to Farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.

^c The City has rights to 2,198 afy. However, actual delivery may be only 60 percent of water rights in an average year, 7 percent in a single dry year, and 34 percent in multiple dry years. For the purposes of this UWMP, the City does not anticipate receiving SWP water in the near future.

^d The City anticipates initiating a recycled water program by 2015.

State Water Project Water

The County of Ventura contracted for 20,000 afy of State Water Project (SWP) water, with 5,000 afy of that amount subcontracted to the UWCD, which has designated 2,198 afy of SWP water for use by the City.¹⁴ The City has discussed a contract with UWCD to ensure that 2,198 afy is reserved for the City. The

¹⁴ City of Santa Paula, Final 2010 UWMP Update (June 2011), 42.

City does not anticipate directly receiving SWP water in the near future.¹⁵ However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Since the 2010 UWMP was prepared, the California Department of Water Resources has updated its State Water Project Delivery Reliability Report three times (2011, 2013, and 2015). The biennial Report assists SWP contractors in assessing the reliability of the SWP component of their overall supplies. The 2015 SWP Reliability Report updates the DWR estimate of future water delivery reliability through 2035. The City's 2010 UWMP update incorporates this updated information from DWR. The updated analysis in the 2015 SWP Reliability Report showed that the primary component of the annual SWP deliveries (referred to as Table A deliveries) would be less under current and future conditions.¹⁶

The 2015 SWP Reliability Report recognized continuing challenges to the ability of the SWP to deliver full contractual allotments of SWP water. For current conditions, the dominant factor for these reductions is the restrictive operational requirements contained in the federal biological opinions. Deliveries estimated for the 2015 Report expressly account for the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and Central Valley Project (CVP) operations. SWP exports have decreased since 2005, although the bulk of the change occurred by 2009 as the federal BOs went into effect, restricting operations. These effects are also reflected in the SWP delivery estimates. The most salient findings in this report are as follows:

- Under existing conditions, the average annual delivery of Table A water estimated for this 2015 Report is 2,550 thousand acre-feet per year (tafy), 3 tafy less than the 2,553 tafy estimated for the 2013 Report.
- The likelihood of existing-condition SWP Article 21 deliveries (supplemental deliveries to Table A water) being greater than 20 tafy has decreased by 3 percent relative to the likelihood presented in the 2013 Report.

For future conditions, the 2015 SWP Reliability Report conservatively assumed that the restrictions imposed by the biological opinions will still be in place, and includes the potential effects of climate change to estimate future deliveries. The changes in run-off patterns and amounts were included along with a potential rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay-Delta") to meet the water quality objectives established for the Delta. For the 2015 SWP Reliability Report, the changes in

15 City of Santa Paula, Final 2010 UWMP Update (June 2011), 44.

16 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015* (July 1, 2015), <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

run-off patterns and amounts were incorporated into the analyses, but the potential rise in sea level was not.

The analyses in the 2015 SWP Reliability Report indicated that the SWP, using existing facilities operated under then current regulatory and operational constraints and future anticipated conditions, and with all contractors requesting delivery of their full Table A amounts in most years, could deliver 60 percent of Table A amounts on a long-term average basis.

Many of the same specific challenges to SWP operations described in the State Water Project Delivery Reliability Report 2013 remained in 2015—most notably, the effects on SWP pumping caused by issuance of the 2008 and 2009 federal biological opinions (BOs), which were reflected in the SWP delivery reliability report. The analyses in this report consider climate change and the effects of sea level rise on water quality, but do not incorporate the probability of catastrophic levee failure.

Recycled Water

Construction of the new City Water Recycling Facility (WRF) that meets California Title 22 regulations for recycled water was completed in early 2010.¹⁷ The WRF has a capacity of 3.15 million gallons per day (mgd), with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd.

The 2010 UWMP estimates recycled water urban demand within the City (and adjacent areas) will be approximately 1,622 afy. The 2010 UWMP anticipates that the City will develop a recycled water program for landscape irrigation and that the estimate amounts that could be delivered in the future are 800 afy by 2020, 1,200 afy by 2025, and 1,622 afy by 2030.¹⁸ The recycled water demand could be fully met with recycled water from the new WRF.

Currently, there are no recycled water systems in the proposed Project vicinity. However, the 2012 Wastewater Master Plan has included West Area 2 to have a future wastewater flow of 0.082 mgd or 919 afy during average dry weather season.¹⁹

Water Conveyance System

The City's domestic water supply is conveyed via gravity throughout its distribution network system. The City currently delivers a portion of the overall domestic water supplies to the Project Site. The closest existing domestic water system to the Project Site includes a main line within Telegraph Road.

17 City of Santa Paula, *Wastewater System Master Plan* (June 2012), 1

18 City of Santa Paula, *Final 2010 UWMP Update* (June 2011), 47.

19 City of Santa Paula, *Wastewater System Master Plan* (June 2012)

Wastewater

The City of Santa Paula Public Works Water Division provides wastewater services to the City.

On-site Sewer

The Project Site is not connected to the City's wastewater treatment system. There are two small farmworker dwelling units and ancillary agricultural facilities located on-site. These residences and the ancillary facilities utilize septic systems to store wastewater, which is periodically pumped and disposed of via private sewage collection services. The nearest sewer system pipeline is an 8-inch line located beneath Telegraph Road to the north of the Project Site.

Citywide Sewer System

The City's Wastewater System Master Plan, prepared by Boyle Engineering and updated by the City of Santa Paula in June 2012, addresses the provisions of wastewater collection facilities to serve the West Area 2 Expansion Area. In May 2015, Jensen Design & Survey, Inc. prepared the Sanitary Sewer Technical Report to provide a blueprint for the design of the sanitary system within the Specific Plan area and to develop conceptual design parameters. The wastewater system consists of approximately 60 miles of collection lines, with pipeline diameters ranging from 6 to 24 inches, 0.5 miles of force mains, 1,190 manholes, and two lift stations. Wastewater flows are conveyed by gravity through the existing pipe network. Two City-owned and -operated sewer lift stations (Harding Park and Lemonwood pump stations) are also used to convey these flows in areas where gravity flow is inadequate. These flows are eventually treated at the existing wastewater treatment plant (WTP) located in the southwest corner of the City.

In January 2012, the City adopted the 2011 Sanitary Sewer Management Program, which provides long-term maintenance for the system to preserve and provide adequate collection and transportation of local wastewater.

Treatment Plant Capacity

The City residents generate and treat approximately 2 mgd of sewage. The City has defined geographic boundaries in which residential, commercial, public, and industrial areas are defined. Each group generates wastewater, which enters the sewer system and is ultimately treated at the WTP. The City constructed a water recycling facility (WRF) for the treatment of sewage generated by the City to replace the original WTP. The new WRF began operations in May of 2010. This new facility has a normal operating capacity of 3.15 mgd with a final build-out capacity of 4.2 mgd, and a peak operating capacity of 7.0 mgd. The process design is a membrane bioreactor (MBR) and reduces energy costs by more than 35 percent. The facility, which has a footprint of 1.5 acres, is completely enclosed for maximum odor and noise control.

The WRF will be capable of producing California Code of Regulations (CCR) Title 22 unrestricted water reuse for agricultural and municipal needs. The treated effluent produced meets the Los Angeles Regional Water Quality Control Board's (RWQCB's) current wastewater discharge requirements, as well as California Department of Health Service (DHS) requirements for recycled water use. Prior discharges to the Santa Clara River received advanced secondary treatment.

Solid Waste

Solid waste collection services are provided in the City of Santa Paula by a private solid waste collection company and disposed of at the Toland Road Landfill, operated by the Ventura Regional Sanitation District (VRSD).

The City participates in a curbside recycling program, which includes the recycling of glass (food and beverage containers), metal (aluminum cans, etc.), and plastic. Curbside pickup of paper, cardboard, and yard trimmings is provided, as well as community drop-off events for residents to dispose of large items, household hazardous waste, and motor oil and filters.

In 2015, the City disposed of 25,684 tons of solid waste at all landfills identified below except for the Bakersfield Metropolitan (Bena) Sanitary Landfill.²⁰ The City provides refuse collection, recycling, and disposal through contracts with Crown Disposal Co., Inc., a private hauling company. Crown Disposal collects 100 percent of the City's solid waste. The solid waste is disposed of at Toland Road Sanitary Landfill; Chiquita Canyon Sanitary Landfill; Simi Landfill and Recycling Center; Azusa Land Reclamation Co. Landfill; Antelope Valley Public Landfills I and II; and the Bakersfield Metropolitan (Bena) Sanitary Landfill.

Table 4.14-8, Solid Waste Facilities, provides the characteristics of the disposal waste facilities that currently accept waste from the City.

20 California Department of Resources Recycling and Recovery (CalRecycle), Disposal Reporting System (DRS), Jurisdiction Disposal by Facility during 2015 for Santa Paula.

**Table 4.14-8
Solid Waste Facilities**

Facility	Daily Capacity (tons/day)	Remaining Capacity (cy)	Ceased Operation Date
Toland Road Sanitary Landfill	1,500	21,983,000 ^a	2027
Chiquita Canyon Sanitary Landfill	6,000	8,617,126 ^b	2019
Simi Valley Landfill & Recycling Center	9,250	119,600,000 ^c	2052
Azusa Land Reclamation Co. Landfill	8,000	51,512,201 ^d	N/A
Antelope Valley Public Landfills I and II	3,564	20,400,000 ^e	2042
Bakersfield Metropolitan (Bena) Sanitary Landfill	4,500	32,808,260 ^f	2046

Source: CalRecycle, Solid Waste Information System (SWIS) database,
<http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx>, accessed October 2016.

Note: cy = cubic yards.

^a As of June 2006.

^b As of April 2016.

^c As of September 2012.

^d As of March 1996.

^e As of April 2011.

^f As of July 2013.

The existing uses within the Project Site include two small farmworker dwelling units and agricultural operations for the production of orchards, row crops, and a limited number of livestock. Therefore, the Project Site currently generates approximately 4.08 tons of solid waste per year.²¹ The existing amount of agricultural crop residual is considered negligible because it is a subcomponent of the “other organic” standard material type developed by CalRecycle (formerly the California Integrated Waste Management Board).²²

4.14.2 REGULATORY SETTING

Water

Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires a variety of actions to protect drinking water and its sources. SDWA authorizes the U.S.

21 Solid Waste generation is 2.04 tons per year per residential unit. Source: Ventura County Solid Waste Management Department, Estimated Solid Waste Generation Rates for Industrial/Commercial/Residential Establishments, Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts.

22 CalRecycle (formerly the California Integrated Waste Management Board), *California 2008 Waste Characterization Study* (August 2009), 107.

Environmental Protection Agency (USEPA) to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The USEPA, state agencies, and water purveyors work together to ensure that SDWA standards are met.

State

California Department of Water Resources

The State of California Department of Water Resources (DWR) released its *State Water Project Final Delivery Capability Report* (“Report”) in July 2015. The Report updates the estimated water delivery capacity of the SWP for current conditions and two decades from 2015.²³ The estimates include the best-known future effects of climate change and the anticipated changes in Sacramento River basin land uses. The assessment of current and future SWP reliability allows DWR to plan for reliable future water supplies in California.

Comprehensive Water Legislation

In November 2009, four legislative bills (SBX7-1, SBX7-6, SBX7-7, and SBX7-8) and the supporting bond bill (SBX7-2), creating a comprehensive water package designed to meet California’s water challenges, were approved by then-governor Arnold Schwarzenegger.²⁴ The legislation establishes the governmental framework to achieve the coequal goals of providing a more reliable water supply to California and restoring and enhancing the Delta ecosystem. The package includes requirements to improve the management of California’s water resources by monitoring groundwater basins; developing agricultural water management plans; reducing statewide per capita water consumption 20 percent by 2020; and reporting water diversions and uses in the Delta. It also appropriates \$250 million for grants and expenditures for projects to reduce dependence on the Delta if the bond issue is approved by the voters in the future.

The Safe, Clean, and Reliable Drinking Water Supply Act of 2010 (SBX 7-2) was placed and passed on the November 2014 ballot as California Proposition 1, the Water Bond (AB 1471). AB 1471 provides funding for California’s aging water infrastructure, as well as for projects and programs to improve the ecosystem and water supply reliability for California. The bond bill includes \$2.7 billion for actions improving Bay-Delta sustainability. These investments will help to reduce seismic risk to

23 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015* (July 1, 2015), <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

24 Department of Water Resources (DWR), *California Water Plan Update 2009*, vol. 4 (December 2009). Reference Guide, Legislation, 2009 Comprehensive Water Package, Special Session Policy Bills and Bond Summary, (November 2009).

Bay-Delta water supplies, protect drinking water quality, and reduce conflict between water management and environmental protection.

Part of the comprehensive water package included SBX7-7 (Steinberg, Chapter 4, Statutes of 2009—Statewide Water Conservation). This bill creates a framework for future planning and actions by urban and agricultural water suppliers to reduce California’s water use. SBX7-7 requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020. CVWD has included the provisions of SBX7-7 in its 2010 UWMP and has reduced water demand by 20 percent since 2006.

On January 17, 2014, California Governor Brown declared a drought state of emergency, and directed state officials to take all necessary actions to prepare for these drought conditions.²⁵ State agencies, led by the Department of Water Resources, are in the process of executing a statewide water conservation campaign, calling on Californians to reduce their water usage by 20 percent.

Recent Regulations, Executive Orders and SWRCB Actions

Executive Orders

On January 17, 2014, Governor Edmund G. Brown Jr. declared a drought state of emergency.²⁶ On April 25, 2014, the governor signed Executive Order B-26-14²⁷ (April 2014 Proclamation) stating, among other things, that

severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.

On December 22, 2014, Governor Brown issued Executive Order B-28-14,²⁸ which extended the suspension of certain activities subject to CEQA contained in the January 2014 and April 2014 Proclamations, including the SWRCB adoption of emergency regulations pursuant to Water Code section

25 Office of the Governor, “Governor Brown Declares Drought State of Emergency,” January 17, 2014, <http://gov.ca.gov/news.php?id=18368>.

26 Office of the Governor, “Governor Brown Declares Drought State of Emergency,” January 17, 2014, <http://gov.ca.gov/news.php?id=18368>.

27 State of California, Executive Department, Executive Order for State Drought Actions, B-26-14, April 25, 2014, <http://gov.ca.gov/news.php?id=18496>.

28 State of California, Office of Governor Edmund G. Brown Jr., “Executive Order B-28-14” (December 22, 2014), <https://www.gov.ca.gov/news.php?id=18815>.

1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers—those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, excluding wholesalers—to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed Executive Order B-29-15,²⁹ directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage, compared to the amount used in 2013, through February 2016. The governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the governor's January 17, 2014, Proclamation, April 25, 2014, Proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

State Water Resources Control Board

In 2014, the State Water Resources Control Board (SWRCB) determined that an emergency existed due to severe drought conditions and that adoption of the proposed emergency regulation was necessary to address the emergency. California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all the demands for water in the State.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015.³⁰ The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

29 State of California, Executive Department, Executive Order B-29-15 (April 1, 2015), http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf

30 State Water Resources Control Board, Resolution No. 2015-2032, Emergency Regulation for Statewide Urban Water Conservation (adopted May 5, 2015).

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers which are assigned a conservation standard, ranging between four percent and 36 percent.³¹

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB and from March 2016 to June 2016, they had achieved 24.2 percent water savings. The Governor issued new Executive Order, as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions and the City now has a zero percent conservation standard.³²

Legislative Actions

Sustainable Groundwater Management Act

In September 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history. SGMA empowers local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities.

The three bills that make up SGMA are AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley).

AB 1739—Groundwater Management

AB 1739 (Dickinson) authorizes the DWR or a groundwater sustainability agency (GSA) to provide technical assistance to entities that extract or use groundwater to promote water conservation and protect groundwater resources. This bill requires the DWR, by January 1, 2017, to publish on its Internet website best management practices for the sustainable management of groundwater, and requires the DWR to prepare and release a report by December 31, 2016, on the agency's best estimate of water available for replenishment of groundwater in the state.

AB 1739 requires a GSA to submit a groundwater sustainability plan (GSP) to DWR for review upon adoption. The bill authorizes a local agency to submit to DWR for evaluation and assessment an alternative

31 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015).
http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approved_regs2015.pdf.

32 State Water Resources Control Board, Self-Certification Conservation Standards—"Stress-test" (by supplier), http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf. Accessed October 18, 2016.

that the local agency believes satisfies the objectives of these provisions. AB 1739 also requires DWR to review any of the above-described submissions at least every 5 years after initial submission to DWR.

In addition, AB 1739 requires that prior to the adoption or any substantial amendment of a general plan, the planning agency review and consider a GSP; groundwater management plan; groundwater management court order, judgment, or decree; adjudication of water rights; or a certain order or interim plan by the SWRCB. AB 1739 requires the planning agency to refer a proposed action to adopt or substantially amend a general plan to any GSA that has adopted a GSP or local agency that otherwise manages groundwater, and to the SWRCB if it has adopted an interim plan that includes territory within the planning area.

SB 1168—Groundwater Management

SB 1168 (Pavley) notes that the policy of the state is that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. This bill states that sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

SB 1168 requires DWR to categorize each basin as high, medium, low, or very low priority. The initial priority for each basin was to be established no later than January 31, 2015. The bill authorizes a local agency to request that DWR revise the boundaries of a basin and required DWR to adopt by January 1, 2016, regulations on the methodology and criteria to be used to evaluate the proposed revision.

In addition, all groundwater basins designated as high- or medium-priority basins by the DWR that are designated as basins subject to critical conditions of overdraft are to be managed under a GSP or coordinated GSPs by January 31, 2020; all other groundwater basins designated as high- or medium-priority basins are to be managed under a GSP or coordinated GSPs by January 31, 2022.

This bill would authorize any local agency, as defined, or combination of local agencies to elect to be a GSA and would require, within 30 days of electing to be or forming a GSA, said agency to inform the DWR of its election or formation and its intent to undertake sustainable groundwater management.

SB 1319—Groundwater

SB 1319 (Pavley) prohibits the SWRCB from establishing an interim plan to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters until January 1,

2025. This provision delays the similar provision in AB 1739 from 2022 to 2025. The bill further requires the SWRCB to exclude any portion of a basin in compliance with groundwater management requirements from probationary status. This provision narrows the similar provision in AB 1739 to only apply to the portion of the basin that is out of compliance.

The bill requires the SWRCB to include any element of a GSP or the entire plan in its interim plan if SWRCB finds it would help meet the sustainability goal. This provision revises the similar provision in AB 1739 to allow for the inclusion of local plans when developing interim plans for basins with probationary status.

A GSP has not yet been adopted for the Santa Paula Basin pursuant to SGMA and is not required until 2022.

SB 1262 (Pavley)—Water Supply Planning

In September 2016, Governor Brown signed SB 1262 (Pavley), which states that if a water supply for a proposed project includes groundwater from a basin that is not adjudicated and is designated as medium or high priority, the following additional information must be included in the WSA: whether DWR has identified the basin as being subject to critical conditions of overdraft; and if a GSA has adopted a (GSP) or approved an alternative plan under the SGMA, a copy of the GSP, or an alternative plan. For a basin that is not adjudicated and is designated by DWR as low or very low priority, the WSA must include information as to whether DWR has identified the basin as being overdrafted or projected that the basin will become overdrafted if present management conditions continue.

SB 1262 is not effective until January 1, 2017. However, as noted earlier, pursuant to SB 1262 and the amended Water Code Section 10910, the Santa Paula Basin is an adjudicated Basin of which the DWR has not indicated is in overdraft.³³

Water Supply Availability and Reliability

The City is required under California Water Code (Sections 10610 to 10656) to assess citywide water supply and demand over the next 20 years in 5-year increments in its UWMP. The City completed its most recent update in 2010. The 2010 update examines water planning, including recycled water, over a 20-year period in 5-year increments; identifies and quantifies adequate water supplies for existing and future water demands in normal, dry, and multiple dry years; identifies actions to prepare for and implement during a catastrophic interruption of water supplies; and implements conservation and efficient use of

33 California's Groundwater Bulletin 118, Santa Clara River Valley Basin Santa Paula Subbasin, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/4-4.04.pdf.

urban water supplies. The UWMP determined that the City's current water supplies are sufficient to meet proposed General Plan development levels to 2020.

Water Supply Assessment Study

The California Water Code, Section 10912 requires that a detailed report regarding water availability and planning for additional water supplies be included for the following types of projects:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A proposed hotel or motel, or both, having more than 500 rooms
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- A mixed-use project that includes one or more of the projects specified in this subdivision
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project

In addition, Government Code Section 66473.7 requires that adequate water supplies be demonstrated as available for the following:

- A proposed residential development of more than 500 dwelling units, if the public water system (PWS) has more than 5,000 service connections
- Any proposed development that increases connections by 10 percent or more, if the PWS has fewer than 5,000 connections

California Green Building Standards Code

The purpose of the California Green Building Standards Code ("CALGreen") is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental quality

The residential mandatory measures are provided in chapter 4 and the nonresidential ones in chapter 5 of the CALGreen Code.

In response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and most recently Executive Order B-29-15 (issued April 1, 2015), California Department of Housing and Community Development (HCD) proposed emergency building standard regulations pertaining to the reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. HCD, in coordination with the California Building Standards Commission (CBSC), Department of Water Resources (DWR), the Division of the State Architect, and other stakeholders, developed emergency regulations that amend the 2016 CALGreen Code.³⁴

CALGreen provides mandatory residential measures, such as stormwater drainage and retention systems, which are thought to prevent flooding of adjacent properties and prevent pollution from stormwater runoff by retaining soil on site or by providing filtering to restrict sedimentation from reaching stormwater drainage systems and receiving streams or rivers. To comply, the retention basin must be sized and shown on the site plan, and water has to be filtered and routed to a public drainage system. The new residential structure also must comply with local stormwater ordinances. The drainage system must also be shown on the site plan (swales, drain piping, retention areas, and groundwater recharge).

The code also requires a 20 percent reduction of indoor water use, and it utilizes both a prescriptive and performance method. The prescriptive method provides some technical features that must be followed:

- Showerheads \leq 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi)
- Lavatory faucets \leq 0.5 gpm at 60 psi
- Kitchen faucets \leq 1.8 gpm at 60 psi
- Urinals \leq 0.5 gal/flush
- Water closets \leq 1.28 gallon/flush

34 California Department of Housing and Community Development, Finding of Emergency Regarding the 2013 California Green Building Standards Code (CALGreen), California Code of Regulations, tit. 24, pt. 11.

CALGreen also specifies acceptable performance standards for plumbing fixtures with reduced water usage. Fixtures can be installed if they meet standards listed in the code.

Outdoor water usage is regulated. CALGreen requires irrigation controls to be weather or soil moisture based and to automatically adjust irrigation in response to changes in plants' needs as weather conditions change, or have rain sensors or communication systems that account for local rainfall.

Local

2010 Urban Water Management Plan Update

Section 10610 et seq. of the California Water Code, known as the Urban Water Management Planning Act, calls for creation and periodic update of UWMPs by all urban water suppliers and sets forth the requirements for such plans, including definition of relevant terms.

Under the definition given in Section 10617, an urban water supplier is an entity “providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.” Water for this development will be supplied from the City of Santa Paula’s existing water system, which is supplied via groundwater wells throughout the City.

In 2011, the City of Santa Paula completed an UWMP update that included the portions of the East Area 2 Annexation Area located east of the City, south of the Ventura County Transportation Commission railroad, surrounds Hallock Drive area, but excluded the triangle area north of Hallock Drive.³⁵ This UWMP did not discuss the specific development and activities contemplated by the Santa Paula West Business Park, although it did discuss, in general terms, the nature and extent of the long-term water supply for the City for the West Area 2 and included an estimated 1,906,000 square feet of commercial/industrial/institutional uses on approximately 125 acres. Much of this general discussion is cited and paraphrased in this WSA. The UWMP contains an analysis of the factors required by Government Code section 66437.7 (a)(2), and such factors apply to this WSA.

Accordingly, this WSA, in concert with the UWMP prepared by the City, includes all necessary data and analyses required by California Water Code section 10910 et seq. and by Government Code section 66437.7 et seq.

The 2010 UWMP is currently being updated to meet the DWR’s requirements for the 5-year update for 2015; a revised update is anticipated in early 2017.

35 City of Santa Paula, *General Plan*, “Land Use Element” (2011), LU-24.

Water In-Lieu Fee Ordinance

In accordance with City of Santa Paula Municipal Code (SPMC) Section 52.021 (Water Resource In-Lieu Fee Ordinance No. 1058), landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. The intent of the Ordinance is to ensure that new urban land users provide sufficient water resources for their needs without taxing existing users. If the associated water rights are not sufficient to serve the proposed development's anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This ordinance applies to water rights within City limits as well as parcels outside City limits who must receive service from the City Water Enterprise.

City Municipal Code—Ordinance Section 52.038, Water Waste

"No person shall [un]lawfully or neglectfully waste water in any manner whatsoever. Continued wasting of water after mailing of [City] notice by registered mail to the customer of record at the mailing address of record by the [City] Director may result in discontinued water service." This Code is a beneficial tool to curb misuse and waste of potable water within the City. The provisions of the Code can be used during periods of normal water supply and supply deficiency. Violation of this Code is subject to City penalties.

City Municipal Code—Ordinance 1223, Chapter 59, Landscape Water Conservation Standards

In accordance with Government Code 65565(c) for the purpose of complying with California law and promoting water conservation, the City maintains Ordinance 1223, Landscape Water Conservation Standards, to be utilized in conjunction with the City of Santa Paula Land Development Provisions for Landscaping and the Guidelines for Implementation of Water Efficient Landscape. Compliance with the guidelines and Landscape Water Conservation Standards is mandatory for all new development projects that are subject to discretionary review by the City of Santa Paula.

Wastewater

Federal

Clean Water Act

As noted elsewhere, the federal Clean Water Act (CWA) Section 401 regulates the discharges of pollutants into Waters of the United States from any point or nonpoint source. Individual permits are issued for certain defined sources of discharge, while nonpoint source runoff from construction sites and urban development is regulated under a series of general permits. Construction that disturbs 1 acre or more is regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. In the State of California, the program is administered by the local RWQCB.

Federal Pretreatment Regulations

Part 403 in the Code of Federal Regulations establishes the responsibilities of federal, state, and local government, industry and the public with respect to implementing National Pretreatment Standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works (POTW) or that may contaminate sewage sludge.

Title 22 Recycled Water

Title 22 sets bacteriological water quality standards based on the expected degree of public contact with recycled water.³⁶ Title 22 establishes the quality and/or treatment processes required for an effluent to be used for a specific nonpotable application. The following categories of recycled water are identified:

- Disinfected tertiary recycled water
- Disinfected secondary-2.2 recycled water
- Disinfected secondary-23 recycled water
- Un-disinfected secondary recycled water

In addition to recycled water uses and treatment requirements, Title 22 addresses sampling and analysis requirements at the treatment plant, preparation of an engineering report prior to production or use of recycled water, general treatment design requirements, reliability requirements, and alternative methods of treatment.

State

The California Ocean Plan was originally adopted by the SWRCB and approved by the USEPA in June 1972, and is revised every three years. Among the California Ocean Plan requirements are the following water quality objectives (Chapter II):

General Provisions

- a. *This chapter sets forth limits or levels of water quality characteristics for ocean waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance. The discharge of waste shall not cause violation of these objectives.*
- b. *The Water Quality Objectives and Effluent Limitations are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations*

36 20 CCR, sec. 1605.1 Federal and State Standards for Federally Regulated Appliances, and 1605.3, State Standards for Non-Federally Regulated Appliances.

in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

c. *Physical Characteristics*

1. *Floating particulates and grease and oil shall not be visible.*
2. *The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.*
3. *Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.*
4. *The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.*

d. *Chemical Characteristics*

1. *The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.*
2. *The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.*
3. *The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.*
4. *The concentration of substances set forth in Chapter II, Table B, in marine sediments shall not be increased to levels which would degrade indigenous biota.*
5. *The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.*
6. *Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.*

e. *Biological Characteristics*

1. *Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.*

2. *The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.*
3. *The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.*

Local

The Los Angeles RWQCB regulates the treatment of wastewater at treatment plants and the discharge of the treated wastewater into receiving waters. The City is responsible for adhering to Los Angeles RWQCB regulations as they apply to wastewater generated and discharged by the WRF. The resulting effluent from the treatment process must meet the Waste Discharge Requirements (WDR) Order No. R4-2007-0028 as amended by WDR Order No. R4-2010-0074.

Solid Waste

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the nation's primary law governing the disposal of solid and hazardous waste. The RCRA set national goals for reducing the amount of waste generated and ensuring that wastes are managed in an environmentally sound manner. The Solid Waste Program encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations encourage source reduction and recycling, and promote the safe disposal of municipal waste.

State

Assembly Bill 939

Assembly Bill (AB) 939 (Chapter 1095, Statutes of 1989), the Integrated Waste Management Act, required, among other things, all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. In addition, AB 939 requires each county and incorporated cities to prepare a Source Reduction and Recycling Element for its jurisdiction, identifying waste characterization; source reduction; recycling; composting, solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste, in addition to a countywide Siting Element specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction that cannot be reduced or recycled for a 15-year period. Each city plan must demonstrate integration with the relevant county plan. The plans must

promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Elements of the plans must be updated every 5 years.

California's 75-Percent "Recycling" Goal

On October 6, 2011, Governor Brown signed AB 341, establishing a State policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. The bill also mandates that local jurisdictions implement commercial recycling by July 1, 2012.

Local

Santa Paula Municipal Code Chapter 50.015

Per Santa Paula Municipal Code, responsible persons must arrange for solid waste collection service with the city or a franchisee.³⁷ Regulations regarding the use of containers stipulate the following:

- Responsible persons must keep in a suitable place one or more containers capable of holding, without spilling, leaking, or emitting odors, all solid waste that accumulates on the premises between the times of two successive collections.
- Responsible persons must deposit in containers or commercial bins provided by the city or franchisee all solid waste generated or accumulated on premises.
- It is unlawful for any person to place ashes that are not cold and free from fire in any container.

Santa Paula Municipal Code Chapter 50.140

In response to AB 393, the City adopted Santa Paula Municipal Code Section 50.140, which requires permit applicants working on construction, remodeling, and/or demolition projects within City limits to practice waste prevention; to reuse, recycle or salvage; and, least preferred, to deposit waste in landfills.

- Waste generators must complete a Certificate of Implementation and a Waste Reduction & Recycling Summary Report (WRRS). The thresholds for planning and reporting job site waste diversion are:
 - Commercial and residential additions or alterations that require a building permit and are greater than 500 square feet
 - Demolition of any structure requiring a permit, regardless of cost or value
 - All new construction (pursuant to the Green Building Code)

³⁷ Santa Paula Municipal Code, tit. V, Public Works, ch. 50.015.

4.14.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?

4.14.4 PROJECT IMPACTS

Threshold: **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

The City's Public Works Department oversees management of all water and wastewater issues for the City. The City recently constructed a new WRF in 2010 that treats the wastewater generated within City limits. The City is located within the jurisdiction of the Los Angeles RWQCB.

The Los Angeles RWQCB regulates the treatment of wastewater at treatment plants and the discharge of the treated wastewater into receiving waters. The City is responsible for adhering to Los Angeles RWQCB regulations as they apply to wastewater generated and discharged by the WRF. The resulting effluent from the treatment process must meet WDR Order No. R4-2007-0028 as amended by WDR Order No. R4-2010-0074. Development of the Project will result in the removal of the existing septic tanks that currently serve the site. Once developed and occupied, uses within the Specific Plan area will generate wastewater that will be connected to the City's sewer system and conveyed through a series of pipelines to the WRF

for treatment. Effluent from the treatment plant must comply with the SPMC to meet the requirements of the WDR permit issued to the City by the Los Angeles RWQCB.

As a result, the treated effluent will not exceed applicable requirements, and the Project's potential impacts related to wastewater treatment are less than significant.

Threshold: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water and Recycled Water System

The Specific Plan's domestic water system would receive water via proposed 10- and 12-inch water mains as identified in **Figure 2.0-11, Domestic and Recycled Water Master Plan**. The point of connections (POCs) for the Project would be along Faulkner Road and Telegraph Road. The existing 8-inch water line located beneath Beckwith Road would remain in place.

From the point of connections, a new 12-inch line would proceed north through the Project Site. The proposed distribution system will be comprised of 8-inch through 12-inch mains. The water mains located beneath Beckwith Road and Faulkner Road would be publicly owned and maintained, while the remaining on-site domestic and fire would be master metered.

Construction of the City's WRF was completed early 2010. The treatment capacity of the City WRF is 4.2 mgd, or 4,704 afy. The City WRF produces water that meets California Title 22 regulations for recycled water. At present, recycled water is not available within the City of Santa Paula area. Estimated recycled water urban demand within the City (and adjacent areas) will be approximately 1,622 AFY. The recycled water demand could be fully met with recycled water from the new WRF.

The City purchased the WRF in 2015; however, the City presently does not have the funds to distribute the water. According to the City's Potable Water System Master Plan, the City would, in the future, develop a recycled water system conveyance plan that would include a line in Telegraph Road. The Project includes an on-site recycled water distribution system to irrigate the greenbelt and other irrigation areas. This will allow the Specific Plan area to make use of recycled water when the City completes its planned recycled water plan and extends a line to the point of connection in the railroad right of way at Beckwith Road.

The Specific Plan's recycled water system would operate via a proposed 12-inch distribution main constructed beneath Telegraph Road, which is currently within City limits. The proposed recycled water distribution system will be comprised of 6-inch mains from the POC of the City's recycled water system.

This terminus would become the main POC for the proposed Project, in addition to a POC located beneath the Ventura County Transportation Commission (VCTC) railroad right-of-way.

Water and recycled water pipeline construction impacts would be less than significant because they would be required to comply with the City's noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation. In addition, no new or increased severity of impacts would occur as a result of the Project.

Wastewater Collection System and Treatment

As previously described, there is no existing sewer system in the Specific Plan area. The City's Wastewater System Master Plan identifies and describes the improvements required to service the Project Site, such as a new off-site mainline that will need to be completed prior to implementation of the Specific Plan. The connection of the Project Site to the City's system would utilize a new lift station at the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Specific Plan area. These improvements would bring the site's POC for sewer service to this proposed lift station and would require completion prior to implementation of Specific Plan. The Sewer System Master Plan for the Specific Plan is shown in **Figure 2.0-12, Sewer System Master Plan**.

Construction of these improvements would require temporary construction and lane closures where the sewer line is constructed within the road rights-of way. Pipeline construction impacts would be less than significant because they would be required to comply with the City's noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation.

The new WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2.0 mgd, so there is unused capacity at the facility to accept the incremental addition of 0.029 mgd that is anticipated from occupancy of the Specific Plan area. Therefore, the Project would have less than significant impacts to wastewater treatment capacity within the City.

Threshold: **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

As provided in **Table 4.14-9, Estimated Wastewater Generation**, the estimated total wastewater generation for the full build-out of uses within the Specific Plan area is approximately 0.01 mgd.

**Table 4.14-9
Estimated Wastewater Generation**

Land Use	Building Square Footage	Wastewater Generation Rates	Total Daily Generation (mgd)
Commercial/Light Industrial	442,743.8	41.1 gpd/ksf	0.018
Light Industrial	196,978.3	41.1 gpd/ksf	0.008
		Total	0.026

Notes: gpd = gallons per day; ksf = thousand square feet; mgd = million gallons per day.

Building square footage found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.

As noted previously, the WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2 mgd, so there is unused capacity at the facility to accept the incremental addition of 0.026 mgd from occupancy of the Specific Plan. The West Area 2 Expansion Area was included in the City's Wastewater System Master Plan as projected development within the City, with an estimated wastewater generation of 0.0818 mgd. Thus, the Project's estimated daily wastewater generation would be approximately 32 percent of the projected development potential for the West Area 2 Expansion. As the Project would not exceed the City's Wastewater System Master Plan projected capacity of the WRF, impacts would be less than significant.

The proposed Project's physical constraints and point of connection at the sewer main in Todd Lane will not accommodate a gravity line using standard allowable design slopes and good design practices. Therefore, a lift station is proposed for the system at the southeast corner of the Project Site. The lift station will be designed to the City of Santa Paula standards being automated with redundant pumps and adequate alarm systems. Complete design will be done during the Project improvement plan preparation.

The Specific Plan is proposing the best-fit alignment to connect to the existing 42-inch sewer main in Todd Lane, leading to the City of Santa Paula WRF. On site, the sewer will drain through one new 8-inch main running east-west along the southerly property line in Faulkner Road. The gravity system will continue toward Faulkner Road, through a new 12-inch casing pipe under State Route (SR) 126, and then south along the Todd drainage channel to a new lift station located at the northwest of Todd Lane at the channel. The proposed lift station will pump flows through the existing 6-inch force main located in Todd Lane. The existing 6-inch force main travels east underneath the existing 9-by-6-foot concrete box culvert and discharges to the existing 8-inch sewer in Todd Lane. This existing 8-inch sewer connects to the existing 42-inch sewer located in Todd Lane, which discharges to the City of Santa Paula WRF.

As concluded in the Sanitary Sewer Technical Report, the Project Site sewer system will be in accordance with the City of Santa Paula design guidelines. The Santa Paula West sewer system is in agreement with the design flows anticipated within the City's Wastewater Master Plan for this development. Also, the main backbone, will have additional capacity before reaching 50% pipe utilization of 253 gpm (0.564 cfs) for future connections and therefore there would be no impacts.

Threshold: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The Project Site is currently developed with agricultural uses as well as two residences and ancillary facilities for on-site agricultural operations. Implementation of the Specific Plan would result in the conversion of agricultural uses with urban development on the site, thus altering existing stormwater drainage on the Project Site.

Treatment systems incorporated into the Project design will be based on the treatment volume calculation guidelines provided in the Ventura County Water Quality Manual. The treatment types will include bioswales, bioretention cells, infiltration trenches, permeable pavement and/or detention basins as needed based on the proposed site plan layout. As a basis for design, the proposed Project must meet or not exceed the storm drainage requirements of the US Army Corps of Engineers (USACE), Ventura County Watershed Protection District (VCWWD), and the City of Santa Paula (on-site drainage systems) where applicable.

Drainage for the Specific Plan is presented in **Figure 2.0-14, Grading and Drainage Master Plan;** and the Storm Drain Plan is shown in **Figure 2.0-15, Storm Drain Plan.** Storm drain facilities would be sized to meet City of Santa Paula standards and accommodate the increased runoff generated by the increase in impervious surfaces on the Project Site. It should also be noted the development of the Project Site would occur in phases, as market conditions allow. Thus, the Project Site's storm drain plan may change throughout build-out of the site and would subsequently be subject to City approval.

The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream.

The storm drain system includes a series of storm drain pipelines, detention basins, and a trapezoidal channel that will run along the Adams Barranca. One acre of land within the Project Site would be set

aside for detention basins totaling approximately 6 af of volume for detention and retention requirements. The basin along Adams Barranca would include debris catchment facilities to reduce debris from storm flows that have caused problems at the railroad culvert and the Caltrans culvert in this channel. These detention basins would serve dual roles of flood protection and water quality enhancement. The trapezoidal channel will be approximately 6 feet in depth, with a 15-foot bottom width and 2:1 side slopes that will accommodate flood waters in a large storm event and protect the buildings on site; in addition, the channel will remove a portion of the property from the floodplain through a LOMR (Letter of Map Revision) with the Federal Emergency Management Agency. The new channel would join with the existing Adams Barranca at the railroad crossing and the SR 126 crossing.

The detention basins will significantly reduce peak runoffs downstream by storing the peak event flows and lagging their release after the storm peak. The Project's proposed design features and drainage plan would not result in an increase in stormwater runoff from the site or exceed stormwater drainage requirements established by the USACE, VCWWD, or City. Impacts would be less than significant.

Threshold: **Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

Water Supply and Demand

At full build-out, the development under the Specific Plan would allow for the development of up to a total of approximately 1,264,982.4 square feet of commercial/light industrial uses and approximately 562,795.2 square feet of light industrial uses on the Project Site. Both of these land uses have a floor to area ratio (FAR) of 0.35 that would allow approximately 442,743.8 square feet of commercial/light industrial buildings and approximately 196,978.3 square feet of light industrial buildings. In addition, the boundary of the site adjacent to the Adams Barranca would be designated for approximately 4.9 acres of passive open space.

Demand for the proposed Project is approximately 39.8 afy (20.5 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation). The potable demand of 22 afy for the Commercial/Light Industrial and Light Industrial uses is 25 percent of the West Area 2 total supply allocation. The landscaped areas will be irrigated using reclaimed water to be delivered from the City's wastewater treatment plant.

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently agricultural uses on the Project Site use approximately 281.1 afy (average over the past 5 years). As such, the Project's consumption will be a net reduction in total water use of 241.3 afy.

It should be noted that the West Area 2 Planning Area has been allocated a supply of 88.8 afy based on future development. The Project would use a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can a portion of the existing water currently used for irrigation. It should be noted that that this portion of the pumped water will be pumped instead by the City from other wells, and not from the current well on site.

The Project will use reclaimed water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City forecasts having between 400 afy (2015) and 1,622 afy (2035) of reclaimed water available for use. The Project will require only a portion of the recycled water (2.9 percent in 2017 and 1.1 percent in 2035).As shown on **Table 4.14-10, Project Supply and Demand Comparison—Average Year (afy)**, shows the Project water demand as a percent of total supply throughout various milestones in the build-out schedule. By 2027 (build-out), the Project is estimated to demand 39.8 afy of water. Water demand from the Project represents 0.81 percent of City's total projected urban water demand in 2017, and decreasing to 0.65 percent in 2037.

The 2010 UWMP Update projects total water demands for the Santa Paula Business Park through 2035 and demonstrates that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands. Therefore, there would be no impacts to available water supplies and no new or expanded entitlements are needed.

**Table 4.14-10
Project Supply and Demand Comparison—Average Year (afy)**

	2015	2017	2020	2025	2027	2030	2035	2037
Total City supply ^a	7,037.0	7,419 ^b	7,991.0	8,945.0	9,334.2 ^c	9,918.0	9,918.0	9,918.0 ^d
West Area 2 allocation ^e	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
Existing agricultural use ^f	281.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Project demand ^g	0	39.8	39.8	39.8	39.8	39.8	39.8	39.8
Percent of City's total supply	0%	0.81%	0.76%	0.70%	0.65%	0.65%	0.65%	0.65%
Net change from agricultural use	0	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)
Available reclaimed water	400	600 ^b	800	1,200	1,368.8 ^c	1,622	1,622	1,622 ^d
Project demand for reclaimed water	0	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Percent of available reclaimed water	0.00%	2.97%	2.23%	1.48%	1.30%	1.10%	1.10%	1.10%

Notes:

^a City of Santa Paula, 2010 Urban Water Management Plan (June 2011) Table 4-4, p. 41.

^b value extrapolated from 2015 and 2020 data.

^c Value extrapolated from 2025 and 2030 data.

^d Value carried over from 2035 data.

^e City of Santa Paula, 2010 Urban Water Management Plan (June 2011) Table 2-4, p. 16.

^f See Table 3 of the Water Supply Assessment.

^g See Table 2 of the Water Supply Assessment.

^h City of Santa Paula, 2010 Urban Water Management Plan (June 2011), Table 4-6, p. 47.

Threshold: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Threshold: Comply with federal, state, and local statutes and regulations related to solid waste?

The Project would generate solid waste during construction. This waste would be generated as a result of the demolition of existing on-site structures, pavement, and agricultural waste as well as the construction of new commercial and light industrial development. Much of the solid waste generated from construction of the Project would be recyclable, such as wood and metal scrap and formed construction board (cement and drywall board). As provided by the SPMC, Section 50.140, Construction and Demolition Diversion, demolition and construction must divert 50 percent of waste tonnage from landfills. Separate calculations and reports are required for the demolition and construction portion of projects involving

both activities. Impacts related to construction solid waste generation are considered potentially significant.

All new development allowed within the Specific Plan will support recycling to reduce the amount of solid waste sent to the landfill. Waste carts for trash, recycling, and green waste would be provided. Estimates of the amount of solid waste that would be generated during operation have been calculated using the waste generation factors contained in the Ventura County Solid Waste Management Department Guidelines of Preparation of Environmental Assessments for Solid Waste Impacts, and are listed in **Table 4.14-11, Estimated Solid Waste Generation**.

**Table 4.14-11
Estimated Solid Waste Generation**

Land Use	Building Square Footage	Generation Rate	Solid Waste Generation (tons/year)	Solid Waste Generation (tons/day)
Commercial/Light Industrial	442,743.8	0.0024 tons/sq. ft./yr.	1,062.58	2.91
Light Industrial	196,978.3	0.0108 tons/sq. ft./yr. ^a	2,127.37	5.83
Total Solid Waste Generation			3,189.95	8.74

Source: Ventura County Solid Waste Management Department. Guidelines of Preparation of Environmental Assessments for Solid Waste Impacts. May 1998.

^a 0.0108 was used for Light Industrial since there is no generation rate for this type of use.

Notes: sq. ft. = square feet; yr. = year.

Building square footage found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.

The Project Site currently generates approximately 4.08 tons of solid waste per year. Under the Specific Plan, future operations would generate approximately 3,189.95 tons of solid waste per year, which equates to approximately 8.74 tons of solid wastes per day that will be delivered to landfills.³⁸ As mentioned previously, the Toland Road Landfill, due to its location and capacity, is the primary provider of solid waste disposal to the City of Santa Paula; other landfills in the region are also used but to a lesser extent. The Toland Road Landfill is permitted to accept a maximum of 1,500 tons of solid waste per day, with a remaining capacity of 21,983,000 cubic yards. The proposed Project would account for less than 1 percent of the Toland Road Landfill permitted daily capacity.

Additionally, the next closest landfills to the Project Site are the Chiquita Canyon Sanitary Landfill and Simi Valley Landfill & Recycling Center. The proposed Project would account for less than 1 percent of the maximum permitted daily capacity for these two landfills. However, the Chiquita Canyon Sanitary Landfill is only permitted through 2019. While there would be a substantial increase in generated solid waste on the Project Site, adequate landfill capacity appears to be available within the City and nearby landfills.

³⁸ Toland Road Landfill is open 5 days per week, which is approximately 260 days per year. 3,189.95 tons/260 days = 12.27 tons/day.

Solid waste generated during construction and operation of the Project would be required to comply with all federal, state, and local statutes and regulations to reduce and recycle solid waste. Therefore, impacts would be less than significant.

As previously mentioned, the proposed Project would comply with AB 939 and AB 231 and the City's Construction and Demolition Diversion section of the Municipal Code, which states that demolition, construction, and remodeling shall divert 50 percent of waste tonnage. However, given that future landfill capacity may not be ensured through the life of the development of the Specific Plan, for many years after occupancy, impacts to solid waste would be potentially significant.

4.14.5 CUMULATIVE IMPACTS

Water

The 2010 UWMP prepared for the City projects water demand within the City's service area through the year 2035. The 2010 UWMP analyzes future water demand at build-out conditions for normal, dry year, and multiple dry water years. As indicated in the analysis above, there is expected to be a surplus of water during normal, dry year, and multiple dry year scenarios. The Specific Plan's demand for water use would meet the projected development demands within the City. Therefore, the cumulative increase in water demand of related projects and build-out of the City pursuant to the General Plan is considered less than significant.

Wastewater

In association with the related projects identified in **Section 3.0, Related Projects**, the Specific Plan and related projects would result in a cumulative increase in projected wastewater flow within the City of Santa Paula. As shown in **Table 4.14-12, Cumulative Wastewater Generation**, the development of related projects would result in a generation flow of 2.372 mgd at build-out. Combined with the net increase of approximately 0.01 mgd from the Project, the cumulative wastewater generation by the Specific Plan and related projects would be approximately 2.382 mgd.

Table 4.14-12
Cumulative Wastewater Generation

Land Use	Unit	Wastewater Generation Rates	Total Daily Generation (mgd)
Residential	1,786 units ^a	163 gpd/person ^b	1.057
Commercial	217,298 sq. ft.	41.1 gpd/ksf ^b	0.009
Industrial	805,474 sq. ft.	41.1 gpd/ksf ^b	0.033
Adams Canyon ^c	—	—	0.499 ^b
Fagan Canyon ^d	—	—	0.178 ^b
East Area 2 (East Gateway) ^e	—	—	0.533 ^b
West Area 2^f	—	—	0.063^b
Related Projects Total			2.372
Project Net			0.01
Total Cumulative			2.382

Source: City of Santa Paula Planning Department (2014) and East Area 1 Amendment Supplemental EIR (September 2014).

Notes: sq. ft. = square feet; ksf = thousand square feet; gpd = gallons per day; and acf = acre feet per year.

^a 3.63 persons/unit

^b From East Area 1 Amendment Supplemental EIR. Generation rate derived from the assumption that 80 percent of water demand is returned as wastewater per the 2010 City of Santa Paula Wastewater Master Plan

^c Blended per the 2010 UWMP. Includes 495 residential units, 100,000 sq. ft. commercial/industrial/institutional, and 200 acres of parks and recreation land.

^d Blended per the 2010 UWMP. Includes 450 dwelling units and 100,000 sq. ft. of commercial/industrial/institutional space, and 7 acres of parks and recreation land.

^e Blended per the 2010 UWMP. Includes 1,602,000 sq. ft. of commercial/industrial/institutional space.

^f West Area 2 accounts for the entire 125 acre expansion area.

East Area 1 is added into residential, commercial and industrial as appropriate.

Zone 2 of the wastewater treatment service area would undergo various infrastructure improvements to handle the future wastewater flows with the development the West Area 2 and other existing and proposed uses within the zone. Development of the Specific Plan includes construction of a new lift station at the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Specific Plan area, north of SR 126. Completion of proposed Project improvements would convey most of the wastewater flow to the POC along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project's contribution to cumulative wastewater system and treatment impacts would be less than significant.

Solid Waste

Development under the Specific Plan and the related projects would add incremental increases in solid waste disposal at landfills located within Ventura County. Approximately 12 years of capacity remain at the Toland Road Sanitary Landfill, 4 years at the Chiquita Canyon Sanitary Landfill, 37 years at the Simi

Valley Landfill & Recycling Center, 10 years at the Azusa Land Reclamation Co. Landfill, 27 years at Antelope Valley Public Landfills I and II, and 23 years at the Bakersfield Metropolitan (Bena) Solid Waste Landfill. .

Assuming that all of the expansion areas and other probable future developments are completely built out according to the City's General Plan, the cumulative solid waste generation would total 58,788 tons per year, as shown in **Table 4.14-13, Estimated Cumulative Solid Waste Generation**. The Specific Plan would account for approximately 5 percent of the City's estimated cumulative solid waste generation.

**Table 4.14-13
Estimated Cumulative Solid Waste Generation**

Land Use	Unit	Solid Waste Generation Rates	Solid Waste Generation (tons/day)	Solid Waste Generation (tons/year)
Residential ^a	1,786 units ^b	0.00612 tons/household/day	10.93	2,842
Commercial ^a	217,298 sq. ft.	0.0025 tons/1000 sq. ft./day	0.54	141
Industrial ^a	805,474 sq. ft.	0.0025 tons/1000 sq. ft./day	2.01	524
East Gateway Project ^c	-		39.5	10,275
Fagan Canyon ^d	-		6.9	1,798
Adams Canyon ^d	-		5.0	1,291
West Area 2 ^{de}	-		24.9	6,480
Existing City uses ^d	-		113.6	29,531
Other City build-out ^f	-		22.7	5,906
Total			226.08	58,788

Source: Ventura County Solid Waste Management Department, *Estimated Solid Waste Generation Rates for Industrial/Commercial/Residential Establishments, Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts*. <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>

Note:

Tons per year were determined using the Toland Road Landfill number of operational days within a year (260 operational days).

^a Land uses include development from East Area 1.

^b 3.63 persons/unit

^c East Gateway Project solid waste generation was determined by the East Gateway Draft EIR.

^d Data from East Area 1 Specific Plan Amendment Supplemental EIR.

^e West Area 2 includes entire 125 acre expansion area.

^f Other build-out assumes 20 percent of solid waste generated by existing uses to account for all other probable future projects identified in the City's Development Activity List.

The City would continue to implement programs for source reduction and recycling and require that subsequent projects complete environmental review to minimize solid waste disposal at the six disposal

facilities. Furthermore, the State has set a goal to recycle, source-reduce, or compost 75 percent of solid waste generated.

The City would utilize the Toland Road Sanitary Landfill until the landfill reaches capacity. At the time Toland Road Sanitary Landfill closes, the City would utilize the capacity of the five remaining landfills previously used for solid waste disposal. The combined remaining capacity of the five landfills is estimated to last for 95 years, or an average of 19 years.

As such, cumulative impacts would be less than significant because the six landfills discussed above have sufficient capacity for decades to service the development of the Specific Plan and other development requiring solid waste disposal.

4.14.6 MITIGATION MEASURES

The following measures have been identified to mitigate the identified solid waste impacts.

SW-1 Before issuance of a demolition permit or construction permit, the applicant must implement waste reduction and recycling programs to divert construction solid waste from the area landfill. A construction recycling plan must be submitted and approved by the Director of Public Works. A final report as to the amount recycled must be provided to the Director of Public Works at the completion of construction activities documenting the waste reduction efforts conducted, including a listing of solid waste diversion amounts, and the amount of waste sent to landfills. The report must also document how the construction contractor complied with applicable state and local statutes and regulations to reduce and recycle solid waste generated during construction.

4.14.7 RESIDUAL IMPACTS AFTER MITIGATION

Implementation of **Mitigation Measure SW-1** would reduce impacts to utilities and services to less than significant levels.

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain most of the basic objectives of the project while avoiding or substantially lessening any of the significant environmental impacts of the project. An EIR is required to include sufficient information about each alternative to meaningful evaluation, analysis, and comparison with a proposed project. This section identifies and describes alternatives to the proposed Project, evaluates the environmental impacts that would result from each of these alternatives and compares these to the proposed Project, as required by CEQA.

Key provisions of the CEQA Guidelines¹ pertaining to the alternatives analysis are summarized below:

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be costlier.
- The No Project Alternative shall be evaluated along with its impact. The No Project analysis shall discuss the existing conditions at the time the notice of preparation is published. Additionally, the analysis shall discuss what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.
- If the project is a development project on an identifiable property, the No Project Alternative is the circumstance under which the project does not proceed. Discussion of this alternative shall compare the environmental effects of the property remaining in its existing state to the environmental effects that would occur if the project were approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this no project consequence should be discussed. In certain instances, the No Project Alternative means “no build,” wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical results of not approving the project rather than create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment.²

1 California Code of Regulations, tit. 14, sec. 15126.6.

2 California Code of Regulations, tit. 14, sec. 15126.6.

- The range of alternatives required in an EIR is governed by a “rule of reason”; therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.³

The range of feasible alternatives to a proposed project is to be selected and discussed in a manner that fosters meaningful public participation and informed decision-making. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative site.⁴

5.2 PROJECT OBJECTIVES

The Santa Paula West Business Park Specific Plan has the following objectives, based on the City’s General Plan and the existing physical, environmental, demographic, and market conditions:

1. Help revitalize the existing built environment and economic climate of the City by permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula;
2. Provide for light industrial and commercial uses that complement existing uses adjacent to the Project area; and
3. Provide suitable sites for Light Industrial and commercial buildings that meet the needs of the community but which are not presently available in the City of Santa Paula.

3 California Code of Regulations, tit. 14, sec. 15126.6(f)(3).

4 California Code of Regulations, tit. 14, sec. 15126.6(f)(1).

5.3 ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED CONSIDERATION

The following alternatives were identified and initially considered by the City and eliminated from further consideration in this EIR because these alternatives would not feasibly attain the basic objectives of the Santa Paula West Business Park Specific Plan.

Alternative Site for the Santa Paula West Business Park

The proposed Santa Paula West Business Park Specific Plan Project also includes the proposed annexation of Project area into the City of Santa Paula. As discussed in **Section 4.10, Land Use**, the Santa Paula General Plan identifies expansion areas and planning areas to allow for the growth of the City due to the small amount of vacant land within the City. The Specific Plan Area is located within the West Area 2 Planning Area as identified in the Santa Paula General Plan. The General Plan Land Use Element notes that the City currently has 135 acres dedicated for commercial uses, 161 acres dedicated for industrial uses, and 141 acres dedicated for open space uses.

The entire site of the proposed Specific Plan Area is active agricultural land designated as Prime Farmland on the State Important Farmland Map. As discussed in **Section 4.2, Agricultural Resources**, the annexation and conversion of this agricultural land to urban development would be a significant and unavoidable impact of the proposed Project. This impact could potentially be avoided by identifying an alternative location for the uses planned for the Santa Paula West Business Park Specific Plan Area.

The City prepared an inventory of vacant and underutilized sites in the City for the City's Housing Element. There are no available vacant or underutilized sites that would accommodate a large industrial/retail commercial or a single large tenant. The City currently has less than 10 acres of vacant or underutilized industrial/commercial sites available within the City limits. While large vacant and underutilized parcels are available in the City, the largest parcels are designated for residential use and would require a General Plan Amendment to change the land use designation to permit industrial/commercial use. Further, these sites located in existing developed residential neighborhoods do not have the location or access characteristics required for large light industrial/commercial tenants. Because there are no suitable sites available that could accommodate a large industrial/retail commercial center of the type that would be permitted under the Specific Plan in the City's current boundaries, the Santa Paula West Business Park project therefore includes a request from the City to annex additional land within the City's Sphere of Influence to create the business park area.

Other expansion areas identified in the Santa Paula General Plan, which consist of Fagan Canyon, and Adams Canyon are not suitable in terms of location and other site characteristics, to accommodate a large light industrial/commercial center.

Because no suitable alternative sites for a large industrial/retail community retail center within the City of Santa Paula or the City's Sphere of Influence, detailed evaluation of this alternative is not provided.

5.4 ALTERNATIVES CONSIDERED

As discussed above in the introduction to this section, an EIR is required to briefly describe the rationale for selection and rejection of alternatives and only evaluate in detail those alternatives that can feasibly meet the basic objectives of the project and avoid or substantially lessen the significant effects of the project:

The alternatives evaluated include the following:

Alternative 1: No Project Alternative—No Development

Alternative 2: 25% Less Development

Alternative 3: 50% Less Development

Evaluation of the No Project Alternative is required by the CEQA Guidelines.⁵ Specifically, the CEQA Guidelines state that when the project consists of a development project, the No Project Alternative should consider the circumstance where the project does not proceed, including whether it is predictable that some other development project will be proposed on the site. When the project consists of a revision to a land use plan, the No Project Alternative should consider the continuation of existing land use plan. Because the Santa Paula West Business Park Specific Plan Project includes revisions to a land use plan and a proposed development project on the Specific Plan site, Alternative 1 evaluates the No Project—No Development Alternative.

Alternative 2 evaluates a 25 percent reduction in development which would evaluate the Project at 75 percent build-out. Alternative 3 evaluates a 50 percent reduction in development which would analyze the Project at 50 percent build-out.

As discussed above in Section 5.3, an alternative site for the Project would not feasibly meet the basic objectives of the Project and an alternative site is currently not available is not being evaluated in detail for these reasons.

⁵ California Code of Regulations, tit. 14, sec. 15126.6(e).

5.5 ALTERNATIVES ANALYSIS

This subsection provides a comparison of the impacts of the alternatives and the proposed Santa Paula Business Park Specific Plan Project for the environmental topics addressed in this EIR. In all cases, the comparison of impacts assumes that all feasible mitigation measures identified in this EIR would be implemented for the impacts resulting from the alternatives. Similarly, in all cases where it can be safely assumed that there are feasible mitigation measures for impacts caused by the alternative, it is assumed that those mitigation measures would be implemented. In accordance with the CEQA Guidelines, the discussion of the environmental effects of the alternatives may be less detailed than that provided for the proposed project but should be sufficiently detailed to allow meaningful evaluation, analysis, and comparison with the proposed project.⁶

Alternative 1: No Project Alternative—No Development

Description of Alternative

Under the No Project Alternative, the proposed Specific Plan Project, including the Santa Paula Business Park Specific Plan and applications for LAFCo jurisdictional reorganization, would not be approved by the City of Santa Paula. There would be no change to any of the existing land uses or jurisdictional boundaries under this alternative.

Analysis of Alternative

Aesthetics

The existing visual characteristics within the Project area would not be altered and there would be no aesthetic impacts in or near the Project area. In comparison, if approved, the proposed Project would result in the near term development of the Specific Plan area with some mixture of commercial and industrial uses that would substantially change the visual character and quality of that part of the Project Site. Over the long term, without the Specific Plan Project, there would likely be an incremental change in the visual character of the rest of the Project area, as currently undeveloped and underutilize parcels are developed with commercial and light industrial uses in accordance with applicable zoning standards at the time they are developed. As discussed in **Section 4.1** of this Draft EIR, the Specific Plan Project as proposed would result in significant impacts that would be avoided by this alternative.

Agricultural Resources

Under the No Project Alternative, the unincorporated areas of the County would remain zoned as Agricultural Exclusive. All existing uses would remain under the current conditions. The agricultural land

⁶ California Code of Regulations, tit. 14, sec. 15126.6(d).

designated as Prime Farmland and farmland of statewide importance within the Project area would remain unchanged and would not convert to non-agricultural uses. This alternative would avoid the significant impact of converting agricultural land to urban uses that would result from the proposed Project.

Air Quality

Under the No Project Alternative, impacts from the emissions of ROG and NOx for both construction and operation would that would exceed the regional construction emissions thresholds under the proposed Project would be eliminated. This alternative would avoid the significant impact of converting agricultural land to urban uses that would result from the proposed Project.

Biological Resources

With the No Project–No Development Alternative, the existing conditions of the Specific Plan Project Area would remain unchanged, and no impacts to biological resources would occur.

Cultural Resources

Under the No Project Alternative, there would be no construction or ground disturbing activities that could impact historical resources, or unearth any archeological or paleontological resources or human remains that may be present within the Project area. All potential impacts to cultural resources would be avoided with this alternative.

Geology and Soils

With the No Project Alternative, no new development would occur within the Project area and all potential impacts associated with new development in the Project area would be avoided.

Greenhouse Gas

Under the No Project Alternative, no new development would occur within the Project area and all potential impacts associated with new development in the Project area would be avoided. No greenhouse gas (GHG) emissions would be generated within the proposed annexation area.

Hazards and Hazardous Materials

Under Alternative 1, no development would occur on the Project Site. Accordingly, there would be no increase in the use, transportation, and disposal of hazardous materials and the potential risk of exposure to these hazards would not increase. Implementation of this alternative would not allow for the potential elimination of existing hazardous material sites that may be present in the Project area. With the implementation of the Specific Plan Project or any or the other alternatives, any new development

occurring on any documented hazardous materials sites would have to be preceded by remediation and cleanup of any existing hazardous materials conditions subject to required oversight by public agencies with jurisdiction over hazardous materials remediation. Similar to the proposed Project, this alternative would have no significant impacts; however, there would be fewer impacts with this alternative.

Hydrology and Water Quality

The project area would remain unchanged under the No Project Alternative. Runoff from existing developed areas is conveyed to existing drainage facilities within the Project area. The on-site drainage is a tributary to the Santa Clara River. Storm runoff patterns would not change under the No Project Alternative; however, they would slightly increase from the additional impervious surfaces that would be on site. Culverts currently on site do not operate at full capacity because they are 50 percent blocked with sediment. The proposed Project would ensure proper drainage for stormwater and water quality purposes. Hydrology and water quality impacts under the No Project Alternative would not result in significant impacts, similar to the proposed Project; however, impacts would be fewer.

Land Use and Planning

With the No Project Alternative, there would be no changes in existing land use conditions or in the local or regional land use planning and regulatory frameworks that currently govern the affected land area. Accordingly, there would be no land use impacts. None of the objectives and community benefits of the proposed Project would occur. There would be no development in the Specific Plan area that might improve the City's economic base and complement the existing pattern and scale of development in Santa Paula. Municipal services and infrastructure would not be provided to the unincorporated areas proposed for annexation to the City. New commercial and industrial uses that could complement the mixture of uses in the new Specific Plan area would not be developed. The No Project–No Development Alternative would not implement a key General Plan land use policy to expand the City's urban limits into the West Area 2 Planning Area to provide a suitable site for a commercial and industrial within the City. Consequently, this alternative would have negative impacts with respect to land use and planning, while the proposed Project would have both positive and less than significant impacts.

This alternative, like the proposed Project, would not divide an established community and would have no effect on any habitat conservation plans.

Noise

Because the No Project Alternative would not result in new development, there would be no construction. Consequently, the significant noise impacts due to construction, identified for the proposed Project would

be avoided. Measures have been identified to mitigate all potential noise impacts identified for the proposed Project; however, impacts would be fewer with the No Project Alternative.

Public Services

With no changes in existing conditions, there would be no impact on any public services and no need to extend any of the City's municipal services to serve new development or existing uses. As discussed in **Section 4.10**, extension of the full range of municipal services to the Specific Plan Project area would not result in any significant impacts. There would not be any effect on local public schools, parks and recreation and library facilities and a less than significant effect on police and fire protection services. This alternative would not, therefore, avoid any significant impacts that would result from the proposed Project; however, impacts would be fewer.

Transportation and Traffic

With the No Project Alternative, there would be no new development as a result of the Specific Plan Project. Of the 16 intersections analyzed in the Project area, the intersection level of service (LOS) for 12 of these intersections operate at LOS C or better during both the AM and PM peak hours and 4 intersections would have potentially significant impacts. The current conditions plus project could be mitigated to less than significant apart from one intersection that would be significant and unavoidable. Cumulative future conditions would result in 2 significant and unavoidable impacts either with or without the Project. With the incorporation of the mitigation, conditions with the Project would be similar to that of the current conditions.

However, one stop-controlled intersection of the 7 analyzed, currently operates at LOS D during the PM peak hour. Under the No Project Alternative there would be no improvements, or mitigation, applied to this intersection to improve the level of service. Although implementation of the proposed Project would increase the LOS at one intersection, the significant and unavoidable impacts would be greater and the No Project Alternative would result in less impacts than the proposed Project.

Utilities and Service Systems

Existing water use would continue under the no Project alternative averaging 281 acre-feet per year (afy) from an irrigation well. As discussed in **Section 4.9, Hydrology and Water Quality**, the Santa Paula Groundwater Basin is the primary source of water for the City and the adjoining County parcels. The Basin is an adjudicated basin and the existing extractions from the Basin would remain within each water user's allocated amount. Water demands for the Project would be around 39.8 afy at full build-out. As such, water demand impacts would be more within both the City's and the County's jurisdiction when compared to the proposed Project and impacts would be greater.

Currently, septic systems are being used to store wastewater from the residences. The amount of wastewater generated by existing uses would increase and a new off-site mainline would need to be completed prior to implementation of the Specific Plan. The increase in wastewater projected from development in the Specific Plan Project Area, is identified and addressed in the City's Wastewater Master Plan. The City's water recycling facility (WRF) would be able to accommodate wastewater generated by the proposed Project. This alternative would not require new pipelines to be built; however, any impacts from the proposed Project would be mitigated. Neither this alternative nor the proposed Project would result in significant impacts; however, this alternative would have fewer impacts.

Solid waste would be increased by the proposed Project. Any impacts would be mitigated to less than significant. Neither this alternative nor the proposed Project would result in significant impacts; however, impacts would be fewer with the No Project Alternative.

Stormwater runoff would increase with development of the Specific Plan area. Detention basins would be used to reduce peak runoffs downstream. While there would be no significant impacts with the proposed Project or alternative, the alternative would have less of an impact.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the Project alternatives is provided in **Table 5.0-3, Comparison of Alternatives to the Proposed Project** at the end of this section. The potential impacts of the proposed Project would be avoided or lessened if no new development occurs within the Specific Plan Project Area.

Land use and water usage impacts for the proposed Project would be significantly fewer than those under the No Project–No Development Alternative. While this alternative would not generate any impacts to water or land use, the impacts of this alternative could be considered greater than the proposed Project.

The No Project–No Development Alternative would not meet any of the basic objectives defined by the City of Santa Paula for the propose Santa Paula West Business Park Specific Plan Project.

Alternative 2: 25 Percent Reduction

Description of Alternative

This alternative assumes that there would be a 25 percent reduction in the 53.81 acres that makes up the proposed Project. This assumes that 75 percent, or approximately 40.36 acres of the Project would be built with the Specific Plan, and 25 percent, or approximately 13.45 acres would remain under the jurisdiction of the County of Ventura with land use subject to the County's General Plan and zoning, and agricultural operations would still continue.

As shown in **Figure 5.0-1, Alternative 2 Conceptual Project Area**, it is assumed that the portion of the site on the corner of Beckwith Road and Telegraph Road, which is approximately 13 acres, would remain under agricultural operations and the remainder of the Specific Plan area would continue with development as proposed. Currently there are agricultural operations to the south, west and northwest of the proposed Project site, residential to the north and northeast, and commercial/light industrial uses to the east.

Analysis of Alternative

Aesthetics

Under Alternative 2, the site would exclude approximately 13 acres from development, which would result in a smaller footprint than the full build-out of the proposed Project. However, construction would still be visible from SR 126, and impacts would remain significant and unavoidable. This alternative would change the visual nature of the site, as would the proposed Project. Impacts would remain the same as the proposed Project.

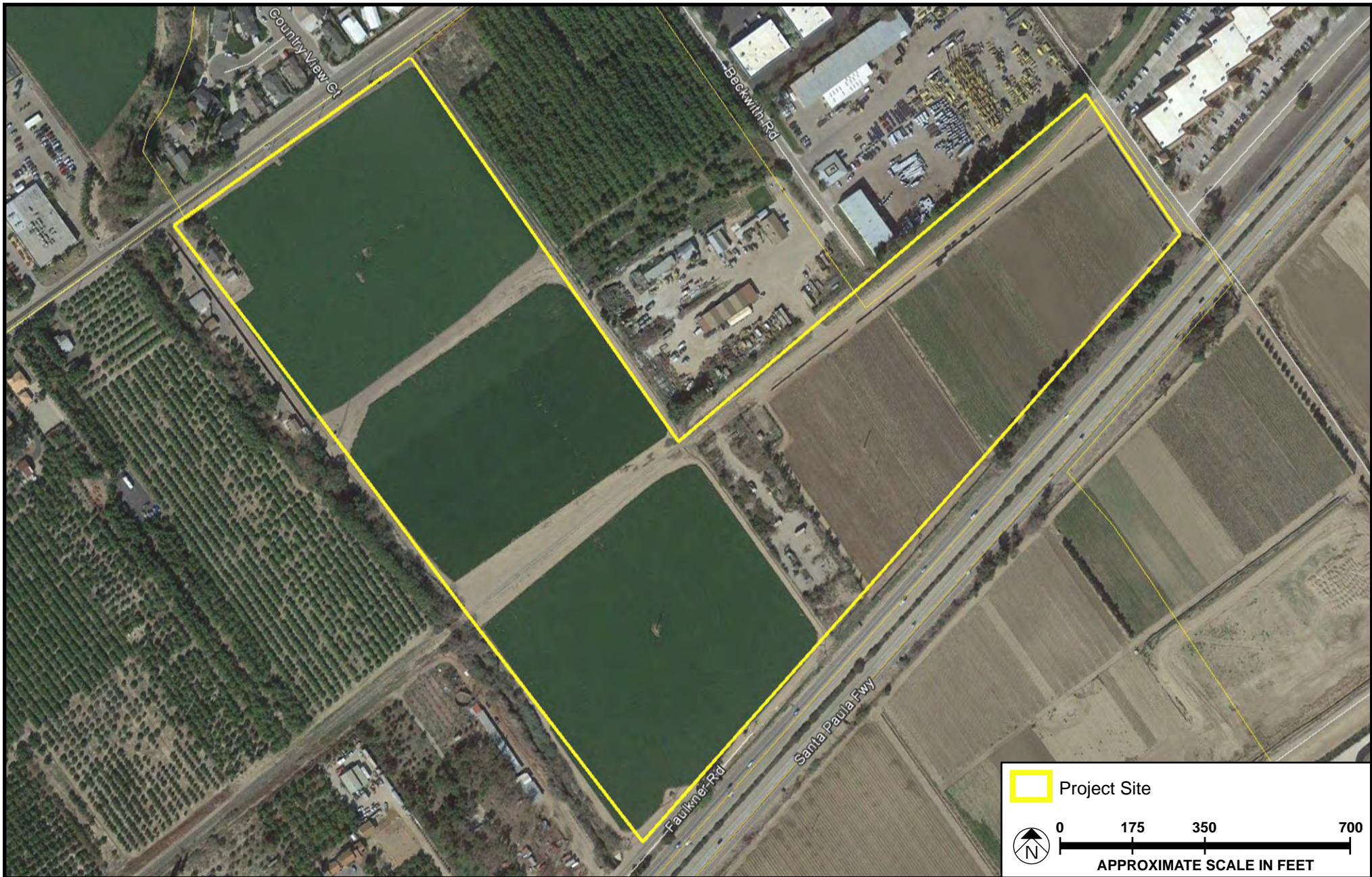
Agricultural Resources

Under this alternative, approximately 8 acres of Prime Farmland and 0.7 acres of Farmland of State wide importance, would remain as is. Additionally, the approximately 13 acres that make up the area that would not be developed would remain as Agricultural Exclusive. Under Alternative 2, there would be less of an impact to agricultural resources, but there would still be significant and unavoidable impacts.

Air Quality

As discussed in **Section 4.13, Transportation and Traffic**, the proposed Project would generate a net increase of approximately 5,546 average daily vehicle trips (ADTs). Under Alternative 2, approximately 4,160 daily trips would be generated. As with the proposed Project, emissions would be generated by area sources, energy sources, and mobile sources, with mobile sources generating the majority of the overall emissions. The overall development under Alternative 2 would generate operational emissions below the Ventura County Air Pollution Control District's (VCAPCD's) thresholds of significance, but construction emissions would remain above VCAPCD standards. Mitigation measures similar to those recommended for the proposed Project would be necessary to reduce construction impact which would remain significant.

Impacts associated with Air Quality Management Plan (AQMP) consistency, exposure of sensitive receptors to substantial pollutant concentrations, and objectionable odors under Alternative 2 would be fewer, and impacts would remain less than significant.



SOURCE: Google Earth 2016

FIGURE 5.0-1

Biological Resources

As portions of the Project area would remain in agricultural use with Alternative 2, potential impacts to biological resources would be reduced in comparison to the proposed Project, even though the Project area consists of disturbed and agricultural areas with limited amounts of seminatural habitat area. This alternative would still disturb Adams Barranca Mixed Willow Riparian, Agricultural Land, developed land, and black walnut trees in addition to potentially impacting the species as described in the proposed Project in **Section 4.4, Biological Resource**. Appropriate Mitigation Measures would reduce any impacts to biological resources similar to the proposed Project would result in similar, less than significant impacts.

Cultural Resources

This alternative would develop a smaller portion of the site with commercial and light industrial uses. This alternative would have a similar potential to uncover previously unknown archaeological resources and human remains. Compliance with the Mitigation Measures during the construction phase would ensure development would not result in significant impacts to potential cultural resources. Impacts would be similar to those of the proposed Project.

Geology and Soils

Construction under this alternative would include similar grading and excavation activities; however, they would be limited to a smaller portion of the site of just approximately 40 acres. Grading and excavation activities would be identical and would result in similar erosion and sedimentation impacts to those of the proposed Project. Any future development within the site would have to comply with the California Building Code (CBC) requirements for seismicity, liquefaction, subsidence, and expansive soils, similar to the proposed Project, which would mitigate potential significant impacts associated with the existing soils and geology conditions of the site. This alternative would be required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) including best management plans (BMPs) for erosion control on and off site, as well as mitigation measures of the proposed Project pertaining to erosion control plans. For this reason, the geology and soils impacts of this alternative would be similar to the proposed Project and less than significant.

Greenhouse Gas

The proposed Project would generate a net increase of approximately 5,546 ADT while 4,160 ADT could be generated under Alternative 2. As with the proposed Project, GHG emissions would be generated by area, energy, and mobile sources, waste disposal, and water and wastewater treatment and conveyance, with mobile sources generating the majority of the overall GHG emissions. All industrial land use projects that exceed 10,000 MTCO₂e per year are considered potentially significant under the South Coast Air Quality Management District (SCAQMD) screening threshold, which is recognized by the VCAPCD. The

estimated Project operational GHG emissions with project design features was estimated to be 6,674.83 MTCO₂e per year, which would not exceed the screening threshold. Given that Alternative 2 includes a 25 percent reduction in uses, this alternative would result 5,006 MTCO₂e per year, which would not exceed the screening threshold. In addition, as with the proposed Project, development under Alternative 2 is expected to be consistent with all feasible and applicable strategies and the recommended measures of ARB Scoping Plan to reduce greenhouse gas emissions in California. Neither this alternative nor the proposed Specific Plan would result in significant greenhouse gas impacts; however, impacts under this alternative would be slightly fewer.

Hazards and Hazardous Materials

While this alternative would result in a density reduction to approximately 40 acres, development would still occur; and impacts similar to those of the proposed Project, but at a reduced intensity, would occur. Construction of the Project would still require materials that could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. that could spill or release. Additionally, agricultural land containing residual pesticides, would still be disturbed. Mitigation measures pertaining to these issues would still be implemented and impacts would be similar to that of the proposed Project.

Hydrology and Water Quality

Alternative 2 would involve slightly less grading of the site with only approximately 40 acres instead of 53.81 acres. However, the grading would still temporarily increase the bare soil area during construction, which may increase soil erosion and sedimentation in stormwater runoff. In addition, construction could contribute other pollutants to stormwater drainage. Similar to the proposed Project, this alternative would be required to comply with the National Pollutant Discharge Elimination System (NPDES) and implement a SWPPP with BMPs in addition to supplying the Project with infiltration basins, thereby making impacts to runoff less than significant. Additionally, this alternative would need to comply with the Los Angeles Regional Water Quality Control Board approved requirements. Therefore, this alternative would have impacts similar to those of the proposed Project, and all impacts would be less than significant.

Land Use and Planning

Alternative 2 would develop and annex approximately 40 acres of the proposed Project site into the City of Santa Paula, and leave approximately 13 acres of agricultural land within the County of Ventura. As shown on **Figure 5.0-1**, this alternative would create an island belonging to the County of Ventura surrounded by the City of Santa Paula.

Some of the objectives and community benefits of the proposed Project would not occur and there would not be full development in the Specific Plan area. Municipal services and infrastructure would be

inconvenienced by supplying services to areas surrounding the approximately 13 acres that would not belong to the City. Approximately 8 acres of commercial/light industrial and 5 acres of light industrial, would not be developed. This alternative would not fully implement the General Plan land use policy to expand the City's urban limits into the West Area 2 Planning Area to provide a suitable site for a commercial and industrial within the City. Consequently, this alternative would have negative impacts with respect to land use and planning, while the proposed Project would have both positive and less than significant impacts.

This alternative, like the proposed Project, would not divide an established community and would have no effect on any habitat conservation plans.

Noise

Alternative 2 would include earthmoving activities during construction that would cause short-term impacts as would the proposed Project. However, those levels would be reduced in intensity and duration as only 40 acres would be built on the proposed Project Site. Implementation of various Mitigation Measures for construction under this alternative would reduce noise impacts to a level of less than significant. Operational activities of Alternative 2 would result in fewer weekday and weekend trips to the proposed Project site when compared to the proposed Project. Impacts would be similar and less than significant.

Public Services

Without annexing approximately 13 acres to the City of Santa Paula, the City's municipal services needs would slightly decrease. However, there would still be a demand for the City's police, fire, and other City resources. Because there is no residential development involved, public schools and parks would not be impacted under this alternative. Similar to the proposed Project, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection and police services. There would be similar, less than significant impacts under Alternative 2 as the proposed Project.

Transportation and Traffic

The proposed Project, with improvements, would result in less than significant impacts at all study intersections apart from two; 10th Street and Harvard Boulevard and Peck Road and Harvard Boulevard/Telegraph Road/Main Street, which would be significant and unavoidable during future conditions even without the Project. However, 10th Street and Harvard Boulevard would cause a significant and unavoidable impact with existing conditions plus Project. The traffic engineers at Fehr and Peers, ran the traffic model for the 10th Street and Harvard Boulevard with a 25 percent reduction. As

shown in **Table 5.0-1, Existing plus Project with Mitigation 25 Percent Reduction Comparison**, under this alternative, there is a somewhat less but still significant impact during the PM peak hour.

**Table 5.0-1
Existing plus Project with Mitigation 25 Percent Reduction Comparison**

Intersection	Peak Hour	Existing		Existing plus Project				With Mitigation			
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Signif. Impact?	V/C or Delay	LOS	Change	Signif. Impact?
<i>March 2015 Analysis</i>											
10th Street & Harvard Boulevard	AM	0.752	C	0.797	C	0.045	No	0.797	C	0.045	No
	PM	0.764	C	0.815	D	0.051	Yes	0.815	D	0.051	Yes
<i>25% Reduction</i>											
10th Street & Harvard Boulevard	AM	0.752	C	0.786	C	0.034	No	0.786	C	0.034	No
	PM	0.764	C	0.803	D	0.039	Yes	0.803	D	0.039	Yes

Notes: Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

Utilities and Service Systems

Existing water use would continue under Alternative 2, averaging an approximately 25 percent of 281 afy or 70.25 afy from an irrigation well. As discussed in **Section 4.9, Hydrology and Water Quality**, the Santa Paula Groundwater Basin is the primary source of water for the City and the adjoining County parcels. The Basin is an adjudicated basin and the existing extractions from the Basin would remain within each water user’s allocated amount. Water demands for the Project would be 75 percent of the proposed Project estimate of 39.8 afy or 29.8 afy at full build-out. Total water demands for the area would be 100.05 afy which is greater than the proposed Project of 39.8 afy. As such, water demand impacts would be more within both the City’s and the County’s jurisdiction when compared to the proposed Project and impacts would be greater.

Currently, septic systems are being used to store wastewater from the residences. The amount of wastewater generated by existing uses would increase and a new off-site mainline would need to be completed prior to implementation of the Specific Plan. The increase in wastewater projected from development in the Specific Plan Project Area, is identified and addressed in the City’s Wastewater Master Plan. The City’s WRF would be able to accommodate wastewater generated by the proposed Project. This alternative would still require new pipelines to be built but on a smaller scale; however, any impacts from the proposed Project would be mitigated. Neither this alternative nor the proposed Project would result in significant impacts; however, this alternative would have fewer impacts.

Solid waste would be increased by the proposed Project; however, under this alternative, there would be slightly less solid waste. For both the Project and this alternative, any impacts would be mitigated to less than significant. Neither would result in significant impacts; however, impacts would be fewer with Alternative 2.

Stormwater runoff would increase with development of the Specific Plan area; however, it would be slightly less with this alternative. Detention basins would be used to reduce peak runoffs downstream. While there would be no significant impacts with the proposed Project or alternative, Alternative 2 would have less of an impact.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the Project alternatives is provided in **Table 5.0-3** at the end of this section.

The 25 Percent Reduction Alternative would result in reduced impacts where compared to the proposed Project. Land use is considered to be greater as it would create an unincorporated island and the general plan would not be fully implemented.

This alternative would meet the basic objectives defined by the City of Santa Paula for the proposed Project.

Alternative 3: 50 Percent Reduction

Description of Alternative

Alternative 3 assumes that there would be a 50 percent reduction in the 53.81 acres that makes up the proposed Project. This assumes that 50 percent, or approximately 26.90 acres of the Project would be built with the Specific Plan, and 50 percent, or approximately 26.90 acres would remain under the jurisdiction of the County of Ventura with land use subject to the County's General Plan and zoning, and agricultural operations would still continue.

As shown in **Figure 5.0-2, Alternative 3 Conceptual Project Area**, it is assumed that the southern portion of the site along SR 126, would remain under agricultural operations and the remainder of the Specific Plan area would continue with development as proposed. Currently there are agricultural operations to the south, of SR 126 to the west and northwest of the proposed Project site, residential is to the north and northeast, and commercial/light industrial uses to the east.

Analysis of Alternative

Aesthetics

Under this alternative, the site would exclude approximately 27 acres from development, which would result in a smaller footprint than the full build-out of the proposed Project. Additionally, the area would be further from SR 126 and less likely to be visible from the road. Alternative 3 would change the visual nature of the site, as would the proposed Project, but the aesthetic changes would be of less intensity. Additionally, the significant and unavoidable impacts from the proposed Project during construction would also be less because the alternative would be set further back from SR 126.

Agricultural Resources

Under this alternative, approximately 20 acres of Prime Farmland would remain as is. Additionally, the approximately 27 acres that make up the area that would not be developed would remain as Agricultural Exclusive. Under Alternative 3, there would be less of an impact to agricultural resources, but there would still be significant and unavoidable impacts.

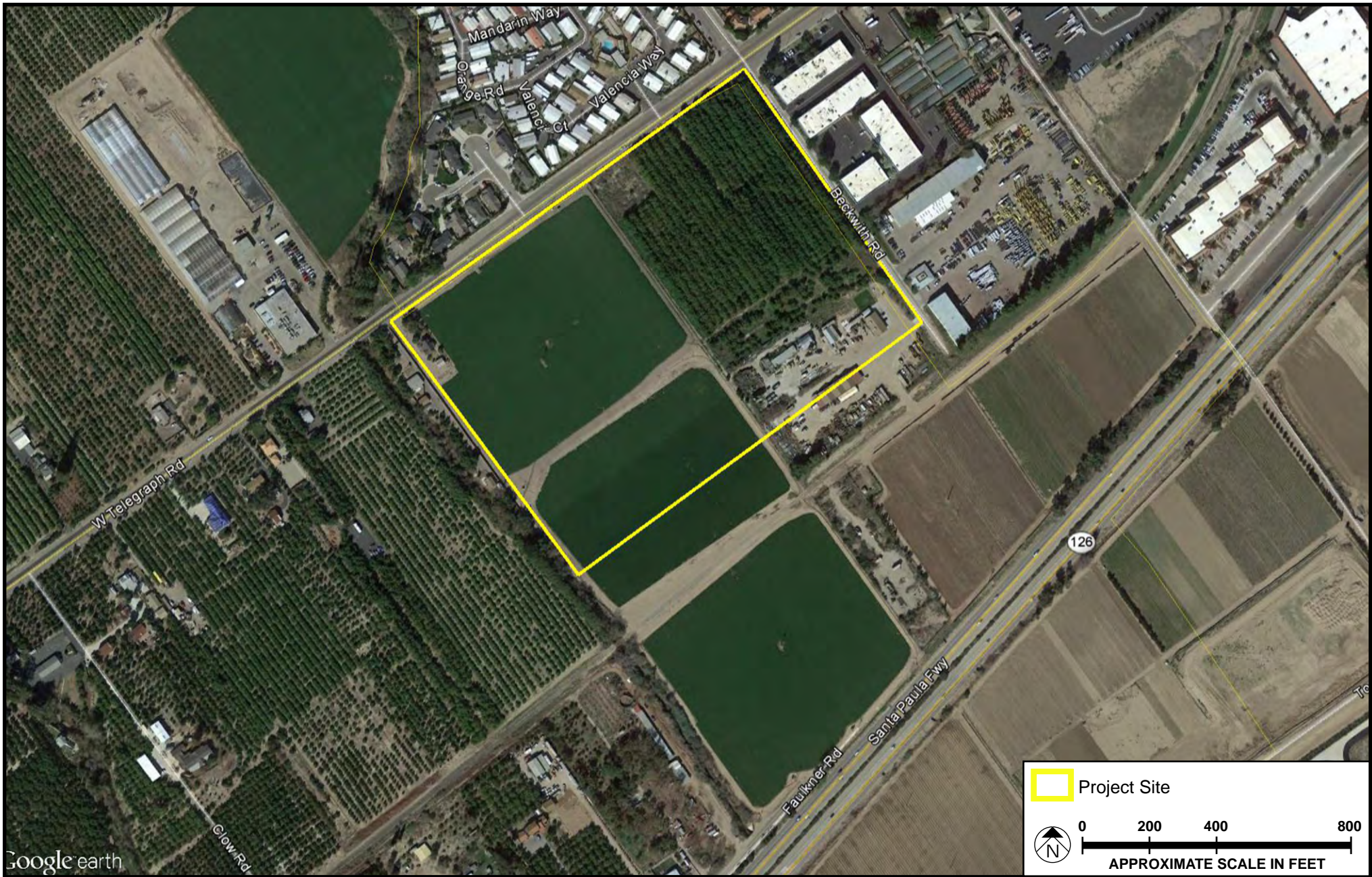
Air Quality

As discussed in **Section 4.13, Transportation and Traffic**, the proposed Project would generate a net increase of approximately 5,546 daily trips. Under Alternative 3, approximately 2,773 daily trips would be generated. As with the proposed Project, emissions would be generated by area sources, energy sources, and mobile sources, with mobile sources generating the majority of the overall emissions. The overall development under Alternative 3 would generate operational emissions below the VCAPCD's thresholds of significance, but daily construction emissions would remain above VCAPCD standards. Mitigation measures similar to those recommended for the proposed Project would be necessary to reduce construction impact which would remain significant.

Impacts associated with AQMP consistency, exposure of sensitive receptors to substantial pollutant concentrations, and objectionable odors under Alternative 3 would be fewer; and impacts would remain less than significant.

Biological Resources

Because portions of the Project area would remain in agricultural use with Alternative 3, potential impacts to biological resources would be reduced in comparison to the proposed Project, even though the Project area consists of disturbed and agricultural areas with limited amounts of seminatural habitat area. This alternative would still disturb Adams Barranca Mixed Willow Riparian, Agricultural Land, Agricultural Avocado Orchards, and developed land, in addition to potentially impacting the species as described in **Section 4.4, Biological Resource**. However, under this alternative, none of the black walnut trees would



Google Earth

SOURCE: Google Earth 2016

FIGURE 5.0-1

be removed or disturbed. Appropriate Mitigation Measures would reduce any impacts to biological resources similar to the proposed Project, and impacts would be less than significant; however, there would be fewer impacts under this alternative.

Cultural Resources

This alternative would develop a smaller portion of the site with commercial and light industrial uses. Alternative 3 would have a similar potential to uncover previously unknown archaeological resources and human remains. Compliance with the Mitigation Measures during the construction phase would ensure development would not result in significant impacts to potential cultural resources. Impacts would be similar to those of the proposed Project.

Geology and Soils

Construction under this alternative would include similar grading and excavation activities; however, they would be limited to a smaller portion of the site of just approximately 27 acres. Grading and excavation activities would be identical and would result in similar erosion and sedimentation impacts to those of the proposed Project. Any future development within the site would have to comply with the CBC requirements for seismicity, liquefaction, subsidence, and expansive soils, similar to the proposed Project, which would mitigate potential significant impacts associated with the existing soils and geology conditions of the site. This alternative would be required to develop and implement a SWPPP, including BMPs for erosion control on and off site, as well as the mitigation measures of the proposed Project pertaining to erosion control plans. For this reason, the geology and soils impacts of Alternative 3 would be similar those for to the proposed Project and less than significant.

Greenhouse Gas

The proposed Project would generate a net increase of approximately 5,546 ADT while 2,773 ADT could be generated under Alternative 3. As with the proposed Project, GHG emissions would be generated by area, energy, and mobile sources, waste disposal, and water and wastewater treatment and conveyance, with mobile sources generating the majority of the overall GHG emissions. All industrial land use projects that exceed 10,000 MTCO_{2e} per year are considered potentially significant under the SCAQMD screening threshold, which is recognized by the VCAPCD. The estimated Project operational GHG emissions with project design features was estimated to be 6,674.83 MTCO_{2e} per year, which would not exceed the screening threshold. Because Alternative 3 includes a 50 percent reduction in uses, this alternative would result 3,337.4 MTCO_{2e} per year, which would not exceed the screening threshold. In addition, as with the proposed Project, development under Alternative 3 is expected to be consistent with all feasible and applicable strategies and the recommended measures of ARB Scoping Plan to reduce greenhouse gas

emissions in California. Neither this alternative nor the proposed Specific Plan would result in significant greenhouse gas impacts; however, impacts under this alternative would be slightly fewer.

Hazards and Hazardous Materials

While this alternative would result in a density reduction to approximately 27 acres, development would still occur; and impacts similar to those of the proposed Project, but at a reduced intensity, would occur. Construction of the Project would still require materials that could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. that could spill or release. Additionally, agricultural land containing residual pesticides, would still be disturbed. Mitigation measures pertaining to these issues would still be implemented and impacts would be similar to that of the proposed Project.

Hydrology and Water Quality

Alternative 3 would involve 50 percent less grading of the site with only approximately 27 acres instead of 53.81 acres. However, the grading would still temporarily increase the bare soil area during construction, which may increase soil erosion and sedimentation in stormwater runoff. In addition, construction could contribute other pollutants to stormwater drainage. Similar to the proposed Project, this alternative would be required to comply with NPDES and implement a SWPPP with BMPs in addition to supplying the Project with infiltration basins, thereby making impacts to runoff less than significant. Additionally, this alternative would need to comply with the Los Angeles Regional Water Quality Control Board approved requirements. Therefore, Alternative 3 would have impacts similar to those of the proposed Project, and all impacts would be less than significant.

Land Use and Planning

Alternative 3 would develop and annex approximately 27 acres of the proposed Project site into the City of Santa Paula, and leave approximately 27 acres of agricultural land within the County of Ventura. As shown on **Figure 5.0-2**, this alternative would extend the City of Santa Paula boundary, and leave a strip of agricultural land south of the developed area in the County of Ventura.

Some of the objectives and community benefits of the proposed Project would not occur and there would not be full development in the Specific Plan area. Municipal services and infrastructure would still need to supply services to the area but on a smaller scale. Approximately 2 acres of open space, 5 acres of light industrial, 17 acres of commercial/light industrial, would no longer be developed. Additionally, the approximate 3 acres of railroad would no longer be included within the boundary of the Project area. Alternative 3 would not fully implement the General Plan land use policy to expand the City's urban limits into the West Area 2 Planning Area to provide a suitable site for a commercial and industrial within the

City. Consequently, this alternative would have negative impacts with respect to land use and planning, while the proposed Project would have both positive and less than significant impacts.

This alternative, like the proposed Project, would not divide an established community and would have no effect on any habitat conservation plans.

Noise

Alternative 3 would include earthmoving activities during construction that would cause short-term impacts as would the proposed Project. However, those levels would be reduced in intensity and duration as only 27 acres would be developed. Implementation of various Mitigation Measures for construction under this alternative would reduce noise impacts to a level of less than significant. Operational activities of this alternative would result in one less impact from traffic when compared to the proposed Project. Impacts to noise would be slightly fewer under this alternative, and impacts would be less than significant.

Public Services

Without annexing approximately 27 acres to the City of Santa Paula, the City's municipal services needs would slightly decrease. However, there would still be a demand for the City's police, fire, and other City resources. Because there is no residential development involved, public schools and parks would not be impacted under this alternative. Similar to the proposed Project, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection and police services. There would be similar, less than significant impacts under Alternative 3 as the proposed Project.

Transportation and Traffic

The proposed Project, with improvements, would result in less than significant impacts at all study intersections apart from two: 10th Street and Harvard Boulevard, and Peck Road and Harvard Boulevard/Telegraph Road/Main Street. These impacts would be significant and unavoidable during future conditions even without the Project. However, 10th Street and Harvard Boulevard would cause a significant and unavoidable impact with existing conditions plus Project. The traffic engineers at Fehr and Peers ran the traffic model for the 10th Street and Harvard Boulevard with a 50 percent reduction. As shown in **Table 5.0-2, Existing plus Project with Mitigation 50 Percent Reduction Comparison**, this intersection would no longer be considered a significant impact under Alternative 3, and impacts would be fewer.

**Table 5.0-2
Existing plus Project with Mitigation 50 Percent Reduction Comparison**

Intersection	Peak Hour	Existing		Existing Plus Project			Signif. Impact?	With Mitigation			Signif. Impact?
		V/C or Delay	LOS	V/C or Delay	LOS	Change		V/C or Delay	LOS	Change	
<i>March 2015 Analysis</i>											
10th Street & Harvard Boulevard	AM	0.752	C	0.797	C	0.045	No	0.797	C	0.045	No
	PM	0.764	C	0.815	D	0.051	Yes	0.815	D	0.051	Yes
<i>50% Reduction</i>											
10th Street & Harvard Boulevard	AM	0.752	C	0.775	C	0.023	No	N/A	N/A	N/A	N/A
	PM	0.764	C	0.791	C	0.027	No	N/A	N/A	N/A	N/A

Notes: Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

Utilities and Service Systems

Existing water use would continue under Alternative 3, averaging approximately 50 percent of 281 afy, or 140.5 afy, from an irrigation well. As discussed in **Section 4.9, Hydrology and Water Quality**, the Santa Paula Groundwater Basin is the primary source of water for the City and the adjoining County parcels. The Basin is an adjudicated basin, and the existing extractions from the Basin would remain within each water user’s allocated amount. Water demands would be 50 percent of the proposed Project estimate of 39.8 afy, or 19.9 afy, at full build-out. Total water demands for the area would be 160.4 afy, which is greater than the proposed Project demand of 39.8 afy. As such, water-demand impacts would be more within both the City’s and the County’s jurisdictions when compared to the proposed Project, and impacts would be greater.

Currently, septic systems are being used to store wastewater from the residences. The amount of wastewater generated by existing uses would increase and a new off-site mainline would need to be completed prior to implementation of the Specific Plan. The increase in wastewater projected from development in the Specific Plan Project Area, is identified and addressed in the City’s Wastewater Master Plan. The City’s WRF would be able to accommodate wastewater generated by the proposed Project. This alternative would still require new pipelines to be built but on a smaller scale; however, any impacts from the proposed Project would be mitigated. Neither this alternative nor the proposed Project would result in significant impacts; however, this alternative would have fewer impacts.

Solid waste would be increased by the proposed Project; however, under this alternative, there would be slightly less solid waste. For both the Project and this alternative, any impacts would be mitigated to less

than significant. Neither would result in significant impacts; however, impacts would be fewer with Alternative 3.

Stormwater runoff would increase with development of the Specific Plan area; however, it would be slightly less with this alternative. Detention basins would be used to reduce peak runoffs downstream. While there would be no significant impacts with the proposed Project or alternative, the alternative would have less of an impact.

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the Project alternatives is provided in **Table 5.0-3** at the end of this section.

The 50 Percent Reduction Alternative would result in reduced impacts where compared to the proposed Project, and avoid would the significant and unavoidable impact of the proposed Project on transportation and traffic at one intersection. Land use is considered to be greater because the general plan would not be fully implemented.

This alternative would meet the basic objectives defined by the City of Santa Paula for the proposed Project.

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The findings of the alternatives analysis discussed above are summarized in **Table 5.0-3**.

The *CEQA Guidelines* require that an environmentally superior alternative be identified among the selected alternatives.⁷ If the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives.

Alternative 1, the No Project Alternative, would have the fewest impacts and would not result in any significant impacts and is the environmentally superior alternative. However, the No Project Alternative would not meet the objectives of the proposed Project. As noted above, if the No Project Alternative is determined to be environmentally superior, the *CEQA Guidelines* require an environmentally superior alternative must also be identified among the remaining alternatives.

⁷ California Code of Regulations, tit. 14, sec. 15126.6(e)(2).

The environmentally superior alternative among the remaining alternatives would be the Alternative 3, the 50 Percent Reduction Alternative. This alternative would avoid the significant and unavoidable environmental impact identified under traffic for the proposed Project.

However, this alternative would not eliminate the significant and unavoidable impacts for aesthetics, agricultural resources, and air quality during construction, and would not be consistent with applicable land use policies and would not achieve the basic objectives of the Project as defined by the City of Santa Paula. Additionally, water usage would be greater by approximately 120.6 afy when compared to the build-out of the proposed Project.

**Table 5.0-3
Comparison of Alternatives to the Proposed Project**

Environmental Topic	Proposed Project Impacts with Mitigation	Alternative 1 No Project Alternative	Alternative 2 No Project Existing Plans & Policies	Alternative 3 East Gateway Specific Plan & High Density Residential
Aesthetics	Construction and Operation: Significant and unavoidable	Less	Similar	Less
Agricultural Resources	Significant and unavoidable	Less	Less	Less
Air Quality	Construction: Significant and unavoidable Operation: Less than significant	Less	Less	Less
Biological Resources	Less than significant	Less	Similar	Less
Cultural Resources	Less than significant	Less	Similar	Similar
Geology/Soils	Less than significant	Less	Similar	Similar
Greenhouse Gas	Less than significant	Less	Less	Less
Hazards/Hazardous Waste	Less than significant	Less	Similar	Similar
Hydrology/Water Quality	Less than significant	Less	Similar	Similar
Land Use/Planning	Less than significant	Greater	Greater	Greater
Noise	Less than significant	Less	Similar	Less
Public Services	Less than significant	Less	Similar	Similar
Transportation/Traffic	Project Impacts: Significant and unavoidable at one intersection Cumulative Impact: Significant and unavoidable at two intersections	Less	Less	Less

Environmental Topic	Proposed Project Impacts with Mitigation	Alternative 1 No Project Alternative	Alternative 2 No Project Existing Plans & Policies	Alternative 3 East Gateway Specific Plan & High Density Residential
Utilities/Services Systems				
Water	Less than significant	Greater	Greater	Greater
Wastewater	Less than significant	Less	Less	Less
Solid Waste	Less than significant	Less	Less	Less
Stormwater	Less than Significant	Less	Less	Less

6.0 EFFECTS NOT FOUND TO BE SIGNIFICANT

Section 15128 of the State CEQA Guidelines requires a brief description of any possible significant effects that were determined not to be significant and were not analyzed in detail within the environmental analysis. Therefore, this Section has been included in the EIR as required by CEQA. The discussion below presents the analysis of the effects related to mineral resources, population and housing, and recreation not found to be significant. Any items not addressed in this Section were addressed in **Section 4.0, Environmental Impact Analysis**, of the Draft EIR.

6.1 MINERAL RESOURCES

Threshold: **Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

The City of Santa Paula is considered to contain significant mineral aggregate resources (sand and gravel), especially along the Santa Paula Creek and Santa Clara River.¹ Most these sand and gravel aggregate resources are used in highways, bridges, parking lots, and concrete buildings. one non-habitNo significant impacts would occur.

Threshold: **Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

While the Project Site and adjacent uses to the west and south are currently under agricultural uses, the Project Site is located within an area characterized by features typical of the urban landscape. Land uses to north are single-family residential uses, and land uses to the east are commercial and light industrial uses.² According to the County of Ventura General Plan, the Project Site is designated within a Mineral Resource Zone (MRZ)-1 and an MRZ-4. MRZ-1 is defined as an area where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. An MRZ-4 is defined as an area where available information is inadequate for assignment to any other MRZ. Therefore, implementation of the Project would not result in the loss of locally important mineral resource recovery sites. No significant impacts would occur.

1 City of Santa Paula, *General Plan*, "Conservation and Open Space Element" (1998).

2 City of Santa Paula, *General Plan*, "Land Use Element" (1998).

6.2 POPULATION AND HOUSING

Threshold: Induce substantial population growth in an area, either directly or indirectly?

The proposed Project would implement the Santa Paula West Business Park Specific Plan (“Specific Plan”), which consists of the development of a mix of light manufacturing, research and development, professional office, and commercial uses within the City. Because the Project would not be developing any additional residential uses to the City, it would not contribute to a direct population increase. The Project would have the potential to increase the population of the City and surrounding areas as a result of the increased employment from the Project. However, given that the Project would remove existing agricultural uses from the Project Site, any increase in employment from the Project would be offset by a corresponding decrease in employment from these existing uses.

It is also anticipated that local residents would comprise a majority of the additional employment opportunities provided from the Project. According to the 2016 Adopted Growth Forecast of the Southern California Association of Governments (SCAG), there were approximately 7,800 jobs in 2012. SCAG anticipates that the City will have an estimated employment of 11,700 in 2040, a total increase of 3,900 jobs from 2012.³ Project employment increase would be approximately 1,510 employees⁴ and would not result in SCAG employment projections for the City being exceeded. Furthermore, the build-out of the Project would develop as market conditions allow; thus, the increase of employment as a result of the Project would occur throughout several years. Because the proposed Project would not substantially induce additional population into the area, no significant impacts would occur.

Threshold: Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

The Project Site is designated by the City’s General Plan for commercial and light industrial uses. There is currently one nonhabitable (due to a recent fire) farmworker dwelling unit on the Project Site. While implementation of the Project would displace the existing housing on the Project Site, this displacement would not be substantial. According to the Department of Finance, as of January 2015, there was an estimated 4.2 percent vacancy rate of housing in Santa Paula.⁵ Therefore, sufficient housing is available

3 Southern California Association of Governments, 2016–2040 *Regional Transportation Plan/Sustainable Communities Strategy* (adopted April 2016), Appendix: Demographics and Growth Forecast, 29, http://scagrtpscscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf.

4 US Green Building Council, Building Area per Employee by Business Type (May 13, 2008), <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>, accessed August 24, 2016.

5 California Department of Finance, Demographic Research Unit, “Table 2: E-5 City/County Population and Housing Estimates, 1/1/2016,” http://vcrma.org/pdf/demographics/2016_DOE.pdf.

in the City, and the Project would not displace existing housing or require the construction of replacement housing. There would be no significant impacts.

Threshold: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As previously mentioned, the Project Site is designated by the City for commercial and light industrial uses, and the Project would implement a business park. There are currently two farmworker dwelling units on the Project Site. While the Project would involve the removal of these two units, and subsequently the displacement of people, this displacement would not be substantial.

Because there would be no displacement of people as a result of the Project, the construction of replacement housing would not be required. No significant impacts would occur.

6.3 RECREATION

Threshold: Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed Project would develop a mix of light manufacturing, research and development, professional office, and commercial uses. Given that the Project does not involve the implementation of residential uses, there would not be an increased demand for local or regional parks or other recreational facilities in the area. The Project would conform with the City's designated commercial and light industrial uses, which do not include any operational connection to local or regional parks. Therefore, impacts are not considered significant.

Threshold: Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

While the Project would incorporate open space and passive uses on site, it would not involve the development of recreational facilities. In addition, the Project would not require the construction or expansion of recreational facilities because a population increase is not anticipated to result from the Project. No significant impacts would occur.

7.0 GROWTH-INDUCING IMPACTS

7.1 DEFINITION OF GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) describe the potential growth-inducing impacts of a proposed project. Specifically, Section 15126.2(d) states that a project may foster economic or population growth, or additional housing, either directly or indirectly, in a geographical area if it meets any one of the following criteria below:¹

- Removal of an impediment to growth (e.g., the establishment of an essential public service or the provision of new access to an area).
- Urbanization of land in a remote location (e.g., leapfrog development).
- Economic expansion or growth occurring in an area in response to a project (e.g., changes in revenue base, employment expansion, etc.).
- Establishment of a precedent-setting action (e.g., a change in zoning or general plan designation).

CEQA does not consider growth inducement to be necessarily detrimental, beneficial, or of significance to the environment. Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies. Significant growth impacts could also be manifested through the provision of infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies.

7.2 GROWTH-INDUCING IMPACTS RELATED TO THE PROJECT

Removal of Impediments to Growth

Growth in an area may result from the removal of physical impediments or restrictions to growth, as well as the removal of planning impediments resulting from land use plans and policies. In this context, physical growth impediments may include nonexistent or inadequate access to an area or the lack of essential public services (e.g., sewer or water service), while planning impediments may include restrictive zoning and general plan designations.

1 California Public Resources Code, Title 14, Division 6, Chapter 3, *California Environmental Quality Act Guidelines*, Section 15126(d).

The on- or off-site service systems are not sized to support urban land use intensities envisioned by the City's General Plan for the Santa Paula West Business Park Specific Plan. Implementation of the Project would introduce substantial amounts of urban development, such as 774,227 square feet of various commercial and light industrial uses. There are no proposed residential uses, thus there would be no direct population introduction to the Project Site. Furthermore, the Project would also generate employment opportunities for existing and future City residents. This increase of development and population on the Project Site would result in a change in uses on an area that is almost exclusively agricultural in nature and use.

Urban development and intensity allowed by the Specific Plan ("Specific Plan") would require constructing on-site urban infrastructure such as access driveways, domestic and recycled water pipelines, sewer pipelines, and related utilities. Future development under the Specific Plan would also include off-site improvements for access, such as the Beckwith Road widening, the Faulkner Road extension, a sewer main connection and lift station, and storm drains (conveyance and detention/debris basins). In addition, as a result of the increase of development and employees and visitors on site, there would be an increase of demand on the City's public services (fire and police protection).

The Project will occur on land designated for development, and the City has planned for utilities and public services to meet the long-term demand of the Project once implemented. Existing City water and sewer main pipelines located within Telegraph Road would provide readily available points of connection to the Project. In addition, City water and sewer main pipelines also exist within Faulkner Road immediately east of the Specific Plan boundary and would provide direct points for connection to serve future development in the Specific Plan area. No increased capacity would be needed for the existing main lines; the improvements needed to make the connections would involve minimal construction within existing road rights-of-way. The Project would include a general plan amendment and is consistent with projected local and regional growth in the area. The Project will not encourage and facilitate growth within areas immediately adjacent to the Project Site. Lands to the north consist of single-family residential uses, and lands to the east are of similar commercial/light industrial uses as the proposed Project. The agricultural lands south of the Project Site are currently designated by the City's General Plan for commercial/light industrial uses, similar to the Project. Lastly, the land west of the Project Site will remain undeveloped and is governed by Save Open Space and Agricultural Resources (SOAR), Santa Paula City Urban Restriction (CURB) Initiative, and the Santa Paula-San Buenaventura Greenbelt Agreement.

Economic Growth

City of Santa Paula

As discussed in **Section 6.0, Effects Not Found to Be Significant**, according to the 2016 Adopted Growth Forecast of the Southern California Association of Governments (SCAG), there were approximately 7,800 jobs in 2012. SCAG anticipates that the City will have an estimated employment of 11,700 in 2040, a total increase of 3,900 jobs from 2012. Project employment increase would be approximately 1,510 employees.² It is anticipated that local residents would comprise a majority of the additional employment opportunities provided from the Project.

County of Ventura

According to SCAG, in 2015 there were approximately 363,000 total jobs within the County of Ventura. The amount of jobs is anticipated to be 419,808 in 2040, which represents a projected increase of 15.6 percent between 2015 and 2040.

Temporary short-term construction jobs would be created during the implementation of the Project, which will be developed as market conditions allow. While the exact amount of construction jobs cannot be estimated, the number and type of jobs will fluctuate over time depending on the type and size of future development projects under construction on the Project Site.

Urbanization of Land in a Remote Area

Development can be considered growth inducing when it is not contiguous to existing urban development and intervening open space areas occur between developments. The Project is located within the City of Santa Paula. The General Plan designation for the Project Site is West Area 2 Expansion Area, designating it as SP-6 (Specific Plan Area 6) in Chapter 16.25 of the Santa Paula Municipal Code (SPMC). The SP-6 zone would fall under the C-LI land use designation and would comply with the development standards established in Chapter 16.21 of the SPMC.

The Project Site is located within the CURB. Property located within the CURB may be developed in accordance with the General Plan and the SPMC. Furthermore, the Project Site is located directly adjacent to existing urban development within the City, including residential, commercial, and light industrial uses. There is an existing network of roadways immediately adjacent to the Project Site that will allow for direct connections to the existing City circulation network and regional roadways (e.g. SR 126). Furthermore,

2 US Green Building Council, Building Area Per Employee by Business Type (May 13, 2008), <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>. Accessed August 24, 2016.

utility infrastructure is also adjacent to the Project Site, which will allow direct connections to water supply, sewer systems, electricity, etc. Stormwater control facilities are also provided in the area. Therefore, the Project is consistent with applicable planning policies and does not involve the urbanization of land in a remote area that would induce growth in surrounding areas.

Economic Expansion

The Land Use Element identifies the City's economic health and well-being as a central goal of the General Plan.³ A major reason the City updated the Santa Paula General Plan in 1998 was to address issues affecting the City's economic health and to provide land for development. The General Plan provides for diverse businesses to provide goods and services to residents and other businesses so that commercial needs do not have to be met outside the City. The General Plan notes that the land use supply, combined with other strategies, can assist in addressing the lack of vacant/developable land, provision of land use designations of a size, and location that can assist in attracting job-generating development and commercial uses.⁴ New uses would also lead to reassessed property valuations, in providing increased property tax revenue.

Temporary short-term construction jobs would be created during the implementation of development allowed under the Specific Plan. Given that construction requires specialized trade skills, the number and type of jobs would fluctuate over time depending on the type and size of future development projects under construction throughout the Project Site.

The Specific Plan is expected to result in the generation of industrial, warehouse, and manufacturing jobs.⁵ Currently, there is a lack of nonagricultural and private commercial jobs in the City. Nearly one-third of the employment workforce work for the City of Santa Paula, and more than 7,000 residents commute to jobs located outside the City.⁶ Providing these jobs will create more employment opportunities for City residents and would be anticipated to result in economic expansion.

In addition to the direct on-site jobs generated by the Project, new employees in the Specific Plan area would also be expected to generate additional employment due to household and employee expenditures for goods and services in the City and larger region. However, at this time, it would be speculative to estimate the number and type of employees that might be supported by this additional spending.

3 City of Santa Paula, *General Plan, "Land Use Element"* (1998).

4 City of Santa Paula, *General Plan, "Land Use Element"* (1998).

5 Stanley R. Hoffman Associates, Inc., *East Area Fiscal Analysis, City of Santa Paula* (November 2013).

6 City of Santa Paula, *General Plan, "Land Use Element"* (1998).

Finally, new spending and employment generated by the Project would produce secondary or multiplier effects as businesses benefitting from direct expenditures purchase goods and services in the City and large region to support their business activity. Again, at this time, it would be speculative to estimate the number and type of employees that might be supported by this additional spending.

Overall, the Project would result in economic expansion within the City of Santa Paula that has been planned for in the Santa Paula General Plan and that would be supportive of the City's economic development goals. These effects would result in additional jobs and contribute to both local and regional economic activity. The economic expansion that would result from this proposed Project would not induce unanticipated growth outside the City of Santa Paula. Impacts associated with economic growth would be beneficial.

8.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

According to the California Environmental Quality Act (CEQA) Guidelines Section 15126.2(c), “[u]ses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse hereafter unlikely.”¹ Primary impacts and, particularly, secondary impacts generally commit future generations to similar uses. In addition, irreversible commitments of resources should be evaluated to ensure that such current consumption is justified. Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of Project implementation that cannot be avoided.

Primary impacts will result from the consumption of nonrenewable resources during construction and operation of the Santa Paula West Business Park Specific Plan (“Specific Plan”). Nonrenewable resources such as sand, gravel, and steel and renewable resources such as lumber will be consumed during project construction. Energy, fossil fuels, oils, and natural gas will be irreversibly committed during construction. These same resources are used for vehicles and for heating and cooling equipment during operations. The continued use of these resources associated with Project operations represents a long-term obligation. The energy consumed in developing and maintaining the Project Site for urban use may be considered a permanent investment.

Construction of the Project would consume limited amounts of certain types of lumber; raw materials in steel; metals such as copper and lead; aggregate materials used in concrete and asphalt, such as sand and stone; water; petrochemical construction materials such as plastic; and other similar slowly renewable or nonrenewable resources. Additionally, fossil fuels for construction vehicles and equipment would be consumed. In terms of Project operations, the following slowly renewable and nonrenewable resources would be required: natural gas and electricity, petroleum-based fuels, fossil fuels, and water. The consumption of such resources would represent a long-term commitment of those resources.

The commitment of resources required for the construction and operation of the Project would limit the availability of such resources for future generations or for other uses during the life of the Project. However, continued use of such resources is consistent with anticipated growth in the City of Santa Paula.

A total of approximately 50 acres of the 54-acre Project Site would be developed to accommodate light industrial and commercial uses under the proposed Specific Plan. The remaining 4 acres would be allotted for open space and passive uses on the Project Site. Therefore, the Project will result in the conversion of approximately 49 acres (combined) of prime and farmland of statewide importance, as identified on the

¹ California Public Resources Code, tit. 14, div. 6, ch. 3, California Environmental Quality Act Guidelines, sec. 15126(c).

California Department of Conservation Farmland Mapping and Monitoring Program, Important Farmland Map for Ventura County, to nonagricultural uses.² While the Project would result in the removal of agricultural lands for urbanized uses, it would dedicate 3.65 acres of various greenways and open space along the Adams Barranca, which is adjacent to the western boundary of the Project Site.

The Project Site is not located within an area identified for mineral extraction, currently undergoing mineral extraction, or within a petroleum resource area that would be adversely affected by future development under the proposed Santa Paula West Business Park (refer to **Section 6.0, Effects Not Found to Be Significant**).

Water, wastewater, and solid waste resources would also be irreversibly committed during construction of various future development projects of the Project Site. Once constructed, ongoing maintenance and operation of future structures built on the Project Site would result in further commitment of water, wastewater, and solid waste resources. These commitments represent long-term obligations that would accompany future development activities (refer to **Section 4.14, Utilities and Service Systems**).

The proposed Santa Paula West Business Park will allow for the development of a variety of land uses that are desired by the City to implement urban development in an area designated for commercial and light industrial uses. The Project will maintain an open space edge buffer along Adams Barranca to minimize any potential impacts from the proposed urbanized development on the Project Site.

2 California Department of Conservation, Farmland Mapping and Monitoring Program, Ventura County Important Farmland, (2010).

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APPENDIX 1.0

Notice of Preparation and Comments

Notice of Preparation

To: Responsible and Trustee Agencies and others on the attached distribution list

From: City of Santa Paula
P.O. Box 569
Santa Paula, California 94061-0569

POSTED
AUG 29 2014
MARK A. LUNN
Ventura County Clerk and Recorder

Subject: Notice of Preparation of a Draft Environmental Impact Report By: _____, Deputy

Santa Paula West Business Park Specific Plan

The City of Santa Paula, as the Lead Agency under the California Environmental Quality Act (CEQA), will prepare an Environmental Impact Report (EIR) to evaluate the Santa Paula West Business Park Specific Plan (Specific Plan or Project). The proposed Specific Plan contains a comprehensive set of plans, exhibits, regulations, conditions and programs for orderly development of the Business Park, which is designed to contain a combination of office, manufacturing, research and development, professional office, and limited commercial uses on approximately 54 acres located in the western edge of the City of Santa Paula. In addition to regulating land use, the Specific Plan addresses vehicular circulation, landscaping, pedestrian walkways and infrastructure.

The purpose of this Notice of Preparation (NOP) is to bring your attention to the Specific Plan and request that your organization assist the City in identifying the scope and content of the environmental information relevant to your agency's statutory responsibilities that should be contained in the EIR. Your agency may need to use the EIR prepared by the City when considering other approvals for the Project. The City also welcomes comments from other interested parties.

The Project Description, including the location, is provided in Attachment A. The preliminary scope of the EIR is provided in Attachment B.

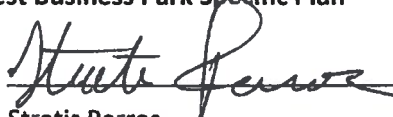
Due to the time limits mandated by State law, your response must be sent no later than 30 days after receipt of this NOP. A Scoping Meeting will be held September 9, 2014 at 6:30 PM at the Santa Paula City Hall in the City Council Chambers. All parties are invited to this meeting to provide comments on the content of the EIR.

Please submit comments to: Mr. Stratis Perros, Deputy Planning Director, City of Santa Paula, P.O. Box 569, Santa Paula, California 94061-0569. Please provide the name of a contact person at your agency. You may also email your response to: sperros@spcity.org.

Project Title: Santa Paula West Business Park Specific Plan

Date: 8.27.14

Signature:


Stratis Perros

Title: Deputy Planning Director

Telephone: (805) 933-4214

SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN NOP

ATTACHMENT A: PROJECT DESCRIPTION

LOCATION

Figure 1 shows the regional location of the Santa Paula West Business Park. **Figure 2** shows the Specific Plan location in the local context. The proposed Specific Plan area is bounded on the north by Telegraph Road, on the east by existing industrial and commercial development in the existing Santa Paula city limits, on the south by agriculture and on the west by the Adams Barranca. The Project site contains frontage along State Route 126 and Telegraph Road and is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way.

The Specific Plan area is located within the Sphere of Influence and the City Urban Restriction Boundary (CURB) of the City of Santa Paula. As part of the Specific Plan approval process, annexation of the Santa Paula West Business Park site to the City of Santa Paula is proposed.

PROJECT DESCRIPTION

The Santa Paula West Business Park is a planned development consisting of a mix of light manufacturing, research and development, professional office and commercial uses consistent with the Commercial/Light Industrial and Light Industrial zones as defined the City of Santa Paula Zoning Ordinance.

Figure 3 illustrates the proposed lot configuration for the Business Park, which is designed to create campus like groupings of professional, administrative, and high technology research and manufacturing uses accompanied by limited commercial activities to support these uses. The sizes of the proposed parcels and roadway layout is planned to achieve orderly and logical circulation among the light industrial and office uses of the Specific Plan.

The Adams Barranca, located along the western boundary of the business park would be zoned Open Space/Passive in the Specific Plan. A 64-foot wide roadway dedication for the extension of Faulkner Road through the Business Park would be dedicated to the City and would allow for integration of the Business Park with the existing developments to the east. Also, the areas along the VCTC railroad right of way would be improved with landscaped screening along the railroad corridor, and an existing at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road.

Figure 4 provides a Land Use Master Plan and **Figure 5** provides the Zoning Implementation Plan for the proposed Project.

The Master Plan land use designations and corresponding areas include:

Land Use Designation	Acres	Percent of Project Site
Commercial / Light Industrial	37.48	68.8
Roadways (Approximate)	13.30	24.5
Open Space/Passive	3.65	6.7
Total Gross Area:	54.43	100

The zoning for the Business Park would be SP-6 (Specific Plan Area 6). Land uses that are permitted within the Master Plan Land Use designations and zoning for the Business Park are outlined in the Specific Plan. The Specific Plan incorporates the development standards for the C/LI zone and LI zone (commercial/light industrial and light industrial) as outlined in the Santa Paula Municipal Code.

The Specific Plan also includes a Master Circulation Plan that provides a framework and standards for safe vehicular, pedestrian, and bicycle circulation, as also addresses parking. The Specific Plan would also establish design standards for landscaping, general signage, and site design guidelines.

PROPOSED DISCRETIONARY APPROVAL ACTIONS

This EIR would serve as the primary source of environmental information to support review and consideration of the following actions:

The Ventura Local Agency Formation Commission (LAFCo) will consider Annexation of the site to the City of Santa Paula.

The City of Santa Paula will consider the following actions:

- General Plan Amendment to change the land use designation to the Santa Paula West Business Park Specific Plan
- Zoning designation of SP-6 (Specific Plan Area 6)
- Development Agreement
- Annexation of the site to the City of Santa Paula

ATTACHMENT B: PRELIMINARY SCOPE OF THE EIR

EIR Scope of Study

Based on a preliminary review of the Project that is consistent with Section 15060 of the California Environmental Quality Act (CEQA) Guidelines, the City of Santa Paula has determined that an EIR should be prepared for this Project. In addition, consistent with Section 15082 of the State CEQA Guidelines, the City has identified the potential for significant environmental effects related to the following CEQA topics:

- Land Use and Planning
- Agricultural Resources
- Transportation and Circulation
- Air Quality
- Noise
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Aesthetics
- Cultural and Historic Resources
- Public Services
- Utilities and Services
- Greenhouse Gas

A brief description of the scope of analysis the City has identified for the Draft EIR related to each of these topics is provided below.

Land Use and Planning - The Santa Paula West Business Park would implement the City's General Plan. The EIR will assess the consistency of the proposed Specific Plan with the City of Santa Paula General Plan and other applicable local land use plans and policies, and regional land use plans, such as the Southern California Association of Governments Regional Transportation Plan.

Agricultural Resources - The EIR will assess the potential impacts to agricultural resources as a result of the development allowed under the proposed Specific Plan. The analysis will consider conversion of farmland resources, as mapped in the Farmland Mapping and Monitoring Program and local land use plans.

Transportation and Circulation – The EIR will include preparation of a traffic study to evaluate the potential impacts of traffic that could be generated upon development of the proposed Specific Plan. The analysis will assess current traffic conditions and the capacity of the street system. Potential impacts will address future development and the estimated number of vehicle trips that could be introduced

onto the street network, including volume to capacity ratios and level of service (LOS) at affected intersections. Potential impacts on public transit service will also be addressed.

Air Quality - The potential impacts for the development under the Specific Plan will be evaluated in accordance with the Guidelines for the Preparation of Air Quality Impact Analysis and other requirements of the Ventura County Air Pollution Control District (VCAPCD). Modeling will be conducted using the California Emissions Estimator Model (CalEEMod). The analysis will include both construction and long-term operational impacts for regulated air emission pollutants. This section of the EIR will also evaluate consistency with the VCAPCD Air Quality Management Plan.

Noise - The potential for development under the Specific Plan to increase noise above ambient noise levels. Both construction and operational noise (from the land uses and traffic) will be analyzed for impacts to residential uses, nearby schools, or other nearby sensitive land uses.

Biological Resources - Potentially occurring sensitive biological resources will be addressed to determine if impacts would occur as a result of development under the Specific Plan. Consistency with the federal Endangered Species Act (Act) of 1973, as amended, in addition to any local or regional habitat conservation plan guidelines that may be applicable to the Project site will be discussed. Field surveys and records research will generally evaluate the potential for the Project site and immediate vicinity to support sensitive biological resources.

Geology and Soils - The EIR will include a description of the existing geology and soil conditions, and evaluate any potential impacts that could occur as a result of development of the Specific Plan. The EIR will assess potential geological and geotechnical impacts or constraints associated with the site based on review of available published information and a site reconnaissance.

Hydrology and Water Quality - The EIR analysis will describe the hydrology (water resource, drainage, and flooding) and water quality conditions of the Project site within and adjacent to the project development areas. The EIR will identify the regulatory framework affecting hydrology and water quality issues and describe the consistency of the proposed Specific with applicable water quality regulations for storm water runoff.

Hazards and Hazardous Materials - The EIR will provide information on hazards and hazardous materials conditions in the area and any potential impacts from development of the Specific Plan. The analysis will include historical database records reviews and site reconnaissance.

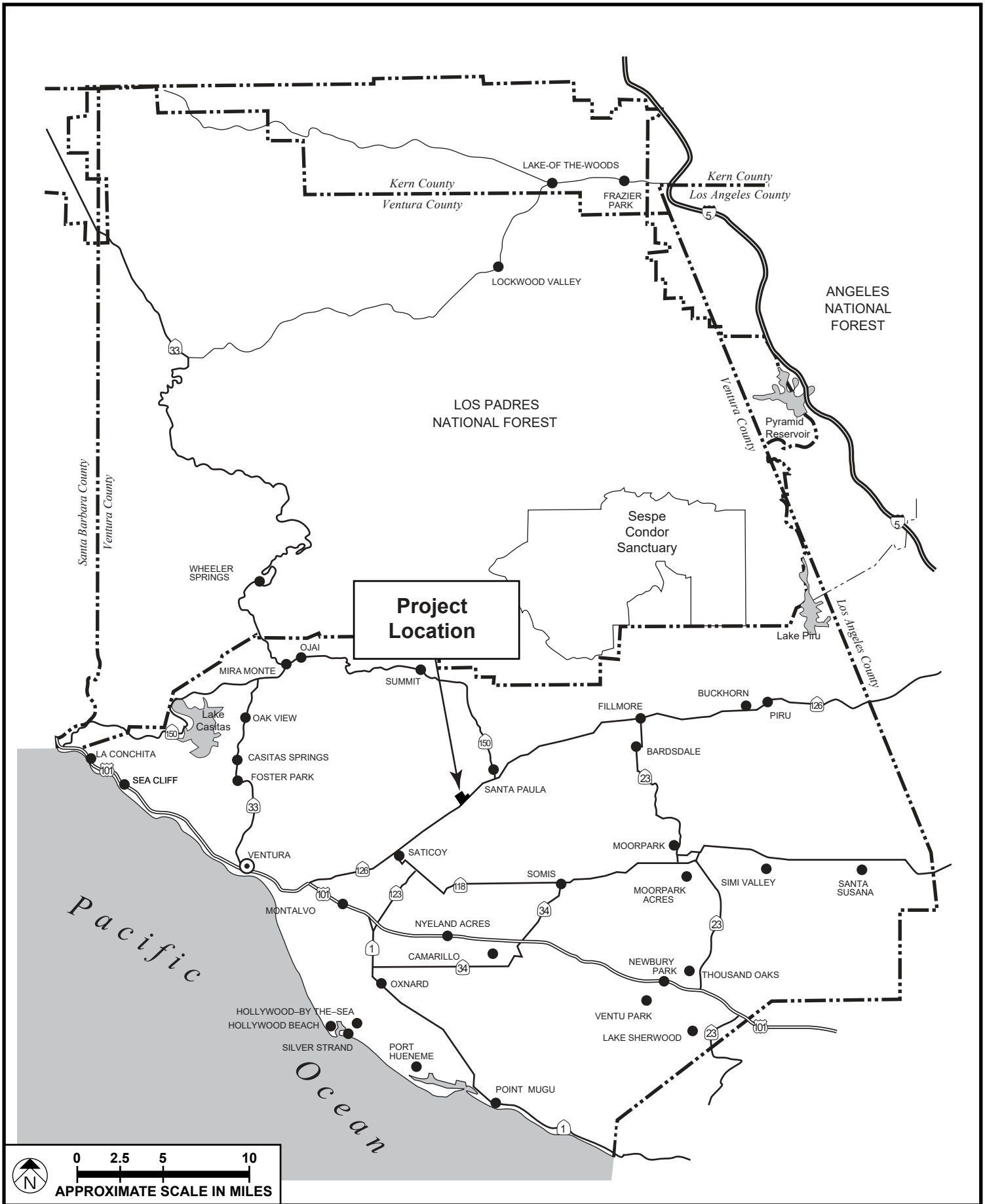
Aesthetics - The EIR will evaluate the changes to the existing visual appearance and character of the Specific Plan site and the due to the introduction of the new industrial and commercial buildings that would result from development under the Business Park Specific Plan.

Cultural Resources - The EIR will assess the potential for any archaeological or paleontological resources within the Specific Plan area or vicinity based on a Phase 1 investigation and subsequent recommendations. The potential for development under the Specific Plan to affect these resources will be identified.

Public Services - The EIR will discuss the potential for environmental impacts that could occur from increased demand for police, fire recreation, and schools, to meet the needs of the additional development that would be allowed by the Specific Plan.

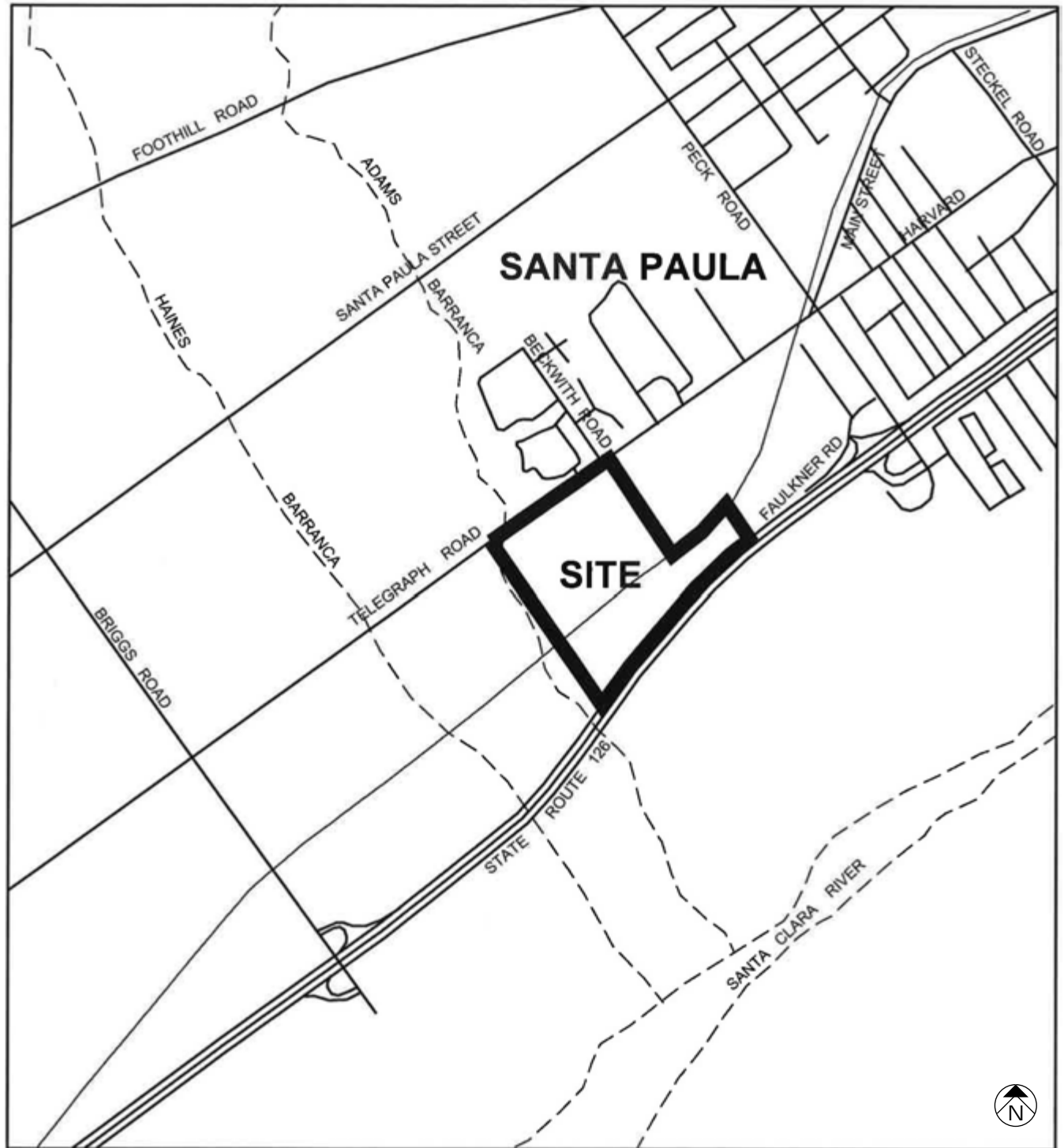
Utilities and Service Systems - The EIR will assess the impacts of the proposed Specific Plan on water supply, wastewater, and solid waste. The analysis will include a water supply assessment, and all service provides for the Specific Plan site will be consulted.

Greenhouse Gas Emissions – Modeling will be conducted using the California Emissions Estimator Model (CalEEMod). Modeling results will provide estimates of direct short-term construction and long-term operational CO₂ emissions for the Project. The EIR will analyze potential construction emissions generated from such sources as construction equipment. Long-term operational GHG emissions from additional traffic, as well as area source emissions from consumption of fossil fuels for operations, water, and space heating systems for operations will be analyzed.



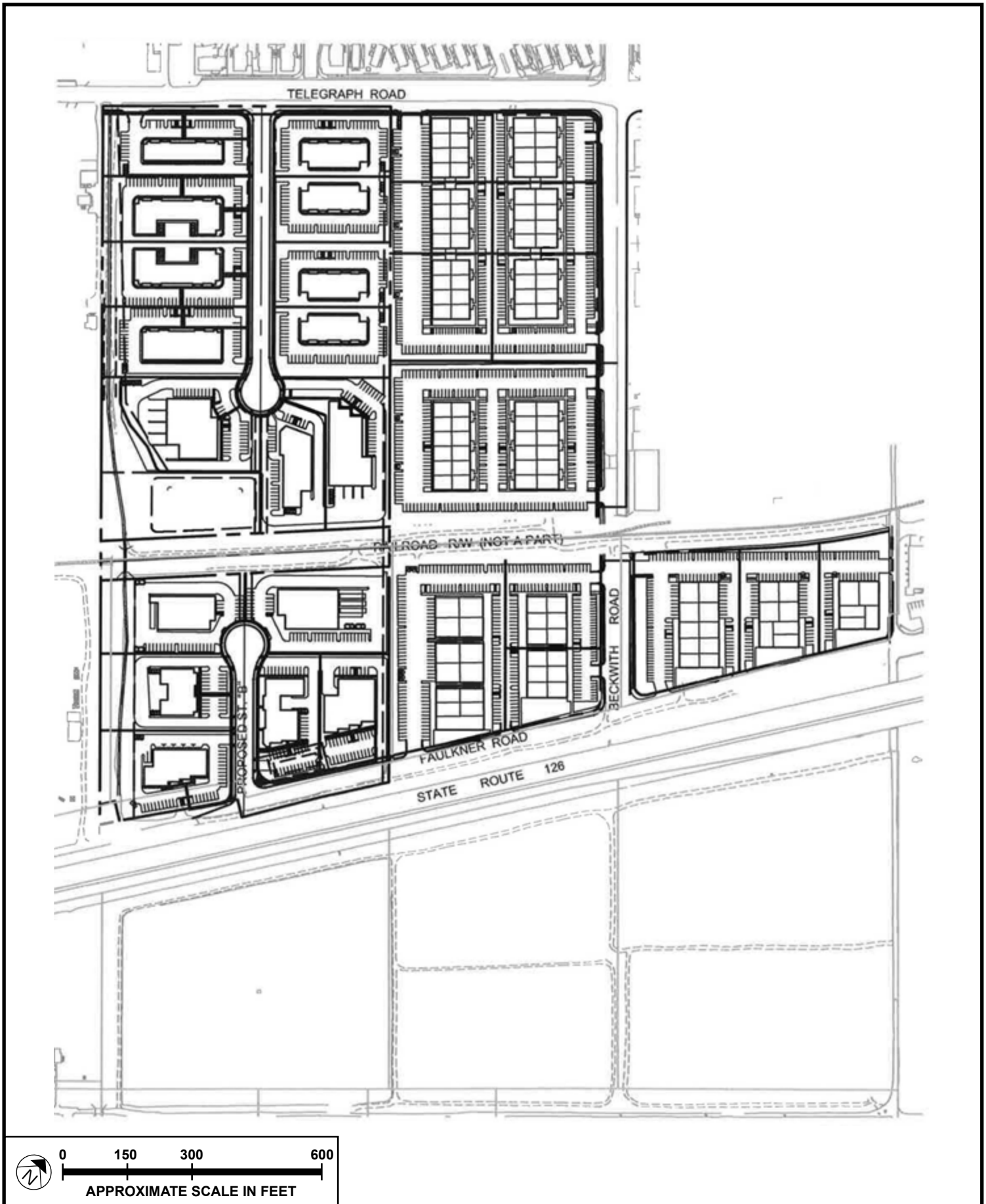
SOURCE: Meridian Consultants – March 2014

FIGURE 1



SOURCE: Jensen Design and Survey – May 2014

FIGURE 2



SOURCE: Jensen Design and Survey – May 2014

FIGURE 3

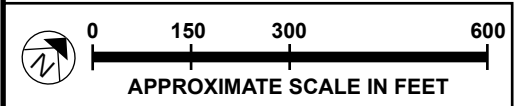


Conceptual Site Plan



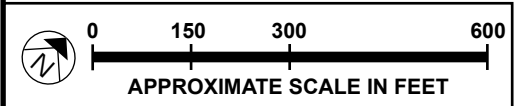
LEGEND

	Railroad (not a part) 200,122 S.f.=4.59 Acres
	Commercial Light Industrial 2,212,120 S.f.=50.78 Acres
	Open Space/Passive 159,218 S.f.=3.65 Acres



SOURCE: Jensen Design and Survey – May 2014

FIGURE 4



SOURCE: Jensen Design and Survey – May 2014

FIGURE 5

4. Inclusion of all appropriate traffic volumes. Analysis should include traffic from the project, **cumulative traffic generated from all specific approved developments in the area**, and traffic growth other than from the project and developments. For example: existing + project + other projects + other growth.
5. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. These mitigation discussions should include, but not be limited to, the following:
 - description of transportation infrastructure improvements
 - financial costs, funding sources and financing
 - sequence and scheduling considerations
 - implementation responsibilities, controls and monitoring

Any mitigation involving transit, HOV, or TDM must be justified and its effects conservatively estimated.

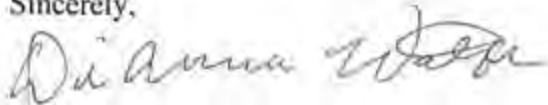
6. Specification of developer's percent share of the cost, as well as a plan of realistic mitigation measures under the control of the developer. The following ratio should be estimated: Additional traffic volume due to project implementation is divided by the total increase in the traffic volume (see Appendix "B" of the Guidelines). That ratio would be the projects equitable share responsibility.

For purposes of determining project share of costs, the number of trips from the project on each traveling segment or element is estimated in the context of forecasted traffic volumes which include build-out of all approved and not yet approved projects, and other sources of growth.

We look forward to reviewing the DEIR and expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send a copy in advance to the undersigned.

If you have any questions regarding this response, please call Mr. Nerses Yerjanian, the Project Engineer/Coordinator, at (213) 897-6536 and refer to IGR/CEQA # 140905/NY.

Sincerely,



DIANNA WATSON
IGR/CEQA Branch Chief
Community Planning & LD IGR Review

cc: Scott Morgan, State Clearinghouse



DEPARTMENT OF CONSERVATION

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

1000 S. Hill Road, Suite 116 • Ventura, CALIFORNIA 93003

PHONE 805 / 654-4761 • FAX 805 / 654-4765 • WEB SITE conservation.ca.gov

September 29, 2014

Mr. Stratis Perros
Deputy Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061-0569



**Subject: Santa Paula West Business Park Specific Plan
Notice of Preparation of a Draft Environmental Impact Report**

Dear Mr. Perros:

The Department of Conservation's (Department) Division of Oil, Gas, and Geothermal Resources (Division) has reviewed the above referenced project. The Division supervises the drilling, maintenance, and plugging and abandonment of oil, gas, and geothermal wells in California. The Department offers the following comments for your consideration.

Based on information provided in the Specific Plan there are no oil wells located within the proposed project. Well locations can be found on the Division's website at www.conservation.ca.gov, go to "Oil, Gas, and Geothermal", and then go to the link "Online Mapping System".

Furthermore, if any plugged or abandoned or unrecorded wells are damaged or uncovered during excavation or grading, remedial plugging operations may be required. If such damage or discovery occurs, the Division's district office must be contacted to obtain information on the requirements for and approval to perform remedial operations.

The Division also recommends the wells within or in close proximity to project boundaries be accurately plotted on all future maps of this project, and a legible copy of the final project map be submitted to the Division.

The possibility for future problems from oil and gas wells that have been plugged and abandoned, or reabandoned, to the Division's current specifications are remote. However, the Division suggests that a diligent effort be made to avoid building over any plugged and abandoned well.

Santa Paula West Business Park Specific Plan
Notice of Preperation of a Draft Environmental Impact Report
Page 2 of 2

To ensure proper review of projects, the Division has available an informational packet entitled, "Construction-Site Plan Review Program. This document is available on the Division's website at www.conservation.ca.gov, go to "Oil, Gas, and Geothermal", then go to "Construction Site Review".

Prior to commencing operations, the project applicant should consult with our office for information on the wells located in the project area.

Thank you for the opportunity to comment on the proposed Santa Paula West Business Park Specific Plan. If you have any questions, please contact me at (805) 654-4761 or via email at bhesson@consvr.ca.gov.

Sincerely,



Bruce H. Hesson, P.E.
District Deputy - Ventura

cc: DOGGR- HQ, Adele Lagomarsino



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



September 26, 2014

Mr. Stratis Perros
Deputy Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061-0569
sperros@spcity.org

Subject: Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Santa Paula West Business Park Specific Plan, Ventura County, SCH#2014081104

Dear Mr. Perros:

The California Department of Fish and Wildlife (Department) has reviewed the above-referenced Notice of Preparation (NOP) for the Santa Paula West Business Park Specific plan Draft Environmental Impact Report (DEIR). The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the project (California Environmental Quality Act, [CEQA] Guidelines § 15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed project that come under the purview of the California Endangered Species Act (Fish and Game Code § 2050 *et seq.*) and Fish and Game Code section 1600 *et seq.*.

The proposed Specific Plan contains a comprehensive set of plans, exhibits, regulations, conditions and programs for orderly development of the Santa Paula West Business Park, which is designed to contain a combination of professional office, manufacturing, research and development, and limited commercial uses on approximately 54 acres located along the western edge of the City of Santa Paula. In addition to regulating land use, the Specific Plan addresses vehicular circulation, landscaping, pedestrian walkways, and infrastructure. The proposed Specific Plan area is bounded to the north by Telegraph Road, to the east by existing industrial and commercial development within the existing Santa Paula City limits, to the south by agriculture, and to the west by Adams Barranca. The Adams Barranca, located along the western boundary of the business park, would be zoned Open Space/Passive. The Specific Plan area also contains frontage along State Route 126 and Telegraph Road, and is bisected by the Ventura County Transportation Commission railroad right-of-way.

The Department offers the following comments and recommendations to assist the City in avoiding or minimizing potential project impacts on biological resources.

Conserving California's Wildlife Since 1870

Specific Comments

The Land Use Master Plan in the NOP (Figure 4) illustrates and reports that 3.65 acres of Open Space/Passive area would be adjacent to the Adams Barranca. The Department concurs with the Open Space zoning to facilitate stream habitat function and use of the barranca as a wildlife travel corridor. The Department recommends a minimum setback of 100-150 feet from the edge of riparian habitat. The Department also concurs with the need for biological field surveys and recommends a thorough biological assessment be completed for the Adams Barranca adjacent to the proposed Specific Plan area (see Section 4 below for more details). A review of the California Natural Diversity Database reveals that approximately 1 mile south of the proposed Specific Plan area, where the Adams Barranca drains into the Santa Clara River, the State and Federally listed Endangered least Bell's vireo (*Empidonax traillii extimus*), the California Species of Special Concern two-striped garter snake (*Thamnophis hammondi*), and Pallid bat (*Antrozous pallidus*) have been observed.

General Comments

1. The Department has responsibility for wetland and riparian habitats. It is the policy of the Department to strongly discourage development in wetlands or conversion of wetlands to uplands. We oppose any development or conversion that would result in a reduction of wetland acreage or habitat values and a loss in wetland function, unless, at a minimum, project mitigation assures there will be "no net loss" of wetland habitat values, function, or acreage. Development and conversion include but are not limited to conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether intermittent or perennial, should be retained and provided with substantial setbacks that preserve the riparian and aquatic values and function and maintain their value to on-site and off-site wildlife populations. Mitigation measures to compensate for impacts to riparian corridors must be included in the DEIR and must compensate for the loss of riparian function, value, and its use as a wildlife corridor.
 - a) The project area supports aquatic, riparian, and wetland habitats; therefore, a jurisdictional delineation of the creeks and their associated riparian habitats should be included in the DEIR. The delineation should be conducted pursuant to the U. S. Fish and Wildlife Service wetland definition adopted by the Department.¹ Please note that some wetland and riparian habitats subject to the Department's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers.

¹ Cowardin, Lewis M., et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

- b) The Department also has regulatory authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed. For any such activities, the project applicant (or “entity”) must provide written notification to the Department pursuant to section 1600 *et seq.* of the Fish and Game Code. Based on this notification and other information, the Department will determine whether a Lake and Streambed Alteration (LSA) Agreement with the applicant is required prior to conducting the proposed activities. The Department’s issuance of a LSA for a project that is subject to CEQA will require CEQA compliance actions by the Department as a Responsible Agency. The Department as a Responsible Agency under CEQA may consider the local jurisdiction’s (Lead Agency’s) Negative Declaration or Environmental Impact Report for the project. To minimize additional requirements by the Department pursuant to section 1600 *et seq.* and/or under CEQA, the document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSA.²
2. The Department considers adverse impacts to a species protected by the California Endangered Species Act (CESA), for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085.) Consequently, if the Project, Project construction, or any Project-related activity during the life of the Project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from the Department may include an Incidental Take Permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subds. (b), (c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA ITP.

² A notification package for a LSA may be obtained by accessing the Department’s website at www.wildlife.ca.gov/habcon/1600.

3. To enable the Department to adequately review and comment on the proposed project from the standpoint of the protection of plants, fish and wildlife, we recommend the following information be included in the DEIR:
 - a) A complete discussion of the purpose and need for, and description of, the proposed project, including all staging areas and access routes to the construction and staging areas.
 - b) A range of feasible alternatives to ensure that alternatives to the proposed project are fully considered and evaluated; the alternatives should avoid or otherwise minimize impacts to sensitive biological resources, particularly wetlands. Specific alternative locations should be evaluated in areas with lower resource sensitivity where appropriate.

Biological Resources within the Project's Area of Potential Effect

4. To provide a complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats, the DEIR should include the following information:
 - a) Per CEQA Guidelines, section 15125(c), information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region.
 - b) A thorough, recent, floristic-based assessment of special status plants and natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see <http://www.dfg.ca.gov/habcon/plant/>). The Department recommends that floristic, alliance- and/or association-based mapping and vegetation impact assessments be conducted at the Project site and neighboring vicinity. *The Manual of California Vegetation*, second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2008³). Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.
 - c) A current inventory of the biological resources associated with each habitat type on site and within the area of potential effect. The Department's California Natural Diversity Data Base in Sacramento should be contacted at

³Sawyer, J. O., Keeler-Wolf, T., and Evens J.M. 2008. A manual of California Vegetation, 2nd ed.

www.wildlife.ca.gov/biogeodata/ to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

- d) An inventory of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect. Species to be addressed should include all those which meet the CEQA definition (see CEQA Guidelines, § 15380). This should include sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

Analyses of the Potential Project-Related Impacts on the Biological Resources

5. To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be addressed in the DEIR:
 - a) A discussion of potential adverse impacts from lighting, noise, human activity, exotic species, and drainage. The latter subject should address: project-related changes on drainage patterns on and downstream of the project site; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site. The discussions should also address the proximity of the extraction activities to the water table, whether dewatering would be necessary, and the potential resulting impacts on the habitat, if any, supported by the groundwater. Mitigation measures proposed to alleviate such impacts should be included.
 - b) Discussions regarding indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a NCCP). Impacts on, and maintenance of, wildlife corridor/movement areas and refugia, including access to undisturbed habitats in adjacent areas, should be fully evaluated in the DEIR.
 - c) The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas that may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.
 - d) A cumulative effects analysis as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant

communities and wildlife habitats.

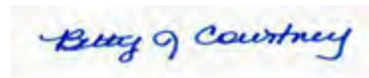
Mitigation for the Project-related Biological Impacts

6. The DEIR should include measures to fully avoid and otherwise protect Rare Natural Communities from project-related impacts. The Department considers these communities as threatened habitats having both regional and local significance.
7. The DEIR should include mitigation measures for adverse project-related impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.
8. For proposed preservation and/or restoration, the DEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human disturbance, etc.
9. The Department recommends that measures be taken to avoid project impacts to nesting birds. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Title 50, § 10.13, Code of Federal Regulations). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). Proposed project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates) should occur outside of the avian breeding season, which generally runs from February 1- September 1 (as early as January 1 for some raptors) to avoid take of birds or their eggs. If avoidance of the avian breeding season is not feasible, the Department recommends surveys by a qualified biologist with experience in conducting breeding bird surveys to detect protected birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

10. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.
11. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.

We appreciate the opportunity to comment on the referenced NOP. Questions regarding this letter and further coordination on these issues should be directed to Dan Blankenship, Senior Environmental Scientist Specialist, at (661) 259-3750 or Daniel.Blankenship@wildlife.ca.gov.

Sincerely,



Betty J. Courtney
Environmental Program Manager I

ec: Christine Found-Jackson, CDFW, Glendale
Jeff Humble, CDFW, Ventura
Scott Morgan (State Clearinghouse)



VENTURA LOCAL AGENCY FORMATION COMMISSION

COUNTY GOVERNMENT CENTER • HALL OF ADMINISTRATION

800 S. VICTORIA AVENUE • VENTURA, CA 93009-1850

TEL (805) 654-2576 • FAX (805) 477-7101

WWW.VENTURA.LAFCO.CA.GOV

Dear Prospective LAFCo Applicant:

Local Agency Formation Commissions (LAFCos) are independent governmental agencies responsible for promoting orderly development through the logical formation and determination of local agency boundaries. LAFCos implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.), which grants them broad authority to review, consider, modify, condition, and approve or disapprove requests for changes of organization, including annexations.

In reviewing any request for a change of organization, LAFCos must consider numerous factors such as, but not limited to, land use; the need for organized community services; the effect on the cost and adequacy of services in the area and adjacent areas; the ability of the city or district to provide services; the availability of water supplies; consistency with regional transportation plans and city/county general and specific plans; and the effects on agricultural lands. In addition, LAFCos must comply with laws pertaining to environmental protection, land conservation, public records, open meetings and taxation. The Ventura LAFCo has also adopted local policies which must be given great weight as part of its consideration of proposals. These policies, along with LAFCo's operational rules and regulations, are set forth in the *Commissioner's Handbook*, which is available on the LAFCo website: www.ventura.lafco.ca.gov.

Regardless of your agency's level of familiarity or experience with the LAFCo application process, we strongly encourage all prospective applicants to consult with Ventura LAFCo staff prior to submitting an application. Although the LAFCo application requirements are generally the same for each boundary change proposal, there may be exceptions depending on the complexity, scope, and location. During the pre-application consultation, a detailed explanation of the application requirements and all information necessary to process the request will be provided. Meeting all of the requirements in the initial application submittal is the best way to minimize processing time and costs. Generally speaking, it takes between three and four months from the time an application is submitted to the time it can be recorded (for proposals that are approved). However, it can take significantly longer if the application does not include all of the required information.

Pre-application consultations are available free of charge in most cases unless multiple meetings are required. Optimally, the consultation process should occur before your agency initiates the environmental review process and well before a resolution to initiate a change of organization is adopted. Please take advantage of the LAFCo staff to help make your LAFCo experience as efficient and cost effective as possible.

Sincerely,
Ventura Local Agency Formation Commission



VENTURA LOCAL AGENCY FORMATION COMMISSION

COUNTY GOVERNMENT CENTER • HALL OF ADMINISTRATION

800 S. VICTORIA AVENUE • VENTURA, CA 93009-1850

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WWW.VENTURA.LAFCO.CA.GOV

September 30, 2014

Mr. Stratis Perros, Deputy Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061-0569

Subject: Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) for Santa Paula West Business Park Specific Plan

Dear Mr. Perros:

Thank you for providing the Ventura Local Agency Formation Commission (LAFCo) with the opportunity to review the NOP for the Santa Paula West Business Park Specific Plan Draft EIR. As a responsible agency under the California Environmental Quality Act (CEQA), LAFCo is charged with ensuring that environmental documents prepared by lead agencies address the issues that relate to LAFCo's scope of authority. Please note that these comments are solely those of the LAFCo staff, and the NOP has not been reviewed by the Commission.

Project Description

The project involves the approval of a Specific Plan for the development of a "Business Park" (i.e., a combination of office, manufacturing, research and development, and other commercial uses) on an approximately 54-acre area located west of and contiguous to the City of Santa Paula. The proposed development requires that the project area be annexed to the City of Santa Paula. The majority of the site is being used for agriculture, and the entire project area has a County General Plan designation of Agricultural – Urban Reserve. The City's General Plan designates the project area as Mixed Use Commercial/Light Industrial.

Annexation of the proposal area to the City requires LAFCo approval of several changes of organization, collectively referred to as a reorganization. The project description should include the following necessary components of the reorganization:

- Annexation to the City of Santa Paula
- Detachment from the Ventura County Resource Conservation District
- Detachment from County Service Area Nos. 32 and 33
- Detachment from the Ventura County Fire Protection District

Therefore, the EIR should identify LAFCo as a responsible agency whose approval is required in conjunction with the development of the proposed project.

Additionally, the project description should specify the Assessor's Parcel Numbers (APNs) that are the subject of the Specific Plan. If any portion of the proposal area to be annexed to the City is located outside of the City's sphere of influence, an amendment to the City's sphere will be required, and LAFCo policies pertaining to sphere amendments will apply.

LAFCo Policies

LAFCo's purposes are to (1) discourage urban sprawl, (2) preserve open space and prime agricultural land, (3) efficiently provide government services, and (4) encourage the orderly formation and development of local agencies, such as cities (Government Code § 56301). The Ventura LAFCo has adopted local policies that it must consider when making decisions on reorganization proposals. Specifically, the policies found in Division 3 of the Ventura LAFCo Commissioner's Handbook ("Handbook") apply to the proposed project. The Handbook is available on the Ventura LAFCo website at www.ventura.lafco.ca.gov, and can be found under the "Policies" tab.

The topics identified for study in the EIR appear to be sufficient to address those general topics and items important to LAFCo review, including the following:

Proposed City Boundaries

It appears that the railroad, which bisects the project area, is not proposed as part of the Specific Plan or for annexation to the City. Exclusion of the railroad right-of-way from the proposed reorganization may be inconsistent with Handbook policies that would create the distortion of existing boundaries [Handbook Sections 3.3.1.2(a) and 3.3.2.2(c)]. Note that all portions of the railroad right-of-way that are surrounded on both sides by the City are located within the City.

Flooding

Handbook Section 3.3.1.2(h) discourages approval of a proposal that would accommodate new development within a hazardous area, unless the hazard can be adequately mitigated. The EIR should include an evaluation of flooding hazards, and should specifically address flooding of Adams Barranca, a drainage channel that is located along the western boundary of the project site.

Agricultural Land

In making determinations regarding reorganization proposals (and sphere of influence amendments), LAFCo is required to apply the definition of prime agricultural land found in Government Code § 56064. Based on a preliminary review of the project area, it appears that the entire proposal area consists of prime agricultural land that would be converted in order to accommodate the proposed development. Handbook Section 3.3.5 includes policies that apply to proposals involving the conversion of agricultural land to other uses. Because the project site is located on land qualifying as prime

agricultural land, in order for LAFCo to approve the reorganization, LAFCo must determine, among other things, that “insufficient non-prime agricultural or vacant land exists” within the City [Handbook Section 3.3.5.1(c)] and make findings pursuant to Section 3.3.5.2. Vacant land in the City, along the City’s southern boundary between Highway 126 and the Santa Clara River, might be able to accommodate development similar to that proposed, and should be evaluated for consistency with Handbook Section 3.3.5.

The EIR should evaluate loss of agricultural land in general, and prime agricultural land in particular. If agricultural land would be lost or otherwise impacted by the project, regardless of whether the development is located on the proposed site or on an alternative site, the City should incorporate into the project description and evaluate in the EIR feasible mitigation measures that reduce the potential impacts to agricultural resources, including agricultural buffers that would minimize conflicts between agricultural and non-agricultural uses.

Utilities and Service Systems

The NOP states that the EIR will include a water supply assessment. The evaluation should also contain an assessment of potable and non-potable water demand, as well as wastewater supply and demand.

Additional Comments

Since development of alternative sites may require LAFCo action, LAFCo staff suggests that the EIR include an evaluation of each potential project site’s consistency with LAFCo policies. If the EIR does not address LAFCo’s policies, LAFCo staff will require this information from the City before any application for reorganization can be accepted by LAFCo as complete for filing purposes.

The Ventura LAFCo encourages prospective applicants to meet with LAFCo staff early in the planning process (see the attached letter from the Commission). We find that such consultation and on-going communication is helpful to clarify the nuances of LAFCo requirements and to avoid delays later in the process.

LAFCo staff requests to be notified when the Draft EIR is available for review, and will provide further comments at that time, if necessary.

Please feel free to contact me should you have any questions.

Sincerely,



Andrea Ozdy
Analyst

Attachment

PUBLIC UTILITIES COMMISSION

320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013
(213) 576-7083



September 24, 2014

Stratis Perros
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061

Dear Mr. Perros:

Re: SCH 2014081104 Santa Paula West Business Park Specific Plan - NOP

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings in California. The Commission Rail Crossings Engineering Branch (RCEB) is in receipt of the *Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR)* from the State Clearinghouse for the proposed City of Santa Paula (City) West Business Park Specific Plan.

The project areas are located on both sides and within the vicinity of an active railroad track. Beckwith Road is situated north of the Ventura County Transportation Commission (VCTC) rail tracks. An existing private at-grade crossing, Todd Lane, is located approximately one (1) block further east. According to the NOP, the areas along the VCTC railroad right-of-way (ROW) would be improved with landscaped screening along the railroad corridor, and the at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road.

Construction of any new rail crossing for public use will require a formal application to the Commission for approval. More information can be found on the Commission's website: <http://www.cpuc.ca.gov/PUC/safety/Rail/Crossings/formalapps.htm>. In addition, RCEB recommends that the City add language to the Specific Plan so that any future development adjacent to or near the railroad/light rail ROW is planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade crossings. This includes considering pedestrian circulation patterns or destinations with respect to railroad ROW and compliance with the Americans with Disabilities Act. Mitigation measures to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade crossings due to increase in traffic volumes and continuous vandal resistant fencing or other appropriate barriers to limit the access of trespassers onto the railroad ROW.

If you have any questions in this matter, please contact me at (213) 576-7076, ykc@cpuc.ca.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ken Chiang".

Ken Chiang, P.E., Utilities Engineer
Rail Crossings Engineering Branch
Safety and Enforcement Division

C: State Clearinghouse


**ASSOCIATION of
GOVERNMENTS**
Main Office

818 West Seventh Street

12th Floor

Los Angeles, California

900 7-3435

t (213) 236-1880

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Cheryl Viegas Walker, El Centro

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Policy Committee Chairs
**Community, Economic and
Human Development**

Margaret Finley, Duarte

Energy & Environment

Deborah Robertson, Rialto

Transportation

 Alan Wagner, San Bernardino
Associated Governments

October 3, 2014

Mr. Stratis Perros, Deputy Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, California 94061-0569
Telephone: (805) 933-4214
E-mail: sperros@spcity.org

RE: SCAG Comments on the Notice of Preparation of an Environmental Impact Report for Santa Paula West Business Park Specific Plan [SCAG NO. IGR8179]

Dear Mr. Perros,

Thank you for submitting the Notice of Preparation of an Environmental Impact Report for Santa Paula West Business Park Specific Plan ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.¹ Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of an Environmental Impact Report for Santa Paula West Business Park Specific Plan. The proposed project contains a comprehensive set of plans, exhibits, regulations, conditions and programs for orderly development of the Business Park, which is designed to contain a combination of office, manufacturing, research and development, professional office, and limited commercial uses. Additionally, the proposed project would address vehicular circulation, landscaping, pedestrian walkways and infrastructure.

When available, please send environmental documentation to SCAG's office in Los Angeles or by email to sunl@scag.ca.gov providing, at a minimum, the full public comment period for review. If you have any questions regarding the attached comments, please contact Lijin Sun, Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Jonathan Nadler,
Manager, Compliance and Performance Assessment

¹ SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

**COMMENTS ON THE NOTICE OF PREPARATION OF
AN ENVIRONMENTAL IMPACT REPORT FOR
SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN [SCAG NO. IGR8179]**

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS Goals

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see <http://rtpscs.scag.ca.gov>). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	<i>Align the plan investments and policies with improving regional economic development and competitiveness</i>
RTP/SCS G2:	<i>Maximize mobility and accessibility for all people and goods in the region</i>
RTP/SCS G3:	<i>Ensure travel safety and reliability for all people and goods in the region</i>
RTP/SCS G4:	<i>Preserve and ensure a sustainable regional transportation system</i>
RTP/SCS G5:	<i>Maximize the productivity of our transportation system</i>
RTP/SCS G6:	<i>Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)</i>
RTP/SCS G7:	<i>Actively encourage and create incentives for energy efficiency, where possible</i>
RTP/SCS G8:	<i>Encourage land use and growth patterns that facilitate transit and non-motorized transportation</i>
RTP/SCS G9:	<i>Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies</i>

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS Goals		
Goal		Analysis
RTP/SCS G1:	<i>Align the plan investments and policies with improving regional economic development and competitiveness.</i>	<i>Consistent: Statement as to why Not-Consistent: Statement as to why or Not Applicable: Statement as to why DEIR page number reference</i>
RTP/SCS G2:	<i>Maximize mobility and accessibility for all people and goods in the region.</i>	<i>Consistent: Statement as to why Not-Consistent: Statement as to why or Not Applicable: Statement as to why DEIR page number reference</i>
etc.		etc.

RTP/SCS Strategies

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit <http://rtpscsc.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf> (Tables 4.3 – 4.7, beginning on page 152).

Regional Growth Forecasts

At the time of this letter, the most recently adopted SCAG forecasts consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit <http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf>. The forecasts for the region and applicable jurisdictions are below.

Forecast	Adopted SCAG Region Wide Forecasts		Adopted City of Santa Paula Forecasts	
	Year 2020	Year 2035	Year 2020	Year 2035
Population	19,663,000	22,091,000	35,400	38,800
Households	6,458,000	7,325,000	10,000	11,100
Employment	8,414,000	9,441,000	9,700	10,500

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at: <http://rtpscsc.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf>

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects*. Appendix G can be accessed at: <http://rtpscsc.scag.ca.gov/Documents/peir/2012/final/2012fPEIR AppendixG ExampleMeasures.pdf>

From: Calderon, Eduardo
To: [Stratis Perros](#)
Subject: Santa Paula Business Park Plan
Date: Thursday, September 04, 2014 11:43:58 AM
Attachments: [image001.jpg](#)

Hi,

Just to let you know that we received the Notice of Preparation for Santa Paula West Business Park.

When you receive the SCE plans or any plans that show a type of joint trench, can you send it to TWC? We would like to place our conduit in for future.

Let me know if you have questions.

Thank you



Eduardo Calderon

Zone 2 Construction Coordinator

2525 Knoll Dr, Ventura CA 93003

O. 805.477.4410

C. 805.391.3207

F. 805.644.9324

eduardo.calderon@twcable.com

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**PUBLIC WORKS AGENCY
TRANSPORTATION DEPARTMENT
Traffic, Advance Planning & Permits Division
MEMORANDUM**

DATE: September 11, 2014

TO: RMA – Planning Division
Attention: Laura Hocking

FROM: Transportation Department

Bow

SUBJECT: REVIEW OF DOCUMENT 14-019 Notice of Preparation of Draft Environmental Impact Report (NOP/DEIR)
Project: **Santa Paula West Business Park Specific Plan**
Lead Agency: **City of Santa Paula**
Specific Plan for 54-acre business park development within sphere of influence and CURB of the City of Santa Paula (city).
West of Faulkner Road (city segment), west of Beckwith Road, south of Telegraph Road, east of Adams Barranca, and north of State Route 126.

Pursuant to your request, the Public Works Agency Transportation Department has reviewed the NOP/DEIR for the Santa Paula West Business Park Specific Plan.

The project is a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) to evaluate the environmental impacts of the Santa Paula West Business Park Specific Plan. The environmental document will contain a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of the Business Park with office, manufacturing, research and development, professional, and limited commercial land uses on approximately 54 acres located west of the city limits within the Sphere of Influence and City Urban Restriction Boundary (CURB). The anticipated land uses are commercial/light industrial (37.48 acres, 68.8%), roadways (13.3 acres, 24.5%), and open space (3.65 acres, 6.7%). The project plans to extend easterly the city portion of Faulkner Road, screen a railroad corridor with landscaping, and realign an at-grade railroad crossing to align with Beckwith Road. The project has frontage on two (2) County-maintained roadways: the County portion of Faulkner Road at the southwest corner of the development (350 feet), and Telegraph Road at the northwest corner of the development (250 feet).

We offer the following comments:

1. The Traffic Study for the DEIR should address the site-specific and cumulative traffic impacts the project may have on the County Regional Road Network and local public roads at full build out. Of particular interest are the County-maintained portions of Faulkner Road and Telegraph Road adjacent to the development.
2. The cumulative impact of this project, when considered with the cumulative impact of all other approved (or anticipated) development projects in the County, is potentially significant. The condition for paying the County Traffic Impact Mitigation Fee (TIMF) to

address the cumulative impacts of this project on the County Regional Road Network should be included in the DEIR in accordance with the terms of the Reciprocal Traffic Agreement between the City of Santa Paula and the County.

3. The Ventura Local Agency Formation Commission (LAFCo) will consider annexation of the site to the City of Santa Paula. LAFCo guidelines under Section 3.2.1 state that cities shall annex entire roadway sections and complete intersections adjacent to the territory proposed to be annexed. The DEIR should require conditions for annexing County roadways adjacent to this development, namely: Faulkner Road and Telegraph Road.
4. Please send us the DEIR when it becomes available for our review and comment.

Our review is limited to the impacts this project may have on the County's Regional Road Network.

T:\Planning\Land Development\Non_County\14-019 (SP).doc



VENTURA COUNTY WATERSHED PROTECTION DISTRICT
PLANNING AND REGULATORY DIVISION
800 South Victoria Avenue, Ventura, California 93009
Sergio Vargas, Deputy Director – (805) 650-4077

MEMORANDUM

DATE: September 26, 2014

TO: Laura Hocking, RMA/Planning Technician

FROM: Sergio Vargas, P.E. – Deputy Director *S.V.*

SUBJECT: RMA 14-019 – Notice of Preparation of a Draft EIR for Santa Paula West Business Park Specific Plan, City of Santa Paula Adams Canyon, Santa Clara River Watershed, Zone 2

Pursuant to your request, this office has reviewed the subject Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) to evaluate the Santa Paula West Business Park Specific Plan forwarded by the City of Santa Paula and dated August 27, 2014. The City of Santa Paula is requesting that the Ventura County Watershed Protection District assist in identifying the scope and content of the environmental information deemed to be relevant to the statutory responsibilities of the District which should be contained and addressed in the EIR.

PROJECT LOCATION

The Santa Paula West Business Park Specific Plan area is bounded by Telegraph Road to the north, Beckwith Road and Todd lane to the east, State Route 126 to the south, and Adams Canyon to the west.

PROJECT DESCRIPTION

The Santa Paula West Business Park is a planned development consisting of a mix of light manufacturing, research and development, professional office and commercial uses that are consistent with the Commercial/Light Industrial and Light Industrial zones as defined in the City of Santa Paula Zoning Ordinance. Adams Canyon delineates the westerly boundary of the Specific Plan area, much of which is proposed to be zoned Open Space/Passive in the Specific Plan.

WATERSHED PROTECTION DISTRICT PROJECT COMMENTS:

Adams Canyon is a Ventura County Watershed Protection District (District) jurisdictional red line channel and is subject to the Ventura County Watershed Protection District Ordinance WP-2 effective October 10, 2013. A significant portion of the Specific Plan area has been mapped by the Federal Emergency Management Agency (FEMA) as a 1% annual chance (100-year) floodplain for Adams Canyon; specifically an "Approximate/Unnumbered A Zone". This is evidenced on FEMA digital Flood Insurance Rate Maps 06111C0778E and 06111C0779E, effective

January 2010. The Adams Canyon floodplain extends easterly into the subject lands between 225-feet (State Route 126) and 304-feet (Telegraph Road). The District requests that the following items be addressed in the environmental document:

1. The City of Santa Paula should use the latest available floodplain information for Adams Canyon to determine the flood hazard on the subject property, this being the U.S. Army Corps of Engineers' June 2012 report entitled "Santa Clara River Watershed Feasibility Study without Project Conditions Overflow Analysis Report" prepared by CDM Smith. The City should contact the USACE or the District and request a copy of this floodplain analysis. Otherwise, the City should retain the services of a California licensed Civil Engineer to undertake an Approximate/ Unnumbered Zone A floodplain analysis to accurately determine the boundaries of the Adams Canyon Regulatory Floodway and 1% annual chance floodplain including Q100 flood elevations (Base Flood Elevations). To undertake the engineering analysis, please use the technical methodologies presented in FEMA Publication 265 "Managing Floodplain Development in Approximate Zone A Areas, (1995)". Upon completion, please circulate the engineering analysis to the District for technical review and comment. The DEIR and subsequent environmental documents should include the findings of the engineering analysis.

2. Please include a discussion in the DEIR that states the following:

"Adams Canyon is a Ventura County Watershed Protection District jurisdictional red line channel. In accordance with Ventura County Watershed Protection District Ordinance WP-2 effective October 10, 2013, no person shall impair, divert, impede or alter the characteristics of the flow of water running in a watercourse, or establish any new drainage connection to a District jurisdictional channel, without first obtaining a written permit from the District. Where applicable, Watercourse or Encroachment Permit applications must be submitted to the District for any proposed work. Permits are required from the District for anything proposed in, on, under, over and across a jurisdictional channel. It is the District's standard that the peak flow after development cannot exceed the peak flow under existing conditions for any frequency of event."

3. Please include the Ventura County Watershed Protection District in the list of jurisdictional agencies that will require permits for development proposed within the bed, banks and overflow areas of Adams Canyon.

Thank you for the opportunity to comment. Feel free to contact me for any further information or if you have further questions.

End of Text

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Laura Hocking/Lori Gregory, Planning DATE: September 23, 2014

FROM: Alicia Stratton

SUBJECT: Request for Review of Notice of Preparation for a Draft Environmental Impact Report for the Santa Paula West Business Park Specific Plan, City of Santa Paula (Reference No. 14-019)

Air Pollution Control District staff has reviewed the subject notice of preparation (NOP) for a draft environmental impact report (DEIR), which is a proposal for a specific plan containing a comprehensive set of plans, exhibits, regulations, conditions and programs for orderly development of the Business Park. The Business Park would contain a combination of office, manufacturing, research and development, professional office, and limited commercial uses on approximately 54 acres. The project location is unincorporated land west of the City of Santa Paula, south of Telegraph Road, and east of the Adams Barranca.

Air quality is identified in Attachment B of the NOP as an area of potential adverse impact from the project. District staff recommends that the DEIR evaluates all potential air quality impacts that may result from the project. Specifically, the air quality assessment should consider reactive organic compound, nitrogen oxide and particulate emissions from all project-related motor vehicles and construction equipment.

A carbon monoxide screening analysis should be conducted for any project-impacted roadway intersection that are currently operating, or that are expected to operate at, Levels of Service D, E, or F, or at any project-impacted roadway intersection that may be a CO hotspot. If a potential hotspot is identified, the District recommends that a complete CALINE3 or CALINE4 carbon monoxide analysis be conducted for that intersection.

This project will involve a large amount of grading of soil. The California Air Resources Board (CARB) has identified diesel exhaust particulate matter as a Toxic Air Contaminant (TAC). Diesel exhaust includes hundreds of different gaseous and particulate components, many of which are toxic. The earthmoving equipment has the potential to expose sensitive populations in the vicinity to elevated levels of diesel exhaust. We recommend that a screening health risk assessment be conducted for the project to assess the potential health risks on any nearby sensitive receptors, such as schools, hospitals, day care centers, retirement homes, and residences. Mitigation

measures should also be identified and discussed if the assessment indicates a significant risk. Additional information on TACs can be obtained from the District's website at http://www.vcapcd.org/air_toxics.htm. If you have any general questions regarding air toxics, please contact Terri Thomas of the APCD at (805) 645-1405 or by email at terri@vcapcd.org.

If the project is determined to have a significant impact on regional and/or local air quality, the DEIR should include all feasible mitigation measures. Moreover, any project design features that mitigate air quality impacts should also be described in the DEIR.

If you have any questions, please call me at (805) 645-1426.

county of ventura

September 29, 2014

City of Santa Paula
Mr. Stratis Perros, Deputy Planning Director
P.O. Box 569
Santa Paula, CA 94061-0569

E-mail: sperros@spcity.org

Subject: Comments on the Notice of Preparation of a Draft Environmental Impact Report, Santa Paula West Business Park Specific Plan

Dear Mr. Perros:

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Laura Hocking, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Laura Hocking at (805) 654-2443.

Sincerely,



Tricia Maier, Manager
Planning Programs Section

Attachments

County RMA Reference Number 14-019





City of Santa Paula
Santa Paula West Business Park Specific Plan
EIR Scoping Meeting
 September 9, 2014

Please Sign In (print)

Name	Address	City/Zip Code	Phone	E-Mail Address
ILAN BENDER	957 FAULKNER RD, S.P	S P 93060	818 379 0916	ILAN@BENDERFARMS.COM
Rosa Rodriguez	957 Faulkner Rd Suite 112	Santa Paula 93060	805-331-0152	rosar@benderfarms.com
Tony Locucciatto	860 Hampshire Rd. Westlake	Westlake 91361	805 367-5720	tllocucciatto@ meridianconsultantsllc.com
CHRIS PENNER	860 HAMPSHIRE RD STE U	WESTLAKE VILLAGE 91361	805-373-8800	C.PENNER@PACKSTONEINC.COM
MIKE PENNER	" "	" "	" "	M.PENNER@PACKSTONEINC.COM
STEVEN LATTIMORE	1146 SAN ROAD	SANTA PAULA 93060	805 525 6088	LATTIMORE@ HUMNET.UCLA.EDU
Stratis Perros	200 S. 10th St. San	Santa Paula 93060	805-933-4214	sperros@spcity.org
SHAWN MCCARTHY	860 HAMPSHIRE RD WESTLAKE	91361	805 367 5700	smccarthy@ meridianconsultantsllc.com

APPENDIX 4.3

Air Quality and Greenhouse Gas Emissions Model Output

Santa Paula West
Ventura County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	187.37	1000sqft	4.30	187,373.00	0
General Light Industry	219.69	1000sqft	5.04	219,695.00	0
General Light Industry	276.11	1000sqft	6.34	276,105.00	0
Parking Lot	13.30	Acre	13.30	0.00	0
City Park	3.65	Acre	3.65	0.00	0
Regional Shopping Center	2.84	1000sqft	0.00	2,836.00	0
Regional Shopping Center	5.35	1000sqft	0.00	5,347.00	0
Regional Shopping Center	10.22	1000sqft	0.00	10,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on Traffic Study

Lot acreage for retail is 0 since it would be located within the general light industry building

Square feet is 0 for parking lot and city park since no architectural coating would be anticipated for those uses

Construction Phase - Construction Assumptions: Set to begin fall 2016

Trips and VMT -

Demolition - Office/Industrial/warehouse = 14,850 sq. ft.

Residential = 2,000 sq. ft.

1,178 tons of demo debris removed.

Grading - Approximately 99,000 cubic yards of during grading

Approximately 7,000 cubic yards of debris and material storage removal

Vehicle Trips - City park is associated with open space; no generated trips based on traffic study

Land Use Change - None

Construction Off-road Equipment Mitigation - Dust Control Mitigation

Mobile Land Use Mitigation -

Area Mitigation - ROG mitigation measures

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	75	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	35.00	70.00
tblConstructionPhase	PhaseEndDate	5/8/2019	3/20/2019
tblConstructionPhase	PhaseStartDate	1/31/2019	12/13/2018
tblGrading	MaterialExported	0.00	7,000.00
tblGrading	MaterialImported	0.00	99,000.00
tblLandUse	LandUseSquareFeet	187,370.00	187,373.00
tblLandUse	LandUseSquareFeet	219,690.00	219,695.00
tblLandUse	LandUseSquareFeet	276,110.00	276,105.00

tblLandUse	LandUseSquareFeet	579,348.00	0.00
tblLandUse	LandUseSquareFeet	158,994.00	0.00
tblLandUse	LandUseSquareFeet	10,220.00	10,222.00
tblLandUse	LandUseSquareFeet	2,840.00	2,836.00
tblLandUse	LandUseSquareFeet	5,350.00	5,347.00
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.3342	4.3299	3.1300	6.2300e-003	0.5118	0.1549	0.6666	0.2145	0.1429	0.3574	0.0000	573.6826	573.6826	0.0613	0.0000	574.9698
2017	0.6701	5.3504	5.7817	0.0111	0.6789	0.2641	0.9430	0.2093	0.2473	0.4566	0.0000	937.4826	937.4826	0.0960	0.0000	939.4984
2018	2.0767	4.3006	5.1246	0.0101	0.3892	0.2129	0.6021	0.1052	0.1997	0.3049	0.0000	830.1042	830.1042	0.0894	0.0000	831.9812
2019	6.6590	0.2225	0.2691	5.0000e-004	0.0149	0.0127	0.0276	3.9500e-003	0.0120	0.0159	0.0000	41.0873	41.0873	8.1300e-003	0.0000	41.2581
Total	9.7400	14.2034	14.3054	0.0280	1.5948	0.6446	2.2393	0.5329	0.6019	1.1348	0.0000	2,382.3568	2,382.3568	0.2548	0.0000	2,387.7075

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.5536	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135
Energy	0.0799	0.7266	0.6103	4.3600e-003		0.0552	0.0552		0.0552	0.0552	0.0000	2,664.7868	2,664.7868	0.1013	0.0323	2,676.9337
Mobile	1.4931	2.9528	14.4685	0.0621	4.4504	0.0662	4.5166	1.1883	0.0612	1.2495	0.0000	4,006.2633	4,006.2633	0.1131	0.0000	4,008.6392
Waste						0.0000	0.0000		0.0000	0.0000	175.9465	0.0000	175.9465	10.3981	0.0000	394.3074
Water						0.0000	0.0000		0.0000	0.0000	50.5534	610.2383	660.7917	5.2204	0.1284	810.2250
Total	5.1266	3.6794	15.0853	0.0664	4.4504	0.1215	4.5719	1.1883	0.1164	1.3047	226.4999	7,281.3012	7,507.8011	15.8330	0.1607	7,890.1188

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.3487	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135
Energy	0.0717	0.6522	0.5478	3.9100e-003		0.0496	0.0496		0.0496	0.0496	0.0000	2,171.4152	2,171.4152	0.0808	0.0269	2,181.4553
Mobile	1.4514	2.6979	13.4017	0.0555	3.9653	0.0599	4.0252	1.0588	0.0553	1.1141	0.0000	3,582.8470	3,582.8470	0.1019	0.0000	3,584.9861
Waste						0.0000	0.0000		0.0000	0.0000	87.9732	0.0000	87.9732	5.1991	0.0000	197.1537
Water						0.0000	0.0000		0.0000	0.0000	40.4427	471.7041	512.1468	4.1755	0.1026	631.6289
Total	4.8719	3.3501	13.9561	0.0594	3.9653	0.1095	4.0748	1.0588	0.1049	1.1637	128.4159	6,225.9790	6,354.3949	9.5573	0.1295	6,595.2376

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.97	8.95	7.49	10.55	10.90	9.87	10.87	10.90	9.89	10.81	43.30	14.49	15.36	39.64	19.44	16.41

2.3 Vegetation

Vegetation

	CO2e
Category	MT
Vegetation Land Change	0.0000
Total	0.0000

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2016	10/12/2016	5	30	
2	Site Preparation	Site Preparation	10/13/2016	11/9/2016	5	20	
3	Grading	Grading	11/10/2016	1/11/2017	5	45	
4	Building Construction	Building Construction	1/12/2017	12/12/2018	5	500	
5	Paving	Paving	12/13/2018	1/30/2019	5	35	
6	Architectural Coating	Architectural Coating	12/13/2018	3/20/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,052,367; Non-Residential Outdoor: 350,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	116.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	293.00	115.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0128	0.0000	0.0128	1.9300e-003	0.0000	1.9300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0643	0.6848	0.5255	6.0000e-004		0.0344	0.0344		0.0321	0.0321	0.0000	55.6460	55.6460	0.0151	0.0000	55.9638
Total	0.0643	0.6848	0.5255	6.0000e-004	0.0128	0.0344	0.0471	1.9300e-003	0.0321	0.0340	0.0000	55.6460	55.6460	0.0151	0.0000	55.9638

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0178	0.0130	4.0000e-005	9.9000e-004	2.6000e-004	1.2500e-003	2.7000e-004	2.4000e-004	5.1000e-004	0.0000	3.8228	3.8228	2.0000e-005	0.0000	3.8233
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	9.5000e-004	9.5400e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.6024	1.6024	8.0000e-005	0.0000	1.6041
Total	1.7900e-003	0.0187	0.0225	6.0000e-005	2.8000e-003	2.7000e-004	3.0800e-003	7.5000e-004	2.5000e-004	1.0100e-003	0.0000	5.4252	5.4252	1.0000e-004	0.0000	5.4274

3.2 Demolition - 2016**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.7300e-003	0.0000	4.7300e-003	7.2000e-004	0.0000	7.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0142	0.2814	0.3790	6.0000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	55.6460	55.6460	0.0151	0.0000	55.9638
Total	0.0142	0.2814	0.3790	6.0000e-004	4.7300e-003	0.0132	0.0180	7.2000e-004	0.0132	0.0139	0.0000	55.6460	55.6460	0.0151	0.0000	55.9638

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-003	0.0178	0.0130	4.0000e-005	9.9000e-004	2.6000e-004	1.2500e-003	2.7000e-004	2.4000e-004	5.1000e-004	0.0000	3.8228	3.8228	2.0000e-005	0.0000	3.8233
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	9.5000e-004	9.5400e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8300e-003	4.8000e-004	1.0000e-005	5.0000e-004	0.0000	1.6024	1.6024	8.0000e-005	0.0000	1.6041
Total	1.7900e-003	0.0187	0.0225	6.0000e-005	2.8000e-003	2.7000e-004	3.0800e-003	7.5000e-004	2.5000e-004	1.0100e-003	0.0000	5.4252	5.4252	1.0000e-004	0.0000	5.4274

3.3 Site Preparation - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1812	0.0000	0.1812	0.0994	0.0000	0.0994	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0508	0.5463	0.4111	3.9000e-004		0.0294	0.0294		0.0270	0.0270	0.0000	36.8771	36.8771	0.0111	0.0000	37.1107
Total	0.0508	0.5463	0.4111	3.9000e-004	0.1812	0.0294	0.2105	0.0994	0.0270	0.1264	0.0000	36.8771	36.8771	0.0111	0.0000	37.1107

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5600e-003	0.1341	0.0981	3.2000e-004	7.4600e-003	1.9400e-003	9.4000e-003	2.0400e-003	1.7800e-003	3.8300e-003	0.0000	28.8358	28.8358	1.8000e-004	0.0000	28.8396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	7.6000e-004	7.6300e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2819	1.2819	7.0000e-005	0.0000	1.2833
Total	8.2000e-003	0.1349	0.1057	3.4000e-004	8.9100e-003	1.9500e-003	0.0109	2.4300e-003	1.7900e-003	4.2300e-003	0.0000	30.1177	30.1177	2.5000e-004	0.0000	30.1229

3.3 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0671	0.0000	0.0671	0.0368	0.0000	0.0368	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5100e-003	0.1946	0.2340	3.9000e-004		9.6100e-003	9.6100e-003		9.6100e-003	9.6100e-003	0.0000	36.8771	36.8771	0.0111	0.0000	37.1107
Total	9.5100e-003	0.1946	0.2340	3.9000e-004	0.0671	9.6100e-003	0.0767	0.0368	9.6100e-003	0.0464	0.0000	36.8771	36.8771	0.0111	0.0000	37.1107

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.5600e-003	0.1341	0.0981	3.2000e-004	7.4600e-003	1.9400e-003	9.4000e-003	2.0400e-003	1.7800e-003	3.8300e-003	0.0000	28.8358	28.8358	1.8000e-004	0.0000	28.8396
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.4000e-004	7.6000e-004	7.6300e-003	2.0000e-005	1.4500e-003	1.0000e-005	1.4600e-003	3.9000e-004	1.0000e-005	4.0000e-004	0.0000	1.2819	1.2819	7.0000e-005	0.0000	1.2833
Total	8.2000e-003	0.1349	0.1057	3.4000e-004	8.9100e-003	1.9500e-003	0.0109	2.4300e-003	1.7900e-003	4.2300e-003	0.0000	30.1177	30.1177	2.5000e-004	0.0000	30.1229

3.4 Grading - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2021	0.0000	0.2021	0.0820	0.0000	0.0820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1199	1.3841	0.9090	1.1400e-003		0.0663	0.0663		0.0610	0.0610	0.0000	107.6621	107.6621	0.0325	0.0000	108.3441
Total	0.1199	1.3841	0.9090	1.1400e-003	0.2021	0.0663	0.2684	0.0820	0.0610	0.1430	0.0000	107.6621	107.6621	0.0325	0.0000	108.3441

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0880	1.5595	1.1405	3.6700e-003	0.1010	0.0225	0.1236	0.0273	0.0207	0.0480	0.0000	335.3193	335.3193	2.0800e-003	0.0000	335.3630
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	1.5700e-003	0.0157	3.0000e-005	2.9800e-003	2.0000e-005	3.0100e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6351	2.6351	1.4000e-004	0.0000	2.6379
Total	0.0893	1.5611	1.1562	3.7000e-003	0.1040	0.0226	0.1266	0.0281	0.0208	0.0488	0.0000	337.9544	337.9544	2.2200e-003	0.0000	338.0009

3.4 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0749	0.0000	0.0749	0.0304	0.0000	0.0304	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.5509	0.7020	1.1400e-003		0.0245	0.0245		0.0245	0.0245	0.0000	107.6620	107.6620	0.0325	0.0000	108.3439
Total	0.0280	0.5509	0.7020	1.1400e-003	0.0749	0.0245	0.0994	0.0304	0.0245	0.0549	0.0000	107.6620	107.6620	0.0325	0.0000	108.3439

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0880	1.5595	1.1405	3.6700e-003	0.1010	0.0225	0.1236	0.0273	0.0207	0.0480	0.0000	335.3193	335.3193	2.0800e-003	0.0000	335.3630
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3100e-003	1.5700e-003	0.0157	3.0000e-005	2.9800e-003	2.0000e-005	3.0100e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.6351	2.6351	1.4000e-004	0.0000	2.6379
Total	0.0893	1.5611	1.1562	3.7000e-003	0.1040	0.0226	0.1266	0.0281	0.0208	0.0488	0.0000	337.9544	337.9544	2.2200e-003	0.0000	338.0009

3.4 Grading - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2021	0.0000	0.2021	0.0820	0.0000	0.0820	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0244	0.2784	0.1872	2.5000e-004		0.0133	0.0133		0.0122	0.0122	0.0000	22.9096	22.9096	7.0200e-003	0.0000	23.0570
Total	0.0244	0.2784	0.1872	2.5000e-004	0.2021	0.0133	0.2154	0.0820	0.0122	0.0942	0.0000	22.9096	22.9096	7.0200e-003	0.0000	23.0570

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0170	0.3015	0.2335	7.9000e-004	0.0846	4.1900e-003	0.0888	0.0213	3.8500e-003	0.0252	0.0000	71.2903	71.2903	4.2000e-004	0.0000	71.2991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.1000e-004	3.0400e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5476	0.5476	3.0000e-005	0.0000	0.5482
Total	0.0172	0.3018	0.2365	8.0000e-004	0.0853	4.1900e-003	0.0894	0.0215	3.8500e-003	0.0253	0.0000	71.8379	71.8379	4.5000e-004	0.0000	71.8473

3.4 Grading - 2017**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0749	0.0000	0.0749	0.0304	0.0000	0.0304	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1191	0.1518	2.5000e-004		5.2900e-003	5.2900e-003		5.2900e-003	5.2900e-003	0.0000	22.9095	22.9095	7.0200e-003	0.0000	23.0570
Total	6.0500e-003	0.1191	0.1518	2.5000e-004	0.0749	5.2900e-003	0.0802	0.0304	5.2900e-003	0.0357	0.0000	22.9095	22.9095	7.0200e-003	0.0000	23.0570

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0170	0.3015	0.2335	7.9000e-004	0.0846	4.1900e-003	0.0888	0.0213	3.8500e-003	0.0252	0.0000	71.2903	71.2903	4.2000e-004	0.0000	71.2991
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.1000e-004	3.0400e-003	1.0000e-005	6.5000e-004	0.0000	6.5000e-004	1.7000e-004	0.0000	1.8000e-004	0.0000	0.5476	0.5476	3.0000e-005	0.0000	0.5482
Total	0.0172	0.3018	0.2365	8.0000e-004	0.0853	4.1900e-003	0.0894	0.0215	3.8500e-003	0.0253	0.0000	71.8379	71.8379	4.5000e-004	0.0000	71.8473

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3909	3.3271	2.2843	3.3800e-003		0.2244	0.2244		0.2108	0.2108	0.0000	301.7437	301.7437	0.0743	0.0000	303.3032
Total	0.3909	3.3271	2.2843	3.3800e-003		0.2244	0.2244		0.2108	0.2108	0.0000	301.7437	301.7437	0.0743	0.0000	303.3032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1201	1.3023	1.6687	3.2200e-003	0.0939	0.0200	0.1138	0.0267	0.0184	0.0451	0.0000	288.2774	288.2774	1.8400e-003	0.0000	288.3160
Worker	0.1174	0.1409	1.4049	3.4600e-003	0.2977	2.2600e-003	0.2999	0.0791	2.0900e-003	0.0812	0.0000	252.7141	252.7141	0.0124	0.0000	252.9749
Total	0.2375	1.4432	3.0737	6.6800e-003	0.3915	0.0222	0.4138	0.1058	0.0205	0.1263	0.0000	540.9914	540.9914	0.0143	0.0000	541.2909

3.5 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0846	1.7859	2.2448	3.3800e-003		0.1136	0.1136		0.1136	0.1136	0.0000	301.7433	301.7433	0.0743	0.0000	303.3029
Total	0.0846	1.7859	2.2448	3.3800e-003		0.1136	0.1136		0.1136	0.1136	0.0000	301.7433	301.7433	0.0743	0.0000	303.3029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1201	1.3023	1.6687	3.2200e-003	0.0939	0.0200	0.1138	0.0267	0.0184	0.0451	0.0000	288.2774	288.2774	1.8400e-003	0.0000	288.3160
Worker	0.1174	0.1409	1.4049	3.4600e-003	0.2977	2.2600e-003	0.2999	0.0791	2.0900e-003	0.0812	0.0000	252.7141	252.7141	0.0124	0.0000	252.9749
Total	0.2375	1.4432	3.0737	6.6800e-003	0.3915	0.0222	0.4138	0.1058	0.0205	0.1263	0.0000	540.9914	540.9914	0.0143	0.0000	541.2909

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3309	2.8843	2.1741	3.3200e-003		0.1853	0.1853		0.1742	0.1742	0.0000	293.5944	293.5944	0.0719	0.0000	295.1032
Total	0.3309	2.8843	2.1741	3.3200e-003		0.1853	0.1853		0.1742	0.1742	0.0000	293.5944	293.5944	0.0719	0.0000	295.1032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1106	1.1643	1.5757	3.1700e-003	0.0924	0.0183	0.1107	0.0263	0.0169	0.0432	0.0000	279.0586	279.0586	1.7800e-003	0.0000	279.0960
Worker	0.1052	0.1257	1.2520	3.4100e-003	0.2930	2.1800e-003	0.2951	0.0778	2.0200e-003	0.0798	0.0000	239.3828	239.3828	0.0113	0.0000	239.6204
Total	0.2158	1.2900	2.8277	6.5800e-003	0.3853	0.0205	0.4059	0.1041	0.0189	0.1230	0.0000	518.4414	518.4414	0.0131	0.0000	518.7164

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0832	1.7576	2.2091	3.3200e-003		0.1118	0.1118		0.1118	0.1118	0.0000	293.5941	293.5941	0.0719	0.0000	295.1029
Total	0.0832	1.7576	2.2091	3.3200e-003		0.1118	0.1118		0.1118	0.1118	0.0000	293.5941	293.5941	0.0719	0.0000	295.1029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1106	1.1643	1.5757	3.1700e-003	0.0924	0.0183	0.1107	0.0263	0.0169	0.0432	0.0000	279.0586	279.0586	1.7800e-003	0.0000	279.0960
Worker	0.1052	0.1257	1.2520	3.4100e-003	0.2930	2.1800e-003	0.2951	0.0778	2.0200e-003	0.0798	0.0000	239.3828	239.3828	0.0113	0.0000	239.6204
Total	0.2158	1.2900	2.8277	6.5800e-003	0.3853	0.0205	0.4059	0.1041	0.0189	0.1230	0.0000	518.4414	518.4414	0.0131	0.0000	518.7164

3.6 Paving - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0105	0.1116	0.0942	1.5000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	13.2397	13.2397	4.1200e-003	0.0000	13.3262
Paving	6.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0169	0.1116	0.0942	1.5000e-004		6.1000e-003	6.1000e-003		5.6100e-003	5.6100e-003	0.0000	13.2397	13.2397	4.1200e-003	0.0000	13.3262

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	3.4000e-004	3.3600e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6424	0.6424	3.0000e-005	0.0000	0.6430
Total	2.8000e-004	3.4000e-004	3.3600e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6424	0.6424	3.0000e-005	0.0000	0.6430

3.6 Paving - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5700e-003	0.0719	0.1100	1.5000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	13.2397	13.2397	4.1200e-003	0.0000	13.3262
Paving	6.4700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0100	0.0719	0.1100	1.5000e-004		3.8900e-003	3.8900e-003		3.8900e-003	3.8900e-003	0.0000	13.2397	13.2397	4.1200e-003	0.0000	13.3262

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	3.4000e-004	3.3600e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6424	0.6424	3.0000e-005	0.0000	0.6430
Total	2.8000e-004	3.4000e-004	3.3600e-003	1.0000e-005	7.9000e-004	1.0000e-005	7.9000e-004	2.1000e-004	1.0000e-005	2.1000e-004	0.0000	0.6424	0.6424	3.0000e-005	0.0000	0.6430

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1643	0.1580	2.5000e-004		8.9000e-003	8.9000e-003		8.1900e-003	8.1900e-003	0.0000	22.0434	22.0434	6.9700e-003	0.0000	22.1899
Paving	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0266	0.1643	0.1580	2.5000e-004		8.9000e-003	8.9000e-003		8.1900e-003	8.1900e-003	0.0000	22.0434	22.0434	6.9700e-003	0.0000	22.1899

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	5.2000e-004	5.2400e-003	2.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0515	1.0515	5.0000e-005	0.0000	1.0525
Total	4.4000e-004	5.2000e-004	5.2400e-003	2.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0515	1.0515	5.0000e-005	0.0000	1.0525

3.6 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.0400e-003	0.1217	0.1862	2.5000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003	0.0000	22.0434	22.0434	6.9700e-003	0.0000	22.1899
Paving	0.0110					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0170	0.1217	0.1862	2.5000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003	0.0000	22.0434	22.0434	6.9700e-003	0.0000	22.1899

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	5.2000e-004	5.2400e-003	2.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0515	1.0515	5.0000e-005	0.0000	1.0525
Total	4.4000e-004	5.2000e-004	5.2400e-003	2.0000e-005	1.3300e-003	1.0000e-005	1.3400e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.0515	1.0515	5.0000e-005	0.0000	1.0525

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9400e-003	0.0130	0.0121	2.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.6596	1.6596	1.6000e-004	0.0000	1.6629
Total	1.5117	0.0130	0.0121	2.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004	0.0000	1.6596	1.6596	1.6000e-004	0.0000	1.6629

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	1.3300e-003	0.0132	4.0000e-005	3.0900e-003	2.0000e-005	3.1200e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.5268	2.5268	1.2000e-004	0.0000	2.5293
Total	1.1100e-003	1.3300e-003	0.0132	4.0000e-005	3.0900e-003	2.0000e-005	3.1200e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.5268	2.5268	1.2000e-004	0.0000	2.5293

3.7 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.5098					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.9000e-004	8.8200e-003	0.0119	2.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	1.6596	1.6596	1.6000e-004	0.0000	1.6629
Total	1.5102	8.8200e-003	0.0119	2.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	1.6596	1.6596	1.6000e-004	0.0000	1.6629

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1100e-003	1.3300e-003	0.0132	4.0000e-005	3.0900e-003	2.0000e-005	3.1200e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.5268	2.5268	1.2000e-004	0.0000	2.5293
Total	1.1100e-003	1.3300e-003	0.0132	4.0000e-005	3.0900e-003	2.0000e-005	3.1200e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.5268	2.5268	1.2000e-004	0.0000	2.5293

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.6198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5900e-003	0.0523	0.0525	8.0000e-005		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	7.2768	7.2768	6.1000e-004	0.0000	7.2897
Total	6.6274	0.0523	0.0525	8.0000e-005		3.6700e-003	3.6700e-003		3.6700e-003	3.6700e-003	0.0000	7.2768	7.2768	6.1000e-004	0.0000	7.2897

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5200e-003	5.3500e-003	0.0534	1.6000e-004	0.0136	1.0000e-004	0.0137	3.6000e-003	9.0000e-005	3.6900e-003	0.0000	10.7156	10.7156	4.9000e-004	0.0000	10.7260
Total	4.5200e-003	5.3500e-003	0.0534	1.6000e-004	0.0136	1.0000e-004	0.0137	3.6000e-003	9.0000e-005	3.6900e-003	0.0000	10.7156	10.7156	4.9000e-004	0.0000	10.7260

3.7 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.6198					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.6900e-003	0.0387	0.0522	8.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	7.2768	7.2768	6.1000e-004	0.0000	7.2897
Total	6.6215	0.0387	0.0522	8.0000e-005		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	7.2768	7.2768	6.1000e-004	0.0000	7.2897

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.5200e-003	5.3500e-003	0.0534	1.6000e-004	0.0136	1.0000e-004	0.0137	3.6000e-003	9.0000e-005	3.6900e-003	0.0000	10.7156	10.7156	4.9000e-004	0.0000	10.7260
Total	4.5200e-003	5.3500e-003	0.0534	1.6000e-004	0.0136	1.0000e-004	0.0137	3.6000e-003	9.0000e-005	3.6900e-003	0.0000	10.7156	10.7156	4.9000e-004	0.0000	10.7260

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4514	2.6979	13.4017	0.0555	3.9653	0.0599	4.0252	1.0588	0.0553	1.1141	0.0000	3,582.8470	3,582.8470	0.1019	0.0000	3,584.9861
Unmitigated	1.4931	2.9528	14.4685	0.0621	4.4504	0.0662	4.5166	1.1883	0.0612	1.2495	0.0000	4,006.2633	4,006.2633	0.1131	0.0000	4,008.6392

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	1,305.97	247.33	127.41	2,879,716	2,565,827
General Light Industry	1,531.24	289.99	149.39	3,376,447	3,008,414
General Light Industry	1,924.49	364.47	187.75	4,243,573	3,781,024
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	121.27	121.27	71.68	200,200	178,378
Regional Shopping Center	228.45	228.45	135.03	377,137	336,029
Regional Shopping Center	436.39	436.39	257.95	720,437	641,910
Total	5,547.80	1,687.89	929.22	11,797,510	10,511,581

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462361	0.064329	0.187151	0.161808	0.068181	0.010152	0.013866	0.019623	0.000750	0.000701	0.004466	0.000287	0.006323

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,461.4503	1,461.4503	0.0672	0.0139	1,467.1697
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,873.8501	1,873.8501	0.0861	0.0178	1,881.1835
NaturalGas Mitigated	0.0717	0.6522	0.5478	3.9100e-003		0.0496	0.0496		0.0496	0.0496	0.0000	709.9648	709.9648	0.0136	0.0130	714.2856
NaturalGas Unmitigated	0.0799	0.7266	0.6103	4.3600e-003		0.0552	0.0552		0.0552	0.0552	0.0000	790.9367	790.9367	0.0152	0.0145	795.7502

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	4.05475e+006	0.0219	0.1988	0.1670	1.1900e-003		0.0151	0.0151		0.0151	0.0151	0.0000	216.3770	216.3770	4.1500e-003	3.9700e-003	217.6938
General Light Industry	4.7542e+006	0.0256	0.2331	0.1958	1.4000e-003		0.0177	0.0177		0.0177	0.0177	0.0000	253.7022	253.7022	4.8600e-003	4.6500e-003	255.2462
General Light Industry	5.97491e+006	0.0322	0.2929	0.2460	1.7600e-003		0.0223	0.0223		0.0223	0.0223	0.0000	318.8441	318.8441	6.1100e-003	5.8500e-003	320.7845
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10961.3	6.0000e-005	5.4000e-004	4.5000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5849	0.5849	1.0000e-005	1.0000e-005	0.5885
Regional Shopping Center	20955.1	1.1000e-004	1.0300e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1182	1.1182	2.0000e-005	2.0000e-005	1.1251
Regional Shopping Center	5813.8	3.0000e-005	2.8000e-004	2.4000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.3103	0.3103	1.0000e-005	1.0000e-005	0.3121
Total		0.0799	0.7266	0.6103	4.3600e-003		0.0552	0.0552		0.0552	0.0552	0.0000	790.9367	790.9367	0.0152	0.0145	795.7502

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	3.63935e+006	0.0196	0.1784	0.1499	1.0700e-003		0.0136	0.0136		0.0136	0.0136	0.0000	194.2094	194.2094	3.7200e-003	3.5600e-003	195.3913
General Light Industry	4.26714e+006	0.0230	0.2092	0.1757	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	227.7106	227.7106	4.3600e-003	4.1700e-003	229.0964
General Light Industry	5.36279e+006	0.0289	0.2629	0.2208	1.5800e-003		0.0200	0.0200		0.0200	0.0200	0.0000	286.1788	286.1788	5.4900e-003	5.2500e-003	287.9204
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	10159.3	5.0000e-005	5.0000e-004	4.2000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	0.5421	0.5421	1.0000e-005	1.0000e-005	0.5454
Regional Shopping Center	19421.8	1.0000e-004	9.5000e-004	8.0000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	1.0364	1.0364	2.0000e-005	2.0000e-005	1.0427
Regional Shopping Center	5388.4	3.0000e-005	2.6000e-004	2.2000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2876	0.2876	1.0000e-005	1.0000e-005	0.2893
Total		0.0717	0.6522	0.5478	3.9200e-003		0.0496	0.0496		0.0496	0.0496	0.0000	709.9649	709.9649	0.0136	0.0130	714.2856

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	1.73133e+006	495.4483	0.0228	4.7100e-003	497.3873
General Light Industry	2.02998e+006	580.9136	0.0267	5.5200e-003	583.1870
General Light Industry	2.55121e+006	730.0719	0.0336	6.9400e-003	732.9290
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	130842	37.4425	1.7200e-003	3.6000e-004	37.5891
Regional Shopping Center	36300.8	10.3881	4.8000e-004	1.0000e-004	10.4287
Regional Shopping Center	68441.6	19.5857	9.0000e-004	1.9000e-004	19.6624
Total		1,873.8501	0.0861	0.0178	1,881.1835

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Light Industry	1.35499e+006	387.7527	0.0178	3.6900e-003	389.2701
General Light Industry	1.58872e+006	454.6403	0.0209	4.3200e-003	456.4196
General Light Industry	1.99665e+006	571.3761	0.0263	5.4300e-003	573.6122
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	25674.3	7.3471	3.4000e-004	7.0000e-005	7.3759
Regional Shopping Center	48406.4	13.8523	6.4000e-004	1.3000e-004	13.9065
Regional Shopping Center	92539.8	26.4818	1.2200e-003	2.5000e-004	26.5855
Total		1,461.4503	0.0672	0.0139	1,467.1697

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.3487	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135
Unmitigated	3.5536	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8130					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.7400					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-004	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135
Total	3.5536	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.8130					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5352					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.0000e-004	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135
Total	3.3487	6.0000e-005	6.5700e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0128	0.0128	3.0000e-005	0.0000	0.0135

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	512.1468	4.1755	0.1026	631.6289
Unmitigated	660.7917	5.2204	0.1284	810.2250

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.34891	13.8265	6.4000e-004	1.3000e-004	13.8807
General Light Industry	157.983 / 0	638.7939	5.1749	0.1272	786.8845
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.36368 / 0.835801	8.1712	0.0448	1.1200e-003	9.4599
Total		660.7917	5.2204	0.1284	810.2250

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 3.47913	11.0612	5.1000e-004	1.1000e-004	11.1045
General Light Industry	126.386 / 0	494.6897	4.1392	0.1016	613.0982
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	1.09094 / 0.668641	6.3959	0.0358	9.0000e-004	7.4263
Total		512.1468	4.1755	0.1026	631.6289

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	87.9732	5.1991	0.0000	197.1537
Unmitigated	175.9465	10.3981	0.0000	394.3074

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.31	0.0629	3.7200e-003	0.0000	0.1410
General Light Industry	847.13	171.9597	10.1625	0.0000	385.3729
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	19.33	3.9238	0.2319	0.0000	8.7935
Total		175.9465	10.3981	0.0000	394.3074

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.155	0.0315	1.8600e-003	0.0000	0.0705
General Light Industry	423.565	85.9799	5.0813	0.0000	192.6864
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	9.665	1.9619	0.1160	0.0000	4.3968
Total		87.9732	5.1991	0.0000	197.1537

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	0.0000	0.0000	0.0000	0.0000

10.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Santa Paula West
Ventura County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	187.37	1000sqft	4.30	187,373.00	0
General Light Industry	219.69	1000sqft	5.04	219,695.00	0
General Light Industry	276.11	1000sqft	6.34	276,105.00	0
Parking Lot	13.30	Acre	13.30	0.00	0
City Park	3.65	Acre	3.65	0.00	0
Regional Shopping Center	2.84	1000sqft	0.00	2,836.00	0
Regional Shopping Center	5.35	1000sqft	0.00	5,347.00	0
Regional Shopping Center	10.22	1000sqft	0.00	10,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on Traffic Study

Lot acreage for retail is 0 since it would be located within the general light industry building

Square feet is 0 for parking lot and city park since no architectural coating would be anticipated for those uses

Construction Phase - Construction Assumptions: Set to begin fall 2016

Trips and VMT -

Demolition - Office/Industrial/warehouse = 14,850 sq. ft.

Residential = 2,000 sq. ft.

1,178 tons of demo debris removed.

Grading - Approximately 99,000 cubic yards of during grading

Approximately 7,000 cubic yards of debris and material storage removal

Vehicle Trips - City park is associated with open space; no generated trips based on traffic study

Land Use Change - None

Construction Off-road Equipment Mitigation - Dust Control Mitigation

Mobile Land Use Mitigation -

Area Mitigation - ROG mitigation measures

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	75	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	35.00	70.00
tblConstructionPhase	PhaseEndDate	5/8/2019	3/20/2019
tblConstructionPhase	PhaseStartDate	1/31/2019	12/13/2018
tblGrading	MaterialExported	0.00	7,000.00
tblGrading	MaterialImported	0.00	99,000.00
tblLandUse	LandUseSquareFeet	187,370.00	187,373.00
tblLandUse	LandUseSquareFeet	219,690.00	219,695.00
tblLandUse	LandUseSquareFeet	276,110.00	276,105.00

tblLandUse	LandUseSquareFeet	579,348.00	0.00
tblLandUse	LandUseSquareFeet	158,994.00	0.00
tblLandUse	LandUseSquareFeet	10,220.00	10,222.00
tblLandUse	LandUseSquareFeet	2,840.00	2,836.00
tblLandUse	LandUseSquareFeet	5,350.00	5,347.00
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	11.0240	155.6971	103.5001	0.2622	19.0221	4.8022	22.1554	10.1848	4.4177	13.0675	0.0000	26,578.77 20	26,578.77 20	2.0662	0.0000	26,622.16 12
2017	10.1764	141.9123	97.7143	0.2619	30.7322	4.3637	35.0958	9.1187	4.0144	13.1331	0.0000	26,136.73 46	26,136.73 46	2.0569	0.0000	26,179.93 04
2018	235.3954	33.2145	38.1653	0.0811	3.1638	1.6591	4.8229	0.8536	1.5565	2.4101	0.0000	7,316.852 5	7,316.852 5	0.7549	0.0000	7,332.705 8
2019	235.1625	16.9782	18.6113	0.0325	0.6079	0.9426	1.5505	0.1612	0.8775	1.0388	0.0000	3,032.152 6	3,032.152 6	0.7466	0.0000	3,047.831 7
Total	491.7582	347.8020	257.9909	0.6377	53.5259	11.7675	63.6246	20.3184	10.8661	29.6495	0.0000	63,064.51 17	63,064.51 17	5.6246	0.0000	63,182.62 90

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Energy	0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806
Mobile	10.5796	19.5630	99.2168	0.4570	32.2606	0.4705	32.7311	8.6011	0.4346	9.0358		32,440.1294	32,440.1294	0.8872		32,458.7596
Total	30.4925	23.5447	102.6339	0.4809	32.2606	0.7733	33.0339	8.6011	0.7375	9.3386		37,217.5933	37,217.5933	0.9791	0.0876	37,265.3060

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Energy	0.3931	3.5735	3.0018	0.0214		0.2716	0.2716		0.2716	0.2716		4,288.2317	4,288.2317	0.0822	0.0786	4,314.3291
Mobile	10.2789	17.8865	91.1187	0.4086	28.7442	0.4254	29.1695	7.6636	0.3930	8.0566		29,008.5632	29,008.5632	0.7986		29,025.3341
Total	29.0244	21.4607	94.1935	0.4301	28.7442	0.6972	29.4414	7.6636	0.6648	8.3284		33,296.9521	33,296.9521	0.8812	0.0786	33,339.8290

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.81	8.85	8.22	10.56	10.90	9.84	10.88	10.90	9.85	10.82	0.00	10.53	10.53	10.00	10.23	10.53

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2016	10/12/2016	5	30	
2	Site Preparation	Site Preparation	10/13/2016	11/9/2016	5	20	
3	Grading	Grading	11/10/2016	1/11/2017	5	45	
4	Building Construction	Building Construction	1/12/2017	12/12/2018	5	500	
5	Paving	Paving	12/13/2018	1/30/2019	5	35	
6	Architectural Coating	Architectural Coating	12/13/2018	3/20/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,052,367; Non-Residential Outdoor: 350,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	116.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	293.00	115.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8508	0.0000	0.8508	0.1288	0.0000	0.1288			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.284 1	4,089.284 1	1.1121		4,112.637 4
Total	4.2876	45.6559	35.0303	0.0399	0.8508	2.2921	3.1429	0.1288	2.1365	2.2654		4,089.284 1	4,089.284 1	1.1121		4,112.637 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0629	1.1362	0.7523	2.7900e-003	0.0671	0.0171	0.0842	0.0183	0.0157	0.0341		281.2147	281.2147	1.7300e-003		281.2511
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0534	0.0561	0.6446	1.4700e-003	0.1232	9.5000e-004	0.1242	0.0327	8.8000e-004	0.0336		122.7044	122.7044	6.0600e-003		122.8317
Total	0.1163	1.1924	1.3969	4.2600e-003	0.1903	0.0181	0.2083	0.0510	0.0166	0.0676		403.9192	403.9192	7.7900e-003		404.0828

3.2 Demolition - 2016**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3152	0.0000	0.3152	0.0477	0.0000	0.0477			0.0000			0.0000
Off-Road	0.9478	18.7614	25.2649	0.0399		0.8817	0.8817		0.8817	0.8817	0.0000	4,089.284 1	4,089.284 1	1.1121		4,112.637 4
Total	0.9478	18.7614	25.2649	0.0399	0.3152	0.8817	1.1969	0.0477	0.8817	0.9294	0.0000	4,089.284 1	4,089.284 1	1.1121		4,112.637 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0629	1.1362	0.7523	2.7900e-003	0.0671	0.0171	0.0842	0.0183	0.0157	0.0341		281.2147	281.2147	1.7300e-003		281.2511
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0534	0.0561	0.6446	1.4700e-003	0.1232	9.5000e-004	0.1242	0.0327	8.8000e-004	0.0336		122.7044	122.7044	6.0600e-003		122.8317
Total	0.1163	1.1924	1.3969	4.2600e-003	0.1903	0.0181	0.2083	0.0510	0.0166	0.0676		403.9192	403.9192	7.7900e-003		404.0828

3.3 Site Preparation - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.1154	0.0000	18.1154	9.9381	0.0000	9.9381			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	18.1154	2.9387	21.0541	9.9381	2.7036	12.6417		4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7117	12.8559	8.5119	0.0316	0.7587	0.1936	0.9523	0.2075	0.1780	0.3855		3,181.847 7	3,181.847 7	0.0196		3,182.258 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0640	0.0674	0.7735	1.7600e-003	0.1479	1.1400e-003	0.1490	0.0392	1.0500e-003	0.0403		147.2453	147.2453	7.2700e-003		147.3981
Total	0.7757	12.9233	9.2854	0.0333	0.9066	0.1947	1.1013	0.2467	0.1791	0.4258		3,329.093 0	3,329.093 0	0.0269		3,329.657 0

3.3 Site Preparation - 2016**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7118	0.0000	6.7118	3.6821	0.0000	3.6821			0.0000			0.0000
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	0.9515	19.4584	23.4003	0.0391	6.7118	0.9611	7.6728	3.6821	0.9611	4.6432	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.7117	12.8559	8.5119	0.0316	0.7587	0.1936	0.9523	0.2075	0.1780	0.3855		3,181.847 7	3,181.847 7	0.0196		3,182.258 9
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0640	0.0674	0.7735	1.7600e-003	0.1479	1.1400e-003	0.1490	0.0392	1.0500e-003	0.0403		147.2453	147.2453	7.2700e-003		147.3981
Total	0.7757	12.9233	9.2854	0.0333	0.9066	0.1947	1.1013	0.2467	0.1791	0.4258		3,329.093 0	3,329.093 0	0.0269		3,329.657 0

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9825	0.0000	8.9825	3.6433	0.0000	3.6433			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	8.9825	3.5842	12.5667	3.6433	3.2975	6.9408		6,414.9807	6,414.9807	1.9350		6,455.6154

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4734	80.8085	53.5032	0.1985	5.5553	1.2167	6.7720	1.4972	1.1190	2.6162		20,000.1854	20,000.1854	0.1231		20,002.7701
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0748	0.8595	1.9600e-003	0.1643	1.2700e-003	0.1656	0.0436	1.1700e-003	0.0448		163.6059	163.6059	8.0800e-003		163.7756
Total	4.5445	80.8833	54.3626	0.2005	5.7196	1.2179	6.9376	1.5407	1.1202	2.6609		20,163.7913	20,163.7913	0.1312		20,166.5457

3.4 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3280	0.0000	3.3280	1.3499	0.0000	1.3499			0.0000			0.0000
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154
Total	1.5128	29.7798	37.9432	0.0617	3.3280	1.3234	4.6514	1.3499	1.3234	2.6732	0.0000	6,414.9807	6,414.9807	1.9350		6,455.6154

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4734	80.8085	53.5032	0.1985	5.5553	1.2167	6.7720	1.4972	1.1190	2.6162		20,000.1854	20,000.1854	0.1231		20,002.7701
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0748	0.8595	1.9600e-003	0.1643	1.2700e-003	0.1656	0.0436	1.1700e-003	0.0448		163.6059	163.6059	8.0800e-003		163.7756
Total	4.5445	80.8833	54.3626	0.2005	5.7196	1.2179	6.9376	1.5407	1.1202	2.6609		20,163.7913	20,163.7913	0.1312		20,166.5457

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9825	0.0000	8.9825	3.6433	0.0000	3.6433			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	8.9825	3.3172	12.2997	3.6433	3.0518	6.6951		6,313.3690	6,313.3690	1.9344		6,353.9915

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0129	72.2530	50.1350	0.1982	21.5854	1.0452	22.6306	5.4319	0.9615	6.3933		19,666.1045	19,666.1045	0.1151		19,668.5220
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0673	0.7743	1.9600e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		157.2611	157.2611	7.4200e-003		157.4169
Total	4.0772	72.3203	50.9093	0.2002	21.7497	1.0465	22.7962	5.4754	0.9626	6.4380		19,823.3656	19,823.3656	0.1225		19,825.9389

3.4 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3280	0.0000	3.3280	1.3499	0.0000	1.3499			0.0000			0.0000
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	1.5128	29.7798	37.9432	0.0617	3.3280	1.3234	4.6514	1.3499	1.3234	2.6732	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0129	72.2530	50.1350	0.1982	21.5854	1.0452	22.6306	5.4319	0.9615	6.3933		19,666.1045	19,666.1045	0.1151		19,668.5220
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0643	0.0673	0.7743	1.9600e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		157.2611	157.2611	7.4200e-003		157.4169
Total	4.0772	72.3203	50.9093	0.2002	21.7497	1.0465	22.7962	5.4754	0.9626	6.4380		19,823.3656	19,823.3656	0.1225		19,825.9389

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8744	9.9679	10.8187	0.0256	0.7567	0.1577	0.9144	0.2151	0.1451	0.3602		2,530.6861	2,530.6861	0.0159		2,531.0190
Worker	0.9424	0.9859	11.3431	0.0287	2.4069	0.0180	2.4249	0.6384	0.0166	0.6550		2,303.8754	2,303.8754	0.1087		2,306.1575
Total	1.8168	10.9537	22.1618	0.0543	3.1636	0.1757	3.3393	0.8535	0.1616	1.0152		4,834.5615	4,834.5615	0.1245		4,837.1765

3.5 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8744	9.9679	10.8187	0.0256	0.7567	0.1577	0.9144	0.2151	0.1451	0.3602		2,530.6861	2,530.6861	0.0159		2,531.0190
Worker	0.9424	0.9859	11.3431	0.0287	2.4069	0.0180	2.4249	0.6384	0.0166	0.6550		2,303.8754	2,303.8754	0.1087		2,306.1575
Total	1.8168	10.9537	22.1618	0.0543	3.1636	0.1757	3.3393	0.8535	0.1616	1.0152		4,834.5615	4,834.5615	0.1245		4,837.1765

3.5 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8208	9.0598	10.3243	0.0256	0.7569	0.1472	0.9041	0.2152	0.1354	0.3506		2,489.2863	2,489.2863	0.0156		2,489.6138
Worker	0.8604	0.8939	10.3083	0.0287	2.4069	0.0176	2.4245	0.6384	0.0163	0.6547		2,217.6272	2,217.6272	0.1006		2,219.7403
Total	1.6811	9.9537	20.6326	0.0543	3.1638	0.1648	3.3286	0.8536	0.1517	1.0053		4,706.9135	4,706.9135	0.1162		4,709.3541

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8208	9.0598	10.3243	0.0256	0.7569	0.1472	0.9041	0.2152	0.1354	0.3506		2,489.2863	2,489.2863	0.0156		2,489.6138
Worker	0.8604	0.8939	10.3083	0.0287	2.4069	0.0176	2.4245	0.6384	0.0163	0.6547		2,217.6272	2,217.6272	0.1006		2,219.7403
Total	1.6811	9.9537	20.6326	0.0543	3.1638	0.1648	3.3286	0.8536	0.1517	1.0053		4,706.9135	4,706.9135	0.1162		4,709.3541

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.6070	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0441	0.0458	0.5277	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		113.5304	113.5304	5.1500e-003		113.6386
Total	0.0441	0.0458	0.5277	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		113.5304	113.5304	5.1500e-003		113.6386

3.6 Paving - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5446	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0441	0.0458	0.5277	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		113.5304	113.5304	5.1500e-003		113.6386
Total	0.0441	0.0458	0.5277	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		113.5304	113.5304	5.1500e-003		113.6386

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.4215	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0421	0.4875	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		109.8104	109.8104	4.8600e-003		109.9124
Total	0.0410	0.0421	0.4875	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		109.8104	109.8104	4.8600e-003		109.9124

3.6 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5446	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0410	0.0421	0.4875	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		109.8104	109.8104	4.8600e-003		109.9124
Total	0.0410	0.0421	0.4875	1.4700e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		109.8104	109.8104	4.8600e-003		109.9124

3.7 Architectural Coating - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	232.5711	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1733	0.1800	2.0757	5.7700e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		446.5529	446.5529	0.0203		446.9784
Total	0.1733	0.1800	2.0757	5.7700e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		446.5529	446.5529	0.0203		446.9784

3.7 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4485	281.4485	0.0267		282.0102
Total	232.3319	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1733	0.1800	2.0757	5.7700e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		446.5529	446.5529	0.0203		446.9784
Total	0.1733	0.1800	2.0757	5.7700e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		446.5529	446.5529	0.0203		446.9784

3.7 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	232.5389	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1612	0.1654	1.9174	5.7900e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		431.9210	431.9210	0.0191		432.3221
Total	0.1612	0.1654	1.9174	5.7900e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		431.9210	431.9210	0.0191		432.3221

3.7 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0238		281.9473
Total	232.3319	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0238		281.9473

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1612	0.1654	1.9174	5.7900e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		431.9210	431.9210	0.0191		432.3221
Total	0.1612	0.1654	1.9174	5.7900e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		431.9210	431.9210	0.0191		432.3221

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.2789	17.8865	91.1187	0.4086	28.7442	0.4254	29.1695	7.6636	0.3930	8.0566		29,008.56 32	29,008.56 32	0.7986		29,025.33 41
Unmitigated	10.5796	19.5630	99.2168	0.4570	32.2606	0.4705	32.7311	8.6011	0.4346	9.0358		32,440.12 94	32,440.12 94	0.8872		32,458.75 96

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	1,305.97	247.33	127.41	2,879,716	2,565,827
General Light Industry	1,531.24	289.99	149.39	3,376,447	3,008,414
General Light Industry	1,924.49	364.47	187.75	4,243,573	3,781,024
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	121.27	121.27	71.68	200,200	178,378
Regional Shopping Center	228.45	228.45	135.03	377,137	336,029
Regional Shopping Center	436.39	436.39	257.95	720,437	641,910
Total	5,547.80	1,687.89	929.22	11,797,510	10,511,581

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462361	0.064329	0.187151	0.161808	0.068181	0.010152	0.013866	0.019623	0.000750	0.000701	0.004466	0.000287	0.006323

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3931	3.5735	3.0018	0.0214		0.2716	0.2716		0.2716	0.2716		4,288.2317	4,288.2317	0.0822	0.0786	4,314.3291
NaturalGas Unmitigated	0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	lb/day										lb/day						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	11108.9	0.1198	1.0891	0.9149	6.5300e-003		0.0828	0.0828		0.0828	0.0828		1,306.9305	1,306.9305	0.0251	0.0240	1,314.8842	
General Light Industry	13025.2	0.1405	1.2770	1.0727	7.6600e-003		0.0971	0.0971		0.0971	0.0971		1,532.3771	1,532.3771	0.0294	0.0281	1,541.7028	
General Light Industry	16369.6	0.1765	1.6049	1.3481	9.6300e-003		0.1220	0.1220		0.1220	0.1220		1,925.8379	1,925.8379	0.0369	0.0353	1,937.5583	
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	15.9282	1.7000e-004	1.5600e-003	1.3100e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8739	1.8739	4.0000e-005	3.0000e-005	1.8853	
Regional Shopping Center	30.0311	3.2000e-004	2.9400e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		3.5331	3.5331	7.0000e-005	6.0000e-005	3.5546	
Regional Shopping Center	57.4112	6.2000e-004	5.6300e-003	4.7300e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.7543	6.7543	1.3000e-004	1.2000e-004	6.7954	
Total		0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806	

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	11.6908	0.1261	1.1462	0.9628	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.3863	1,375.3863	0.0264	0.0252	1,383.7567
General Light Industry	14.6926	0.1585	1.4405	1.2100	8.6400e-003		0.1095	0.1095		0.1095	0.1095		1,728.5374	1,728.5374	0.0331	0.0317	1,739.0570
General Light Industry	9.97081	0.1075	0.9775	0.8211	5.8700e-003		0.0743	0.0743		0.0743	0.0743		1,173.0365	1,173.0365	0.0225	0.0215	1,180.1754
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0147627	1.6000e-004	1.4500e-003	1.2200e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		1.7368	1.7368	3.0000e-005	3.0000e-005	1.7474
Regional Shopping Center	0.0278337	3.0000e-004	2.7300e-003	2.2900e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.2746	3.2746	6.0000e-005	6.0000e-005	3.2945
Regional Shopping Center	0.0532104	5.7000e-004	5.2200e-003	4.3800e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		6.2601	6.2601	1.2000e-004	1.1000e-004	6.2982
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.3931	3.5735	3.0018	0.0215		0.2716	0.2716		0.2716	0.2716		4,288.2316	4,288.2316	0.0822	0.0786	4,314.3291

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Unmitigated	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.0138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6800e-003	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Total	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8912					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6800e-003	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Total	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy
Install Low Flow Bathroom Faucet
Install Low Flow Kitchen Faucet
Install Low Flow Toilet
Install Low Flow Shower
Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Santa Paula West
Ventura County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	187.37	1000sqft	4.30	187,373.00	0
General Light Industry	219.69	1000sqft	5.04	219,695.00	0
General Light Industry	276.11	1000sqft	6.34	276,105.00	0
Parking Lot	13.30	Acre	13.30	0.00	0
City Park	3.65	Acre	3.65	0.00	0
Regional Shopping Center	2.84	1000sqft	0.00	2,836.00	0
Regional Shopping Center	5.35	1000sqft	0.00	5,347.00	0
Regional Shopping Center	10.22	1000sqft	0.00	10,222.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on Traffic Study

Lot acreage for retail is 0 since it would be located within the general light industry building

Square feet is 0 for parking lot and city park since no architectural coating would be anticipated for those uses

Construction Phase - Construction Assumptions: Set to begin fall 2016

Trips and VMT -

Demolition - Office/Industrial/warehouse = 14,850 sq. ft.

Residential = 2,000 sq. ft.

1,178 tons of demo debris removed.

Grading - Approximately 99,000 cubic yards of during grading

Approximately 7,000 cubic yards of debris and material storage removal

Vehicle Trips - City park is associated with open space; no generated trips based on traffic study

Land Use Change - None

Construction Off-road Equipment Mitigation - Dust Control Mitigation

Mobile Land Use Mitigation -

Area Mitigation - ROG mitigation measures

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	75	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	35.00	70.00
tblConstructionPhase	PhaseEndDate	5/8/2019	3/20/2019
tblConstructionPhase	PhaseStartDate	1/31/2019	12/13/2018
tblGrading	MaterialExported	0.00	7,000.00
tblGrading	MaterialImported	0.00	99,000.00
tblLandUse	LandUseSquareFeet	187,370.00	187,373.00
tblLandUse	LandUseSquareFeet	219,690.00	219,695.00
tblLandUse	LandUseSquareFeet	276,110.00	276,105.00

tblLandUse	LandUseSquareFeet	579,348.00	0.00
tblLandUse	LandUseSquareFeet	158,994.00	0.00
tblLandUse	LandUseSquareFeet	10,220.00	10,222.00
tblLandUse	LandUseSquareFeet	2,840.00	2,836.00
tblLandUse	LandUseSquareFeet	5,350.00	5,347.00
tblLandUse	LotAcreage	0.23	0.00
tblLandUse	LotAcreage	0.07	0.00
tblLandUse	LotAcreage	0.12	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	1.59	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	1.59	0.00
tblVehicleTrips	WD_TR	1.59	0.00
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	11.5917	158.6942	118.3900	0.2618	19.0221	4.8062	22.1561	10.1848	4.4214	13.0681	0.0000	26,522.38 62	26,522.38 62	2.0681	0.0000	26,565.81 57
2017	10.6424	144.5933	112.7202	0.2615	30.7322	4.3670	35.0991	9.1187	4.0175	13.1362	0.0000	26,081.37 82	26,081.37 82	2.0589	0.0000	26,124.61 49
2018	235.4107	33.6240	42.4962	0.0795	3.1638	1.6608	4.8246	0.8536	1.5580	2.4116	0.0000	7,189.865 7	7,189.865 7	0.7555	0.0000	7,205.730 7
2019	235.1763	17.0137	18.5961	0.0322	0.6079	0.9426	1.5505	0.1612	0.8775	1.0388	0.0000	3,006.095 0	3,006.095 0	0.7466	0.0000	3,021.774 1
Total	492.8211	353.9253	292.2026	0.6351	53.5259	11.7766	63.6303	20.3184	10.8745	29.6547	0.0000	62,799.72 51	62,799.72 51	5.6291	0.0000	62,917.93 54

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Energy	0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806
Mobile	11.2615	21.1869	108.1176	0.4391	32.2606	0.4718	32.7324	8.6011	0.4359	9.0370		31,249.8149	31,249.8149	0.8883		31,268.4696
Total	31.1744	25.1686	111.5347	0.4630	32.2606	0.7747	33.0352	8.6011	0.7387	9.3398		36,027.2788	36,027.2788	0.9803	0.0876	36,075.0159

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Energy	0.3931	3.5735	3.0018	0.0214		0.2716	0.2716		0.2716	0.2716		4,288.2317	4,288.2317	0.0822	0.0786	4,314.3291
Mobile	10.9651	19.3558	100.5670	0.3927	28.7442	0.4267	29.1709	7.6636	0.3942	8.0578		27,944.4362	27,944.4362	0.7998		27,961.2316
Total	29.7106	22.9300	103.6417	0.4142	28.7442	0.6986	29.4427	7.6636	0.6661	8.3297		32,232.8251	32,232.8251	0.8824	0.0786	32,275.7265

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.70	8.89	7.08	10.55	10.90	9.82	10.87	10.90	9.83	10.82	0.00	10.53	10.53	9.99	10.23	10.53

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2016	10/12/2016	5	30	
2	Site Preparation	Site Preparation	10/13/2016	11/9/2016	5	20	
3	Grading	Grading	11/10/2016	1/11/2017	5	45	
4	Building Construction	Building Construction	1/12/2017	12/12/2018	5	500	
5	Paving	Paving	12/13/2018	1/30/2019	5	35	
6	Architectural Coating	Architectural Coating	12/13/2018	3/20/2019	5	70	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,052,367; Non-Residential Outdoor: 350,789 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	116.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	875.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	293.00	115.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8508	0.0000	0.8508	0.1288	0.0000	0.1288			0.0000			0.0000
Off-Road	4.2876	45.6559	35.0303	0.0399		2.2921	2.2921		2.1365	2.1365		4,089.284 1	4,089.284 1	1.1121		4,112.637 4
Total	4.2876	45.6559	35.0303	0.0399	0.8508	2.2921	3.1429	0.1288	2.1365	2.2654		4,089.284 1	4,089.284 1	1.1121		4,112.637 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0708	1.1782	0.9615	2.7900e-003	0.0671	0.0172	0.0842	0.0183	0.0158	0.0341		280.5322	280.5322	1.7600e-003		280.5692
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0575	0.0657	0.6510	1.4000e-003	0.1232	9.5000e-004	0.1242	0.0327	8.8000e-004	0.0336		116.8194	116.8194	6.0600e-003		116.9467
Total	0.1283	1.2439	1.6125	4.1900e-003	0.1903	0.0181	0.2084	0.0510	0.0167	0.0677		397.3516	397.3516	7.8200e-003		397.5158

3.2 Demolition - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3152	0.0000	0.3152	0.0477	0.0000	0.0477			0.0000			0.0000
Off-Road	0.9478	18.7614	25.2649	0.0399		0.8817	0.8817		0.8817	0.8817	0.0000	4,089.284 1	4,089.284 1	1.1121		4,112.637 4
Total	0.9478	18.7614	25.2649	0.0399	0.3152	0.8817	1.1969	0.0477	0.8817	0.9294	0.0000	4,089.284 1	4,089.284 1	1.1121		4,112.637 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0708	1.1782	0.9615	2.7900e-003	0.0671	0.0172	0.0842	0.0183	0.0158	0.0341		280.5322	280.5322	1.7600e-003		280.5692
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0575	0.0657	0.6510	1.4000e-003	0.1232	9.5000e-004	0.1242	0.0327	8.8000e-004	0.0336		116.8194	116.8194	6.0600e-003		116.9467
Total	0.1283	1.2439	1.6125	4.1900e-003	0.1903	0.0181	0.2084	0.0510	0.0167	0.0677		397.3516	397.3516	7.8200e-003		397.5158

3.3 Site Preparation - 2016**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.1154	0.0000	18.1154	9.9381	0.0000	9.9381			0.0000			0.0000
Off-Road	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	5.0771	54.6323	41.1053	0.0391	18.1154	2.9387	21.0541	9.9381	2.7036	12.6417		4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8011	13.3307	10.8794	0.0315	0.7587	0.1942	0.9529	0.2075	0.1786	0.3861		3,174.125 6	3,174.125 6	0.0199		3,174.543 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0691	0.0788	0.7812	1.6800e-003	0.1479	1.1400e-003	0.1490	0.0392	1.0500e-003	0.0403		140.1833	140.1833	7.2700e-003		140.3360
Total	0.8702	13.4095	11.6606	0.0332	0.9066	0.1953	1.1020	0.2467	0.1797	0.4264		3,314.308 8	3,314.308 8	0.0272		3,314.879 2

3.3 Site Preparation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7118	0.0000	6.7118	3.6821	0.0000	3.6821			0.0000			0.0000
Off-Road	0.9515	19.4584	23.4003	0.0391		0.9611	0.9611		0.9611	0.9611	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4
Total	0.9515	19.4584	23.4003	0.0391	6.7118	0.9611	7.6728	3.6821	0.9611	4.6432	0.0000	4,065.005 3	4,065.005 3	1.2262		4,090.754 4

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8011	13.3307	10.8794	0.0315	0.7587	0.1942	0.9529	0.2075	0.1786	0.3861		3,174.125 6	3,174.125 6	0.0199		3,174.543 2
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0691	0.0788	0.7812	1.6800e-003	0.1479	1.1400e-003	0.1490	0.0392	1.0500e-003	0.0403		140.1833	140.1833	7.2700e-003		140.3360
Total	0.8702	13.4095	11.6606	0.0332	0.9066	0.1953	1.1020	0.2467	0.1797	0.4264		3,314.308 8	3,314.308 8	0.0272		3,314.879 2

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9825	0.0000	8.9825	3.6433	0.0000	3.6433			0.0000			0.0000
Off-Road	6.4795	74.8137	49.1374	0.0617		3.5842	3.5842		3.2975	3.2975		6,414.9807	6,414.9807	1.9350		6,455.6154
Total	6.4795	74.8137	49.1374	0.0617	8.9825	3.5842	12.5667	3.6433	3.2975	6.9408		6,414.9807	6,414.9807	1.9350		6,455.6154

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	5.0355	83.7929	68.3847	0.1983	5.5553	1.2207	6.7761	1.4972	1.1228	2.6199		19,951.6463	19,951.6463	0.1250		19,954.2714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0767	0.0876	0.8680	1.8600e-003	0.1643	1.2700e-003	0.1656	0.0436	1.1700e-003	0.0448		155.7592	155.7592	8.0800e-003		155.9289
Total	5.1122	83.8805	69.2526	0.2001	5.7196	1.2220	6.9416	1.5407	1.1239	2.6647		20,107.4055	20,107.4055	0.1331		20,110.2003

3.4 Grading - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					3.3280	0.0000	3.3280	1.3499	0.0000	1.3499			0.0000				0.0000
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234	0.0000	6,414.9807	6,414.9807	1.9350			6,455.6154
Total	1.5128	29.7798	37.9432	0.0617	3.3280	1.3234	4.6514	1.3499	1.3234	2.6732	0.0000	6,414.9807	6,414.9807	1.9350			6,455.6154

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	5.0355	83.7929	68.3847	0.1983	5.5553	1.2207	6.7761	1.4972	1.1228	2.6199		19,951.6463	19,951.6463	0.1250			19,954.2714
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0767	0.0876	0.8680	1.8600e-003	0.1643	1.2700e-003	0.1656	0.0436	1.1700e-003	0.0448		155.7592	155.7592	8.0800e-003			155.9289
Total	5.1122	83.8805	69.2526	0.2001	5.7196	1.2220	6.9416	1.5407	1.1239	2.6647		20,107.4055	20,107.4055	0.1331			20,110.2003

3.4 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.9825	0.0000	8.9825	3.6433	0.0000	3.6433			0.0000			0.0000
Off-Road	6.0991	69.5920	46.8050	0.0617		3.3172	3.3172		3.0518	3.0518		6,313.3690	6,313.3690	1.9344		6,353.9915
Total	6.0991	69.5920	46.8050	0.0617	8.9825	3.3172	12.2997	3.6433	3.0518	6.6951		6,313.3690	6,313.3690	1.9344		6,353.9915

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4742	74.9226	65.1380	0.1980	21.5854	1.0486	22.6340	5.4319	0.9645	6.3964		19,618.3000	19,618.3000	0.1171		19,620.7583
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0691	0.0788	0.7772	1.8600e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		149.7092	149.7092	7.4200e-003		149.8650
Total	4.5433	75.0014	65.9152	0.1998	21.7497	1.0498	22.7995	5.4754	0.9656	6.4411		19,768.0092	19,768.0092	0.1245		19,770.6234

3.4 Grading - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3280	0.0000	3.3280	1.3499	0.0000	1.3499			0.0000			0.0000
Off-Road	1.5128	29.7798	37.9432	0.0617		1.3234	1.3234		1.3234	1.3234	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915
Total	1.5128	29.7798	37.9432	0.0617	3.3280	1.3234	4.6514	1.3499	1.3234	2.6732	0.0000	6,313.3690	6,313.3690	1.9344		6,353.9915

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.4742	74.9226	65.1380	0.1980	21.5854	1.0486	22.6340	5.4319	0.9645	6.3964		19,618.3000	19,618.3000	0.1171		19,620.7583
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0691	0.0788	0.7772	1.8600e-003	0.1643	1.2300e-003	0.1655	0.0436	1.1300e-003	0.0447		149.7092	149.7092	7.4200e-003		149.8650
Total	4.5433	75.0014	65.9152	0.1998	21.7497	1.0498	22.7995	5.4754	0.9656	6.4411		19,768.0092	19,768.0092	0.1245		19,770.6234

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0335	10.2552	15.2457	0.0255	0.7567	0.1596	0.9163	0.2151	0.1468	0.3619		2,509.9935	2,509.9935	0.0164		2,510.3377
Worker	1.0125	1.1544	11.3866	0.0273	2.4069	0.0180	2.4249	0.6384	0.0166	0.6550		2,193.2404	2,193.2404	0.1087		2,195.5225
Total	2.0460	11.4096	26.6323	0.0528	3.1636	0.1776	3.3412	0.8535	0.1634	1.0169		4,703.2339	4,703.2339	0.1251		4,705.8602

3.5 Building Construction - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0335	10.2552	15.2457	0.0255	0.7567	0.1596	0.9163	0.2151	0.1468	0.3619		2,509.9935	2,509.9935	0.0164		2,510.3377
Worker	1.0125	1.1544	11.3866	0.0273	2.4069	0.0180	2.4249	0.6384	0.0166	0.6550		2,193.2404	2,193.2404	0.1087		2,195.5225
Total	2.0460	11.4096	26.6323	0.0528	3.1636	0.1776	3.3412	0.8535	0.1634	1.0169		4,703.2339	4,703.2339	0.1251		4,705.8602

3.5 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517
Total	2.6687	23.2608	17.5327	0.0268		1.4943	1.4943		1.4048	1.4048		2,609.9390	2,609.9390	0.6387		2,623.3517

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9640	9.3162	14.6736	0.0255	0.7569	0.1489	0.9058	0.2152	0.1370	0.3522		2,468.8936	2,468.8936	0.0162		2,469.2328
Worker	0.9211	1.0470	10.2900	0.0273	2.4069	0.0176	2.4245	0.6384	0.0163	0.6547		2,111.0332	2,111.0332	0.1006		2,113.1462
Total	1.8851	10.3631	24.9636	0.0527	3.1638	0.1665	3.3303	0.8536	0.1533	1.0069		4,579.9268	4,579.9268	0.1168		4,582.3790

3.5 Building Construction - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517
Total	0.6712	14.1741	17.8156	0.0268		0.9016	0.9016		0.9016	0.9016	0.0000	2,609.9389	2,609.9389	0.6387		2,623.3517

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9640	9.3162	14.6736	0.0255	0.7569	0.1489	0.9058	0.2152	0.1370	0.3522		2,468.8936	2,468.8936	0.0162		2,469.2328
Worker	0.9211	1.0470	10.2900	0.0273	2.4069	0.0176	2.4245	0.6384	0.0163	0.6547		2,111.0332	2,111.0332	0.1006		2,113.1462
Total	1.8851	10.3631	24.9636	0.0527	3.1638	0.1665	3.3303	0.8536	0.1533	1.0069		4,579.9268	4,579.9268	0.1168		4,582.3790

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6114	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.6070	17.1628	14.4944	0.0223		0.9386	0.9386		0.8635	0.8635		2,245.2695	2,245.2695	0.6990		2,259.9481

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0472	0.0536	0.5268	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		108.0734	108.0734	5.1500e-003		108.1816
Total	0.0472	0.0536	0.5268	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		108.0734	108.0734	5.1500e-003		108.1816

3.6 Paving - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5446	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,245.2695	2,245.2695	0.6990		2,259.9481

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0472	0.0536	0.5268	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		108.0734	108.0734	5.1500e-003		108.1816
Total	0.0472	0.0536	0.5268	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		108.0734	108.0734	5.1500e-003		108.1816

3.6 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4259	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.4215	14.9353	14.3652	0.0223		0.8094	0.8094		0.7447	0.7447		2,208.973 1	2,208.973 1	0.6989		2,223.649 9

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0438	0.0493	0.4844	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		104.5285	104.5285	4.8600e-003		104.6305
Total	0.0438	0.0493	0.4844	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		104.5285	104.5285	4.8600e-003		104.6305

3.6 Paving - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5490	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9
Paving	0.9956					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.5446	11.0645	16.9276	0.0223		0.5982	0.5982		0.5982	0.5982	0.0000	2,208.973 1	2,208.973 1	0.6989		2,223.649 9

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0438	0.0493	0.4844	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		104.5285	104.5285	4.8600e-003		104.6305
Total	0.0438	0.0493	0.4844	1.4000e-003	0.1232	9.0000e-004	0.1241	0.0327	8.3000e-004	0.0335		104.5285	104.5285	4.8600e-003		104.6305

3.7 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102
Total	232.5711	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.0102

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1855	0.2108	2.0720	5.4900e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		425.0886	425.0886	0.0203		425.5141
Total	0.1855	0.2108	2.0720	5.4900e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		425.0886	425.0886	0.0203		425.5141

3.7 Architectural Coating - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4485	281.4485	0.0267		282.0102
Total	232.3319	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4485	281.4485	0.0267		282.0102

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1855	0.2108	2.0720	5.4900e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		425.0886	425.0886	0.0203		425.5141
Total	0.1855	0.2108	2.0720	5.4900e-003	0.4847	3.5400e-003	0.4882	0.1286	3.2800e-003	0.1318		425.0886	425.0886	0.0203		425.5141

3.7 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473
Total	232.5389	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		281.9473

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1722	0.1938	1.9053	5.5100e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		411.1453	411.1453	0.0191		411.5465
Total	0.1722	0.1938	1.9053	5.5100e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		411.1453	411.1453	0.0191		411.5465

3.7 Architectural Coating - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	232.2724					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0238		281.9473
Total	232.3319	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0238		281.9473

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1722	0.1938	1.9053	5.5100e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		411.1453	411.1453	0.0191		411.5465
Total	0.1722	0.1938	1.9053	5.5100e-003	0.4847	3.5300e-003	0.4882	0.1286	3.2700e-003	0.1318		411.1453	411.1453	0.0191		411.5465

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.9651	19.3558	100.5670	0.3927	28.7442	0.4267	29.1709	7.6636	0.3942	8.0578		27,944.43 62	27,944.43 62	0.7998		27,961.23 16
Unmitigated	11.2615	21.1869	108.1176	0.4391	32.2606	0.4718	32.7324	8.6011	0.4359	9.0370		31,249.81 49	31,249.81 49	0.8883		31,268.46 96

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
General Light Industry	1,305.97	247.33	127.41	2,879,716	2,565,827
General Light Industry	1,531.24	289.99	149.39	3,376,447	3,008,414
General Light Industry	1,924.49	364.47	187.75	4,243,573	3,781,024
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	121.27	121.27	71.68	200,200	178,378
Regional Shopping Center	228.45	228.45	135.03	377,137	336,029
Regional Shopping Center	436.39	436.39	257.95	720,437	641,910
Total	5,547.80	1,687.89	929.22	11,797,510	10,511,581

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.462361	0.064329	0.187151	0.161808	0.068181	0.010152	0.013866	0.019623	0.000750	0.000701	0.004466	0.000287	0.006323

5.0 Energy Detail

5.1 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3931	3.5735	3.0018	0.0214		0.2716	0.2716		0.2716	0.2716		4,288.2317	4,288.2317	0.0822	0.0786	4,314.3291
NaturalGas Unmitigated	0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	lb/day										lb/day						
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Light Industry	11108.9	0.1198	1.0891	0.9149	6.5300e-003		0.0828	0.0828		0.0828	0.0828		1,306.9305	1,306.9305	0.0251	0.0240	1,314.8842	
General Light Industry	13025.2	0.1405	1.2770	1.0727	7.6600e-003		0.0971	0.0971		0.0971	0.0971		1,532.3771	1,532.3771	0.0294	0.0281	1,541.7028	
General Light Industry	16369.6	0.1765	1.6049	1.3481	9.6300e-003		0.1220	0.1220		0.1220	0.1220		1,925.8379	1,925.8379	0.0369	0.0353	1,937.5583	
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	15.9282	1.7000e-004	1.5600e-003	1.3100e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		1.8739	1.8739	4.0000e-005	3.0000e-005	1.8853	
Regional Shopping Center	30.0311	3.2000e-004	2.9400e-003	2.4700e-003	2.0000e-005		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		3.5331	3.5331	7.0000e-005	6.0000e-005	3.5546	
Regional Shopping Center	57.4112	6.2000e-004	5.6300e-003	4.7300e-003	3.0000e-005		4.3000e-004	4.3000e-004		4.3000e-004	4.3000e-004		6.7543	6.7543	1.3000e-004	1.2000e-004	6.7954	
Total		0.4379	3.9811	3.3441	0.0239		0.3026	0.3026		0.3026	0.3026		4,777.3067	4,777.3067	0.0916	0.0876	4,806.3806	

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	11.6908	0.1261	1.1462	0.9628	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.3863	1,375.3863	0.0264	0.0252	1,383.7567
General Light Industry	14.6926	0.1585	1.4405	1.2100	8.6400e-003		0.1095	0.1095		0.1095	0.1095		1,728.5374	1,728.5374	0.0331	0.0317	1,739.0570
General Light Industry	9.97081	0.1075	0.9775	0.8211	5.8700e-003		0.0743	0.0743		0.0743	0.0743		1,173.0365	1,173.0365	0.0225	0.0215	1,180.1754
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.0147627	1.6000e-004	1.4500e-003	1.2200e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		1.7368	1.7368	3.0000e-005	3.0000e-005	1.7474
Regional Shopping Center	0.0278337	3.0000e-004	2.7300e-003	2.2900e-003	2.0000e-005		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		3.2746	3.2746	6.0000e-005	6.0000e-005	3.2945
Regional Shopping Center	0.0532104	5.7000e-004	5.2200e-003	4.3800e-003	3.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		6.2601	6.2601	1.2000e-004	1.1000e-004	6.2982
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.3931	3.5735	3.0018	0.0215		0.2716	0.2716		0.2716	0.2716		4,288.2316	4,288.2316	0.0822	0.0786	4,314.3291

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed
- Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Unmitigated	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.0138					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6800e-003	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Total	19.4750	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	4.4545					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8912					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.6800e-003	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658
Total	18.3525	6.6000e-004	0.0730	1.0000e-005		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004		0.1573	0.1573	4.1000e-004		0.1658

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy
Install Low Flow Bathroom Faucet
Install Low Flow Kitchen Faucet
Install Low Flow Toilet
Install Low Flow Shower
Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

10.0 Vegetation

DPM total (lbs)	Total Calendar Days	Hours/Day	ER (lb/hr)	# Sources	Individual Sour
727.4	930	24	0.0326	502	6.49195E-05

g/s

8.17986E-06

HRA To Be Added.

APPENDIX 4.5

Cultural Resources

**PHASE I ARCHAEOLOGICAL SURVEY OF THE
SANTA PAULA WEST SPECIFIC PLAN AREA, SANTA
PAULA, VENTURA COUNTY, CALIFORNIA**

Prepared for:

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MANAGEMENT SUMMARY

An intensive Phase I archaeological survey was conducted for the Santa Paula West Specific Plan Area, an approximately 53-acre study area in Santa Paula, Ventura County, California. This investigation involved an archival records search, a review of existing published and unpublished references on local prehistory and history, and a pedestrian survey of the project area.

No previously undocumented archaeological resources were found in the project area.

1. INTRODUCTION

At the request of Mr. Brian McCarthy of Meridian Consultants, Westlake Village, California, an intensive Phase I archaeological survey was conducted for the Santa Paula West Specific Plan Area, Santa Paula, Ventura County, California (Figures 1 and 2, Appendix A). The study area covers 53 acres. It is located north of Highway 126 and the Santa Clara River, and south of Harvard Road. The old bed of the Southern Pacific Railroad runs through the approximate middle of the study area, which is roughly one-half mile east of Santa Paula. Adams Barranca, an ephemeral but down-cut drainage, is at the western limit of the study area.

This study was conducted to fulfill the regulatory requirements for identification of cultural resources in compliance with Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA).

The purpose of this Phase I archaeological survey was to provide a background review of pertinent previous research and an archival records search in order to establish whether any known archaeological sites were present in or near the study area, and/or whether any systematic study of the study area had been conducted by archaeologists; an intensive, pedestrian survey of the study area in order to identify any previously unrecorded cultural resources; and, should any be found within the subject property, a preliminary assessment of such resources. This manuscript constitutes a report on this Phase I archaeological study. Subsequent sections provide background to the investigation, including the results of the archival records search; a summary of the field surveying techniques employed; the results of the fieldwork; and management recommendations.

2. PROJECT AREA BACKGROUND

ETHNOGRAPHIC BACKGROUND

Ventura County, including the study area, lies within the territory of the Ventureño dialect of the Chumash ethnolinguistic group (Kroeber 1925). The Chumash were Hokan speaking people, who occupied the region from Topanga Canyon northwest to approximately San Luis Obispo. Because of their location in an area of early Spanish missionization, Chumash culture and life ways were heavily disrupted prior to any modern efforts at ethnographic research, hence our knowledge of them is limited. However, based on fragmentary records and various means of inferential and analogical studies, a certain amount can be reconstructed about their way of life.

The Chumash followed a hunting-gathering-fishing subsistence pattern, which incorporated a heavy reliance on maritime resources, including pelagic and littoral fishes, and shellfish. Indeed, the bountiful sea resources that they exploited may have been a key factor in their evolutionary success (Landberg 1965): at the time of the arrival of the Spanish the Chumash had reached levels of population density, and complexities in social organization, unequaled worldwide by other non-farming groups (Moratto 1984:118). These included permanent coastal villages along the Channel Islands area containing as many as 1,000 inhabitants (Brown 1967), as well as a hierarchical sociopolitical organization consisting of at least two major chiefdoms (Whitley and Beaudry 1991). Further, based on recent reconstructions using mission registers, the Chumash appear to be a matrilocal, and perhaps matrilineal, clan-based society (Johnson 1988).

The coastal Ventura County region, including the lower reaches of the Santa Clara Valley, was apparently a portion of a paramount Chumash capital at the village of Muwu, at modern Point Mugu (Whitley and Beaudry 1991; Whitley and Clewlow 1979). This served as the center of Lulapin, one of the two known historical chiefdoms, and was a domain whose limits stretched from the southeastern extreme of Chumash territory to Dos Pueblos, just beyond modern Santa Barbara. Correspondingly, the Mugu locale has been documented, both archaeologically and ethnographically, as the center of a considerable amount of aboriginal activity (Whitley and Beaudry 1991; Whitley and Clewlow 1979).

With reference to the study area, it is apparent from various records (see Kroeber 1925; Brown 1967; Applegate 1974, 1975; King 1975) that the villages in this region tended to be localized in two general areas: along the coast, *per se*, and along the major drainages (specifically, the Santa Clara and Sespe Rivers and Santa Paula Creeks). The nearest recorded historical villages to the study area, accordingly, are Sa'aqtik'oy, at modern Saticoy; Mupu, in Santa Paula along Santa Paula Creek, on the modern campus of Thomas Aquinas College; Malalal, near the confluence of the Santa Clara River and Sespe Creek, putatively in old Sespe Village on the northwest side of this confluence; and Seqpe, up Sespe Creek from the Santa Clara. Each of these villages is a considerable distance from the study area, and thus a considerable distance from areas of known historical Chumash occupation.

ARCHAEOLOGICAL BACKGROUND

The archaeological basis for the regional prehistoric sequence in Ventura County lies ultimately in the research of David Banks Rogers (1929), who worked on the Channel Islands and along the Santa Barbara coastline. William J. Wallace (1955) subsequently modified the terminology of Rogers' scheme, and improved with additional and more detailed data and radiocarbon dates. More recently, King (1981) has suggested certain refinements to Wallace's proposed framework.

Wallace's chronology for southern coastal California includes four time periods, the earliest of which (Early Man/Big Game Hunting period) was considered speculative, and thought to correlate with the end of the Pleistocene. Although it is likely that occupation of the southern California coastal region occurred during this early time period, to date the only evidence of such has been limited to a few discoveries of fluted projectile points, found in isolated locales. However, the characteristic geomorphological instability of the California coastline, combined with the major change in erosional/degradational regimes that occurred at the end of the Pleistocene, does not favor the preservation of remains from this or earlier period (Whitley and Dorn 1993).

With the transition towards a modern environment, starting approximately 9,000 to 10,000 years ago, however, an adaptation referred to as the Early Millingstone period (or Early Horizon) began and is evident in the archaeological record. Most sites of this stage date between 8,500 and 3,500 years in age, and are dominated by assemblages containing large numbers of ground stone artifacts, along with crude choppers and other core/cobble tools. These are thought to represent an adaptation to gathered foods, especially a reliance on hard-shelled seeds.

More recently, it has been suggested that scraper planes, in particular, may have served in the processing of agave (Kowta 1969; Salls 1985); that the association of ground stone and core/cobble tools represents a generalized plant processing toolkit, rather than one emphasizing hard-seeds, per se (Whitley 1979), and one that was used in appropriate environmental settings throughout the prehistoric past; that is, that the so-called 'early millingstone toolkit' is environmentally rather than chronologically specific and reflects localized exploitation patterns, rather than a wide-ranging adaptational strategy (Leonard 1971). However, on the coastal strip, there continues to be evidence that such sites date to the earlier end of the time-frame, and they are generally located on terraces and mesas, above the coastal verge.

Recent studies by Erlandson (1988; see also Erlandson and Colton 1991) provide evidence of a significant, even if small, population of coastal hunter-gatherers in the region before 7,000 years ago, or at the beginning of the Early Millingstone period. Erlandson has shown that these were neither "big game" hunters, nor specialized, hard-seed gatherers, but instead generalized foragers that relied on a variety of different kinds of terrestrial, coastal and marine resources, and that they were adapted to estuarine embayments that have long since disappeared from the local environment. Further, his evidence indicates that their primary protein sources were shellfish and other marine resources. Extending a pattern first identified by Meighan (1959) on the Channel Islands, in other words, this suggests that the adaptation to the seashore is a very ancient and long-lived tradition in local prehistory.

Following the Early Millingstone, a transitional stage, referred to as the Intermediate (or Middle) Period, occurred. It is believed to have gotten underway about 3,500 years ago, and to have lasted until about A.D. 1000. It is marked on the coast by a growing exploitation of marine resources, the appearance of the hopper mortar and stone bowl/mortar, and a diversification and an increase in the number of chipped stone tools. Projectile points, in particular, are more common at sites than previously, while artifacts such as fish hooks and bone gorges also appear. Further, there is substantial evidence that it was at the beginning of this Intermediate period that inland sites, such as those found in the Conejo Corridor on the north side of the Santa Monica Mountains, were first established and occupied, suggesting the exploitation of more varied environments and perhaps an increase in population (Whitley and Beaudry 1991), as well as a movement of coastal sites down towards the beaches. In general, however, the Intermediate period can be argued to have set the stage for the accelerated changes that took place immediately following it.

With the transition to the Late Prehistoric period at A.D. 1200, which followed the introduction of the bow and arrow at about A.D. 500 and represented by a major reduction in the size of projectile points, we can correlate local prehistory with Chumash society as described (even if in abbreviated form) by early chroniclers and missionaries. However, this is not to suggest that society was in any way static, for the transition to the Late Prehistoric period was marked by the evolution and eventual dominance of a sophisticated maritime economy.

Further, the rise in Chumash social complexity has been shown to have been associated with the development of craft specialization, involving the use of standardized micro-drills to mass produce shell beads on Santa Cruz Island (Arnold 1987), and to have occurred during the Late Prehistoric period.

HISTORICAL BACKGROUND

The missionization and Spanish colonization of the Ventura County region altered traditional Chumash society irrevocably. Although Juan Rodriguez Cabrillo stopped in the area in A.D. 1542 while exploring the coast, and Sebastián Vizcaíno sailed by in 1602 (Bancroft 1963), this historical period effectively began with the passing of the Gaspar de Portolá expedition through the area in 1769 - 1770 (Bolton 1971; Boneu 1983). Portolá was followed in quick succession by a number of other explorers, such as Juan Bautista de Anza in 1775-1776 (Bolton 1931) and José Longinos Martinez in 1792 (Simpson 1938). However, it was the establishment of the Mission of San Buenaventura, at modern Ventura, in 1782 (Triem 1985) that truly spelled the end of the aboriginal period.

This project's study area is located relatively close to the original Ventura mission in modern terms, but in earlier times was some distance from the mission proper. It was not until 1840, in fact, that any significant evidence for historical use of the general region surrounding the study area occurred. On April 28 of that year, Governor Juan B. Alvarado granted the 17,733.33 acres Rancho Santa Paula y Saticoy to Manuel Jimeno Casarin. This rancho was patented to John P. Davidson, James Blair, Stephen M. Tebbets, Joseph B. Crockett and Edward D. Baker in 1872 (Robinson 1956).

The town of Santa Paula developed shortly thereafter, stimulated by three factors: citrus farming; the development of oil production in the region; and the arrival of the Southern Pacific Railroad, in 1887 (Triem 1985).

The development of the citrus industry was the impetus for the creation of the Limoneira Company, established in 1893 by Wallace Hardison and Nathan Blanchard, who had demonstrated great local success at citrus farming. Their initial investment was a 400-acre tract that was 5 miles west of Santa Paula. In order to adequately irrigate this property, they also acquired the water rights to Santa Paula Creek. In 1896, Hardison enlisted his nephew, Charles C. Teague, to manage his California business affairs while he pursued a South American mining interest. With some effort, Teague consolidated his uncle's various business holdings, putting the Limoneira Company on the road to financial success with Santa Paula itself growing and developing accordingly (Teague 1944).

Blanchard retired in 1898 and was replaced by Teague, then 25 years old, as Limoneira manager, a position Teague held until 1950. (In 1904, he also became part owner and in 1917 company president.) Under Teague's direction, Limoneira became one of the largest lemon producers in the world. The company was also instrumental in revolutionizing the industry. Teague was responsible for developing fruit storage and curing techniques that allowed for the sale of fruit, picked in the winter/spring, during the height of the summer, when prices were highest. He also oversaw the development of practical and efficient orchard heaters and fruit washers. And he was a major force in the development of cooperative marketing, for the both the citrus and the walnut industries (Teague 1944).

Limoneira developed orchards east and west of Santa Paula, resulting in the largest amount of acreage in the world devoted to citrus (Triem 1985).

Charles Teague published his autobiography, *Fifty Years a Rancher*, in 1944. Although it contains some personal details of his early years, it is primarily an account of his involvement in the development and growth of the citrus and walnut industries. Befitting the fact that the Limoneira Company was the largest producer of lemons in the first few decades of the twentieth century, Teague's impact and influence were not just local, but in fact national. He was awarded an honorary doctorate of law by the University of California in 1924, and was appointed to the Federal Farm Board in 1929, based on a personal plea from President Herbert Hoover. Teague arguably can be cited as Ventura County's most prominent and influential citizen, certainly for the first half of the twentieth century if not for the century in its entirety.

The study area has thus been in continuous use since the beginning of the 20th century, for farming, reflecting the area's agricultural history.

3. ARCHIVAL RECORDS SEARCH

An archival records search was conducted at the South Central Coast Information Center (SCCIC), located at the California State University, Fullerton, by SCCIC staff members to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the study area; (ii) if the study area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive. The complete results of this archival record search are included in this document as Appendix B.

The records search included a review of all maps and files housed at the IC related to the project area, as well as determining if any previously recorded cultural resources identified within the project area are listed on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). A records search of the Native American Heritage Commission (NAHC) Sacred Lands Files was also requested from the NAHC.

Files and records indicate that six studies have been conducted that intersect at least a portion of the project area, with one (VN-00396) encompassing the entire project (Table 1). Because of the age of this survey (1977), an intensive re-examination was however required. An additional six studies have been conducted within some portion of the ½-mile radius around the project area (Table 2). None of these studies resulted in the documentation of any cultural resources either within or near the project area.

In summary, the archival record searches indicated that the study area had been surveyed previously, and that no prehistoric or historic cultural resources had been identified at that time.

Table 1 Previously Conducted Cultural Resource Projects Within Santa Paula West Project Area.

NADB Number	Author(s)	Date	Report Title
VN-00396	Lopez, Robert	1977	<i>An Archaeological Survey of the City of Santa Paula's 1998 General Plan Study Area.</i>
VN-01265	Reed, L. W.	1992	<i>Consolidated Report: Cultural Resources Studies for the Proposed Pacific Pipeline Project.</i> Peak and Associates.
VN-01801	Wlodarski, Robert J.	1999	<i>A Cultural Resource Evaluation for the Santa Paula Branch Line, Recreational Trail Master Plan, County of Ventura, California.</i> Historical, Environmental, Archaeological, Research, Team.
VN-02274	Maki, Mary K.	2003	<i>Phase I Archaeological Survey Report of Approximately 12000 Linear Feet for the Todd Lane Drain Project, Santa Paula, Ventura County, California.</i> Conejo Archaeological Consultants.
VN-02872	Fortier, Jana	2009	<i>TEA-21 Rural Roadside Inventory: Native American Consultants and Ethnographic Study for Caltrans District 7, Ventura County.</i> ICF Jones & Stokes.
VN-02873	Fortier, Jana	2009	<i>TEA-21 Rural Roadside Inventory: Native American Consultants and Ethnographic Study for Caltrans District 7, County of Los Angeles.</i> ICF Jones & Stokes.

Table 2. Previously Conducted Cultural Resource Projects within 1/2-Mile Radius of Santa Paula West Project Area

NADB Number	Author(s)	Date	Report Title
VN-00623	Pence, Robert L.	1988	<i>Archaeological Reconnaissance of the Twyford Plant Laboratories Site Santa Paula, California.</i> Pence Archaeological Consulting.
VN-00831	Lopez, Robert	1976	<i>An Archaeological Survey of the Area of the Proposed Upgrading of the Santa Paula Wastewater Treatment Plant.</i>
VN-01102	Singer, Clay A.	1977	<i>Preliminary Cultural Resource Survey and Potential Impact Assessment for Thirteen Areas in Southern Ventura County, California.</i> ARI.
VN-01250	Santoro, Loren, and A. George Toren	1993	<i>Phase I Cultural Resource Survey Peck Road Drain – Unit II Ventura County, California.</i> Ogden Environmental and Energy Services Company, Inc.
VN-02390	Jordan, Stacey C., and Joshua D. Patterson	2006	<i>Archaeological Survey Report for the Southern California Edison Company Replacement of 30 Deteriorated Poles, Private and Public Inholdings, Ventura, Los Angeles, and Santa Barbara Counties, California.</i> Mooney, Jones & Stokes.
VN-02917	Drover, Christopher, and Patrick O. Maxon	2010	<i>Phase I Cultural Resources Assessment, Santa Paula Water Project Phases 1A, 1B, and 2, Santa Paula, Ventura County, California.</i> BonTerra Consulting.
VN-02960	Wlodarski, Robert J.	2011	<i>A Phase I Archaeological Study for the Proposed Bender Calpipe Project Located South of Highway 126, West of Shell Road/Peck Road and East of Todd Lane, City of Santa Paula, County of Ventura, California.</i> Historical, Environmental, Archaeological, Research, Team.
VN-03075	Fulton, Phil	2012	<i>Cultural Resource Assessment Class I Inventory, Verizon Wireless Services Peppertree Facility, City of Santa Paula, Ventura County, CA.</i> LSA Associates.
VN-03103	Billat, Lorna	2012	<i>AT&T Colo Diamond, 401 S Beckwith Rd, Santa Paula, Ventura County.</i> EarthTouch.

NAHC SACRED LANDS FILES SEARCH

A request was sent to the Native American Heritage Commission (NAHC) for a search of their Sacred Lands files. ASM received a response letter, dated October 1, 2014, indicated that the NAHC's search failed to indicate the presence of Native American cultural resources in the immediate project area (Appendix C). The letter also included a list of Native American individuals/organizations who may have knowledge of cultural resources in the project area or be able to advise with regard to locating areas of potential adverse impact with the project area.

4. FIELD SURVEY METHODS AND RESULTS

SURVEY METHODS

An intensive archaeological field survey of the Santa Paula West Specific Plan Area, Ventura County, was conducted by ASM Senior Archaeologist Sherri Andrews, M.A., J.D., RPA, on October 8, 2014. Field methods were designed to meet all professional requirements, including the *Secretary of the Interior's Standards and Guidelines*.

The ground surface was examined at 15-m transect intervals, with transects walked across all accessible portions of the study area to identify artifacts or other archaeological indicators that might be present on the ground surface. In addition, cut-banks of arroyos (where visible) and rodent hole back-dirt piles were also examined to ascertain whether buried archaeological deposits might be present.

Based on the lack of previously documented resources in the area revealed by the records searches, as well as the heavily modified nature of the project area as indicated by pre-field observation of aerial photographs, the likelihood of the presence of archaeological resources was deemed to be very low.

As discussed below, although primarily agricultural fields/orchards, two portions of the study area had been developed and they contain structures and other facilities. Neither of these areas were surveyed or evaluated during the field study, which then considered only the fields and orchards.

SURVEY RESULTS

The Santa Paula West Specific Plan Area study area consists primarily of the flood plain of the Santa Clara River, backed (to the north) by the steep foothills and slopes of the Santa Paula/San Cayetano Peaks ridge system. The entire study area has been heavily modified, with most currently in active cultivation or occupied by Bender Farms facilities and structures, a fresh cut flower grower and shipping company. There were no apparent natural landforms within the project area, with all surfaces appearing to at least having been leveled and graded, and all being regularly used and modified into the present (Figure 3, Appendix A).

The very northeastern portion of the project area, bounded by Telegraph Road to the north and Beckwith Road to the east, is an active and densely planted avocado grove. South of the avocado grove, and bounded on the south by the railroad, is a lot occupied by Bender Farms containing multiple structures, equipment areas, and other facilities (Figure 4, Appendix A). The Bender Farms facility is surrounded by chain-link fence topped with razor wire, and was not surveyed during this study.

South of the Bender Farms facility and the railroad, and bounded on the east by Todd Lane and State Route (SR-) 126 on the south, is a large lot that is in active cultivation and appears to be associated with the Bender Farms operation. The western half of the project area, both north and south of the railroad and bounded on the north by Telegraph Road, on the south by SR-126, and

on the west by Adams Barranca, is a recently plowed and furrowed field; historically this contained a lemon orchard. The 1966 topo map shows the project area in orchards prior to the arrival of the highway that appears on the 1968 topo.

A house is located at the very northwest corner of the project area along Telegraph Road (Figure 5, Appendix A). The immediate area of the house also was not surveyed and the potential historical significance of this structure, if any, was not evaluated during this project.

The field survey did not result in the discovery of any previously undocumented archaeological sites. Based on this fact, development within the agricultural fields and orchards that were surveyed areas does not have the potential to result in adverse impacts to cultural resources.

RECOMMENDATIONS

An intensive Phase I archaeological survey was conducted for the Santa Paula West Specific Plan study area, Santa Paula, Ventura County, California. This involved an archival records search of site maps and files at the SCCIC; a records search conducted by the NAHC of their Sacred Lands files; a background review of existing literature and studies; and an intensive, on-foot examination of the study area.

No cultural resources or sacred sites or lands had been previously recorded within or adjacent to the study area, according to the SCCIC and NAHC files and records.

An intensive Phase I archaeological survey was conducted of the agricultural fields and orchards within the Specific Plan area, which constitute the large majority of this area. A fenced and developed area containing structures and other facilities in the central southern portion of the Specific Plan area, and an existing house at the northeastern corner of the area, were not surveyed or evaluated.

Intensive Phase I survey of the study area indicates that no extant archaeological resources are present within the currently undeveloped portions of the Specific Plan area. Development and use of this area, therefore, does not have the potential to result in adverse impacts to cultural resources, and no further archaeological work is recommended. In the unlikely event that cultural resources are discovered during development of this area, however, it is recommended that an archaeologist be contacted to evaluate the find.

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APPENDICES

APPENDIX A:
REPORT FIGURES

CONFIDENTIAL APPENDIX B:
RECORD SEARCH

CONFIDENTIAL APPENDIX C:
NAHC SACRED LANDS FILE SEARCH

APPENDIX A:

REPORT FIGURES

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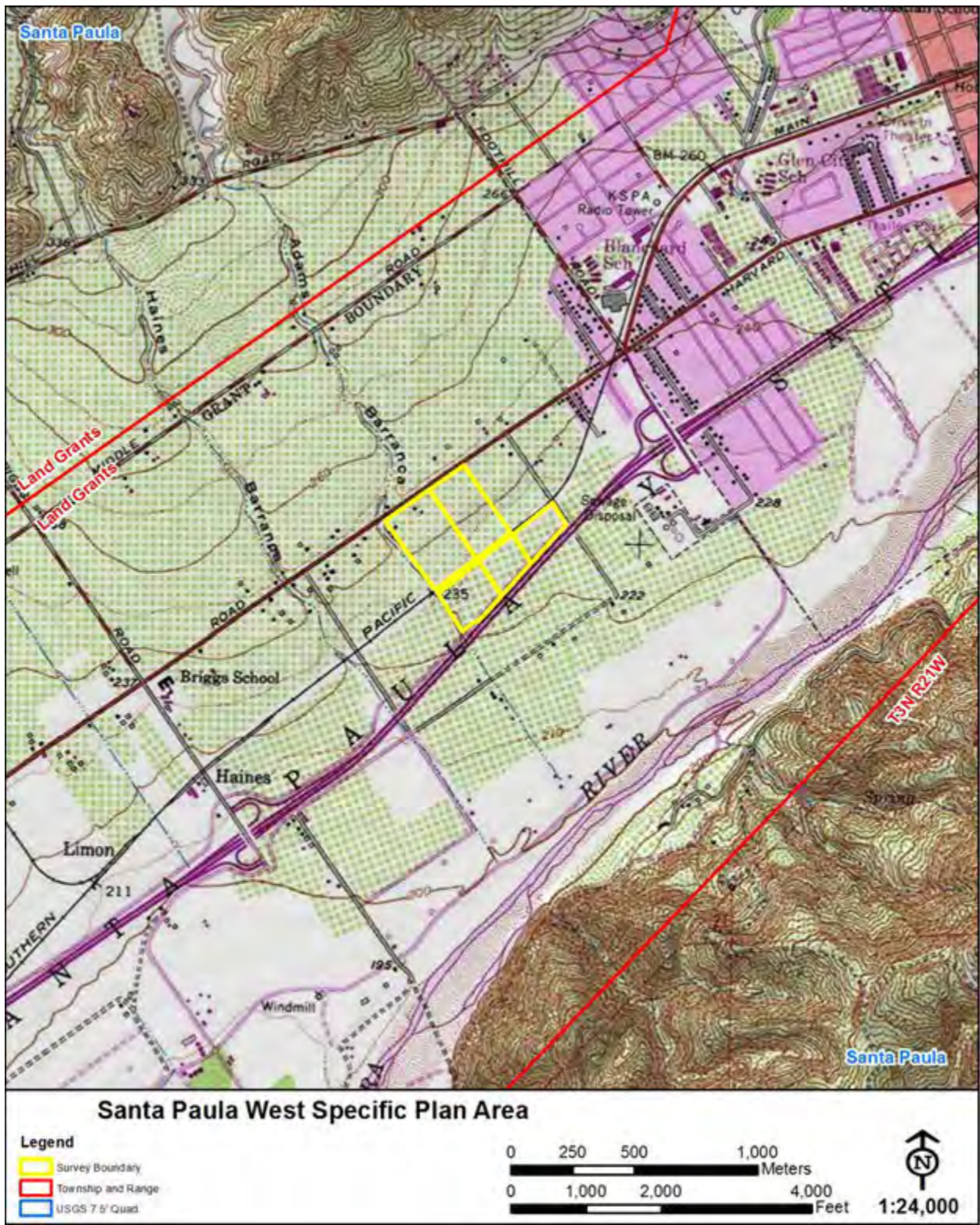


Figure 1. Location of Santa Paula West Specific Plan Project Area, Ventura County, California.

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Figure 2. Aerial view of location of Santa Paula West Specific Plan Project Area, Ventura County, California.

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Figure 3. Recently disked crop.



Figure 4. Bender Farms.

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Figure 5. House adjacent to Telegraph Road.

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SAN DIEGO NATURAL HISTORY MUSEUM
BALBOA PARK - SAN DIEGO SOCIETY OF NATURAL HISTORY - ESTABLISHED 1874

13 October 2014

Dr. David S. Whitley
ASM Affiliates
20424 West Valley Blvd., Suite A
Tehachapi, California 93561

RE: Paleontological Resource Investigation, Santa Paula West SPA

Dear Dr. Whitley,

This letter report summarizes the results of a desktop paleontological resource investigation for the Santa Paula West SPA project site adjacent to the City of Santa Paula, Ventura County, California. The purpose of this report is to summarize the existing paleontological resource data within the project site in order to assist in planning and design efforts for any proposed specific plan updates and/or annexes. For the purposes of this report, paleontological resources consist of any remains or traces of past life, including body fossils (e.g., bones, teeth, shells, leaves, wood), trace fossils (e.g., burrows, tracks, footprints, feeding traces), and any impressions (e.g., molds or casts) of these fossils. Generally, fossils must be older than about 10,000 years (i.e., the end of the Pleistocene epoch), but organic remains of early Holocene age may also represent fossils because they are part of the record of past life.

Project Description:

The Santa Paula West, SPA project site lies directly west of the City of Santa Paula, in unincorporated central Ventura County, California. Santa Paula is located in the Santa Clara River Valley, approximately 15 miles inland from the Pacific Ocean, and about 50 miles northwest of Downtown Los Angeles. The project site is an approximately 55-acre parcel that is bounded on the north by Telegraph Road and a commercial lot, on the east by Beckwith Road and Todd Lane, on the south by State Route 126 (Santa Paula Freeway), and on the west by agricultural land (Figure 1). The boundary for the City of Santa Paula borders the northern and eastern sides of the project site.

Published geologic maps and reports (Morton, 1976; Tan et al., 2004; Dibblee et al., 2010) indicate that the project site is immediately underlain by Holocene-age (less than about 10,000 years old) alluvial deposits (Qa, Figure 1). These surficial sediments are primarily composed of sands, gravels, and cobbles. Coarser-grained gravels and cobbles are associated with alluvial fans building out onto the valley floor from the mouths of canyons in the uplands to the north and south. Finer-grained sediments represent channel, stream terrace, and/or overbank deposits created by the Santa Clara River as it migrated across its floodplain (Morton, 1976; Tan et al., 2004, Dibblee et al., 2010). Presumably, alluvial deposits of Pleistocene-age (about 2.6 million to 10,000 years old) underlie the Holocene-aged deposits at an unknown depth.

Paleontological Record Search:

A record search request of paleontological collections data at the Natural History Museum of Los Angeles County (LACM) generated a response that there are no recorded LACM fossil collecting localities in the immediate vicinity of the project site, nor are there any fossils known from Holocene- or Pleistocene-aged alluvial deposits in the entirety of the Santa Clara River Valley (S.A. McLeod, 23 September, 2014; personal communication). However, significant paleontological resources have been documented elsewhere in Ventura County. Pleistocene-aged alluvial deposits in Simi Valley and Thousand Oaks have yielded remains of extinct, large-bodied “Ice Age” mammals, including ancient horses, elephant-like mammoths and mastodons, and giant ground sloths (Lander, 2007 and references therein). In Simi Valley, deposits previously thought to be Holocene in age yielded remains of late Pleistocene-aged horses, mammoths, and bison (Lander, 2007 and references therein), thus indicating these deposits are older than previously thought.

Paleontological Resource Assessment:

The Bureau of Land Management (BLM) has developed the Potential Fossil Yield Classification (PFYC) system to aid in the assessment of paleontological resources from a given geologic formation. This management system involves the assignment of a class number ranging from Class 5 (very high potential) to Class 1 (very low potential), with subclasses to further define potential fossil yield (BLM, 2007). Formations that occur within the project site, both at the surface, and at depth, are assessed below.

Holocene-aged alluvial deposits: Under the BLM’s PFYC system, Holocene-aged alluvial deposits are assigned Class 2, low potential, due to their relatively young age. Geologic rock units with PFYC of 2 or lower generally do not require mitigation, although caution should be exercised during any future excavations, given the discovery of Pleistocene-aged fossils in deposits incorrectly mapped as Holocene in age in nearby Simi Valley.

Pleistocene-aged alluvial deposits: The distribution of vertebrate fossils in older alluvial deposits is not uniform and typically varies with sediment grain size. Thus, coarser-grained Pleistocene-aged alluvial deposits (e.g., conglomerates deposited in an alluvial fan setting) are typically assigned PFYC Class 3A (moderate potential), while finer-grained Pleistocene-aged alluvial deposits (e.g., sandstones and siltstones deposited in an alluvial floodplain) are assigned PFYC Class 4 (high potential). In the absence of information concerning subsurface geology within the project site, Pleistocene-aged alluvial deposits are assigned a PFYC Class 3B (unknown potential). Future geotechnical work (e.g., exploratory boreholes or other subsurface data) and/or a paleontological pedestrian survey of the project site may provide additional information which will allow for refinement of the PFYC class of Pleistocene-aged alluvial deposits within the project site, and also provide information concerning the depth below current grade of the contact between Holocene- and Pleistocene-aged deposits. Formations with PFYC of 3 or 4 typically require implementation of a paleontological mitigation program.

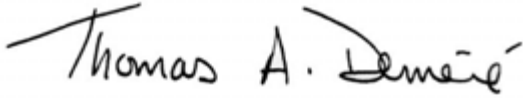
Potential Effects of Future Development:

Future surficial development (less than 10 feet below current grade) in the Santa Paula West SPA project site has a low potential for impacting paleontological resources, and thus paleontological mitigation is not recommended for any future surficial excavations (e.g., shallow grading). As discussed above, deep excavations (greater than 10 feet below current grade) have the potential to impact alluvial deposits of Pleistocene-age. Until additional subsurface data (e.g., geotechnical report) becomes available, it is recommended that any ground-disturbance activities

greater than 10 feet below existing grade be required to implement a full paleontological mitigation program.

If you have any questions concerning these findings please feel free to contact me at 619-255-0232 or tdemere@sdnhm.org.

Sincerely,

A handwritten signature in black ink that reads "Thomas A. Deméré". The signature is written in a cursive style with a long horizontal line extending from the start of the word "Thomas".

Thomas A. Deméré
Director, Department of PaleoServices

Enc: Figure 1

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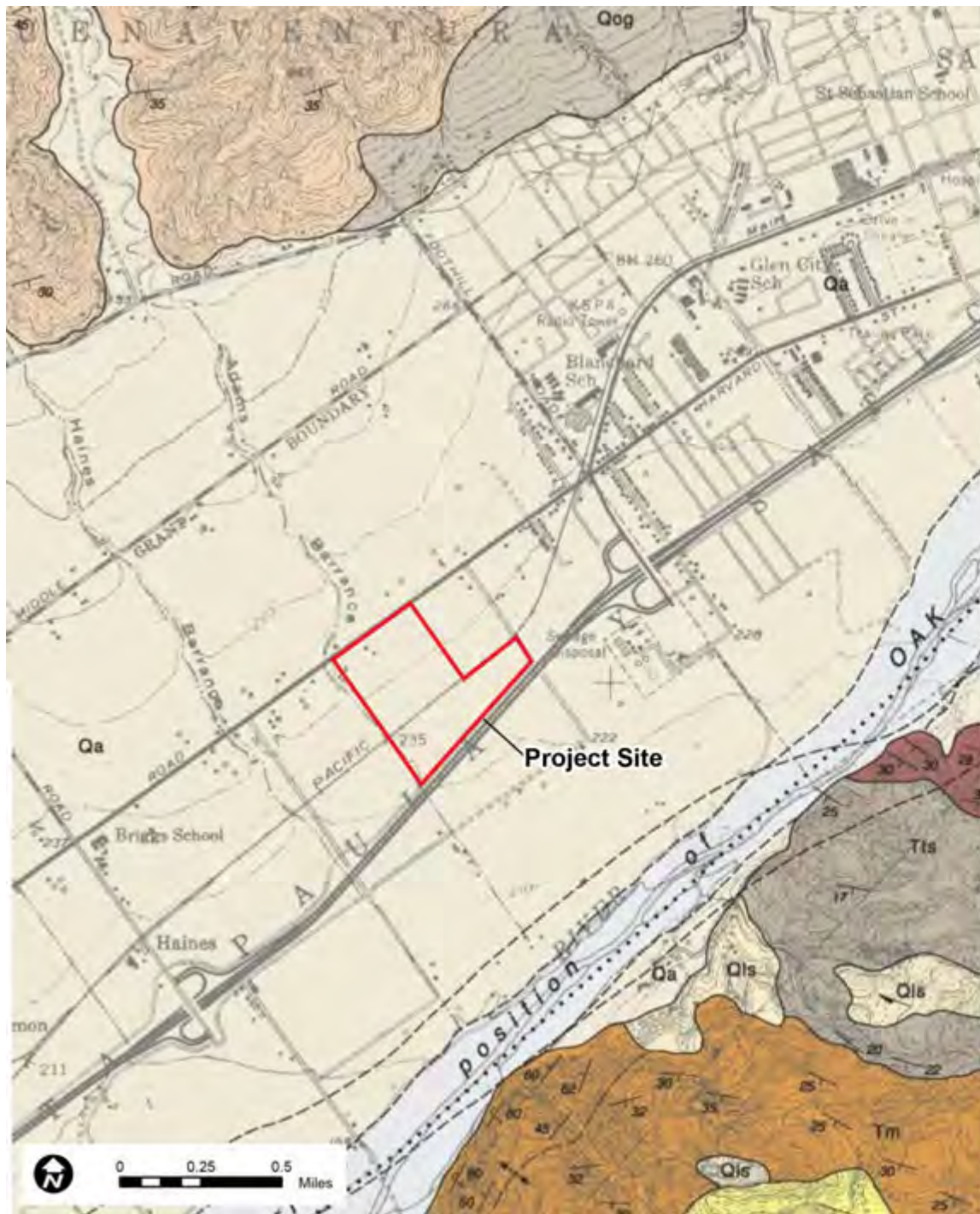


Figure 1: Project Map with Geology, Santa Paula West, SPA



Source: Geologic Map of the Santa Paula Quadrangle, Dibblee et al. 2010

Historic Resources Evaluation Report
15258 W. Telegraph Road
Santa Paula, Ventura County, California

Prepared for:

The City of Santa Paula
P.O. Box 569
Santa Paula, CA 93061-0569

Prepared by:

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September 2015

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1.0 MANAGEMENT SUMMARY

The City of Santa Paula is conducting environmental review of the proposed Santa Paula West Business Park Specific Plan (“Specific Plan”), which would provide a comprehensive set of plans, exhibits, regulations, conditions, and programs to regulate the development of a portion of the West Area 2 planning area as identified in the City of Santa Paula General Plan. The Specific Plan and other off-site improvements to support the Specific Plan development are collectively referred to as the “Project.” Meridian Consultants LLC was retained to perform a historic resources evaluation of the property located at 15258 W. Telegraph Road, on the site of the Specific Plan Area, in accordance with the California Environmental Quality Act (CEQA). The purpose of the investigation is to provide the City of Santa Paula with information and recommendations to determine whether the project would cause substantial adverse changes to any historical resources, as defined by CEQA.

This report evaluates the historical and architectural significance of this property based on criteria established by the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and the City of Santa Paula. The report also assesses the potential for the project to adversely impact historical resources. This property presently contains a single-family home and agricultural fields.

Meridian Consultants examined existing data, historic resource survey reports, and other sources to develop a historic context to evaluate the historic significance of this property. A site visit was also completed in September 2015 to document the existing condition of this property.

Components of the property evaluated in this report, including a historic employee residence and cultivated fields associated with the historic Atmore Ranch, were identified as potentially eligible for listing in the NRHP and the CRHR as contributing elements within the Santa Clara Valley rural historic district, identified in the 1996 Ventura County Cultural Heritage Survey Phase V: Western Santa Clara Valley.

Based on the research and site survey conducted, due to a loss of historic integrity, including the demolition of the main ranch house and development of some of the previously cultivated fields, the property as a whole no longer retains sufficient historic integrity to qualify individually as a historic resource at the national, state, or local level.

The proposed development of the property in accordance with the Specific Plan would result in the demolition of the employee residence and loss of agricultural fields. This impact would be adverse due to the loss of elements that contribute to the Santa Clara Valley rural historic district. However, given the large size and complex nature of this rural historic district, the loss of a single employee residence and associated fields would not reduce the integrity of the historic district to the degree that it could no longer convey historic significance. The Santa Clara Valley rural historic district would remain eligible for listing in the NRHP and the CRHR. Therefore, impacts would be less than significant.

2.0 INTRODUCTION

2.1 PURPOSE OF THE REPORT

In September 2015, at the request of the City of Santa Paula, Meridian Consultants performed a historic resource evaluation of 15258 W. Telegraph Road, a property located just west of the City of Santa Paula in unincorporated Ventura County, California. This investigation is part of the environmental review process required under CEQA for the proposed annexation of the project site to the City of Santa Paula, adoption of the Santa Paula West Business Park Specific Plan, and amendment to the City of Santa Paula's 1978 Sphere of Influence (SOI) to include this expansion area.

The purpose of this historic resource assessment is to evaluate the eligibility of the property for inclusion in the NRHP or the CRHR, or designation as a local landmark, and if considered eligible for one of these designations, to assess the impacts the Project would have on the property. The investigation consisted of a site visit to the property and a review of existing information by Jeff Carr, Meridian Consultants Senior Planner/Cultural Resource Specialist.

2.2 PROJECT LOCATION

The City of Santa Paula is located in Ventura County, directly north of State Route (SR) 126 and the Santa Clara River, west of the City of Fillmore, and east of the City of San Buenaventura in the Santa Clara River Valley. The regional location is shown in **Figure 2.0-1, Regional Location Map**. Regional access to Santa Paula West is provided by SR 126.

The Project Site consists of 53.81 acres located near the western boundary of the City of Santa Paula, as shown in **Figure 2.0-2, Project Location Map**. The Project Site is bound to the north by Telegraph Road; to the south by SR 126; to the east by existing industrial and commercial development in the existing City limits; and to the west by the Adams Barranca and agricultural operations. The Project Site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way. Local access is provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

The Project Site includes five Assessor Parcels, identified as Assessor Parcel Nos. (APNs) 098-0-010-150, 098-0-010-160, 098-0-010-190, 098-0-010-180, and 098-0-020-040.

2.3 PROJECT DESCRIPTION

As noted earlier, the proposed Santa Paula West Business Park Specific Plan is a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of a portion of the West Area 2 of the City of Santa Paula General Plan. The Specific Plan and other off-site improvements to support the Specific Plan development are collectively referred to as the Project.

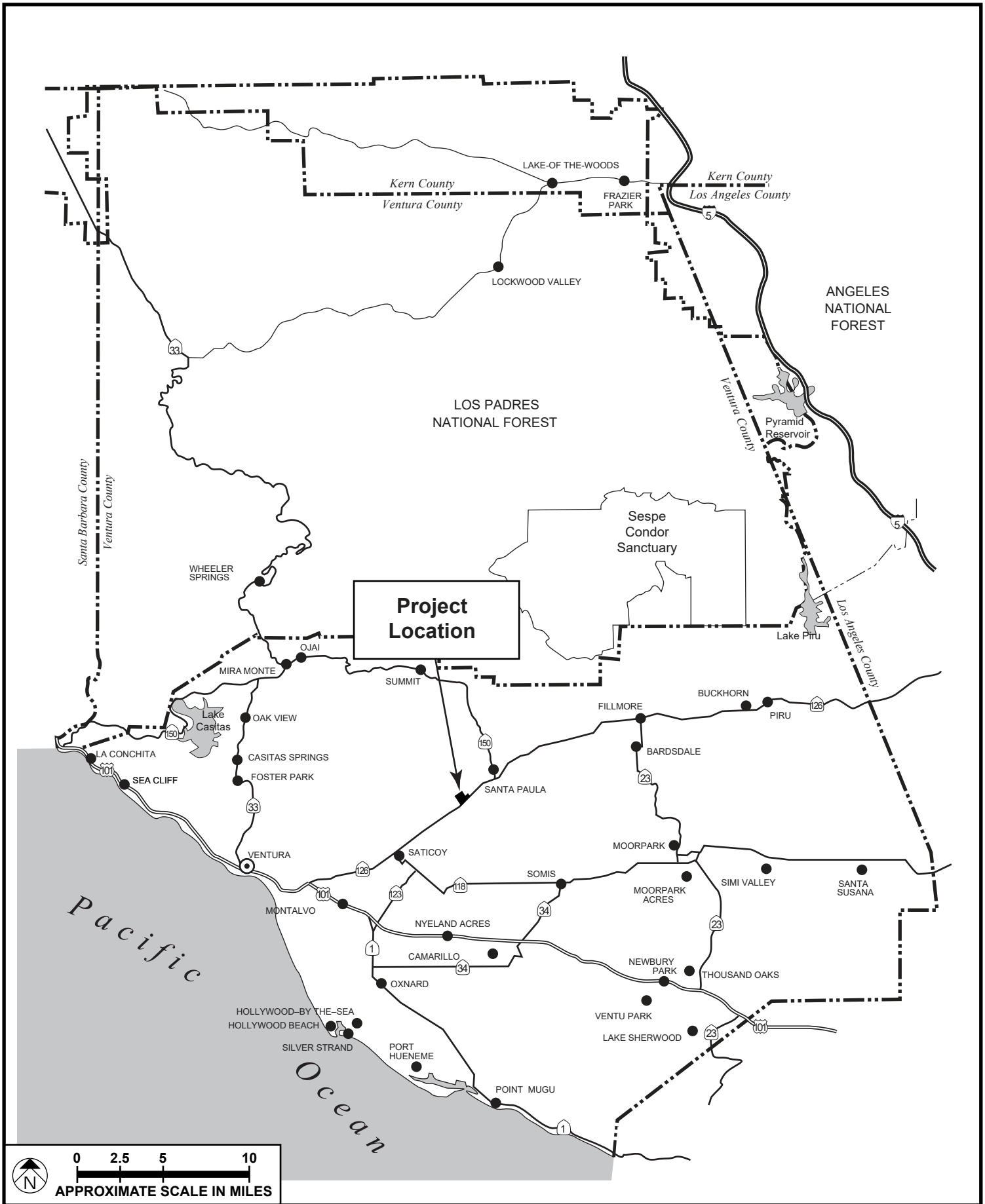
West Area 2 is identified as an expansion area in the City's 1988 General Plan. The General Plan envisions an amendment to the City of Santa Paula's 1978 Sphere of Influence (SOI) to include this expansion area and regulates the development of the Project Area as a coordinated office/industrial/business park use.

Figure 2.0-3, Conceptual Site Plan, shows the expected configuration of lots within the Specific Plan area. The sizes of the proposed parcels and the roadway layout are designed to achieve orderly and logical circulation within the Specific Plan area.

The Adams Barranca, located along the western boundary of the Project Site, would be zoned Open Space/Passive in the Specific Plan. A 64-foot-wide roadway for the extension of Faulkner Road through the Business Park would be dedicated to the City and would allow for integration of the Business Park with the existing developments to the east.

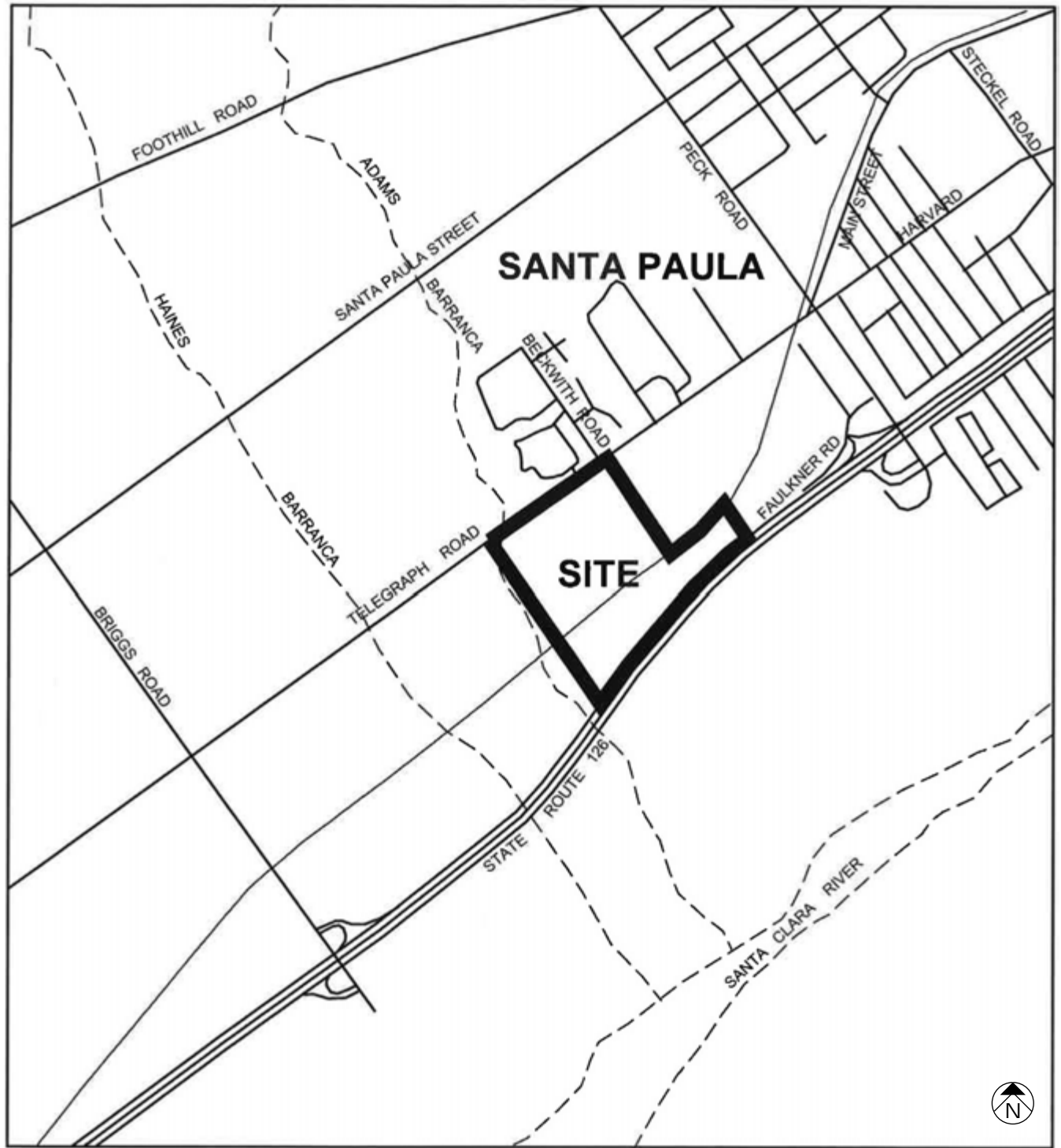
The areas along the VCTC railroad right-of-way would be improved with landscaped screening along the railroad corridor, and an existing at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road.

The Adams Barranca, SR 126, and parking lots would create a 50- to 100-foot-wide separation from the agricultural areas to the west and south.



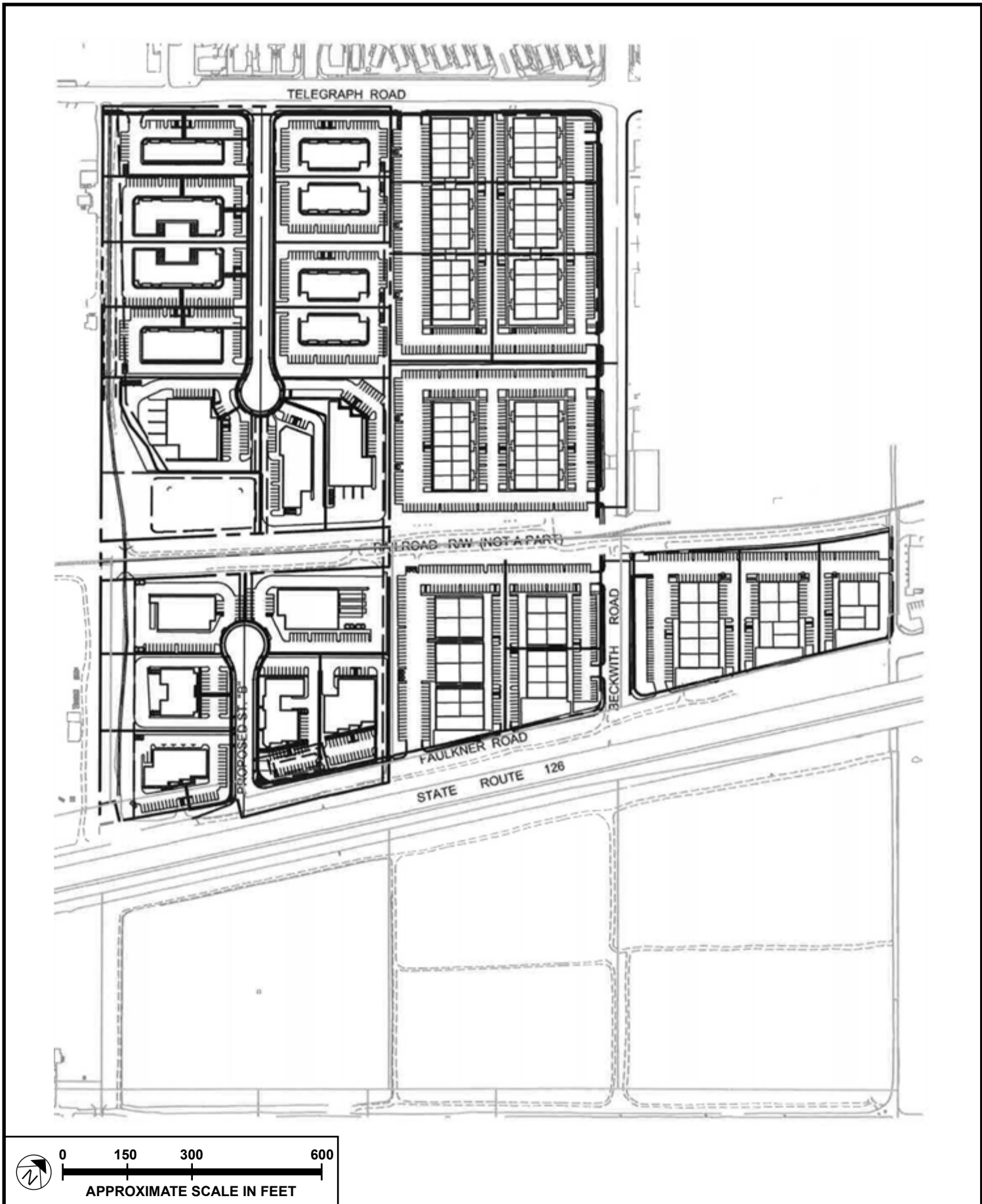
SOURCE: Meridian Consultants – 2015

FIGURE 2.0-1



SOURCE: Jensen Design and Survey – May 2014

FIGURE 2.0-2



SOURCE: Jensen Design and Survey – May 2014

FIGURE 2.0-3

3.0 ADMINISTRATIVE SETTING

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

The purpose of this investigation is to evaluate the historical significance and integrity of a potential historical resource within the Project Area to assist the City of Santa Paula in determining whether the proposed project would result in a substantial adverse change in the significance of the historical resource, pursuant to CEQA. A “historical resource” as defined by California Public Resources Code (PRC) Part 5020.1(j) “includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.” Guidelines for CEQA further define a “historical resource” as any resource listed in or determined eligible for listing in the CRHR, included in a local register of historical resources, or determined to be historically significant by the lead agency.

3.2 HISTORIC RESOURCES EVALUATION

National Register of Historic Places

Administered by the National Park Service, the NRHP is part of a national recognition program to identify, evaluate, and protect America’s historic and archaeological resources. The NRHP recognizes properties that are historically significant at the local, state, and national level and uses criteria for evaluation that are nearly identical to those of the CRHR:

- Associated with events that have made a significant contribution to the broad patterns of our history (Criterion A)
- Associated with the lives of persons significant in our past (Criterion B)
- Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values (Criterion C)
- Has yielded, or may be likely to yield, information important in history or prehistory (Criterion D)

Based on the NRHP standards, in addition to possessing significance under one or more criteria above, a property must also retain sufficient *integrity* to convey its historic significance. An evaluation of a property’s significance establishes whether the “essential physical features” that define the property’s significance remain intact. The NRHP considers integrity in terms of seven “aspects.” A property must not necessarily possess all aspects of integrity; relevant aspects will depend on why the property is significant. The seven aspects of integrity are listed below:

- *Location* is the place where the historic property was constructed or the place where the historic event took place.

- *Design* is the composition of elements that constitute the form, plan, space, structure, and style of a property.
- *Setting* is the physical environment of a historic property that illustrates the character of the place.
- *Materials* are the physical elements combined in a particular pattern or configuration to form the aid during a period in the past.
- *Workmanship* is the physical evidence of the crafts of a particular culture or people during any given period of history.
- *Feeling* is the quality that a historic property has in evoking the aesthetic or historic sense of a past period of time.
- *Association* is the direct link between a property and the event or person for which the property is significant.

The age threshold for listing in the NRHP is 50 years. However, properties less than 50 years of age may be eligible for listing if they are of “exceptional importance,” as defined by NRHP guidelines.

California Register of Historical Resources

The CRHR is a program intended to promote the recognition and protection of resources of architectural, historical, archaeological, and cultural significance. The program facilitates the identification of historical resources for state and local planning purposes, determines eligibility for state historic preservation grant funding, and provides certain protections under CEQA. To be eligible for listing in the CRHR, a property must meet at least one of the following criteria:

- Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States (Criterion 1)
- Associated with the lives of persons important to local, California or national history (Criterion 2)
- Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values (Criterion 3)
- Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation (Criterion 4)

Additionally, a resource would be automatically listed in the CRHR if it is listed in the NRHP or formally determined eligible by an agency for listing in the NRHP.

The age threshold for listing in the CRHR is 50 years so that sufficient time has passed to understand fully the historic significance of a resource. However, properties less than 50 years of age may be considered for listing in the CRHR if sufficient time has passed to understand the historic importance of a property.

City of Santa Paula Historic Landmark Ordinance

City of Santa Paula Ordinance No. 816 provides for the designation of City landmarks and establishes the criteria for designating a landmark nomination. The City's Design Assistance Committee makes determinations on whether a nominated property or structure meets one or more criteria below:

1. Historical & Cultural Significance
 - a. The proposed landmark is particularly representative of a distinct historical period, type, style, region, or way of life.
 - b. The proposed landmark is an example of a type of building which was once common, but is now rare.
 - c. The proposed landmark is of a greater age than most of its kind.
 - d. The proposed landmark is connected with a business or use which was once common, but now rare.
 - e. The architect or builder was locally or nationally renowned.
 - f. The site is the location of a significant local or national event.
2. Historic Architectural & Engineering Significance
 - a. The construction materials or engineering methods used in the proposed landmark are unusual or significant or uniquely effective.
 - b. The overall effect of the design of the proposed landmark is beautiful, or its details and materials are beautiful or unusual.
3. Neighborhood and Geographic Setting
 - a. The proposed landmark materially benefits the historic character of the neighborhood.
 - b. The proposed landmark in its location represents an established and familiar visual feature of the neighborhood, community or city.

Additionally, any structure, property, or area that meets one or more of the criteria above must also possess integrity in the areas of location, design, materials, construction and workmanship.

City of Santa Paula Ordinance No. 816 also provides for the designation of Historic Districts based on the following criteria:

1. The proposed historic district is a geographically definable area, urban or rural, possessing a significant concentration or continuity of site, buildings, structures, or objects unified by past events, or aesthetically by plan or physical development, or
2. The historic or aesthetic collective value of the district taken together may be greater than the value of each individual structure, or
3. The district meets the criteria that are listed for the designation of Landmarks provided in Section 17.55.080. (City of Santa Paula, Ordinance No. 816, Nomination of Landmarks) Section 106

3.3 IMPACT EVALUATION AND THRESHOLDS OF SIGNIFICANCE

Section 15064.5(b) of the CEQA Guidelines provides that a project with an effect that may cause a substantial adverse change in the significance of a historical resource may also have a significant effect on the environment. A substantial adverse change in the significance of a historical resource is defined as the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. According to the CEQA Guidelines, a resource would be materially impaired when a project, “demolishes or materially alters in an adverse manner those physical characteristics of an historic resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources [or] that account for its inclusion in a local register of historical resources pursuant to section 5020.1(K) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant.”

If a lead agency determines that a project would result in significant adverse changes in the significance of a historical resource, the agency must identify potentially feasible measures to mitigate those significant adverse changes.

4.0 HISTORIC CONTEXT

4.1 LOCAL HISTORY

The earliest historic, nonnative, use of the environs surrounding the Project Area dates to the mid-nineteenth century. On April 28, 1840, Governor Juan B. Alvarado granted Manuel Jimeno Casarin 17,733.33 acres of the Rancho Santa Paula y Saticoy. A later owner, T. W. More, sold approximately 15,000 acres to George G. Briggs in 1861. Formerly a horticulturist in Marysville, Briggs planted a 160-acre orchard thinking he could successfully cultivate fruit on the land. However, persistent drought made it difficult to sustain a productive fruit-growing operation; and in 1867, Briggs authorized land agent E. B. Higgins to subdivide the rancho into 150-acre parcels, which were sold to farmers from northern California, the East, and the Midwest.¹ The rancho was later patented in 1872 to John P. Davidson, James Blair, Stephen M. Tebbets, Joseph B. Crockett, and Edward D. Baker.² That same year, Nathan Blanchard and E. L. Bradley purchase 2,700 acres from Higgins. Three years later, Blanchard recorded the townsite of Santa Paula on a portion of that purchase.³

The town of Santa Paula would develop in the coming decades, driven by citrus farming, oil production in the region, and the coming of the Southern Pacific Railroad.⁴ Prior to the arrival of railroad, the agricultural economy of the area was restrained by the lack of a regional transportation network. However, after the establishment of the railroad, the citrus industry began a fast and steady period of growth. The growing citrus industry gave rise to the Limoneira Company, which was established by Wallace Hardison and Nathan Blanchard in 1893. The company acquired the water rights to Santa Paula Creek and began the company on 400 acres approximately 5 miles west of Santa Paula. Hardison's nephew, Charles C. Teague, managed his uncle's California businesses while Hardison was in South America pursuing his mining interests. Teague consolidated his uncle's holdings and grew Limoneira into a successful local company. In 1898, the 25-year-old Teague replaced a retiring Blanchard as Limoneira's manager and held that position until 1950. He became part owner in 1904 and company president in 1917. The company would grow to become one of the most successful lemon producers in the world—eventually holding the most acreage devoted to citrus—and was responsible for revolutionizing the industry. Under Teague, Limoneira developed fruit storage and curing techniques, allowing fruit picked in the winter and spring to be sold when prices were highest in the summer. Other important Limoneira advancements included the development of practical and efficient orchard heaters and fruit washers,

1 Solomon N. Sheridan, *History of Ventura County, California* (Chicago: S. J. Clarke Publishing Company, 1926).

2 W. W. Robinson, *The Story of Ventura* (Title Insurance and Trust, 1956).

3 San Buenaventura Research Associates, *CEQA Historic Resources Report, East Gateway Project, Santa Paula, CA* (Santa Paula, 2001), 4.

4 J. P. Triem, *Ventura County: Land of Good Fortune* (Chatsworth: Windsor Publications, 1985).

and the development of cooperative marketing for the citrus and walnut industries.⁵ New tree varieties were also developed during this period of innovation. Operations like Limoneira, the Teague-McKevett Company (founded 1908), and the Newhall Land and Farming Company's Orchard Farm (founded 1912) rapidly accelerated the region's shift to citrus cultivation, which progressed in waves of crops that included oranges, lemons, and, eventually, avocados, with one crop replacing another in succession.⁶

The expansion of the citrus industry accelerated dramatically in the period from 1920 to 1945. This expansion, along with the success of the oil industry, helped to spur the growth of Santa Paula, which saw the construction of new schools, banks, and commercial buildings, and the development of new residential lands tracts, for both the affluent and the working class.⁷ Affluent farmers relocated to the area, as did a multitude of farmworkers representing a variety of ethnic groups, including Chinese, Japanese, and Mexican immigrants, as well as Dust Bowl⁸ refugees. This diversity in social and economic character was evident in the residential buildings of the area, with ranch houses as the primary dwellings of the property owners. Through time, a family-owned ranch would be subdivided as children matured into adulthood, and new residences would be built. Housing was provided on both family farms and company farms for farmworkers, some of whom worked year-round while others worked seasonally. Types of worker housing included bunkhouses for single men, small family dwellings, and detached dwellings for ranch supervisors and labor supervisors.⁹

The two-decade period after World War II was characterized by increased suburban development, during which time agricultural lands in Southern California were redeveloped for the increasingly suburban populations. During this period, rootstock planted during the boom years became less profitable, and citrus diseases became widespread. The need to plant new trees combined with increasing land values due to development resulted in the reduction of the number of acres under cultivation, especially in Orange and Los Angeles Counties.¹⁰ However, the Santa Clara Valley managed to retain its citrus landscape because of its geography.

5 C. C. Teague, *Fifty Years a Rancher* (Los Angeles: Ward Ritchie Press, 1944).

6 San Buenaventura Research Associates, *Ventura County Cultural Heritage Survey Phase VI: Santa Clara Valley* (Santa Paula, 1999), 4.

7 Edwin M. Sheridan, *History of Ventura County, State of California, Its People and Its Resources* (Los Angeles: Harold McLean Meier, 1940), 163-164.

8 The Dust Bowl era was a period of severe dust storms and drought during 1930s that forced the relocation of millions of people from the Plains states.

9 San Buenaventura Research Associates (1999), 6.

10 San Buenaventura Research Associates (1999), 5.

4.2 DEVELOPMENT OF THE PROJECT AREA

The Project Area was part of a 75-acre ranch purchased by Richard Atmore in 1874. Atmore was a native of England who came to Santa Paula from Placerville, El Dorado County, in northern California.¹¹ Under Atmore, the ranch produced crops of barley, corn, potatoes, and alfalfa. Atmore also established an orchard, kept a large vegetable garden, and raised hogs. An 1879 description of the ranch also described a comfortable cottage, a yard filled with flowers and ornamental shrubbery, a row of willows on the east and south, a barn, and an 18-foot well.¹² The main house, a 2-story Italianate style residence, was likely constructed around the time of Atmore's purchase of the property. After Atmore's death on January 23, 1899, Ruben A. Atmore and his son, Edward, continued ranching and added 22 acres of land across Telegraph Road to their holdings. In the 1930s, Edward established a ranch of his own on Santa Paula Street. Presently, only one historic house remains on the property. This single-family employee residence appears to have been constructed in the 1920s or 1930s (based on period features like a Craftsman-style window); however, it does not appear on historic topographic maps until 1952. Within the last 20 years, the property was sold by the Atmore family to Bender Farms and McGrath Farms. Bender Farms developed portions of the property with modern agricultural-related buildings and parking areas. Aerial photography and a demolition permit indicate that the main Atmore residence and its associated barn and garage were razed sometime between 2007 and 2009.

11 Peggy Kelly, "Atmore Reunion Draws Members of Pioneering Family," *Santa Paula Times*, June 24, 2003, accessed September 28, 2015, http://www.santapaulatimes.com/news/archivestory.php/aid/4924/Atmore_reunion_draws_members_of_pioneering_family.html%20-%20June%2024.

12 Edwin Earl Hampton, Jr., *Ventura County: Garden of the World* (Ventura: Ventura County Historical Society, 2002).

5.0 DESCRIPTION OF THE POTENTIAL HISTORICAL RESOURCE

5.1 SURROUNDING SETTING

The Project Site is situated within the Transverse Ranges physiographic province of California. The primary faults, folds, mountains, and valleys of this region are all aligned in an east–west direction. The Transverse Ranges are a tectonically active region, with high rates of uplift, folding, and sedimentation.

The Project Site is located approximately 0.6 miles northwest of the Santa Clara River, which generally runs in an east–west direction south of the Project Site. The foothills of the Topatopa Mountains are to the north.

A variety of land uses surround the Project Site. Telegraph Road, which bounds the site along the north, is a two-lane roadway approximately 50 feet wide. North of Telegraph Road within the City limits are residential uses, consisting of a single-family residential neighborhood accessed from Country View Court, opposite the western portion of the Project Site, and a mobile-home residential community accessed from Valencia Way, opposite the eastern portion of the Project Site.

The southern portion of the Project Site is bound by SR 126, a four-lane freeway that runs east–west. South of SR 126 are agricultural operations and water storage basins. These agricultural lands contain row crops, avocados, and citrus, and extend to the Santa Clara River, which runs east–west along the base of South Mountain. A limited number of single-family residential units lie within some of the agricultural properties.

Along the East, the Project Site flanks the west and south boundaries of a light industrial area located immediately east of Beckwith Road and north of the VCTC railroad tracks. Beckwith Road is a two-lane road that separates the Project Site from the industrial uses to the east. The light industrial uses, which are within the City of Santa Paula limits, include office and warehouse buildings that house Cornerstone Molds and Machining, other related offices, and the Church of Christ–Buenaventura. The industrial properties also contain a construction equipment storage and maintenance facility operated by United Site Services.

The Adams Barranca is adjacent to the Project Site on the southwest and contains areas with riparian vegetation. Immediately west of Adams Barranca are agricultural operations consisting of orchards and a limited amount of livestock. Single-family residences are located within these agricultural operations.

5.2 SITE DESCRIPTION

The Project Site exhibits limited topographic variation and contains no natural slopes, rock outcrops, or other geological formations. The topography of the Project Site slopes gently, generally from north to south, with the highest elevation in the northern portion at approximately 250 feet above mean sea level (amsl) near Telegraph Road, and its lowest elevation at approximately 226 feet amsl near the boundary with SR 126.

An aerial view of the Project Site is provided in **Figure 5.0-1, Aerial Photograph of the Project Site/Photo Location Key**, and shows the main features. Photographs of the Project Site are provided in **Figure 5.0-2** through **Figure 5.0-10**. Approximately 49 acres of the 53.81-acre Project Site are currently used for agricultural production. The Project Site has undergone extensive surface grading and leveling as part of the ongoing agricultural operations. Several unpaved roads run throughout the Project Site, providing access to the existing agricultural operations. As noted earlier, the VCTC railroad right-of-way, containing railway tracks, bisects the Project Site. The southwest portion is bound by the lower reaches of the Adams Barranca, an improved channel that runs generally north–south.

The Project Site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land in the northeastern portion of the site and herbs on approximately 12.3 acres within the southeastern portion of the site. Approximately 4.5 acres of the Bender Farms portion of the Project Site consists of maintenance equipment storage facilities related to agricultural operations, offices, and other ancillary uses, such as packing facilities and related farming materials. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land that make up roughly the western half of the Project Site.

5.3 EMPLOYEE RESIDENCE AT 15258 W. TELEGRAPH ROAD

The employee residence is a rectangular-massed building of no discernable architectural style, save for one Craftsman-style, three-over-one wooden-sash window present on the front façade. The house consists of a front-gabled core with flanking side projections. A shed-roofed room projects off the kitchen on the east elevation, which provides rear access to the house through a notched porch at the southeast corner. The west elevation features a shed-roofed projection and a side-gabled projection, each corresponding to a bedroom. The symmetrical façade of the house is characterized by a hipped-roof, partial-width front porch. The porch roof is supported by 4x4 posts and has a beadboard ceiling. A vertical slat porch railing encloses the space, save for the front entrance, which is accessible via cast concrete steps. The house is clad in wide shiplap or novelty board siding; is capped by a medium-pitched, asphalt-shingle roof; and sits on a crawlspace. The perimeter foundation appears to be cast concrete. Fenestration is a mixture of one-over-one wooden- and vinyl-sash windows, with one vinyl-

sliding window on the east elevation and a three-over-one sash window on the façade. The house has enclosed eaves and louvered gable vents in each of the three gable ends. An exterior brick chimney is located on the east elevation of the house, toward the front, and corresponds to a fireplace in the front living room.

Two ancillary structures are directly behind, and to the south of, the employee residence. The first is a small manufactured shed south of the house. The second is a front-gabled garage clad in corrugated metal sheets.

The immediate setting around the employee residence is characterized by mature fruit trees, a small fenced yard, and a brick-paver path leading from the front of the house to dirt parking areas.



SOURCE: Google Earth – September 2015

FIGURE 5.0-1



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-2



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-3



View 2: Employee Residence—Facing South



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-4



View 3: Employee Residence—Facing Northwest



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-5



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-6



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-7



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-8



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-9



SOURCE: Meridian Consultants, LLC - 2015

FIGURE 5.0-10

6.0 EVALUATION OF SIGNIFICANCE AND INTEGRITY

6.1 PREVIOUS EVALUATIONS

The Project Site was included in a historic resources survey completed in 1996 by San Buenaventura Research Associates for the Ventura County Cultural Heritage Board.¹³ The California Office of Historic Preservation (OHP) funded the survey through the Certified Local Government program. The survey resulted in the identification of an NHRP-eligible rural historic district, Santa Clara Valley, which was determined to be significant under Criterion A and Criterion C. The OHP reviewed and accepted the survey's conclusions, which were also adopted by the Ventura County Cultural Heritage Board and the Ventura County Board of Supervisors.¹⁴

Under Criterion A, the Santa Clara Valley Historic District was found to be historically significant for its association with the growth and development of agriculture during the period between 1874 and 1950. The surveys concluded that the historic district illustrated the development of agricultural commodities and techniques and demonstrated the progression of land uses from dry farming of grains to the use of irrigation to grow tree crops, including citrus.¹⁵

Under Criterion C, the Santa Clara Valley Historic District was determined eligible as a well-preserved example of a historic Southern California citriculture landscape. The historic district was also deemed eligible for its significant concentration of historic buildings, structures, objects, and sites related to the historic citrus industry. It was significant as an example of the human-designed agricultural landscape, demonstrated by its specific historic form, pattern, and arrangement of buildings, structures, and objects that together helped illustrate and interpret citriculture in Southern California. Moreover, the variety and number of building styles and types from the period of significance (1874–1950) illustrate the historic development of agriculture in terms of both family farming and agribusiness enterprises.¹⁶

6.2 EVALUATION OF SIGNIFICANCE

National Register and California Register Significance

The property was evaluated for eligibility for listing in the National Register using the National Register Criteria for Evaluation under Criterion A and the California Register Criteria for Designation under Criterion 1 in the 1996 survey (see the Department of Parks and Recreation Form from that survey in

13 San Buenaventura Research Associates, *Ventura County Cultural Heritage Survey Phase V: Western Santa Clara Valley* (Santa Paula, 1996).

14 San Buenaventura Research Associates (2001), 5.

15 San Buenaventura Research Associates (2001), 5.

16 San Buenaventura Research Associates (2001), 5.

Appendix A). At that time, the property contained a 2-story Italianate style main residence, a 2-story wooden barn, a corrugated metal three-car garage, a lemon orchard, and a 1-story employee residence. The 1996 survey concluded the property appeared to possess important associations with events or patterns of events that have made a significant contribution to the broad patterns of history. The property was considered to be associated with the growth and development of agriculture in the region and contributed to the significance of the Santa Clara Valley Historic District.

Since this review was completed in 1996, the integrity of the property has been diminished through the demolition of the main residence, barn, and garage, and by the loss of some of the agricultural fields, as discussed below. As such, the property would not meet the criteria for eligibility as an individual resource. While not individually eligible, the remaining historic features of the property as they exist today, including the employee residence and remaining agricultural fields, do retain sufficient integrity to convey their significant historic associations. Therefore, these features should be considered to be contributing elements within the previously identified Santa Clara Valley rural historic district.

The property does not appear to be associated with persons significant in our past, and therefore it would not be considered eligible for listing in the NRHP under Criterion B or in the CRHR under Criterion 2. Having purchased the ranch in 1974, Richard Atmore was one of the early ranchers in the community. However, documentation has not shown that Mr. Atmore was especially important within his profession or group. His status and contribution to ranching was likely similar to many other ranchers at the time with similarly sized ranches; at its largest, the Atmore Ranch was 75 acres. Compared to the contributions of individuals in the profession such as Wallace Hardison and Charles C. Teague, who were exceptionally successful ranchers and made significant advancements in agricultural techniques, the contributions of Atmore were likely equivalent to those of his peers and would not meet the threshold for NRHP or CRHR significance. Moreover, even if the contributions of Atmore were considered significant within his profession, the demolition of the main residence on the property has severed the direct physical association with him and his descendants, and the property would no longer convey that association.

In terms of architectural significance (NRHP Criterion C and CRHR Criterion 3), the employee residence is not a good example of any particular style of architecture, and no known architect was responsible for the design of the house. In its original form, it may have possessed some characteristics of the Craftsman style, with three-over-one sash windows and tapered porch columns; however, those elements have been replaced, with the exception of one window on the façade of the building. While it is not an especially good representation of a significant architectural style, the house does appear to represent a type of architecture that is significant within the context of the Santa Clara Valley rural historic district. Labor housing is a significant component within the built environment of the historic

district, and this house appears to be a good representation of that architectural phenomenon. The house has lost some material and design integrity as a result of the replacement of windows and doors, and the construction of a likely addition to the west elevation of the house, and therefore would not be considered individually eligible for the NRHP or CRHR. However, enough integrity remains that the house would still be a contributing element to the Santa Clara Valley rural historic district.

The Project Area was surveyed for the presence of intact and significant archaeological resources in June 2015 by ASM Affiliates.¹⁷ This investigation indicated that no extant archaeological resources are present within the currently undeveloped portions of the Specific Plan area. Therefore, the property would not likely yield information on important research questions in history or prehistory and would not qualify for the NRHP under Criterion D or the CRHR under Criterion 4.

Properties Less than 50 Years of Age

Under the NRHP and CRHR, properties younger than 50 years of age may be eligible for listing if they are determined to be “exceptional.” There are no specific criteria for determining whether a property less than 50 years of age meets the definition for exceptional; however, such a property can be evaluated only when sufficient historical perspective exists to determine that the property is exceptionally important. Exceptional importance may be applied to the extraordinary importance of an event or to a whole class of resources that are so fragile that survivors of any age are unusual. The buildings and structures located on the Project Area that are less than 50 years of age were constructed within the last 20 years. They are associated with current-day agricultural use of the property by Bender Farms, and none appears to be exceptionally important in recent history.

Local Significance and Eligibility

The property was evaluated for designation as a City Landmark according to City of Santa Paula Ordinance No. 816 evaluation criteria. At the time of the 1996 survey, the property may have qualified for designation under criterion 1(a) as “particularly representative of a distinct historical period, type, style, region, or way of life.” However, due to a loss of integrity resulting from the demolition of the main residence, garage, and barn and the loss of some of the agricultural fields, the former Atmore Ranch does not appear to be eligible as an individual City Landmark.

¹⁷ David S. Whitley and Sherri Andrews, *Draft Phase I Archaeological Survey of the Santa Paula West Specific Plan Area, Santa Paula, Ventura County, California* (Tehachipi, CA: ASM Affiliates, 2015).

6.3 EVALUATION OF INTEGRITY

The employee residence retains integrity of **location** because this home is located on its original site of construction and has not been moved. The historic form and massing of the employee residence is still largely recognizable, despite the likely addition to the west elevation, so it retains integrity of **design**. The setting of the larger property has been somewhat compromised by the construction of nonhistoric residential development nearby; the introduction of nonhistoric agricultural buildings and structures on the site; and the loss of the historic main residence. However, the immediate setting around the employee residence is still surrounded by agricultural fields as it was historically; therefore, the resource retains integrity of **setting**. Due to a loss of historic materials, including windows, doors, and porch columns, the property no longer possess integrity of **materials** and **workmanship**. The employee residence and its immediate setting would be recognizable to someone who lived during the property's historic period of significance; therefore, the property retains integrity of **feeling** and **association**.

7.0 PROJECT IMPACTS

The development of the Project Area in accordance with the Santa Paula West Business Park Specific Plan would result in the demolition of the employee residence at 15258 W. Telegraph Road and the loss of agricultural fields associated with the former Atmore Ranch. The residence and fields are elements that contribute to the significance of the Santa Clara Valley rural historic district, which is considered a historical resource under CEQA. According to Public Resource Code 21084.1, “a project that may cause a substantial change in the significance of an historical resource is a project that may have a significant effect on the environment.” The Public Resources Code broadly defines a threshold for determining if the impacts of a project on an historic property will be significant and adverse. By definition, a substantial adverse change means, “demolition, destruction, relocation, or alterations,” such that the significance of an historical resource would be impaired. For purposes of NRHP eligibility, reductions in a property’s integrity (the ability of the property to convey its significance) should be regarded as potentially adverse impacts.

While the development of the Project would result in an adverse impact by eliminating elements that contribute to a historic district, this impact would not cause a substantial change in the significance of the Santa Clara Valley rural historic district. Given the large size and complex nature of the historic district, the loss of a single employee residence and associated fields would not reduce the integrity of the historic district such that it could no longer convey historic significance. The Santa Clara Valley rural historic district would remain eligible for the NRHP and the CRHR. Therefore, the impact resulting from the Project would be less than significant.

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APPENDIX A

California Department of Parks and Recreation Form 523 (1995)

No.	Dir.	Street	Resource Name	Other ID	NRHP Status Code	Landmark Status
15132	West	Telegraph Road	Linebarger Ranch		3D	eligible
15257	West	Telegraph Road	William A. Colley Ranch		3D	
15258	West	Telegraph Road	Richard Atmore Ranch	Employee residence	3D	eligible
15320	West	Telegraph Road	Richard Atmore Ranch		3D	eligible
		Todd Lane	William Geisler Ranch		3D	
15321		Todd Lane	Agnes Graham Ranch		3D	
630		Todd Road	Fred Beckwith Ranch		3D	
40		Wells Road	Victor Cummings Ranch		3D	eligible
242		Wells Road	Bell-Culp Ranch		3D	eligible
2843		Wheeler Canyon Road	Limoneira Ranch	Social Hall	3D	
3739		Wheeler Canyon Road	Lloyd Ranch		3B	eligible
4104		Wheeler Canyon Road	Jauregui Ranch		3D	
4613		Wheeler Canyon Road	Swanson Ranch		3D	
4886		Wheeler Canyon Road	William Staben Ranch		3D	
4999		Wheeler Canyon Road	McCarthy-Garmon Ranch		3D	
5660		Wheeler Canyon Road	Pellissier-Staben Ranch		3D	
5828		Wheeler Canyon Road	Eliseo School	James D. Schwindt residence	3D	eligible
6645		Wheeler Canyon Road	Thomas Darling Ranch	Residence #1	3D	
6733		Wheeler Canyon Road	Cummings Ranch		3D	
6780		Wheeler Canyon Road	O'Leary Ranch		3D	eligible
7399		Wheeler Canyon Road	Botke Ranch and Studio		3B	eligible
8416		Wheeler Canyon Road	Hobson Brothers Ranch		3D	

PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 3D

Other Listings
Review Code _____ Reviewer _____ Date _____

Resource Name or #: (Assigned by recorder) *Richard Atmore Ranch*

P1. Other Identifier:

P2. Location: Not for Publication Unrestricted a. County *Ventura*
and (P2b and P2c or P2d. Attach a Location Map as necessary.)

b. USGS 7.5' Quad *Santa Paula* Date *1951* T ; R ; 1/4 of 1/4 of Sec ; B.M.

c. Address: *15320 West Telegraph Road* City *Santa Paula* Zip *93060*

d. UTM: (Give more than one for large and/linear resources) *11* ; mE/ mN

e. Other Locational Data (Enter Parcel #, legal description, directions to resource, elevation, etc., as appropriate)

Parcel No. *98-010-015*

P3. Description (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This two-story, essentially Italianate style residence with an irregular, t-shaped plan, has two, intersecting medium-pitched, gable roofs covered with composition shingles over the main body of the house. One story, gable-roofed wings project from the northern and southern elevations. A full-front veranda is the main feature of the northern wing. A small stoop flanked by a pair of fluted engaged pilasters is located on the eastern elevation of the house protecting an inset oak paneled front door. The house is covered with wide, horizontal shiplap siding and rests on a concrete perimeter foundation. The open eaves on the main body of the house feature decorative flat brackets under closed eaves. The house has medium, multi-pane, double-hung windows with plain wood casings and shelf mouldings.

The house has had several additions over the years. Originally it was a two-story hipped roof square plan house with a veranda on two sides. About 1900, the house was considerably enlarged. A two-story portion was added extending to the east, and the verandas enclosed. Other changes occurred to the rear of the house with several additions, including a slanted bay window. Some changes reflect the Craftsman era from 1910 to 1915, as seen in the front door and the three-part window on the eastern elevation.

P3b. Resource Attributes: (List attributes and codes) *HP33 - Fam/ranch* *HP2 - Single Family Property*

P4. Resources Present Building Structure Object Site District Element of District Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



P5b. Description of Photo: (View, date, accession #)
Residence, east elevation, 6/15/95, #1501

P6. Date Constructed/Age and Sources:

Prehistoric Historic Both

1874-E

P7. Owner and Address

*Robert Bannon
3836 Dunford Way
Santa Clara, CA 95051*

P8. Recorded by: (Name, affiliation, and address)

*Judy Triem/San Buenaventura Research Assoc.
Ventura County Cultural Heritage Board
800 S. Victoria Ave.
Ventura, CA 93009*

P9. Date Recorded: *8/14/95*

P10. Survey Type: (Describe)

Intensive

P11. Report Citation: (Cite survey report and other sources, or enter "none")

San Buenaventura Research Associates, 1996, West Santa Clara Valley Cultural Heritage Survey, Phase V. General Services Administration

- Attachments**
- | | | | | |
|---------------------------------------|--|---|--|--|
| <input type="checkbox"/> NONE | <input checked="" type="checkbox"/> Continuation Sheet | <input checked="" type="checkbox"/> District Record | <input type="checkbox"/> Rock Art Record | <input type="checkbox"/> Other: (List) |
| <input type="checkbox"/> Location Map | <input checked="" type="checkbox"/> Building, Structure, and Object Record | <input type="checkbox"/> Linear Feature Record | <input type="checkbox"/> Artifact Record | |
| <input type="checkbox"/> Sketch Map | <input type="checkbox"/> Archaeological Record | <input type="checkbox"/> Milling Station Record | <input type="checkbox"/> Photograph Record | |

BUILDING, STRUCTURE, AND OBJECT RECORD

Resource Name or #: (Assigned by recorder) *Richard Atmore Ranch*

B1. Historic Name: *Richard Atmore Residence*

B2. Common Name: *none*

B3. Original Use: *ranch*

B4. Present Use: *same*

B5. Architectural Style: *Italianate*

B6. Construction History: (Construction date, alterations, and date of alterations)

original house(two-story hipped roof square with veranda on two sides, symmetrical design, 1874-E; additions in 1890, 1920

B7. Moved? No Yes Unknown Date:

Original Location:

B8. Related Features: *two-story wood barn, corrugated metal three-car garage, lemon orchard*

B9a. Architect: *unknown*

b. Builder: *unknown*

B10. Significance: Theme: *Agriculture*

Area: *West Santa Clara Valley*

Period of Significance: *1860-1946*

Property Type: *ranch buildings*

Applicable Criteria: *A, C*

(Discuss importance in terms of historical or architectural context as defined by theme, period and geographic scope. Also address integrity.)

The Atmore residence is significant as one of the earliest remaining ranch houses from the pioneer era of the Santa Clara Valley's history. Although reduced from its original 75 acres to 18 acres, the ranch is still owned by the Atmore family and is currently planted in lemons. The barn and setting for the ranch remain intact. Richard Atmore, a native of England, came to Santa Paula from El Dorado County in northern California in 1874. He purchased the present ranch that year and probably built the house as that time. The family raised grain and stock and eventually planted walnuts and lemons. Descendants of the family, Ruben A. and his son Edward, continued the ranching tradition and obtained an additional 22 acres across Telegraph Rd., illustrating their success as ranchers. Edward established his own ranch on Santa Paula Street in the 1930s.

B11. Additional Resource Attributes: (List attributes and codes) *HP33 - Farm/ranch*

HP2 - Single Family Property

B12. References:

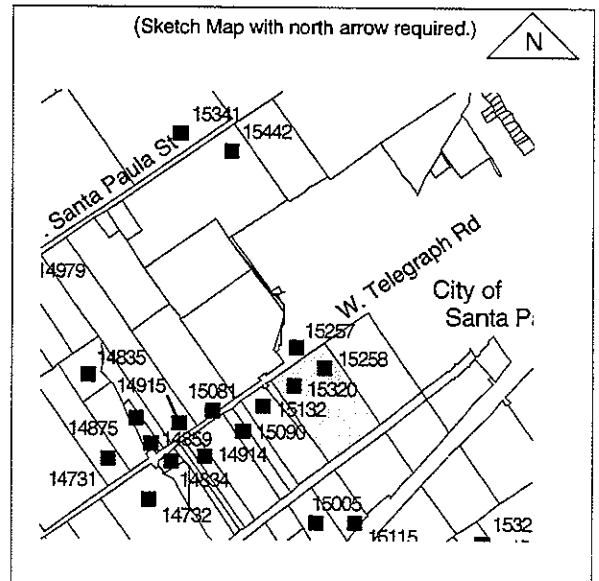
Interview w/ Allan Atmore, 6/27/95; Sheridan, Sol. History of Ventura County, Vol II, Chicago: S.J. Clark, 1926

B13. Remarks:

B14. Evaluator: *Judy Triem*

Date of Evaluation: *11/15/95*

(This space reserved for official comments.)



Primary # _____

HRI # _____

Trinomial _____

CONTINUATION SHEET

Page 3 of 4 Resource Name or #: (Assigned by recorder) *Richard Atmore Ranch*

Recorded by: *Judy Triem/San Buenaventura Research Assoc.*

Date *8/14/95*

Continuation Update

P3. Description (continued)

The final addition, possibly from the 1920s, is the long one story wing extending from the northern elevation, with its French doors opening onto a recessed porch. The house is in good condition.

A narrow dirt drive leads from the main road through the lemon orchard along the east side of the house and down past the garage and barn. The three-car garage is covered with corrugated metal siding, as is the large two-story barn.

CONTINUATION SHEET

Primary # _____
HRI # _____
Trinomial _____

Page 4 of 4 Resource Name or #: (Assigned by recorder) *Richard Atmore Ranch*

Recorded by: *Judy Triem/San Buenaventura Research Assoc.*

Date *9/20/95*

Continuation Update

P3. Description

15258 W. Telegraph Road - employee residence

This is a one-story folk Victorian style residence with a rectangular plan and a front-facing medium high-pitched, gable roof covered with composition shingles. A projecting porch with a vertical slat baluster runs across the front of the house, and is supported by tapered columns. The house is covered with wide, horizontal shiplap siding and rests on a concrete perimeter foundation. The eaves are closed and louvered vents are located under the gable ends. A brick chimney is located on the east side of the house. The house has medium, one-over-one, double-hung windows with plain wood casings. An addition has been made on the west side of the house. The house is in fair condition.

A driveway leads from Telegraph Road along the west side of the house. In front of the house is a dirt parking area, several mature trees and a small fenced yard. This house was built as the foreman's house on the 18 acre Atmore Ranch. The main house is to the east of this house.

Supplemental Photograph or Drawing



Description of Photo: (View, date, accession #)

Residence, north elevation, 8/21/95, #1607

APPENDIX 4.6

Preliminary Geotechnical Investigation Report



Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

TRANSMITTAL

To: Meridian Consultants, LLC
860 Hampshire Road, Suite P
Westlake Village, California 91361

Date: June 1, 2015

Project No. 11027.001

Attention: Mr. Brian McCarthy, Senior Project Manager

Transmitted:

Golden State Overnight

Courier

Pick Up

The Following:

Draft Report

Final Report

Extra Report

Proposal

Other

For:

Your Use

As Requested

Subject: Geologic and Geotechnical Study, Santa Paula West Industrial Park Specific Plan, Adjacent to the Southwest Portion of the City of Santa Paula, Unincorporated Ventura County, California

LEIGHTON CONSULTING, INC.

By: Gareth I. Mills

Distribution: (1) Addressee

GEOLOGIC AND GEOTECHNICAL STUDY
SANTA PAULA WEST INDUSTRIAL PARK SPECIFIC PLAN
ADJACENT TO THE SOUTHWEST MARGIN OF
THE CITY OF SANTA PAULA
UNINCORPORATED VENTURA COUNTY, CALIFORNIA

Prepared for:

MERIDIAN CONSULTANTS, LLC

860 Hampshire Road, Suite P
Westlake Village, California 91361

Project No. 11027.001

June 1, 2015



Leighton Consulting, Inc.

A LEIGHTON GROUP COMPANY



Leighton Consulting, Inc.
A LEIGHTON GROUP COMPANY

June 1, 2015

Project No. 11027.001

Meridian Consultants, LLC
860 Hampshire Road, Suite P
Westlake Village, California 91361

Attention: Mr. Brian McCarthy, Senior Project Manager

**Subject: Geotechnical and Geologic Study,
Santa Paula West Industrial Park Specific Plan
Adjacent to Southwest Portion of the City of Santa Paula
Unincorporated Ventura County, California**

In accordance with your authorization, Leighton Consulting, Inc. (Leighton) has conducted a geotechnical and geologic study for the Santa Paula West Industrial Park Specific Plan that is located adjacent to the southwestern portion of the City of Santa Paula, in unincorporated Ventura County, California. The purpose of this study has been to review the general geologic and geotechnical conditions of the land encompassed by the Santa Paula West Industrial Park Specific Plan, and to identify potential geologic and geotechnical hazards that may be present for input into an Environmental Impact Report (EIR).

In performing the review, we have referred to California Geological Survey (CGS) Notes regarding preparation of geologic reports as well as the Geology and Soil portion of Appendix G, California Environmental Quality Act (CEQA) checklist of the CEQA Guidelines. Specific items addressed in our study include:

- Onsite earth units and their general engineering characteristics (including settlement, collapse or expansion)
- Faulting and seismicity
- Seismic related ground failure (secondary seismic hazards)
- Seismic related ground failure (secondary seismic hazards)

- Slope stability and landslides
- Erosion

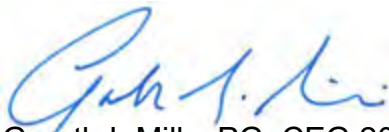
This report summarizes our findings and conclusions with respect to the Santa Paula West Industrial Park Specific Plan, identifies potential geologic hazards and presents measures to mitigate the hazards. Our study has incorporated the data collected during our background review and field reconnaissance.

Detailed geologic and geotechnical studies should be conducted for future development to evaluate geotechnical aspects of the specific development design. Such studies should include evaluation of compressible soils, faulting and seismic hazards, corrosive soils, and other measures needed to develop specific recommendations for the design of future improvements.


We appreciate this opportunity to provide our services. If you have any questions, please contact this office at your convenience.

Respectfully submitted,

LEIGHTON CONSULTING, INC.


 Gareth I. Mills, PG, CEG 2034
 Vice President / Principal Geologist




 Jason D. Hertzberg, GE 2711
 Principal Engineer



GIM/JDH/gv

Distribution: (1) Addressee



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Appendices

Appendix A – References

Appendix B – Historical Earthquake List

1.0 INTRODUCTION

1.1 Purpose and Scope of Work

The purpose of this study has been to review the general geologic and geotechnical conditions of the land encompassed by the Santa Paula West Industrial Park Specific Plan (Site) adjacent to the southwestern portion of the City of Santa Paula (City), as shown on Figure 1 (Site Location Map), and to identify potential geologic and geotechnical hazards that may be present. This information will be included in an Environmental Impact Report (EIR) being prepared for annexation of the Site by the City.

1.2 Methodology

This geologic and geotechnical study was conducted as follows:

- Available published reports and geologic maps were reviewed and the data analyzed. Historical aerial photographs were also reviewed. References and photographs reviewed are listed in Appendix A.
- A site reconnaissance was conducted to observe existing conditions onsite and the general surface distribution of geologic materials.
- The data obtained from our background review and site reconnaissance was evaluated and analyzed by a Certified Engineering Geologist and a Geotechnical Engineer.
- Preparation of this report addressing the geologic, seismic, and geotechnical engineering aspects of the Site. This report is based on our experience in the region and data obtained from the above-mentioned sources.

1.3 Site Location and Project Description

The Santa Paula West Industrial Park Specific Plan area is approximately 53.64 acres in size and is located adjacent to the southwestern portion of the City of Santa Paula (Figure 1). It is bounded by Telegraph Road to the northwest, Adams Barranca to the southwest, Faulkner Road to the southeast, and Beckwith Road and Todd Lane to the northeast.

The Site is approximately 53.64 acres in size and consists of the following two properties, each of which are separated by a Union Pacific Railroad:

- McGrath (McGaelic): north of the Union Pacific Railroad and adjacent to the southwest corner of the intersection of Telegraph Road and Beckwith Road; and,
- Bender Farms: south of the Union Pacific Railroad and adjacent to the northwest corner of the intersection of Todd Lane and Faulkner Road.

Existing zoning and land use designations for the Specific Plan Area are shown by the City of Santa Paula (1998b; 2013). Proposed zoning and land use designations are light industrial and commercial.

Historical aerial photographs were reviewed for information regarding past uses of the Site. Aerial photographs were reviewed for the following years: 1938, 1953, and 1981.

In the 1938 aerial photograph, the Site appears to have been developed for agricultural use and no residential development was apparent. A railroad was visible that extended from the northeast to the southwest through the approximate center of the site. Adams Barranca was evident adjacent to the southwest site margin. Uses of land areas that surround the Site are similar to those visible at the Site.

In the 1953 aerial photograph, the Site and surrounding land do not appear to have changed significantly. Agricultural uses continued to be dominant at the Site and surrounding areas.

In the 1981 aerial photograph, State Route 126 was then apparent and bounded the south site margin. Agricultural use of the Site and surrounding areas was still dominant. However, what appear to be two groups of residential buildings were located on the Site adjacent to the intersection of Adams Barranca and Telegraph Road, and east of that location also south of Telegraph Road.

Currently, agricultural uses of the Site are still dominant, although a portion of the center of the Site contains several residential buildings and other non-residential buildings. Surrounding these buildings, the land is used for equipment and vehicle storage.

2.0 GEOTECHNICAL CONDITIONS

2.1 Regional Geologic Setting

The Site is located in a valley between South Mountain to the south and Santa Paula Ridge to the north within the Transverse Ranges Geomorphic Province. The Transverse Ranges are generally characterized by east-to-west-trending folds and faults. The area contains extensive Tertiary marine and non-marine sedimentary units and Quaternary alluvial and landslide deposits (Dibblee, 1992). Minor amounts of Tertiary-aged andesite-basalt are present in South Mountain. Major structural features in the vicinity include the Oak Ridge fault, the Long Canyon Syncline, the Long Canyon Anticline, and the South Mountain Anticline to the south (Dibblee, 1992). Major structural features to the north include the Orcutt fault, the Timber Canyon fault, the Sisar fault, the Cayetano fault, the Santa Paula Ridge Anticline, the Pine Canyon Anticline, and the Echo Canyon Anticline (Dibblee, 1990). The present landscape in the area has been formed by tectonic (i.e. mountain-building) forces and erosion.

2.2 Earth Units

Quaternary alluvium of the Santa Clara River has been mapped in the area of the Site (Dibblee, 1992). The alluvial soil is expected to consist of silts, sands and gravel, which extend to unknown depths below the ground surface. A regional geologic map of the area is provided as Figure 2.

2.3 Regional Faulting and Seismicity

Southern California is a geologically complex area with numerous fault systems, including strike-slip, oblique, thrust and blind thrust faults. Therefore, any specific area is subject to seismic hazards of varying degree, depending on the proximity and earthquake potential of nearby active faults, and the local geologic and topographic conditions. Seismic hazards include primary hazards from surface rupturing of rock and soil materials along active fault traces, and secondary hazards resulting from strong ground shaking.

2.3.1 Surface Rupture

To protect structures from the hazard of surface ground rupture along a fault line, the California Geological Survey (CGS), under the State-

mandated Alquist-Priolo (AP) Act of 1972, has delineated “Earthquake Fault Zones” that encompass active or potentially active faults that are both “sufficiently active” and “well defined” (CGS, 2002; Bryant and Hart, 2007). Development projects within these zones that are intended for human occupancy require detailed investigations to evaluate faulting. An active fault, as defined by State law, is a fault that has been proven by direct geologic methods, such as trenching, to have offset Holocene-age sediments (11,000 years old or younger). A fault that has been proven by direct geologic evidence *not* to have moved during the last 11,000 years is termed inactive.

Numerous active faults have been mapped within this area of southern California (Figure 4). However, even though portions of these faults may be considered active per the criteria of the California Geological Survey (Bryant and Hart, 2007), not all portions of all of the faults have been included within Alquist-Priolo Earthquake Fault Zones by the California Geological Survey, even though Holocene activity of certain fault segments may have been demonstrated by other workers. Such inclusion is typically limited by the resources available to the California Geological Survey to perform studies that would warrant inclusion.

No State of California Earthquake Fault Zones (CGS, 2000, 2002; State of California, Department of Conservation, Division of Mines and Geology, 1998) have been mapped transecting the Site. However, as shown in Figure 4, the closest mapped fault to the site is the Oak Ridge Fault located approximately 4,500 feet south of the site (Weber et al., 1975). It has not been included in an Alquist-Priolo Earthquake Fault Zone and the California Geological Survey (2010) classifies much of it, including the portion closest to the site, as having last produced ground rupture during late Quaternary time, i.e. the last 700,000 years. Although only a portion of this fault south of Fillmore, over 7 miles east of the site is classified as active by the California Geological Survey (2010), the fault is generally considered active (Ventura County, 2013).

Currently, the closest Earthquake Fault Zones with respect to the Site are designated along the Rudolph Fault within the Orcutt / Timber Canyon group of fault approximately 4.9 miles northeast of the site (California Department of Conservation, Division of Mines and Geology, 1985, 1986), and the Wright Road Fault located approximately 4.8 miles southwest of

the site (California Department of Conservation, Division of Mines and Geology, 1997, 1998).

Based on the preceding discussion, the risk of damage associated with surface fault rupture across the site is considered low.

A discussion of the Oak Ridge Fault and other regional faults are discussed in the following section.

2.3.2 Nearby Active Faults

The characteristics of the known nearby fault systems that are discussed below were gathered from the Southern California Earthquake Data Center (SCEC) website (see: <http://scedc.caltech.edu>), and supplemented with information from other sources, where noted.

Oak Ridge Fault

The Oak Ridge fault is a southeast-dipping thrust fault; at its nearest approach, it is located approximately 4,500 feet south of the southern portion of the Site (Figure 4). The Oak Ridge fault is approximately 54 miles long, and is thought to have a slip rate between 3.5 and 6 millimeters per year. The Oak Ridge Fault strikes generally parallel to State Route 126 from the town of Piru in the east extending west into the Pacific Ocean to a location approximately 12 miles due south of Santa Barbara. This fault is expected to produce earthquakes of magnitude (Mw) 6.5 to 7.5.

San Cayetano Fault

The San Cayetano fault is a north-dipping thrust fault, located approximately 8.5 miles north of the Site. The fault is approximately 27 miles long, and is thought to have a slip rate between 1.3 and 9 millimeters per year. This fault is estimated to be capable of producing earthquakes of magnitude (Mw) 6.5 to 7.3. It may have produced an earthquake on December 21, 1812 that exceeded magnitude 7.0 (Dolan and Rockwell, 2001).

Ventura Fault

The Ventura fault is a north-dipping thrust fault, located approximately 3.7 miles west of the Site. The fault is approximately 12 miles long, and is thought to have a slip rate of approximately 0.5 to 1.5 millimeters per year. This fault is estimated to be capable of producing earthquakes of magnitude (Mw) 6.0 to 6.8.

Bailey Fault

The Bailey fault is a left-lateral, oblique reverse fault, located approximately 9.5 miles south of the Site. The fault is approximately 12 miles long. The maximum potential earthquake magnitude and the slip rate are unknown. The fault is thought to have last ruptured during the late Quaternary (i.e. during the last approximately 700,000 years).

Red Mountain Fault

The Red Mountain fault is a north-dipping, thrust fault, located approximately 13 miles west of the Site. The fault is approximately nine miles long and thought to have a slip rate of 0.4 to 1.5 millimeters per year. This fault is estimated to be capable of producing earthquakes of magnitude (Mw) 6.0 to 6.8.

Simi Fault

The Simi fault is a north dipping fault with a left-lateral reverse sense of slip. It is approximately 17 miles long and, at its closest approach, is approximately 6.2 miles south of the Site. Based on studies performed by Hitchcock et al. (2001), the most recent rupture of the fault occurred about 1,350 years before present and produced approximately 6.5 feet to 8 feet of total oblique slip displacement; this is consistent with a magnitude 7 earthquake.

A listing of faults located within 62 miles (approximately 100 kilometers) of the Site is provided below (Blake 2000a).

Fault Name	Distance mi (km)	Maximum Earthquake (Mw)
OAK RIDGE (Onshore)	0.9 (1.4)*	6.9
VENTURA - PITAS POINT	3.7 (6.0)	6.8
SIMI-SANTA ROSA	6.2 (9.9)	6.7
SAN CAYETANO	8.5 (13.7)	6.8
M.RIDGE-ARROYO PARIDA-SANTA ANA	11.6 (18.7)	6.7
RED MOUNTAIN	13.0 (20.9)	6.8
SANTA YNEZ (East)	13.6 (21.9)	7.0
MONTALVO-OAK RIDGE TREND	12.2 (19.7)	6.6
CHANNEL IS. THRUST (Eastern)	14.2 (22.9)	7.4
OAK RIDGE(Blind Thrust Offshore)	14.9 (23.9)	6.9
ANACAPA-DUME	17.1 (27.6)	7.3
SANTA SUSANA	19.1 (30.7)	6.6
HOLSER	20.4 (32.8)	6.5
MALIBU COAST	20.9 (33.6)	6.7
NORTHRIDGE (E. Oak Ridge)	21.2 (34.1)	6.9
SAN GABRIEL	26.7 (43.0)	7.0
BIG PINE	27.2 (43.7)	6.7
SANTA MONICA	32.2 (51.9)	6.6
SANTA YNEZ (West)	32.7 (52.7)	6.9
NORTH CHANNEL SLOPE	32.5 (53.9)	7.1
SANTA CRUZ ISLAND	33.9 (54.6)	6.8
SIERRA MADRE (San Fernando)	35.0 (56.3)	6.7
SAN ANDREAS - 1857 Rupture	35.0 (56.3)	7.8
SAN ANDREAS - Carrizo	35.0 (56.3)	7.2
GARLOCK (West)	35.8 (57.6)	7.1
PLEITO THRUST	36.2 (58.2)	7.2
VERDUGO	39.5 (63.6)	6.7
PALOS VERDES	39.5 (63.5)	7.1
HOLLYWOOD	41.2 (66.3)	6.4
SAN ANDREAS - Mojave	42.1 (67.8)	7.1
SIERRA MADRE	45.5 (73.2)	7.0
NEWPORT-INGLEWOOD (L.A.Basin)	46.0 (74.0)	6.9
WHITE WOLF	47.3 (76.2)	7.2
COMPTON THRUST	50.0 (80.4)	6.8

Fault Name	Distance mi (km)	Maximum Earthquake (Mw)
SANTA ROSA ISLAND	51.2 (82.4)	6.9
RAYMOND	51.4 (82.8)	6.5
ELYSIAN PARK THRUST	54.2 (87.3)	6.7
CLAMSHELL-SAWPIT	58.5 (94.2)	6.5
LOS ALAMOS-W. BASELINE	60.0 (96.5)	6.8

* distance measured using Weber et al (1975).

2.3.3 Seismic Shaking

The probability that the Site will be subject to strong seismic shaking from a moderate to large earthquake on a major active fault in southern California is high. The intensity of ground shaking at a given location depends primarily on the earthquake magnitude, faulting mechanism, distance and depth from the source (hypocenter) and the site response characteristics. The intensity of shaking is generally amplified in areas underlain by deep deposits of loose, unconsolidated soils. In the study area, the hazard posed by seismic shaking is considered high, due to the proximity of known active faults. A map showing recent earthquakes in the region is provided as Figure 5.

The computer program EQSEARCH (Blake, 2000b) was used to evaluate past, documented seismic activity near the Site. This program performs an automated search of a catalog of historic southern California earthquakes, and computes the distance from a project site to each of the earthquake epicenters within a specified search radius of 62 miles (approximately 100 kilometers). From the computed distances, the program also estimates (using an appropriate attenuation relationship) the peak horizontal ground acceleration that may have occurred at the Site due to each earthquake. A database of recorded earthquakes with magnitudes of 5.0 or larger between 1800 and 2015 was used in the analysis. The results of the analysis, including an earthquake epicenter map for events from 1800 to 2015, and a listing of historic earthquakes with an epicentral distance of less than 62 miles from the Site, are presented in Appendix B.

The largest historical earthquake within the 62-mile radius of the Site was the 1952, magnitude 7.7 Arvin-Tehachapi Earthquake that occurred on the

White Wolf fault approximately 46 miles to the northeast. It is estimated to have produced a horizontal ground acceleration of 0.1g at the Site. The earthquake event estimated to have produced the highest estimated horizontal ground acceleration, 0.13g, at the Site was a magnitude 7.0 earthquake that occurred approximately 24 miles from the site in 1827 in the Santa Barbara Channel.

The Site will experience moderate to severe ground shaking if a large magnitude earthquake occurs on one of the nearby faults. For geotechnical analysis, Peak Ground Acceleration (PGA_M) based on the 2013 California Building Code is 1.07g, using Equation 11.8-1 of ASCE7-10. The analysis was performed based on the latitude and longitude of the approximate Site center, 34.3326°N and -119.0914°W, respectively. PGA was also estimated using a probabilistic analysis for an earthquake with a 2 percent probability of exceedance in 50 years (i.e. a 2,500-year return period) using the United States Geological Survey (USGS) Seismic Hazard Deaggregation Interactive Analysis tool (see: <http://geohazards.usgs.gov/deaggint/2008/>); for this analysis, the PGA was estimated at 0.96g. Based on deaggregation of the PGA, the estimated modal earthquake magnitude is approximately 7 at a distance of 1.9 kilometers from the Site. Results of the analysis are provided in Appendix A.

2.3.4 Secondary Seismic Hazards

Secondary effects of seismic shaking are non-tectonic processes that are directly related to strong seismic shaking. Ground deformation, including fissures, settlement, displacement and loss of bearing strength are expressions of these processes, and are among the leading causes of damage to improvements during moderate to large earthquakes. Secondary effects leading to ground deformation include liquefaction, lateral spreading, settlement, and landsliding. Other hazards indirectly related to seismic shaking are inundation, tsunamis, and seiches.

Liquefaction: Liquefaction occurs when loose, cohesionless, water-saturated soils (generally fine-grained sand and silt) are subjected to strong seismic ground motion of significant duration. These soils essentially behave similar to liquids, losing much of its shear strength. Improvements constructed on these soils may buckle, tilt or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone

areas underlain by young sandy alluvium where the groundwater table is less than 50 feet below the existing ground surface (bgs).

According to the Seismic Hazard Zone Report for the Santa Paula 7.5-Minute Quadrangle, Ventura County, California (CGS, 2002a), the historically shallowest depth to groundwater in the vicinity of the Site ranges from less than approximately 20 feet below the existing ground surface at the southeastern site margin to approximately 40 feet below ground surface at the northwestern site margin boundary (Figure 3). As shown in Figure 6, Liquefaction Hazard Maps prepared by the California Geological Survey, much of the site is located within a potential liquefaction zone (CGS, 2002b); only a small area of the site adjacent to the northwest site margin does not lie within the liquefaction zone. However, the City of Santa Paula General Plan, Safety Element's liquefaction map shows the area as completely within a liquefaction zone (City of Santa Paula, 1998a). In addition, Weber et. al (1975) suggests that liquefaction has occurred across approximately the southern half of the Site in the past based on the recognition of certain geomorphologic features.

The presence of shallow groundwater historically, and loose sandy alluvial soils make liquefaction a potential hazard within the Site, and this will need to be studied on a case-by-case basis.

Lateral Spreading: Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move down slope on a liquefied substrate of relatively large aerial extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, or is known to move on slope gradients as gentle as one degree. The land in the vicinity of the Site is essentially flat and no slopes are present. However, based on our recent reconnaissance of the Site, the west margin of the site that descends towards Adams Barranca may be as much as 20 feet in height. Although the potential for lateral spreading across much of the Site is likely to be low, the western portion of the Site adjacent to Adams Barranca may be susceptible to lateral spreading. The potential for lateral spreading should be studied on a case-by-case basis if development is proposed in the western portion of the Site.

Seismically Induced Settlement: Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, loosely packed granular alluvial deposits are especially susceptible to this phenomenon. Poorly compacted artificial fills may also experience seismically induced settlement. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. There is the potential for seismically induced settlement to occur.

Seismically Induced Landslides: Marginally stable slopes may be subject to landsliding caused by seismic shaking. In most cases, this is limited to relatively shallow soil failures on steeper natural slopes, although deep-seated failures of over-steepened slopes are also possible. The Site is located on flat land (Figure 1) and thus, the potential for seismically induced landslides is considered to be low.

Seismically Induced Inundation: Strong seismic ground motion can cause dams and levees to fail, resulting in damage to structures and properties located downstream. Four up-gradient dams have the potential to inundate the Site: Pyramid Lake Dam, Lake Castaic Dam, Bouquet Canyon Dam, and Santa Felicia Dam (Ventura County, 2013). Details of each dam are shown in the table below:

Name	Year Completed	Type of Dam	Storage Capacity (Acre-Feet)	Height (Feet)
Castaic Dam	1973	Earth	325,000	360
Bouquet Canyon Dam	1934 Upgraded 1981	Earth	36,500	190
Pyramid Dam	1973	Earth-Fill	179,000	444
Santa Felicia Dam (Lake Piru)	1955	Earth	100,000	236.3

Based on a review of the Safety Element of the City of Santa Paula's General Plan (City of Santa Paula, 1998a), each of these dams has been designed to withstand an earthquake of Mw 6.0, although the specific ground acceleration assumed for each design is not documented (City of

Santa Paula, 1998a). Nonetheless, several of the active faults in the vicinity of the Site have the potential to generate earthquakes in excess of magnitude 6.0 (see Section 2.3.3 of this report). Failure of any of these dams could have a significant impact on the Site.

As an example, in 1928, failure of the San Francis Dam approximately 35 miles northeast of the Site flooded appreciable portions of the Santa Clara River Valley, including the City of Santa Paula north to East Santa Paula Street, near the high school. Loss of life and property occurred. Some of the dams currently upstream from Santa Paula are larger than the Saint Francis Dam. All of the dams listed in the table above are significantly closer to the Site than the St. Francis Dam, and some are larger.

According to the Ventura County General Plan Hazard Appendix, the entire Site is located within a Dam Inundation Area (Ventura County, 2013).

Tsunamis and Seiches: A tsunami, or seismically generated sea wave, is generally created by a large earthquake that causes a sudden vertical displacement of the ocean floor. A seiche is an earthquake-induced wave in a confined body of water, such as a lake or reservoir, is usually small (generally no more than 10 feet to 20 feet above the pre-existing water level) and is of short duration. Currently, there is no reliable methodology to predict the severity of a seiche, but given the manner in which it occurs it will be less severe than the effects of total dam failure and inundation of the surrounding areas (Ventura County, 2013).

Damage from tsunamis is confined to coastal areas that are typically 20 feet or less above sea level. Since the average elevation of the Site is approximately 260 feet above mean sea level, the area is 13 miles from the coast, and is not located near any confined bodies of water, the risk of inundation from a tsunami or seiche is considered to be very low.

2.4 Slope Stability

The Site is located on flat terrain, and no significant slopes are present in or immediately surrounding the area. No areas of potential slope instability are shown on the Seismic Hazards Zone Map for the Santa Paula 7.5-Minute

Quadrangle, Ventura County, California (CGS, 2002b) or the City of Santa Paula General Plan, Safety Element (1998a) at or adjacent to the Site.

Manufactured slopes and walls, if any, from developments within the area should be designed in accordance with current codes and standards, and the design should be reviewed from a geotechnical perspective. When so designed, the risk of slope instability is considered to be very low.

2.5 Groundwater

The Site is located within the Santa Paula sub-basin of the Santa Clara River Valley Basin in the South Coast Hydrologic Region. The Santa Paula sub-basin is bounded to the north by the impermeable rocks of the Topatopa Mountains and on the south by the impermeable rocks of South Mountain and by the Oak Ridge fault (DWR, 2003). The eastern boundary is defined by a bedrock constriction, which coincides with shallow groundwater. The western boundary of the sub-basin is defined by the point at which the dip of the water table steepens toward the Oxnard and Mound sub-basins (DWR, 2003). Groundwater flows from northeast to southwest, generally along the direction of flow of the Santa Clara River (DWR, 2003).

Historically, groundwater beneath the Site has been as shallow as less than 20 feet below ground surface at the northwestern margin of the Site and approximately 40 feet below ground surface at the northern portion of the Site (CGS, 2002a). Based on our review of groundwater data maintained by the California Department of Water Resources (available at <http://www.water.ca.gov/waterdatalibrary/>), there are no groundwater wells at the Site. However, groundwater wells do exist in the area that surrounds the Site and include groundwater level data for varying time periods. Current groundwater levels beneath the site are unknown.

2.6 Soil Engineering Characteristics

The following findings are based on our review of existing data and our experience in the Santa Paula area. Geotechnical investigations should be conducted for individual improvement projects within the Site to provide recommendations for grading, overexcavation and removal of compressible soils,

fill placement, wall design and other geotechnical aspects of proposed improvements.

2.6.1 Compressible and Collapsible Soil

Soil compressibility refers to a soil's potential for settlement when subjected to increased loads, such as from a fill surcharge. Based on our experience in the area, topsoil, and the upper portion of the young alluvial soil are generally expected to be slightly to moderately compressible. Uncontrolled fill would be considered compressible throughout the entire depth.

Collapse potential refers to the potential settlement of the alluvial soil under existing stresses (loads) upon being wetted. Based on our experience, the alluvial soil underlying the area is expected to have a slight to moderate collapse potential.

2.6.2 Expansive Soils

The upward pressures induced by expansive soils can have significant effects upon structures and other surface improvements. Shrinkage of these soils during drying can also cause damage as structural support is removed. Based on our experience in the Santa Paula area, the alluvial soils present within the Site vicinity are expected to exhibit a low expansion potential. Soils with a higher expansion potential (medium or greater) may be encountered locally. Testing to evaluate the expansion potential of the soil should be conducted in areas where improvements are planned.

Typical Classification of expansive soil is provided below.

Expansion Index	Potential Expansion
0-20	Very Low
21-50	Low
51-90	Medium
91-130	High
Above 130	Very High

2.6.3 Corrosive Soils

Corrosive soils contain chemical constituents that may cause damage to construction materials such as concrete and ferrous metals. One such constituent is water-soluble sulfate, which, if high enough in concentration, can react with and damage concrete. Electrical resistivity, chloride content and pH level are indicators of the soil's tendency to corrode ferrous metals. Based on our experience, the soil in the area is expected to be corrosive to ferrous metals. Testing of the soils should be conducted in order to identify the corrosive potential of the earth materials in the area. If concrete structures are planned, sulfate testing should also be conducted to determine if special concrete will be required to withstand sulfate attack.

2.6.4 Rippability and Oversized Rock

The alluvial soils at the Site are expected to be readily excavated using conventional earthmoving methods. Oversized material could be generated depending on the design and specific site conditions and depth of excavation into the alluvial soils. Development designs should consider the presence of oversized materials such as cobbles and boulders at depth, especially in the west portion of the Site adjacent to Adams Barranca. If oversized materials are encountered, the design should be reviewed and additional geotechnical recommendations provided for oversized material placement.

2.6.5 Suitability as Fill Material

The soils underlying the Site are generally suitable for use as compacted fill, provided they are free of debris, significant organic material, and oversized material. Moisture conditioning (either moistening or drying) will generally be needed in order to obtain the proper moisture content needed for compaction.

2.6.6 Erosion

The unconsolidated alluvial deposits exposed on potential cut slopes or other excavations in the area are expected to be susceptible to erosion. Manufactured slopes composed of compacted fill are also expected to be

moderately to highly susceptible to erosion. Measures to control erosion will be required for projects at the Site.

2.7 Mineral Resources

The requirements of the California Surface Mining and Reclamation Act of 1975 are such that full consideration has to be given to the potential loss of significant mineral deposits to land uses that preclude mining. The primary mineral resource in the Santa Paula area is aggregate (sand and gravel) mined from the Santa Clara River wash adjacent to the south of the Site (Anderson, et al., 1981; City of Santa Paula, 1998b). The aggregate resource is in high demand because much of the material mined from the Santa Clara River meets California Department of Transportation standards for Portland cement concrete aggregate. The aggregate mines are also important to flood control along the Santa Clara River. Removal of material from the River is controlled by the Ventura County Flood Control District to ensure that the optimum stream gradient is maintained. Therefore, CGS has defined the Western Ventura County Production-Consumption Region within which the likelihood for the presence or absence of mineral deposits has been estimated. The Site lies within this Production-Consumption Region. The Site lies within Mineral Resource Zone 1 (see Figure 7).

MRZ-1 is an area “...where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence” (Anderson, et al., 1981).

The location of MRZ-1 with respect to the Site is shown in Figure 7.

Historically, petroleum has also been an important mineral resource in the Santa Paula area. However, the oil fields are located far to the north and south of the Site. Recently, oil production and exploration has been in decline around the Santa Paula area, due to the high viscosity and high sulfur content of the oil, and a lack of nearby refining capabilities. The Site is not located within an established oil resource area (City of Santa Paula, 1998).

3.0 SUMMARY OF POTENTIAL GEOLOGIC, GEOTECHNICAL AND MINERAL RESOURCES IMPACTS, AND MITIGATION MEASURES

This section summarizes the principal geotechnical conditions that occur on the Site. The potential impact that each condition may have on the improvements is subjectively rated as less-than-significant or potentially significant. The California Natural Resources Agency CEQA Guidelines for Geologic and Soils portions of Environmental Reports were used in preparation of this section of the report. The checklist from those guidelines (in bold) is provided below. A discussion of the geologic, seismic or soil condition at the Site and associated risk from the condition is provided following each checklist topic.

Geology and Soils

Would the project:

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
- i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

No known active faults have been mapped crossing the Site and no State of California or City of Santa Paula established Earthquake Fault Zone (CGS, 2000 and 2002, City of Santa Paula, 1998a; Bryant and Hart, 2007) have been established that include the Site. As such, the risk of loss, injury or death associated with surface rupture of a known earthquake fault is considered to be very low and is considered to be a *less than significant impact*.

- ii) Strong seismic ground shaking?**

The intensity of ground shaking at a given location depends on several factors, but primarily on the earthquake magnitude, the distance from the hypocenter to the Site, and response characteristics of soil units underlying the Site. PGA at the Site was estimated at 0.96g with magnitude of approximately 7 (M_w) at a distance on the order of 1.9 kilometers for the Maximum Considered Earthquake.

As such, the hazard posed by seismic shaking is considered high, due to the proximity of known active faults. Therefore, seismic ground shaking is considered to be a potentially significant impact.

Mitigation Measures: There is no realistic way in which the hazard of seismic shaking can be totally avoided. However, exposure to future ground shaking at the Site is no greater than at many other sites in southern California. Design of improvements in accordance with the California Building Code, and appropriate City of Santa Paula and County of Ventura Standards is expected to reduce the impact of ground shaking to less than significant.

iii) Seismic-related ground failure, including liquefaction?

Liquefaction, and Lateral Spreading: Liquefaction occurs when loose, cohesionless, water-saturated soils (generally fine-grained sand and silt) are subjected to strong seismic ground motion of significant duration. These soils essentially behave similar to liquids, losing shear strength. Improvements constructed on these soils may buckle, tilt or settle when the soils liquefy. Liquefaction more often occurs in earthquake-prone areas underlain by young sandy alluvium where the groundwater table is less than 50 feet below the ground surface.

Lateral spreading is a phenomenon where large blocks of intact, non-liquefied soil move down slope on a liquefied substrate of relatively large aerial extent. The mass moves toward an unconfined area, such as a descending slope or stream-cut bluff, or on slope gradients as gentle as 1 degree.

Historic groundwater data for the Santa Paula area shows that historic high groundwater levels at the Site range from approximately 20 feet below ground surface near the southeastern boundary to approximately 40 feet below ground surface near the northwestern boundary. Liquefaction hazard maps prepared by the California Geological Survey (2002a) and the City of Santa Paula (1998) indicate the young alluvial soils at the site may have the potential to be liquefiable, if shallow groundwater conditions are present. Therefore, the potential for liquefaction is considered to be a potentially significant impact.

Mitigation Measures: Geotechnical studies should be conducted for planned improvements within the Site and should further evaluate the potential for liquefaction and shallow groundwater conditions in areas of planned

development. If liquefaction is found to be a hazard to the proposed development, recommendations to reduce the potential for liquefaction should be provided, which may include overexcavation and recompaction of potentially liquefiable soils, ground improvement, structural design improvements to building and/or other measures. Conducting such studies in accordance with California Building Code and City requirements and implementing appropriate geotechnical recommendations during design and construction will reduce the risk associated with liquefaction and lateral spreading to *less than significant*.

Seismically Induced Settlement: Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Unconsolidated, loosely packed granular alluvial deposits are especially susceptible to this phenomenon. Poorly compacted artificial fills may also experience seismically induced settlement. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. Seismic settlement could occur on the Site and is thus considered a *potentially significant impact*.

Mitigation Measures: Geotechnical studies should be conducted for planned improvements within the Site and should evaluate the potential for seismic settlement in areas of planned development. If seismic settlement is found to be a hazard to proposed developments within the Site, measures to reduce the potential for settlement should be provided and may include overexcavation and recompaction of settlement prone soils, ground improvement, structural design improvements to building and other measures. Conducting such studies in accordance with California Building Code and City requirements and implementing appropriate geotechnical recommendations will reduce the risk associated with seismic settlement to *less than significant*.

iv) Landslides?

The Site is located on essentially flat terrain. No areas of potential slope instability on the Site are shown in the Seismic Hazard Zone Report, Santa Paula 7.5-Minute Quadrangle, Ventura County, California (CGS, 2002a) or the City of Santa Paula General Plan, Safety Element (1998a). As such, the risk associated with landslides on the Site is considered to be *less than significant*.

Individual project designs within the Site should be reviewed as the Site is developed and design cut or fill slopes and walls associated with improvements to the site should be geotechnically reviewed. Recommendations for design and construction of such slopes and walls should be provided and implemented during construction provide adequate stability of project slopes.

b) Result in substantial soil erosion or the loss of topsoil?

The native topsoil and alluvial soils in the Site may be moderately susceptible to erosion. These materials will be particularly prone to erosion during construction or earth moving activities (if any), especially during heavy rains. Fill soils generated during grading and any development may also be subjected to erosion. The impact of erosion at the Site is considered to be *potentially significant*.

Mitigation Measures: The potential for erosion can typically be reduced by appropriate protection or paving of exposed ground surfaces, landscaping, providing terraces on slopes, placing berms or V-ditches at the tops of slopes, and installing adequate drainage improvements. Disturbed areas should be protected until healthy plant growth is established. Typically, protection can be provided by the use of sprayed polymers, straw wattles, jute mesh or by other measures in accordance with California Building Code and City of Santa Paula requirements.

Temporary erosion control measures should be provided during construction. Such measures typically include temporary catchment basins and/or sandbagging to control runoff and contain sediment transport on the Site. Correct implementation of these erosion control measures in accordance with City requirements is expected to reduce the impact resulting from erosion to *less than significant*.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The native alluvial soils on the Site are generally considered to be suitable to support development without adverse effects of settlement, subsidence, slope failures or other significant geologic hazards, provided proper overexcavation and foundation design, and other appropriate measures are conducted. Geotechnical studies should be conducted to evaluate the proposed design of future improvements including, slopes, walls, planned excavations and other aspects of the design. Such studies should be prepared in accordance with California Building Code and City of Santa

Paula requirements and should provide recommendations for grading and construction of planned improvements to include recommendations for overexcavation of potentially compressible soil, wall design, fill placement, paving, and other geotechnical aspects. With the implementation of the recommendations contained in those reports, risks posed by the geologic units are expected to be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Based on our experience in the Santa Paula area and review the Safety Element of the City of Santa Paula (1998a), the alluvial soils present at the Site are expected to exhibit a low expansion potential. However, soils with a higher expansion potential (medium or greater) may be encountered locally. Depending on the improvements planned for the area, expansive soils could pose a risk to property. However, as previously noted, geotechnical studies should be conducted to evaluate the potential for expansive soil to impact individual improvements. If encountered, proposed structures should be constructed in accordance with California Building Code requirements for construction on expansive soils. With the implementation of the recommendations contained in those reports, the risk posed by expansive soil is expected to be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

We would expect that sewers are available, or will be constructed, at the Site. Geotechnical studies should be conducted to evaluate the suitability of soils to support a wastewater disposal system in locations where sewers will not be available. With the implementation of the recommendations contained in those reports, the potential risk posed by waste water disposal systems supported by unsuitable soils is expected to be less than significant.


Mineral Resources

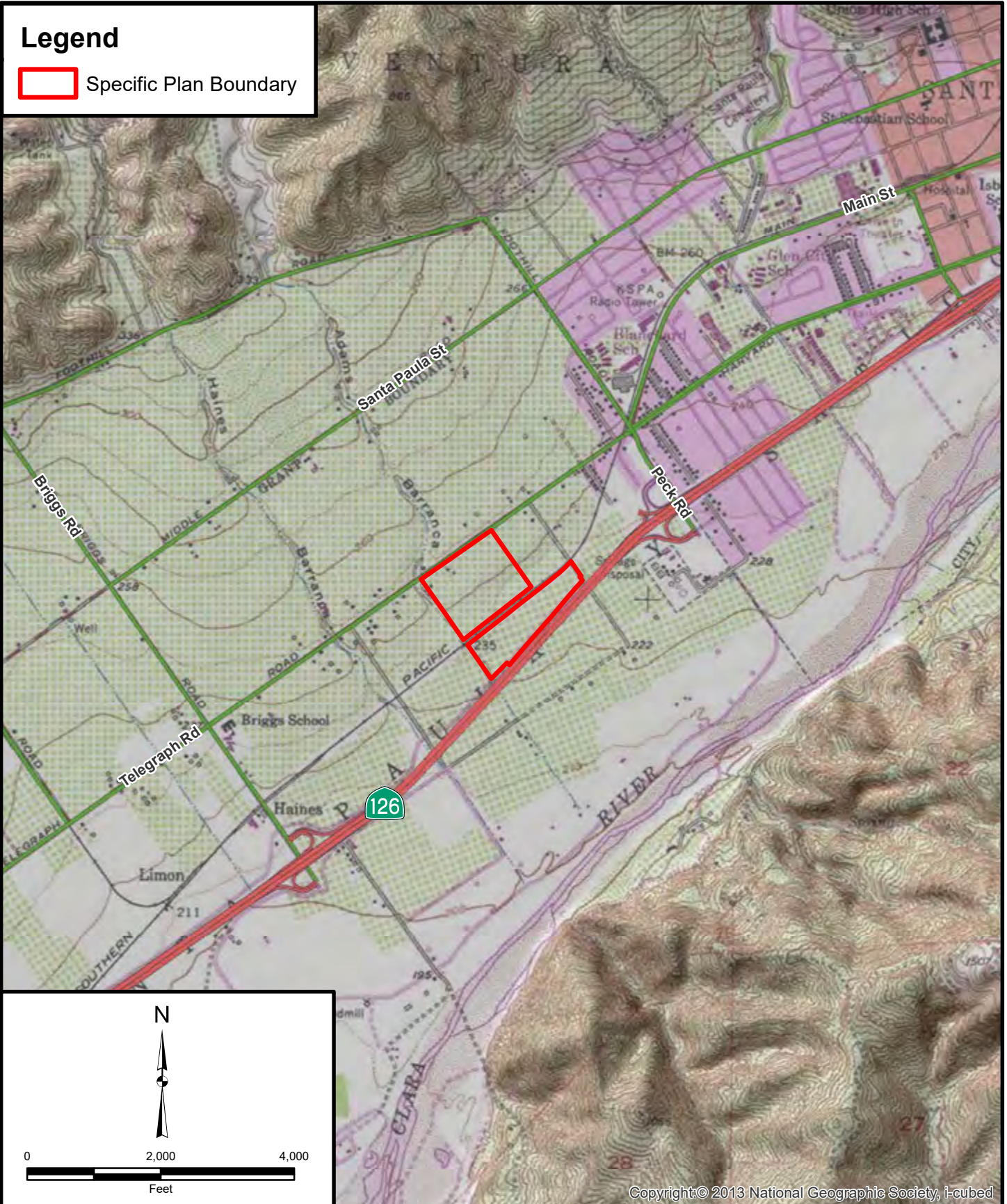
Would the project:

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
- b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Although extractable sand and gravel deposits suitable for use as aggregate have been identified within the Western Ventura County Production-Consumption Region, the Site is located in a Mineral Resource Zone 1, an area “...where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.” (Anderson, et al., 1981). Therefore, the potential loss of mineral resources is considered to be less than significant.

Legend

 Specific Plan Boundary



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Project: 11027-001 Eng/Geol: JDH/GIM
Scale: 1" = 2,000 Feet Date: May, 2015

Base Map: ESRI Resource Center, 2010
Thematic Info: Leighton
Author: (asakowicz)

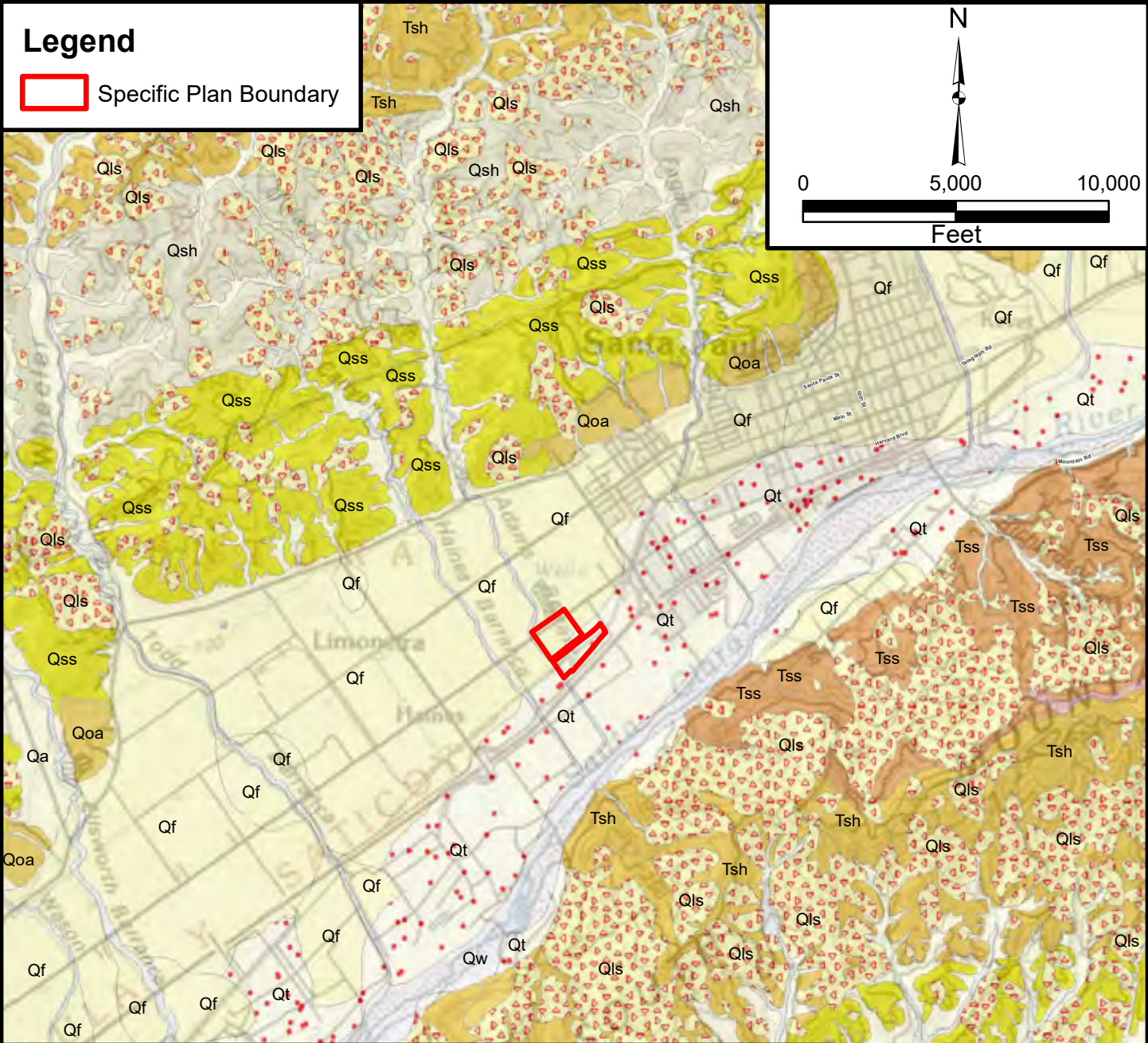
SITE LOCATION MAP

Santa Paula West Industrial Park Specific Plan
Adjacent to Southwest Portion of City of Santa Paula
Unincorporated Ventura County, California

Figure 1



Leighton



Legend

Specific Plan Boundary

Legend

- Qa Alluvial Valley Deposits
- Qf Alluvial Fan Deposits
- Qls Landslide Deposits; may include debris flows and older landslides
- Qoa Old Alluvial Valley Deposits
- Qof Old Alluvial Fan Deposits
- Qsh Fine-grained formations of Pleistocene age and younger; includes fine-grained sandstone, siltstone, mudstone, shale, siliceous and calcareous sediments
- Qss Coarse-grained formations of Pleistocene age and younger; primarily sandstone and conglomerate

- Qt Terrace Deposits; includes marine and stream terrace deposits
- Qw Alluvial Wash Deposits
- Qya Young Alluvial Valley Deposits
- Qyf Young Alluvial Fan Deposits
- Tsh Fine-grained Tertiary age formations of sedimentary origin
- Tss Coarse-grained Tertiary age formations of sedimentary origin
- Tv Tertiary age formations of volcanic origin

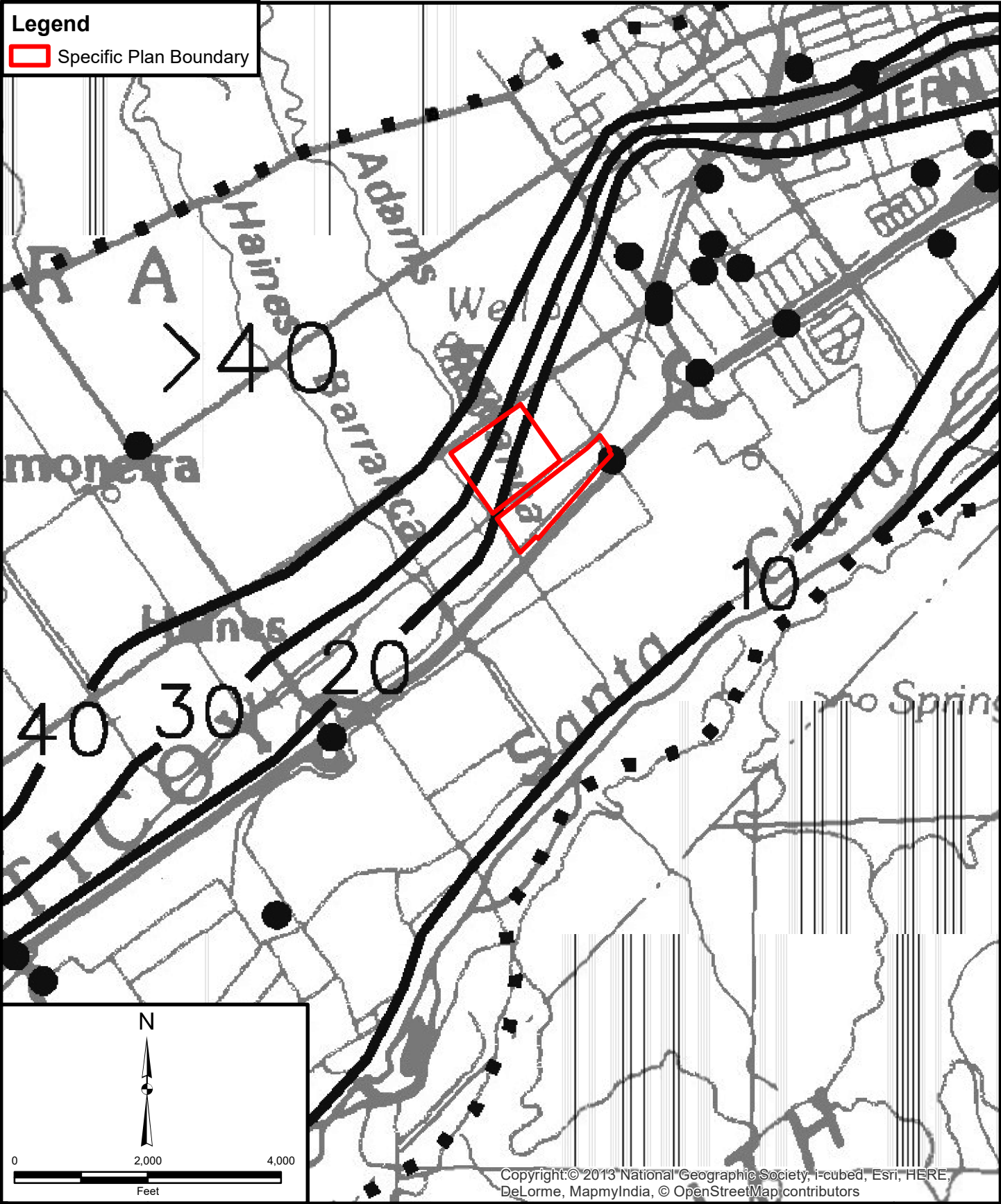
© 1993 National Geographic Society, i-cubed

Project: 11027-001	Eng/Geol: JDH/GIM
Scale: 1" = 5,000'	Date: May, 2015
Base Map: ESRI Resource Center, 2010 Thematic Info: Southern California USGS Geology in GIS Format by CGS, July 2010 Author: (asakowicz)	

REGIONAL GEOLOGY MAP
 Santa Paula West Industrial Park Specific Plan
 Adjacent to Southwest Portion of City of Santa Paula
 Unincorporated Ventura County, California

Figure 2

Leighton

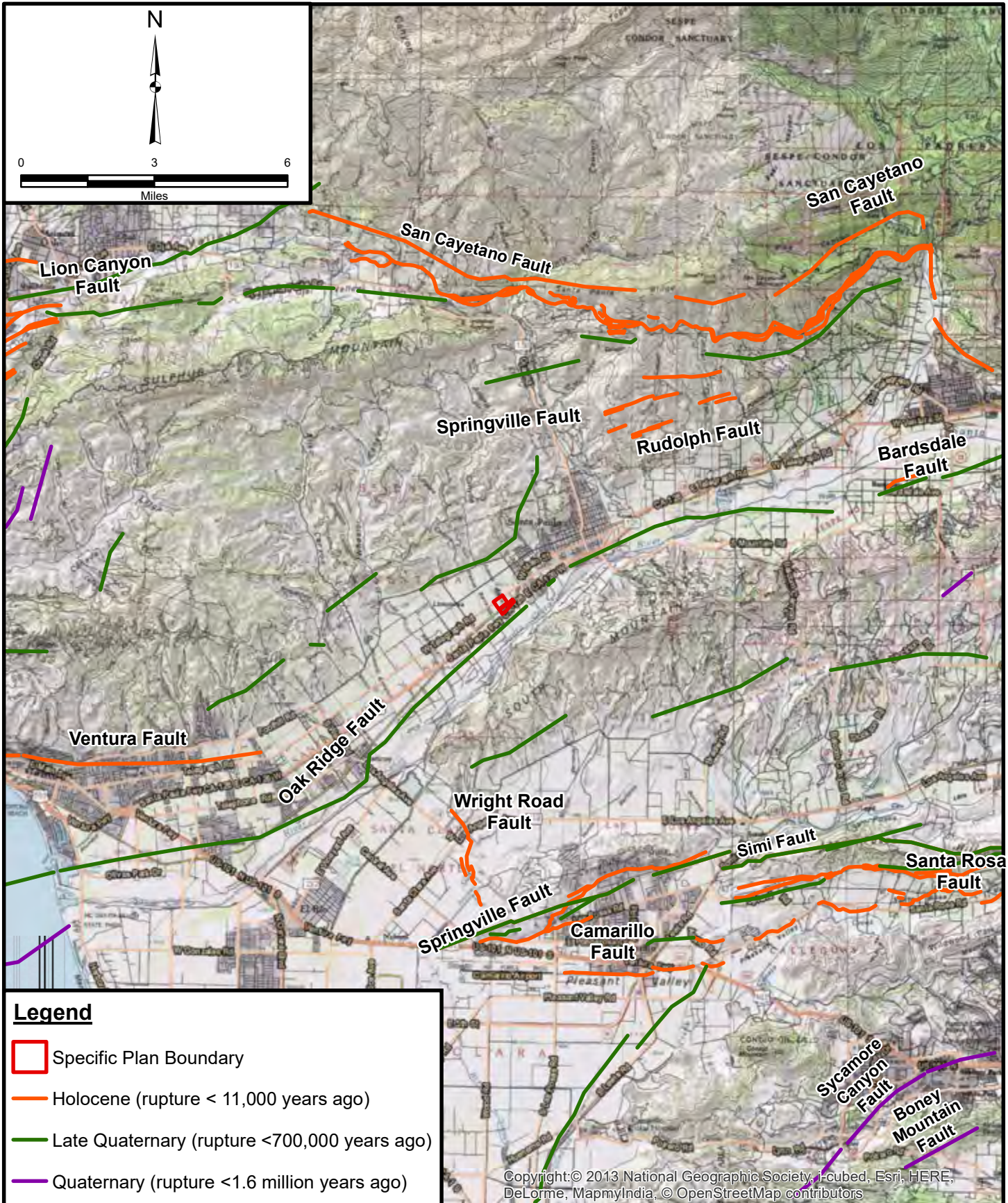


Project: 11027.0001	Eng/Geol: JDH/GIM
Scale: 1" = 2,000'	Date: June 2015
Excerpted from: California Geological Survey (2002a)	
Author: Leighton Geomatics (asakowicz)	

HISTORIC GROUND WATER DEPTHS
 Santa Paula West Industrial Park Specific Plan
 Adjacent to Southwest Portion of City of Santa Paula
 Unincorporated Ventura County, California

Figure 3

Leighton



Project: 11027-001	Eng/Geol: JDH/GIM
Scale: 1" = 3 miles	Date: June 2015
Base Map: ESRI ArcGIS Online 2015 Excerpted from California Geological Survey(2010) Author: Leighton Geomatics (asakowicz)	

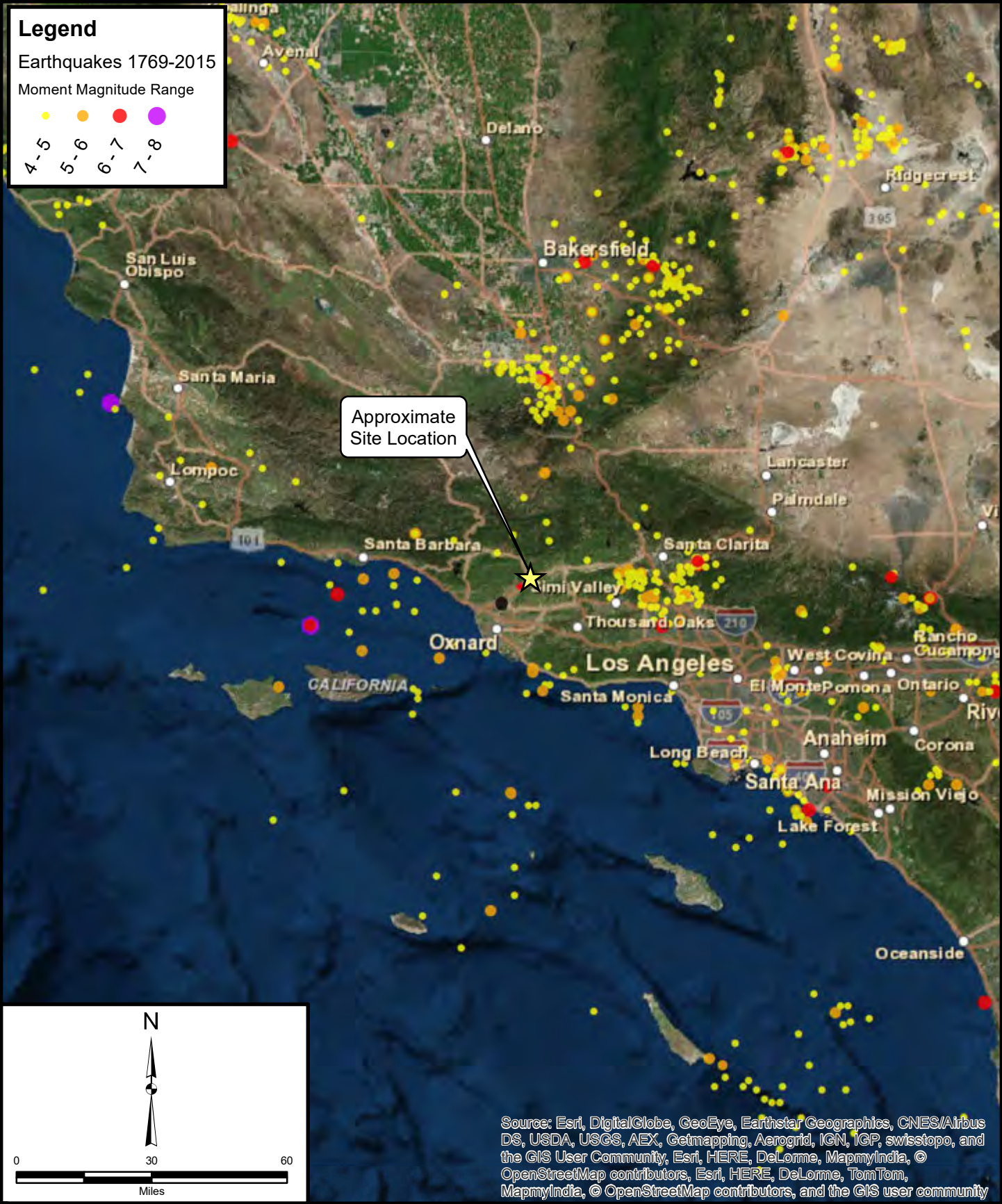
REGIONAL FAULT MAP

Santa Paula West Industrial Park Specific Plan
 Adjacent to Southwest Portion of City of Santa Paula
 Unincorporated Ventura County, California

Figure 4



Leighton






Project: 11027.001	Eng/Geol: JDH/GIM
Scale: 1" = 30 miles	Date: May 2015
Base Map: ESRI ArcGIS Online 2015 Thematic Information: Leighton, USGS, SCEC Author: Leighton Geomatics (asakowicz)	

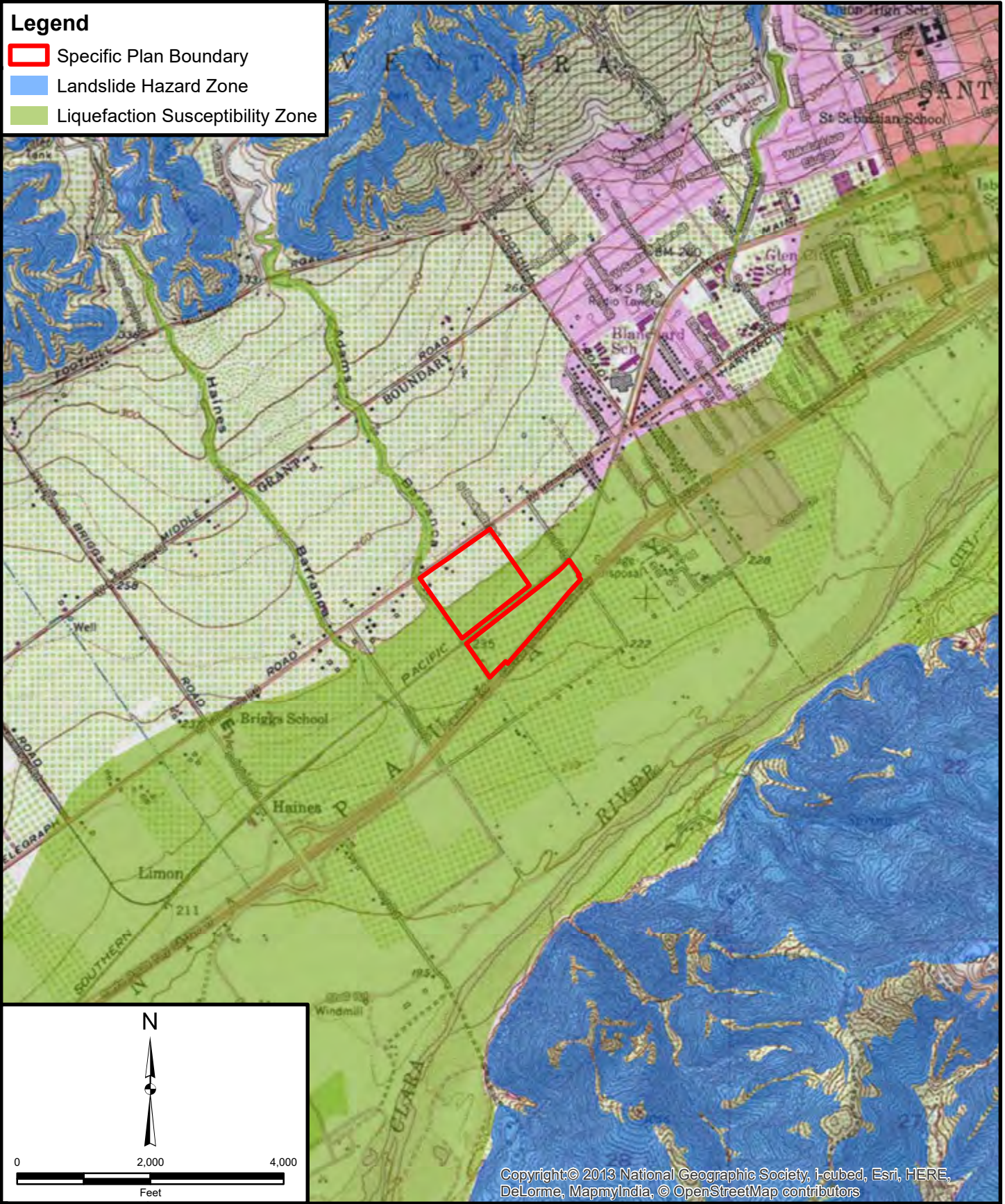
HISTORIC SEISMICITY MAP
 Santa Paula West Industrial Park Specific Plan
 Adjacent to Southwest Portion of City of Santa Paula
 Unincorporated Ventura County, California

Figure 5

Leighton

Legend

-  Specific Plan Boundary
-  Landslide Hazard Zone
-  Liquefaction Susceptibility Zone



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Project: 11027.001 Eng/Geol:JDH/GIM
Scale: 1" = 2,000' Date: June 2015

Base Map: ESRI ArcGIS Online 2015
Excerpted from California Geological Survey (2002b)
Author: Leighton Geomatics (asakowicz)

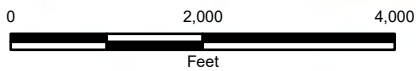
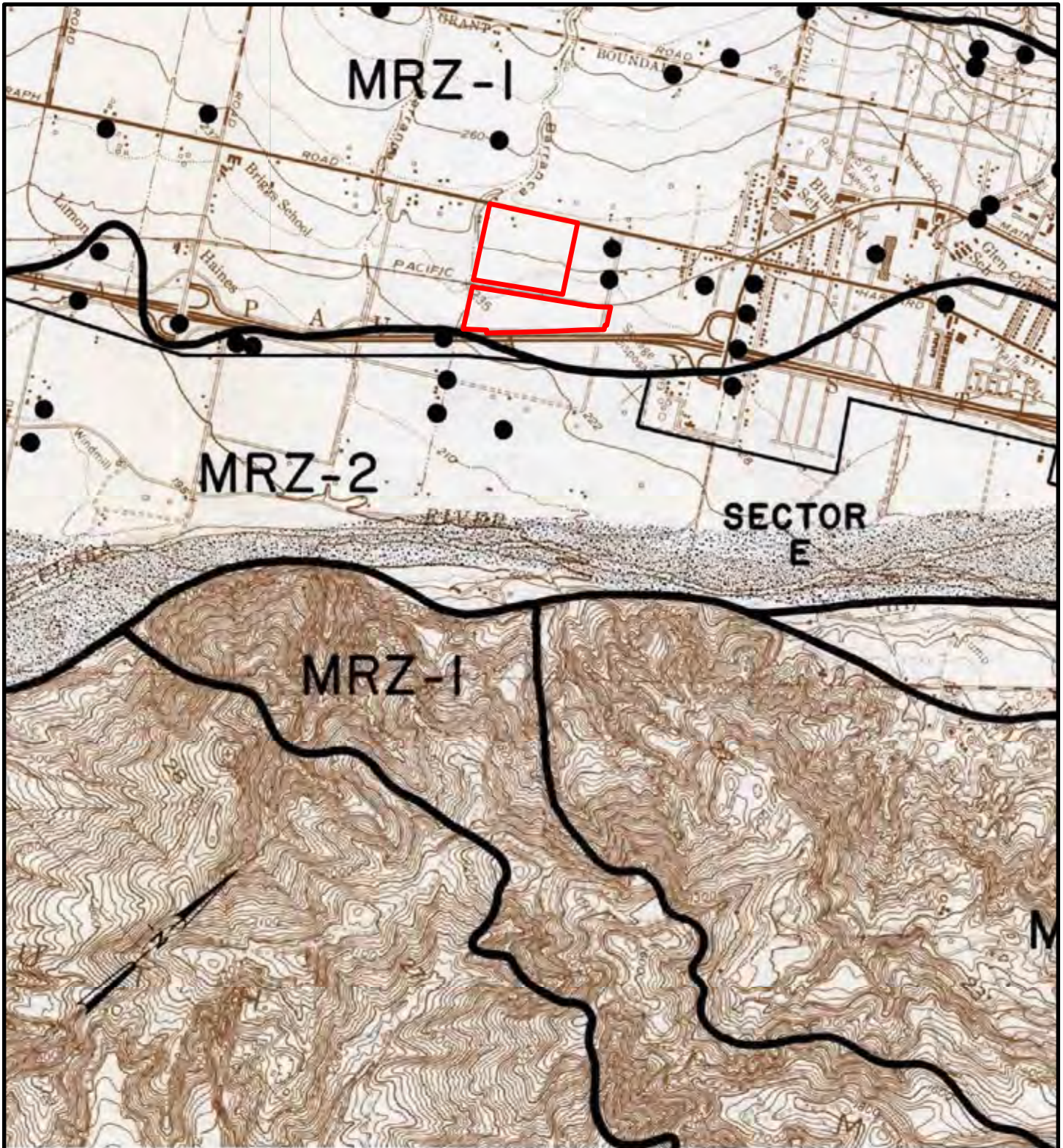
LIQUEFACTION MAP

Santa Paula West Industrial Park Specific Plan
Adjacent to Southwest Portion of City of Santa Paula
Unincorporated Ventura County, California

Figure 6



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EXPLANATION

- Drill Hole
- ▨ Riverbed
- MRZ-2 Mineral Resource Zone Area
- ▭ Specific Plan Boundary

Project: 11027.001	Eng/Geol: JDH/GIM
Scale: 1" = 2,000'	Date: June 2015
Excerpted from Anderson, et.al (1981)	
Author: Leighton Geomatics (asakowicz)	

MINERAL RESOURCES ZONE MAP
 Santa Paula West Industrial Park Specific Plan
 Adjacent to Southwest Portion of City of Santa Paula
 Unincorporated Ventura County, California

Figure 7

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APPENDIX A
REFERENCES



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APPENDIX A

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Aerial Photographs

Agency	Flight	Frames	Date	Scale
Pacific Western Aerial Surveys	PW VEN	3-169, 3-170	June 15, 1981	1 : 24,000
USDA	AXI-3K	123, 124, 125	January 3, 1953	1 : 20,000
Stringfellow	AXI	57-9, 57-10	July 1, 1938	1 : 20,000

APPENDIX B
SEISMIC HAZARD ANALYSIS



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*
*   E Q S E A R C H   *
*
*   Version 3.00     *
*
*****
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ESTIMATION OF
PEAK ACCELERATION FROM
CALIFORNIA EARTHQUAKE CATALOGS

JOB NUMBER:

DATE: 05-25-2015

JOB NAME: Santa Paula West Specific Plan

EARTHQUAKE-CATALOG-FILE NAME: ALLQUAKE.DAT

MAGNITUDE RANGE:

MINIMUM MAGNITUDE: 5.00
MAXIMUM MAGNITUDE: 9.00

SITE COORDINATES:

SITE LATITUDE: 34.3326
SITE LONGITUDE: 119.0914

SEARCH DATES:

START DATE: 1800
END DATE: 2015

SEARCH RADIUS:

62.0 mi
99.8 km

ATTENUATION RELATION: 14) Campbell & Bozorgnia (1997 Rev.) - Alluvium

UNCERTAINTY (M=Median, S=Sigma): M Number of Sigmas: 0.0

ASSUMED SOURCE TYPE: DS [SS=Strike-slip, DS=Reverse-slip, BT=Blind-thrust]

SCOND: 0 Depth Source: A

Basement Depth: 5.00 km Campbell SSR: 0 Campbell SHR: 0

COMPUTE PEAK HORIZONTAL ACCELERATION

MINIMUM DEPTH VALUE (km): 3.0

EARTHQUAKE SEARCH RESULTS

Page 1

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	34.0650	119.0350	02/21/1973	144557.3	8.0	5.90	0.077	VII	18.8(30.2)
GSB	34.3790	118.7110	01/19/1994	210928.6	14.0	5.50	0.045	VI	21.9(35.3)
GSP	34.3260	118.6980	01/17/1994	233330.7	9.0	5.60	0.047	VI	22.4(36.1)
GSP	34.3770	118.6980	01/18/1994	004308.9	11.0	5.20	0.034	V	22.6(36.4)
MGI	34.0000	119.0000	12/14/1912	0 0 0.0	0.0	5.70	0.048	VI	23.5(37.9)
DMG	34.0000	119.0000	09/24/1827	4 0 0.0	0.0	7.00	0.129	VIII	23.5(37.9)
DMG	34.1000	119.4000	05/19/1893	035 0.0	0.0	5.50	0.040	V	23.8(38.4)
GSP	34.3690	118.6720	04/26/1997	103730.7	16.0	5.10	0.028	V	24.0(38.7)
GSP	34.3940	118.6690	06/26/1995	084028.9	13.0	5.00	0.026	V	24.4(39.3)
DMG	34.7000	119.0000	10/23/1916	254 0.0	0.0	5.50	0.036	V	25.9(41.7)
DMG	34.5000	119.5000	06/29/1926	2321 0.0	0.0	5.50	0.035	V	26.0(41.8)
DMG	34.5000	119.5000	08/05/1930	1125 0.0	0.0	5.00	0.024	IV	26.0(41.8)
GSP	34.3780	118.6180	01/19/1994	211144.9	11.0	5.10	0.024	V	27.2(43.7)
DMG	34.3000	118.6000	04/04/1893	1940 0.0	0.0	6.00	0.047	VI	28.1(45.2)
DMG	34.3670	119.5830	07/01/1941	75054.8	0.0	5.90	0.044	VI	28.1(45.3)
GSP	34.3050	118.5790	01/29/1994	112036.0	1.0	5.10	0.022	IV	29.3(47.1)
GSB	34.3010	118.5650	01/17/1994	204602.4	9.0	5.20	0.023	IV	30.1(48.4)
DMG	34.8000	119.1000	09/05/1883	1230 0.0	0.0	6.00	0.039	V	32.3(51.9)
DMG	33.9860	119.4750	08/06/1973	232917.0	16.9	5.00	0.017	IV	32.4(52.2)
GSP	34.2130	118.5370	01/17/1994	123055.4	18.0	6.70	0.067	VI	32.7(52.6)
DMG	34.0000	119.5000	02/18/1926	1818 0.0	0.0	5.00	0.017	IV	32.7(52.7)
PAS	34.3470	119.6960	08/13/1978	225453.4	12.8	5.10	0.017	IV	34.5(55.5)
T-A	34.5000	119.6700	06/01/1893	12 0 0.0	0.0	5.00	0.016	IV	34.9(56.2)
MGI	34.4000	119.7000	03/25/1806	8 0 0.0	0.0	5.00	0.016	IV	35.0(56.3)
PAS	33.9440	118.6810	01/01/1979	231438.9	11.3	5.00	0.015	IV	35.6(57.3)
GSP	34.2310	118.4750	03/20/1994	212012.3	13.0	5.30	0.019	IV	35.9(57.7)
DMG	34.3080	118.4540	02/09/1971	144346.7	6.2	5.20	0.017	IV	36.4(58.5)
DMG	33.9500	118.6320	08/31/1930	04036.0	0.0	5.20	0.017	IV	37.2(59.9)
DMG	34.1180	119.7020	07/05/1968	04517.2	5.9	5.20	0.016	IV	37.9(60.9)
DMG	34.8670	118.9330	09/21/1941	1953 7.2	0.0	5.20	0.016	IV	38.0(61.1)
PAS	33.9190	118.6270	01/19/1989	65328.8	11.9	5.00	0.013	III	39.0(62.7)
T-A	34.8300	118.7500	11/27/1852	0 0 0.0	0.0	7.00	0.065	VI	39.4(63.5)
DMG	34.4110	118.4010	02/09/1971	141028.0	8.0	5.30	0.017	IV	39.7(63.9)
DMG	34.4110	118.4010	02/09/1971	14 1 8.0	8.0	5.80	0.025	V	39.7(63.9)
DMG	34.4110	118.4010	02/09/1971	14 244.0	8.0	5.80	0.025	V	39.7(63.9)
DMG	34.4110	118.4010	02/09/1971	14 041.8	8.4	6.40	0.040	V	39.7(63.9)
DMG	34.9000	118.9500	08/01/1952	13 430.0	0.0	5.10	0.014	IV	40.0(64.4)
MGI	34.3000	119.8000	07/03/1925	1821 0.0	0.0	5.30	0.016	IV	40.5(65.1)
DMG	34.3000	119.8000	06/29/1925	144216.0	0.0	6.25	0.035	V	40.5(65.1)
MGI	34.3000	119.8000	07/03/1925	1638 0.0	0.0	5.30	0.016	IV	40.5(65.1)
DMG	34.9000	118.9000	10/23/1916	244 0.0	0.0	6.00	0.028	V	40.7(65.4)
MGI	34.0000	118.5000	11/19/1918	2018 0.0	0.0	5.00	0.012	III	40.8(65.7)
DMG	34.0000	118.5000	08/04/1927	1224 0.0	0.0	5.00	0.012	III	40.8(65.7)
DMG	34.2000	119.8000	12/21/1812	19 0 0.0	0.0	7.00	0.060	VI	41.5(66.7)
T-A	34.9200	118.9200	05/23/1857	0 0 0.0	0.0	5.00	0.012	III	41.7(67.1)
T-A	34.9200	118.9200	01/20/1857	0 0 0.0	0.0	5.00	0.012	III	41.7(67.1)
DMG	34.9320	118.9760	03/01/1963	02557.9	13.9	5.00	0.012	III	41.9(67.4)
T-A	34.4200	119.8200	00/00/1862	0 0 0.0	0.0	5.70	0.021	IV	42.0(67.5)
DMG	34.9410	118.9870	11/15/1961	53855.5	10.7	5.00	0.012	III	42.4(68.3)
DMG	34.9500	118.8670	07/21/1952	121936.0	0.0	5.30	0.014	IV	44.5(71.6)
DMG	34.9830	118.9830	05/23/1954	235243.0	0.0	5.10	0.012	III	45.3(72.9)
PAS	33.6710	119.1110	09/04/1981	155050.3	5.0	5.30	0.014	III	45.7(73.5)
DMG	35.0000	119.0330	07/21/1952	12 2 0.0	0.0	5.60	0.017	IV	46.2(74.3)

 EARTHQUAKE SEARCH RESULTS

Page 2

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
DMG	35.0000	119.0170	07/21/1952	115214.0	0.0	7.70	0.088	VII	46.3(74.5)
DMG	35.0000	119.0170	01/12/1954	233349.0	0.0	5.90	0.022	IV	46.3(74.5)
DMG	35.0000	119.0000	02/16/1919	1557 0.0	0.0	5.00	0.010	III	46.4(74.6)
DMG	35.0000	119.0000	07/21/1952	12 531.0	0.0	6.40	0.032	V	46.4(74.6)
PAS	34.9430	118.7430	06/10/1988	23 643.0	6.8	5.40	0.014	IV	46.6(74.9)
DMG	35.0000	118.8330	07/23/1952	75319.0	0.0	5.40	0.014	III	48.4(77.8)
DMG	35.0000	118.8330	07/23/1952	181351.0	0.0	5.20	0.012	III	48.4(77.8)
MGI	34.0800	118.2600	07/16/1920	18 8 0.0	0.0	5.00	0.009	III	50.6(81.4)
MGI	34.0000	118.3000	09/03/1905	540 0.0	0.0	5.30	0.012	III	50.7(81.6)
DMG	34.5190	118.1980	08/23/1952	10 9 7.1	13.1	5.00	0.009	III	52.5(84.5)
T-A	34.0000	118.2500	01/10/1856	0 0 0.0	0.0	5.00	0.009	III	53.3(85.7)
T-A	34.0000	118.2500	09/23/1827	0 0 0.0	0.0	5.00	0.009	III	53.3(85.7)
T-A	34.0000	118.2500	03/26/1860	0 0 0.0	0.0	5.00	0.009	III	53.3(85.7)
GSP	35.1490	119.1040	05/28/1993	044740.6	21.0	5.20	0.009	III	56.4(90.7)
DMG	34.0000	120.0170	04/01/1945	234342.0	0.0	5.40	0.011	III	57.6(92.8)
DMG	33.8500	118.2670	03/11/1933	1425 0.0	0.0	5.00	0.008	II	57.7(92.9)
DMG	35.1330	118.7670	07/21/1952	194122.0	0.0	5.50	0.011	III	58.2(93.7)
MGI	34.1000	118.1000	07/11/1855	415 0.0	0.0	6.30	0.021	IV	58.8(94.7)
PAS	34.0730	118.0980	10/04/1987	105938.2	8.2	5.30	0.009	III	59.5(95.7)
PAS	34.0610	118.0790	10/01/1987	144220.0	9.5	5.90	0.015	IV	60.8(97.8)
DMG	33.7830	118.2500	11/14/1941	84136.3	0.0	5.40	0.010	III	61.3(98.6)

-END OF SEARCH- 74 EARTHQUAKES FOUND WITHIN THE SPECIFIED SEARCH AREA.

TIME PERIOD OF SEARCH: 1800 TO 2015

LENGTH OF SEARCH TIME: 216 years

THE EARTHQUAKE CLOSEST TO THE SITE IS ABOUT 18.8 MILES (30.2 km) AWAY.

LARGEST EARTHQUAKE MAGNITUDE FOUND IN THE SEARCH RADIUS: 7.7

LARGEST EARTHQUAKE SITE ACCELERATION FROM THIS SEARCH: 0.129 g

COEFFICIENTS FOR GUTENBERG & RICHTER RECURRENCE RELATION:

a-value= 1.307

b-value= 0.404

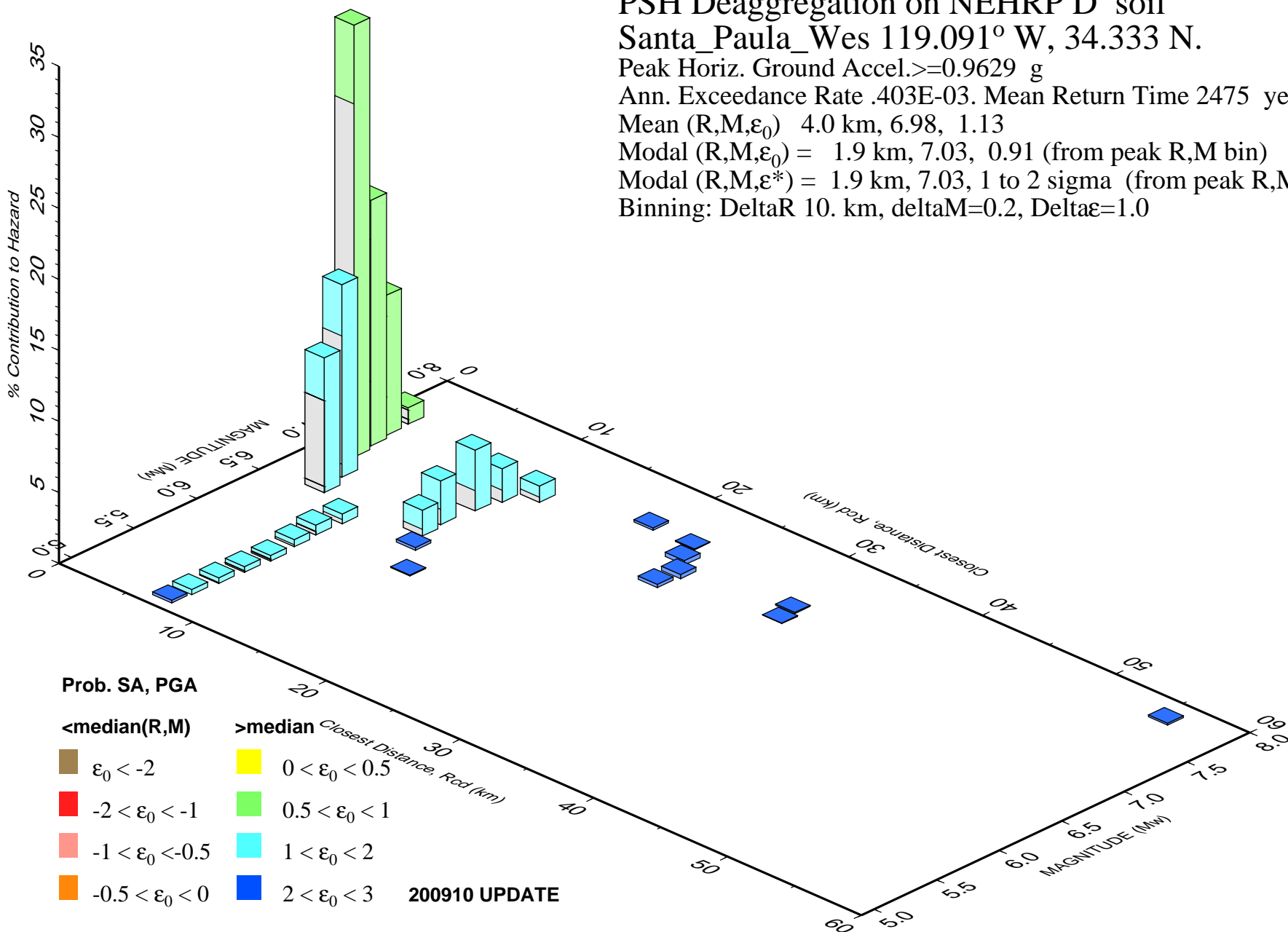
beta-value= 0.929

TABLE OF MAGNITUDES AND EXCEEDANCES:

Earthquake Magnitude	Number of Times Exceeded	Cumulative No. / Year
4.0	74	0.34419
4.5	74	0.34419
5.0	74	0.34419
5.5	27	0.12558
6.0	12	0.05581
6.5	5	0.02326
7.0	4	0.01860
7.5	1	0.00465

PSH Deaggregation on NEHRP D soil Santa_Paula_Wes 119.091° W, 34.333 N.

Peak Horiz. Ground Accel. ≥ 0.9629 g
 Ann. Exceedance Rate .403E-03. Mean Return Time 2475 years
 Mean (R,M, ϵ_0) 4.0 km, 6.98, 1.13
 Modal (R,M, ϵ_0) = 1.9 km, 7.03, 0.91 (from peak R,M bin)
 Modal (R,M, ϵ^*) = 1.9 km, 7.03, 1 to 2 sigma (from peak R,M, ϵ bin)
 Binning: DeltaR 10. km, deltaM=0.2, Delta ϵ =1.0



APPENDIX 4.8

Phase I Environmental Site Assessment



Santa Paula West

15320 West Telegraph Road
Santa Paula, CA 93060

Inquiry Number: 4114777.5

October 28, 2014

The EDR Aerial Photo Decade Package



6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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Date EDR Searched Historical Sources:

Aerial Photography October 28, 2014

Target Property:

15320 West Telegraph Road

Santa Paula, CA 93060

<u><i>Year</i></u>	<u><i>Scale</i></u>	<u><i>Details</i></u>	<u><i>Source</i></u>
1938	Aerial Photograph. Scale: 1"=500'	Flight Year: 1938	Laval
1947	Aerial Photograph. Scale: 1"=500'	Flight Year: 1947	USGS
1959	Aerial Photograph. Scale: 1"=500'	Flight Year: 1959	Robinson
1967	Aerial Photograph. Scale: 1"=500'	Flight Year: 1967	USGS
1978	Aerial Photograph. Scale: 1"=500'	Flight Year: 1978	Pacific Air
1986	Aerial Photograph. Scale: 1"=500'	Flight Year: 1986	USGS
1994	Aerial Photograph. Scale: 1"=500'	/DOQQ - acquisition dates: 1994	USGS/DOQQ
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	USDA/NAIP
2009	Aerial Photograph. Scale: 1"=500'	Flight Year: 2009	USDA/NAIP
2010	Aerial Photograph. Scale: 1"=500'	Flight Year: 2010	USDA/NAIP
2012	Aerial Photograph. Scale: 1"=500'	Flight Year: 2012	USDA/NAIP



INQUIRY #: 4114777.5

YEAR: 1938

| = 500'





INQUIRY #: 4114777.5

YEAR: 1947

| = 500'





INQUIRY #: 4114777.5

YEAR: 1959

| = 500'





INQUIRY #: 4114777.5

YEAR: 1967

| = 500'





INQUIRY #: 4114777.5

YEAR: 1978

| = 500'





INQUIRY #: 4114777.5

YEAR: 1986

| = 500'





INQUIRY #: 4114777.5

YEAR: 1994

| = 500'





INQUIRY #: 4114777.5

YEAR: 2005

| = 500'





INQUIRY #: 4114777.5

YEAR: 2009

| = 500'





INQUIRY #: 4114777.5

YEAR: 2010

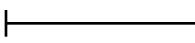
| = 500'





INQUIRY #: 4114777.5

YEAR: 2012

 = 500'

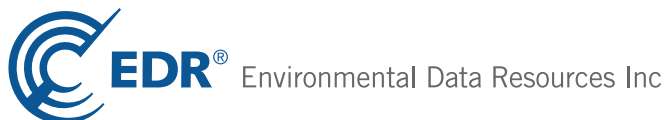


Santa Paula West

15320 West Telegraph Road
Santa Paula, CA 93060

Inquiry Number: 4114777.2s
October 24, 2014

The EDR Radius Map™ Report with GeoCheck®



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA 93060

COORDINATES

Latitude (North): 34.3333000 - 34° 19' 59.88"
Longitude (West): 119.0919000 - 119° 5' 30.84"
Universal Transverse Mercator: Zone 11
UTM X (Meters): 307555.3
UTM Y (Meters): 3800899.0
Elevation: 233 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map: 34119-C1 SANTA PAULA, CA
Most Recent Revision: 1967

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from: 20120506
Source: USDA

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

<u>Site</u>	<u>Database(s)</u>	<u>EPA ID</u>
BANNON RANCH 15320 TELEGRAPH RD SANTA PAULA, CA 93060	HAZNET	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA	RGA LUST	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA	LUST	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA 93060	SLIC Facility Status: Completed - Case Closed HIST UST	N/A

EXECUTIVE SUMMARY

BANNON RANCH
15320 TELEGRAPH RD
SANTA PAULA, CA

UST

N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List
Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System
FEDERAL FACILITY..... Federal Facility Site Information listing

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls
LUCIS..... Land Use Control Information System

EXECUTIVE SUMMARY

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR..... EnviroStor Database

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

FEMA UST..... Underground Storage Tank Listing

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

VCP..... Voluntary Cleanup Program Properties

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations

HAULERS..... Registered Waste Tire Haulers Listing

INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands

WMUDS/SWAT..... Waste Management Unit Database

Local Lists of Hazardous waste / Contaminated Sites

US CDL..... Clandestine Drug Labs

HIST Cal-Sites..... Historical Calsites Database

SCH..... School Property Evaluation Program

Toxic Pits..... Toxic Pits Cleanup Act Sites

CDL..... Clandestine Drug Labs

US HIST CDL..... National Clandestine Laboratory Register

EXECUTIVE SUMMARY

Local Lists of Registered Storage Tanks

CA FID UST..... Facility Inventory Database
SWEEPS UST..... SWEEPS UST Listing

Local Land Records

LIENS 2..... CERCLA Lien Information
LIENS..... Environmental Liens Listing
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System
LDS..... Land Disposal Sites Listing
MCS..... Military Cleanup Sites Listing
SPILLS 90..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

DOT OPS..... Incident and Accident Data
DOD..... Department of Defense Sites
FUDS..... Formerly Used Defense Sites
CONSENT..... Superfund (CERCLA) Consent Decrees
ROD..... Records Of Decision
UMTRA..... Uranium Mill Tailings Sites
US MINES..... Mines Master Index File
TRIS..... Toxic Chemical Release Inventory System
TSCA..... Toxic Substances Control Act
FTTS..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS..... Section 7 Tracking Systems
ICIS..... Integrated Compliance Information System
PADS..... PCB Activity Database System
MLTS..... Material Licensing Tracking System
RADINFO..... Radiation Information Database
FINDS..... Facility Index System/Facility Registry System
RAATS..... RCRA Administrative Action Tracking System
RMP..... Risk Management Plans
CA BOND EXP. PLAN..... Bond Expenditure Plan
NPDES..... NPDES Permits Listing
UIC..... UIC Listing
Cortese..... "Cortese" Hazardous Waste & Substances Sites List
CUPA Listings..... CUPA Resources List
Notify 65..... Proposition 65 Records
DRYCLEANERS..... Cleaner Facilities
VENTURA CO. BWT..... Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
WIP..... Well Investigation Program Case List
ENF..... Enforcement Action Listing
EMI..... Emissions Inventory Data
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing

EXECUTIVE SUMMARY

WDS.....	Waste Discharge System
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
PRP.....	Potentially Responsible Parties
MED WASTE VENTURA.....	Medical Waste Program List
2020 COR ACTION.....	2020 Corrective Action Program List
LEAD SMELTERS.....	Lead Smelter Sites
EPA WATCH LIST.....	EPA WATCH LIST
PROC.....	Certified Processors Database
Financial Assurance.....	Financial Assurance Information Listing
PCB TRANSFORMER.....	PCB Transformer Registration Database
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
US FIN ASSUR.....	Financial Assurance Information
HWT.....	Registered Hazardous Waste Transporter Database
COAL ASH DOE.....	Steam-Electric Plant Operation Data
MWMP.....	Medical Waste Management Program Listing
HWP.....	EnviroStor Permitted Facilities Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR US Hist Cleaners.....	EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF.....	Recovered Government Archive Solid Waste Facilities List
-------------	--

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or

EXECUTIVE SUMMARY

dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 06/10/2014 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TWYFORD PLANT LAB., INC.	15245 TELEGRAPH RD.	WNW 0 - 1/8 (0.004 mi.)	6	11
HELIPOWER SVC	15500 TELEGRAPH RD C21	N 0 - 1/8 (0.007 mi.)	B10	15
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CQ OF SANTA PAULA CA NO 7313	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D16	21

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 07/30/2014 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WEST SIDE INVESTMENT Status: Completed - Case Closed	411 BECKWITH RD S	N 0 - 1/8 (0.005 mi.)	B8	13
TOSCO #5238 (CIRCLE K)	765 HARVARD BLVD W	NE 1/4 - 1/2 (0.456 mi.)	F24	26
TOSCO #5238 (CIRCLE K) Status: Completed - Case Closed	765 HARVARD BLVD W	NE 1/4 - 1/2 (0.456 mi.)	F25	27
GARRY COLLETT Status: Completed - Case Closed	741 HARVARD BLVD	NE 1/4 - 1/2 (0.480 mi.)	F27	36
SATICOY LEMON ASSOCIATION Status: Completed - Case Closed	103 NORTH PECK ROAD	NNE 1/4 - 1/2 (0.485 mi.)	28	38
SANTA PAULA RANCH	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G29	43
J. M. SHARP COMPANY	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G30	45
SANTA PAULA RANCH Status: Completed - Case Closed	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G31	46
J.M. SHARP COMPANY	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G32	49

SLIC: SLIC Region comes from the California Regional Water Quality Control Board.

A review of the SLIC list, as provided by EDR, and dated 09/15/2014 has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WEATHERFORD ETERA (FORMER)	401 BECKWITH	NNE 0 - 1/8 (0.011 mi.)	C11	18
WEATHERFORD ETERA (FORMER) Facility Status: Completed - Case Closed	401 S. BECKWITH RD	NNE 0 - 1/8 (0.011 mi.)	C13	19

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 07/30/2014 has revealed that there are 5 UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WESTSIDE INVESTMENTS	411 BECKWITH ROAD	N 0 - 1/8 (0.005 mi.)	B9	15
OILFIELD RENTAL TOOLS	401 BECKWITH ROAD	NNE 0 - 1/8 (0.011 mi.)	C12	18
BALDEN RANCH CO. INC.	265 BECKWITH ROAD	NNW 0 - 1/8 (0.102 mi.)	18	23
JAMES LOCKSHAW & TOLO INC.	112 TODD ROAD	NNE 1/8 - 1/4 (0.133 mi.)	19	24
K-MART	150 LINDSAY LANE	NE 1/8 - 1/4 (0.241 mi.)	23	26

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 09/16/2014 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JUNIOR RECYCLING CENTER	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D17	23

Local Lists of Registered Storage Tanks

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 4 HIST UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ARGO PETROLEUM	411 S BECKWITH RD	N 0 - 1/8 (0.005 mi.)	B7	12
RANCHO RODORO	15740 W TELEGRAPH RD	NNE 1/8 - 1/4 (0.205 mi.)	20	24
GALBRAITH RANCHES	14915 W TELEGRAPH RD	WSW 1/8 - 1/4 (0.229 mi.)	E21	25
ORANGE GROVE	14914 W TELEGRAPH RD	WSW 1/8 - 1/4 (0.229 mi.)	E22	26

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA)

EXECUTIVE SUMMARY

of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/10/2014 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
OIL FIELD RENTALS SANTA PAULA	401 S BECKWITH RD	NNE 0 - 1/8 (0.011 mi.)	C14	19

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSTATES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WEST SIDE INVESTMENT	411 BECKWITH RD S	N 0 - 1/8 (0.005 mi.)	B8	13
CIRCLE K	765 HARVARD	NE 1/4 - 1/2 (0.469 mi.)	F26	35
SANTA PAULA RANCH	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G31	46

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there is 1 EDR US Hist Auto Stat site within approximately 0.25 miles of the target property.

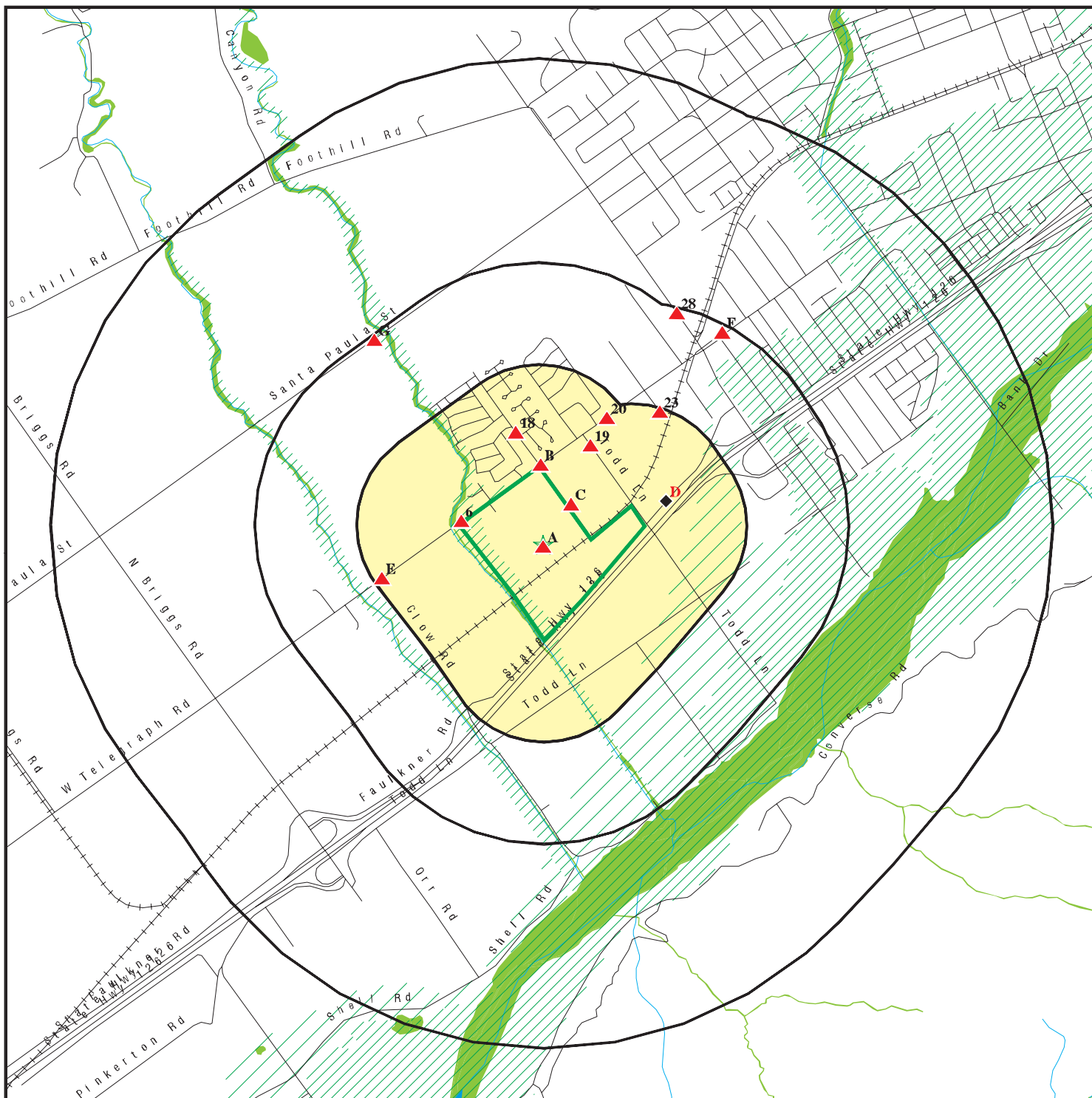
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D15	20

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 20 records.

<u>Site Name</u>	<u>Database(s)</u>
SOMIS ARROYO DISPOSAL SITE	CDL
M & M FARM LABOR	CERC-NFRAP
UNION PACIFIC RAILROAD	HAZNET
CALTRANS D-7/CONSTR/EA07-1189A4	HAZNET
CALTRANS D-7/CONSTR/EA07-1189F4	HAZNET
CALTRANS DIST 7/CONSTRUCTION	HAZNET
MESA UNION SCHOOL DISTRICT	HAZNET
VANPAK INC	HAZNET
UNOCAL SNYDER SETTING	RCRA-SQG
SOUTHERN CALIFORNIA GAS COMPANY -	RCRA NonGen / NLR
VINTAGE PETROLEUM INC	FINDS, EMI
SANTA PAULA CITY CLASS III	FINDS
WEST STATES ENERGY	FINDS
SOUTHERN CALIFORNIA GAS COMPANY -	FINDS
SANTA PAULA	FINDS
THE TERMO COMPANY-SULPHUR CREST	VENTURA CO. BWT
M & M FARM LABOR INC	VENTURA CO. BWT
STAGECOACH GENERAL STORE	WDS
ARGO PETROLEUM CORP.	EMI

OVERVIEW MAP - 4114777.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

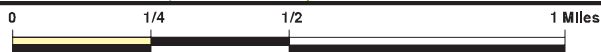
Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

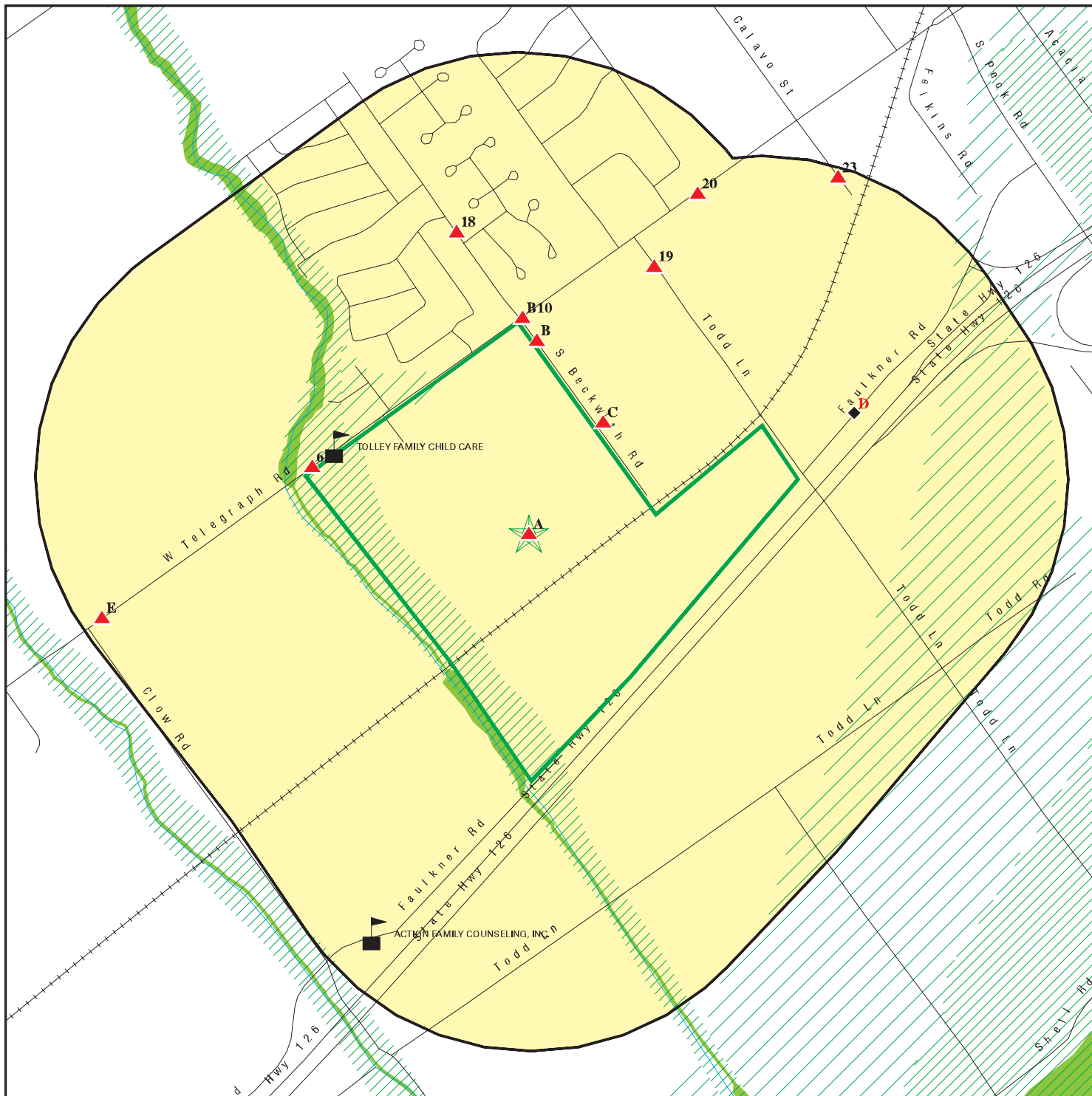















This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:27 pm

DETAIL MAP - 4114777.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Oil & Gas pipelines from USGS
-  100-year flood zone
-  500-year flood zone
-  National Wetland Inventory
-  Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:28 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		3	0	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		0	0	0	0	NR	0
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500	1	1	0	8	NR	NR	10

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500	1	2	0	0	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250	1	3	2	NR	NR	NR	6
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		1	0	0	NR	NR	1
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US HIST CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250	1	1	3	NR	NR	NR	5
SWEEPS UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
LIENS	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
DOT OPS	0.001		0	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		1	0	2	NR	NR	3
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
VENTURA CO. BWT	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	1	0	NR	NR	NR	NR	1
EMI	0.001		0	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
MED WASTE VENTURA	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
HWT	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		1	0	NR	NR	NR	1
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001	1	0	NR	NR	NR	NR	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

A1 **BANNON RANCH**
Target **15320 TELEGRAPH RD**
Property **SANTA PAULA, CA 93060**

HAZNET **S112949437**
 N/A

Site 1 of 5 in cluster A

Actual:
233 ft.

HAZNET:
Year: 2006
Gepaid: CAC002597113
Contact: JOANN HILTON
Telephone: 5109123160
Mailing Name: Not reported
Mailing Address: PO BOX 928
Mailing City,St,Zip: SANTA PAULA, CA 930610928
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: 0.08
Facility County: Ventura

Year: 2005
Gepaid: CAC002597113
Contact: JOANN HILTON
Telephone: 5109123160
Mailing Name: Not reported
Mailing Address: PO BOX 928
Mailing City,St,Zip: SANTA PAULA, CA 930610928
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Tank bottom waste
Disposal Method: Recycler
Tons: 12.92
Facility County: Ventura

Year: 2005
Gepaid: CAC002597113
Contact: JOANN HILTON
Telephone: 5109123160
Mailing Name: Not reported
Mailing Address: PO BOX 928
Mailing City,St,Zip: SANTA PAULA, CA 930610928
Gen County: Not reported
TSD EPA ID: CAT080033681
TSD County: Not reported
Waste Category: Other organic solids
Disposal Method: Not reported
Tons: 1.92
Facility County: Ventura

Year: 2005
Gepaid: CAC002597113
Contact: JOANN HILTON
Telephone: 5109123160
Mailing Name: Not reported
Mailing Address: PO BOX 928
Mailing City,St,Zip: SANTA PAULA, CA 930610928

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

BANNON RANCH (Continued)

S112949437

Gen County: Not reported
TSD EPA ID: CAL000190816
TSD County: Not reported
Waste Category: Waste oil and mixed oil
Disposal Method: Not reported
Tons: 0.93
Facility County: Ventura

Year: 2005
Gepaid: CAC002597113
Contact: JOANN HILTON
Telephone: 5109123160
Mailing Name: Not reported
Mailing Address: PO BOX 928
Mailing City,St,Zip: SANTA PAULA, CA 930610928
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified organic liquid mixture
Disposal Method: Recycler
Tons: 6.67
Facility County: Ventura

[Click this hyperlink](#) while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

**A2
Target
Property**

**BANNON RANCH
15320 W TELEGRAPH RD
SANTA PAULA, CA**

**RGA LUST S114580139
N/A**

Site 2 of 5 in cluster A

**Actual:
233 ft.**

RGA LUST:
2007 BANNON RANCH 15320 W TELEGRAPH RD
2006 BANNON RANCH 15320 W TELEGRAPH RD

**A3
Target
Property**

**BANNON RANCH
15320 W TELEGRAPH RD
SANTA PAULA, CA**

**LUST S108245883
N/A**

Site 3 of 5 in cluster A

**Actual:
233 ft.**

VENTURA CO. LUST:
Region: VENTURA
Facility ID: SR026
Status: Case Closed

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s) EDR ID Number
EPA ID Number

A4 **BANNON RANCH**
Target **15320 W TELEGRAPH RD**
Property **SANTA PAULA, CA 93060**

SLIC **U001580099**
HIST UST **N/A**

Site 4 of 5 in cluster A

Actual:
233 ft.

SLIC:
Region: STATE
Facility Status: Completed - Case Closed
Status Date: 05/02/2007
Global Id: T0611116855
Lead Agency: VENTURA COUNTY LOP
Lead Agency Case Number: SR0002601
Latitude: 34.33412
Longitude: -119.095503
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: Not reported
File Location: Local Agency Warehouse
Potential Media Affected: Soil
Potential Contaminants of Concern: Tetrachloroethylene (PCE)
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

HIST UST:

Region: STATE
Facility ID: 00000031377
Facility Type: Other
Other Type: RANCHER
Total Tanks: 0001
Contact Name: BRITT BOWKAR
Telephone: 8059832515
Owner Name: BANNON RANCH
Owner Address: 1200 W DOUGLAS AVE
Owner City,St,Zip: OXNARD, CA 93030

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00000000
Tank Used for: Not reported
Type of Fuel: Not reported
Tank Construction: Not reported
Leak Detection: None

A5 **BANNON RANCH**
Target **15320 TELEGRAPH RD**
Property **SANTA PAULA, CA**

UST **U004052549**
N/A

Site 5 of 5 in cluster A

Actual:
233 ft.

VENTURA CO. UST:
Facility ID: D 1551
Facility Status: Inactive
York Number: UGTCL027

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

6
WNW
< 1/8
0.004 mi.
21 ft.

TWYFORD PLANT LAB., INC.
15245 TELEGRAPH RD.
SANTA PAULA, CA 93060

RCRA-SQG 1000230215
FINDS CAD982409997

Relative:
Higher

RCRA-SQG:

Date form received by agency: 03/10/1988
Facility name: TWYFORD PLANT LAB., INC.
Facility address: 15245 TELEGRAPH RD.
SANTA PAULA, CA 93060
EPA ID: CAD982409997
Mailing address: TELEGRAPH RD.
SANTA PAULA, CA 93060
Contact: ENVIRONMENTAL MANAGER
Contact address: 15245 TELEGRAPH RD.
SANTA PAULA, CA 93060
Contact country: US
Contact telephone: (805) 525-7125
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Actual:
243 ft.

Owner/Operator Summary:

Owner/operator name: TWYFORD PLANT LAB., INC.
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: (415) 555-1212
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TWYFORD PLANT LAB., INC. (Continued)

1000230215

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002806624

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

**B7
North
< 1/8
0.005 mi.
26 ft.**

**ARGO PETROLEUM
411 S BECKWITH RD
SANTA PAULA, CA 93060**

**HIST UST U001580094
N/A**

Site 1 of 4 in cluster B

**Relative:
Higher**

HIST UST:
Region: STATE
Facility ID: 00000010572
Facility Type: Other
Other Type: SERVICE YARD
Total Tanks: 0002
Contact Name: JOE CLOW
Telephone: 8059331321
Owner Name: WESTSIDE INVESTMENTS
Owner Address: 4200 TIMBER CYN RD.
Owner City,St,Zip: SANTA PAULA, CA 93060

**Actual:
249 ft.**

Tank Num: 001
Container Num: #1
Year Installed: Not reported
Tank Capacity: 00008000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: #2
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: Not reported
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

B8
North
< 1/8
0.005 mi.
26 ft.

WEST SIDE INVESTMENT
411 BECKWITH RD S
SANTA PAULA, CA 93060

Site 2 of 4 in cluster B

HIST CORTESE
LUST
VENTURA CO. BWT

S100876783
N/A

Relative: HIST CORTESE:
Higher Region: CORTESE
 Facility County Code: 56
Actual: Reg By: LTNKA
249 ft. Reg Id: C-87112

LUST:
 Region: STATE
 Global Id: T0611100237
 Latitude: 34.334625
 Longitude: -119.089327
 Case Type: LUST Cleanup Site
 Status: Completed - Case Closed
 Status Date: 11/15/1988
 Lead Agency: LOS ANGELES RWQCB (REGION 4)
 Case Worker: YR
 Local Agency: Not reported
 RB Case Number: C-87112
 LOC Case Number: Not reported
 File Location: Not reported
 Potential Media Affect: Soil
 Potential Contaminants of Concern: Gasoline
 Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:
 Global Id: T0611100237
 Contact Type: Regional Board Caseworker
 Contact Name: YUE RONG
 Organization Name: LOS ANGELES RWQCB (REGION 4)
 Address: 320 W. 4TH ST., SUITE 200
 City: Los Angeles
 Email: yrong@waterboards.ca.gov
 Phone Number: Not reported

Status History:
 Global Id: T0611100237
 Status: Completed - Case Closed
 Status Date: 11/15/1988

Global Id: T0611100237
 Status: Open - Case Begin Date
 Status Date: 09/16/1987

Regulatory Activities:
 Global Id: T0611100237
 Action Type: Other
 Date: 01/01/1950
 Action: Leak Stopped

Global Id: T0611100237

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WEST SIDE INVESTMENT (Continued)

S100876783

Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0611100237
Action Type: ENFORCEMENT
Date: 11/15/1988
Action: Closure/No Further Action Letter

Global Id: T0611100237
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

LUST REG 4:

Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-87112
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Not reported
Global ID: T0611100237
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: TELEGRAPH
Enforcement Type: Not reported
Date Leak Discovered: 9/16/1987
Date Leak First Reported: 9/16/1987
Date Leak Record Entered: 10/14/1987
Date Confirmation Began: Not reported
Date Leak Stopped: 9/16/1987
Date Case Last Changed on Database: 6/29/1989
Date the Case was Closed: 11/15/1988
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: UNK
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 3048.0497090376364314419582614
Source of Cleanup Funding: UNK
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: Not reported
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

WEST SIDE INVESTMENT (Continued)

S100876783

Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: WEST SIDE INVESTMENT
RP Address: 4200 TIMBER CANYON RD, SANTA PAULA, CA 93060
Program: LUST
Lat/Long: 34.33629 / -1
Local Agency Staff: EHD
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. BWT:

Facility ID: FA0006363
Program: BUSINESS PLAN - SANTA PAULA/HAZARDOUS WASTE GENERATOR

B9
North
< 1/8
0.005 mi.
26 ft.

WESTSIDE INVESTMENTS
411 BECKWITH ROAD
SANTA PAULA, CA
Site 3 of 4 in cluster B

UST U002243875
N/A

Relative:
Higher

VENTURA CO. UST:
Facility ID: D 34
Facility Status: Inactive
York Number: 146054

Actual:
249 ft.

B10
North
< 1/8
0.007 mi.
35 ft.

HELIPOWER SVC
15500 TELEGRAPH RD C21
SANTA PAULA, CA 93060
Site 4 of 4 in cluster B

RCRA-SQG 1000818865
FINDS CAD983647942
VENTURA CO. BWT
HAZNET

Relative:
Higher

RCRA-SQG:
Date form received by agency: 09/04/1992
Facility name: HELIPOWER SVC
Facility address: 15500 TELEGRAPH RD C21
SANTA PAULA, CA 93060
EPA ID: CAD983647942
Mailing address: TELEGRAPH RD C21
SANTA PAULA, CA 93060
Contact: JOHN RAINS
Contact address: 15500 TELEGRAPH RD C21
SANTA PAULA, CA 93060
Contact country: US
Contact telephone: (805) 933-1371
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous

Actual:
251 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HELIPOWER SVC (Continued)

1000818865

waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name: CALIFORNIA TURBINE SVC INC
Owner/operator address: 15500 TELEGRAPH RD C21
SANTA PAULA, CA 93060
Owner/operator country: Not reported
Owner/operator telephone: (805) 933-1371
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110002884317

Environmental Interest/Information System

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

VENTURA CO. BWT:

Facility ID: FA0006147
Program: HAZARDOUS WASTE GENERATOR

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HELIPOWER SVC (Continued)

1000818865

HAZNET:

Year: 2012
Gepaid: CAD983647942
Contact: JOHN RAINS
Telephone: 8059331371
Mailing Name: Not reported
Mailing Address: 15500 W TELEGRAPH RD STE C21
Mailing City,St,Zip: SANTA PAULA, CA 930603051
Gen County: Ventura
TSD EPA ID: CAT080013352
TSD County: Los Angeles
Waste Category: Not reported
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.198
Facility County: Ventura

Year: 2011
Gepaid: CAD983647942
Contact: JOHN RAINS
Telephone: 8059331371
Mailing Name: Not reported
Mailing Address: 15500 W TELEGRAPH RD STE C21
Mailing City,St,Zip: SANTA PAULA, CA 930603051
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.198
Facility County: Ventura

Year: 2009
Gepaid: CAD983647942
Contact: JOHN RAINS
Telephone: 8059331371
Mailing Name: Not reported
Mailing Address: 15500 W TELEGRAPH RD STE C21
Mailing City,St,Zip: SANTA PAULA, CA 930603051
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Fuel Blending Prior To Energy Recovery At Another Site
Tons: 0.198
Facility County: Ventura

Year: 2008
Gepaid: CAD983647942
Contact: JOHN RAINS
Telephone: 8059331371
Mailing Name: Not reported
Mailing Address: 15500 W TELEGRAPH RD STE C21
Mailing City,St,Zip: SANTA PAULA, CA 930603051
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified solvent mixture

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

HELIPOWER SVC (Continued)

1000818865

Disposal Method: Other Recovery Of Reclamation For Reuse Including Acid Regeneration,
Organics Recovery Ect
Tons: 0.198
Facility County: Ventura

Year: 2006
Gepaid: CAD983647942
Contact: JOHN RAINS
Telephone: 8059331371
Mailing Name: Not reported
Mailing Address: 15500 W TELEGRAPH RD STE C21
Mailing City,St,Zip: SANTA PAULA, CA 930603051
Gen County: Not reported
TSD EPA ID: CAT080013352
TSD County: Not reported
Waste Category: Unspecified solvent mixture
Disposal Method: Recycler
Tons: 0.22
Facility County: Ventura

[Click this hyperlink](#) while viewing on your computer to access additional CA_HAZNET: detail in the EDR Site Report.

C11
NNE
< 1/8
0.011 mi.
56 ft.

WEATHERFORD ETERA (FORMER)
401 BECKWITH
SANTA PAULA, CA 93060
Site 1 of 4 in cluster C

SLIC S105911428
N/A

Relative:
Higher

SLIC REG 4:
Region: 4
Facility Status: No further action required
SLIC: 0556
Substance: Not reported
Staff: Not reported

Actual:
242 ft.

C12
NNE
< 1/8
0.011 mi.
56 ft.

OILFIELD RENTAL TOOLS
401 BECKWITH ROAD
SANTA PAULA, CA
Site 2 of 4 in cluster C

UST U002243874
N/A

Relative:
Higher

VENTURA CO. UST:
Facility ID: D 33
Facility Status: Inactive
York Number: 146054

Actual:
242 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

C13
NNE
< 1/8
0.011 mi.
56 ft.

WEATHERFORD ETERA (FORMER)
401 S. BECKWITH RD
SANTA PAULA, CA 93060

SLIC
VENTURA CO. BWT

S110326446
N/A

Site 3 of 4 in cluster C

Relative:
Higher

SLIC:

Actual:
242 ft.

Region: STATE
Facility Status: Completed - Case Closed
Status Date: 07/02/1996
Global Id: SLT43356354
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 34.3535080279001
Longitude: -119.069224254772
Case Type: Cleanup Program Site
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 0556
File Location: Not reported
Potential Media Affected: Not reported
Potential Contaminants of Concern: Not reported
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

VENTURA CO. BWT:

Facility ID: FA0006971
Program: HAZARDOUS WASTE GENERATOR/BUSINESS PLAN - SANTA PAULA

Facility ID: FA0024278
Program: BUSINESS PLAN - SANTA PAULA

C14
NNE
< 1/8
0.011 mi.
56 ft.

OIL FIELD RENTALS SANTA PAULA
401 S BECKWITH RD
SANTA PAULA, CA 93060

RCRA NonGen / NLR
HAZNET

1000597594
CAD983616111

Site 4 of 4 in cluster C

Relative:
Higher

RCRA NonGen / NLR:

Actual:
242 ft.

Date form received by agency: 07/11/1996
Facility name: OIL FIELD RENTALS SANTA PAULA
Facility address: 401 S BECKWITH RD
SANTA PAULA, CA 93060
EPA ID: CAD983616111
Contact: BECKY ALBERS
Contact address: 9203 EMMOTT RD
HOUSTON, TX 77040
Contact country: US
Contact telephone: (713) 937-3811
Contact email: Not reported
EPA Region: 09
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name: OIL FIELD RENTAL
Owner/operator address: PO BOX 1331
HOUSTON, TX 77251

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

OIL FIELD RENTALS SANTA PAULA (Continued)

1000597594

Owner/operator country: Not reported
Owner/operator telephone: (713) 672-1601
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

HAZNET:

Year: 1995
Gepaid: CAD983616111
Contact: OIL FIELD RENTAL
Telephone: 7136721601
Mailing Name: Not reported
Mailing Address: 1360 POST OAK BLVD #1000
Mailing City,St,Zip: HOUSTON, TX 770560000
Gen County: Not reported
TSD EPA ID: CAD000633164
TSD County: Not reported
Waste Category: Degreasing sludge
Disposal Method: Disposal, Land Fill
Tons: 9.2708
Facility County: Ventura

D15
ENE
< 1/8
0.077 mi.
409 ft.

957 FAULKNER RD
SANTA PAULA, CA 93060

EDR US Hist Auto Stat 1015684008
N/A

Site 1 of 3 in cluster D

Relative:
Lower

EDR Historical Auto Stations:

Name: D & S AUTOWORKS
Year: 2010
Address: 957 FAULKNER RD

Actual:
230 ft.

Name: D & S AUTOWORKS
Year: 2011
Address: 957 FAULKNER RD

Name: SINALAO AUTO REPAIR

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

(Continued)

1015684008

Year: 2012
Address: 957 FAULKNER RD

D16
ENE
< 1/8
0.077 mi.
409 ft.

CQ OF SANTA PAULA CA NO 7313
957 FAULKNER RD
SANTA PAULA, CA 93060

RCRA-SQG 1014387976
HAZNET CAR000216358

Site 2 of 3 in cluster D

Relative:
Lower

RCRA-SQG:

Date form received by agency: 01/27/2011
Facility name: CQ OF SANTA PAULA CA NO 7313
Facility address: 957 FAULKNER RD
SANTA PAULA, CA 93060
EPA ID: CAR000216358
Contact: JESUS C NAVA
Contact address: 957 FAULKNER RD
SANTA PAULA, CA 93060
Contact country: US
Contact telephone: 805-525-5545
Contact email: 7297MGR@STORES.CARQUEST.COM
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Actual:
230 ft.

Owner/Operator Summary:

Owner/operator name: BENDER FARM
Owner/operator address: 410 S BECKWITH RD
SANTA PAULA, CA 93060
Owner/operator country: US
Owner/operator telephone: 805-921-0490
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 05/01/2006
Owner/Op end date: Not reported
Owner/operator name: CQ OF SANTA PAULA CA NO 7313
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 05/01/2006
Owner/Op end date: Not reported

Handler Activities Summary:

U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CQ OF SANTA PAULA CA NO 7313 (Continued)

1014387976

On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Hazardous Waste Summary:

Waste code: D001
Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKEY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Waste code: D002
Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

Waste code: D005
Waste name: BARIUM

Waste code: D007
Waste name: CHROMIUM

Waste code: D008
Waste name: LEAD

Waste code: D035
Waste name: METHYL ETHYL KETONE

Violation Status: No violations found

HAZNET:

Year: 2011
Gepaid: CAR000216358
Contact: JESUS C NAVA
Telephone: 8055255545
Mailing Name: Not reported
Mailing Address: 957 FAULKNER RD
Mailing City,St,Zip: SANTA PAULA, CA 930600000
Gen County: Not reported
TSD EPA ID: AZD081705402
TSD County: Not reported
Waste Category: Not reported
Disposal Method: Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

CQ OF SANTA PAULA CA NO 7313 (Continued)

1014387976

Tons: 0.145
Facility County: Ventura

D17
ENE
< 1/8
0.077 mi.
409 ft.

JUNIOR RECYCLING CENTER
957 FAULKNER RD
SANTA PAULA, CA 93060

SWRCY S108991919
N/A

Site 3 of 3 in cluster D

Relative:
Lower

SWRCY:
Reg Id: 26782
Cert Id: RC13660
Mailing Address: 10351 Cayuga Ave
Mailing City: Pacoima
Mailing State: CA
Mailing Zip Code: 91331
Website: Not reported
Email: Not reported
Phone Number: (818) 653-0407
Grand Father: N
Rural: N
Operation Begin Date: 03/03/2008
Aluminium: Y
Glass: Y
Plastic: Y
Bimetal: Y
Agency: N/A
Monday Hours Of Operation: 9:00 am - 5:00 pm
Tuesday Hours Of Operation: 9:00 am - 5:00 pm
Wednesday Hours Of Operation: 9:00 am - 5:00 pm
Thursday Hours Of Operation: 9:00 am - 5:00 pm
Friday Hours Of Operation: 9:00 am - 5:00 pm
Saturday Hours Of Operation: 9:00 am - 5:00 pm
Sunday Hours Of Operation: CLOSED
Organization ID: 19034
Organization Name: Junior Recycling Center

Actual:
230 ft.

18
NNW
< 1/8
0.102 mi.
536 ft.

BALDEN RANCH CO. INC.
265 BECKWITH ROAD
SANTA PAULA, CA

UST U002097654
N/A

Relative:
Higher

VENTURA CO. UST:
Facility ID: D 32
Facility Status: Inactive
York Number: 146054

Actual:
257 ft.

MAP FINDINGS

Map ID
Direction
Distance
Elevation

Site

Database(s)

EDR ID Number
EPA ID Number

19
NNE
1/8-1/4
0.133 mi.
702 ft.

JAMES LOCKSHAW & TOLO INC.
112 TODD ROAD
SANTA PAULA, CA

UST **U002169474**
N/A

Relative:
Higher

Actual:
247 ft.

VENTURA CO. UST:
Facility ID: D 917
Facility Status: Inactive
York Number: 146060

20
NNE
1/8-1/4
0.205 mi.
1083 ft.

RANCHO RODORO
15740 W TELEGRAPH RD
SANTA PAULA, CA 93060

HIST UST **U001580240**
N/A

Relative:
Higher

Actual:
248 ft.

HIST UST:
Region: STATE
Facility ID: 00000015322
Facility Type: Other
Other Type: FARM
Total Tanks: 0007
Contact Name: RANDALL R. AXELL
Telephone: 8055258178
Owner Name: TOLO INC
Owner Address: P.O. BOX 25056
Owner City,St,Zip: SANTA ANA, CA 92799

Tank Num: 001
Container Num: WIND #1
Year Installed: 1960
Tank Capacity: 00000300
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: None

Tank Num: 002
Container Num: WIND #2
Year Installed: 1960
Tank Capacity: 00000300
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: None

Tank Num: 003
Container Num: HOUSE #1
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

Tank Num: 004
Container Num: HOUSE #2
Year Installed: 1963
Tank Capacity: 00001000

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

RANCHO RODORO (Continued)

U001580240

Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

Tank Num: 005
Container Num: BARN #1
Year Installed: Not reported
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

Tank Num: 006
Container Num: BARN #2
Year Installed: 1970
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: UNLEADED
Tank Construction: Not reported
Leak Detection: None

Tank Num: 007
Container Num: BARN #3
Year Installed: 1972
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

E21
WSW
1/8-1/4
0.229 mi.
1209 ft.

GALBRAITH RANCHES
14915 W TELEGRAPH RD
SANTA PAULA, CA 93454

HIST UST **U001585942**
N/A

Site 1 of 2 in cluster E

Relative:
Higher

HIST UST:
Region: STATE
Facility ID: 00000038221
Facility Type: Other
Other Type: CITRUS RANCH
Total Tanks: 0001
Contact Name: Not reported
Telephone: 8055258527
Owner Name: BANK OF AMERICA NT & SA
Owner Address: 313 B EAST PLAZA DRIVE #16
Owner City,St,Zip: SANTA MARIA, CA 93454

Actual:
250 ft.

Tank Num: 001
Container Num: 1
Year Installed: Not reported
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: None

MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

E22 **ORANGE GROVE**
WSW **14914 W TELEGRAPH RD**
1/8-1/4 **SANTA PAULA, CA 93060**
0.229 mi.
1210 ft.

HIST UST **U001580211**
 N/A

Relative: HIST UST:
Higher Region: STATE
 Facility ID: 00000031285
Actual: Facility Type: Other
250 ft. Other Type: Not reported
 Total Tanks: 0001
 Contact Name: Not reported
 Telephone: 2097810500
 Owner Name: ROGER CLOW
 Owner Address: 14914 TELEGRAPH RD
 Owner City,St,Zip: SANTA PAULA, CA 93060

 Tank Num: 001
 Container Num: 1
 Year Installed: Not reported
 Tank Capacity: 00000550
 Tank Used for: PRODUCT
 Type of Fuel: REGULAR
 Tank Construction: 10 gauge
 Leak Detection: Stock Inventor

23 **K-MART**
NE **150 LINDSAY LANE**
1/8-1/4 **SANTA PAULA, CA**
0.241 mi.
1274 ft.

UST **U002244044**
 N/A

Relative: VENTURA CO. UST:
Higher Facility ID: D 281
 Facility Status: Inactive
Actual: York Number: 146055
242 ft.

F24 **TOSCO #5238 (CIRCLE K)**
NE **765 HARVARD BLVD W**
1/4-1/2 **SANTA PAULA, CA 93060**
0.456 mi.
2406 ft.

LUST **S104530853**
 N/A

Relative: LUST REG 4:
Higher Region: 4
 Regional Board: 04
Actual: County: Ventura
243 ft. Facility Id: C-85011
 Status: Pollution Characterization
 Substance: Gasoline
 Substance Quantity: Not reported
 Local Case No: 85011
 Case Type: Groundwater
 Abatement Method Used at the Site: Not reported
 Global ID: T0611100116
 W Global ID: Not reported
 Staff: UNK

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S104530853

Local Agency: 56000L
 Cross Street: Not reported
 Enforcement Type: LFOR
 Date Leak Discovered: 3/12/1985
 Date Leak First Reported: 3/12/1985
 Date Leak Record Entered: Not reported
 Date Confirmation Began: 7/1/1988
 Date Leak Stopped: Not reported
 Date Case Last Changed on Database: 5/17/2000
 Date the Case was Closed: Not reported
 How Leak Discovered: Not reported
 How Leak Stopped: Not reported
 Cause of Leak: Not reported
 Leak Source: Not reported
 Operator: Not reported
 Water System: Not reported
 Well Name: Not reported
 Approx. Dist To Production Well (ft): 1293.4260086370438236143718208
 Source of Cleanup Funding: F
 Preliminary Site Assessment Workplan Submitted: 3/12/1985
 Preliminary Site Assessment Began: 12/16/1992
 Pollution Characterization Began: 12/16/1992
 Remediation Plan Submitted: Not reported
 Remedial Action Underway: Not reported
 Post Remedial Action Monitoring Began: Not reported
 Enforcement Action Date: 3/12/1985
 Historical Max MTBE Date: 6/5/1997
 Hist Max MTBE Conc in Groundwater: 310000
 Hist Max MTBE Conc in Soil: 0
 Significant Interim Remedial Action Taken: Not reported
 GW Qualifier: Not reported
 Soil Qualifier: ND
 Organization: Not reported
 Owner Contact: Not reported
 Responsible Party: TOSCO MARKETING CO
 RP Address: 3525 HYLAND AVE., COSTA MESA, CA 92626
 Program: LUST
 Lat/Long: 34.3403338 / -1
 Local Agency Staff: DCS
 Beneficial Use: Not reported
 Priority: Not reported
 Cleanup Fund Id: Not reported
 Suspended: Not reported
 Assigned Name: Not reported
 Summary: Not reported

F25
NE
1/4-1/2
0.456 mi.
2406 ft.

TOSCO #5238 (CIRCLE K)
765 HARVARD BLVD W
SANTA PAULA, CA 93060
Site 2 of 4 in cluster F

LUST S105974831
N/A

Relative:
Higher

LUST:
 Region: STATE
 Global Id: T0611100116
 Latitude: 34.340722
 Longitude: -119.0849
 Case Type: LUST Cleanup Site

Actual:
243 ft.

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Status: Completed - Case Closed
Status Date: 06/01/2009
Lead Agency: VENTURA COUNTY LOP
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: 85011
LOC Case Number: 85011
File Location: Not reported
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id: T0611100116
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Status History:

Global Id: T0611100116
Status: Open - Verification Monitoring
Status Date: 06/08/1990

Global Id: T0611100116
Status: Open - Verification Monitoring
Status Date: 05/18/2009

Global Id: T0611100116
Status: Completed - Case Closed
Status Date: 06/01/2009

Global Id: T0611100116
Status: Open - Site Assessment
Status Date: 06/01/1990

Global Id: T0611100116
Status: Open - Remediation
Status Date: 10/31/2005

Global Id: T0611100116
Status: Open - Case Begin Date
Status Date: 03/12/1985

Global Id: T0611100116
Status: Open - Remediation
Status Date: 03/15/1996

Global Id: T0611100116
Status: Open - Remediation
Status Date: 03/31/2008

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Global Id: T0611100116
Status: Open - Site Assessment
Status Date: 03/12/1985

Regulatory Activities:

Global Id: T0611100116
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 03/12/1985
Action: * Historical Enforcement

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 11/19/2007
Action: * No Action

Global Id: T0611100116
Action Type: RESPONSE
Date: 05/19/2006
Action: Other Workplan

Global Id: T0611100116
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 01/01/2016
Action: File review

Global Id: T0611100116
Action Type: RESPONSE
Date: 07/31/2003
Action: Other Report / Document

Global Id: T0611100116
Action Type: RESPONSE
Date: 06/18/2004
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/14/2006
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/25/2008
Action: Technical Correspondence / Assistance / Other - #L32

Global Id: T0611100116
Action Type: RESPONSE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Date: 08/05/2006
Action: Other Workplan

Global Id: T0611100116
Action Type: RESPONSE
Date: 04/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 05/25/2009
Action: Well Destruction Report

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 08/31/2007
Action: Technical Correspondence / Assistance / Other - #L29

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 05/12/2008
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 01/26/2009
Action: File review

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 06/29/2006
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/05/2007
Action: Technical Correspondence / Assistance / Other - #L26

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 12/24/2006
Action: Technical Correspondence / Assistance / Other - #L24

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 07/09/2007
Action: Technical Correspondence / Assistance / Other - #L28

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/27/2006
Action: * No Action - #L18

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 05/22/2006
Action: Technical Correspondence / Assistance / Other - #L20

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 08/07/2006
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 08/04/2006
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/28/2006
Action: File review - #L19

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 07/24/2006
Action: Technical Correspondence / Assistance / Other - #L21

Global Id: T0611100116
Action Type: RESPONSE
Date: 06/11/2007
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0611100116
Action Type: REMEDIATION
Date: 01/01/1950
Action: Monitored Natural Attenuation

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 06/28/2007
Action: Technical Correspondence / Assistance / Other - #L27

Global Id: T0611100116
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Global Id: T0611100116
Action Type: RESPONSE
Date: 09/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 08/31/2007
Action: Other Workplan

Global Id: T0611100116
Action Type: RESPONSE
Date: 04/21/2008
Action: Interim Remedial Action Report

Global Id: T0611100116
Action Type: RESPONSE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Date: 09/29/2008
Action: Other Report / Document

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 05/15/2006
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 11/05/2007
Action: Technical Correspondence / Assistance / Other - #L30

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 09/11/2007
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 02/13/2007
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 09/03/2008
Action: Staff Letter - #L33

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 09/13/2006
Action: Technical Correspondence / Assistance / Other - #L22

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 10/18/2006
Action: File review - #L23

Global Id: T0611100116
Action Type: RESPONSE
Date: 01/31/2006
Action: Sensitive Receptor Survey Report

Global Id: T0611100116
Action Type: RESPONSE
Date: 01/31/2006
Action: Other Report / Document

Global Id: T0611100116
Action Type: RESPONSE
Date: 10/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 07/08/2007
Action: CAP/RAP - Other Report

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Global Id: T0611100116
Action Type: RESPONSE
Date: 12/10/2007
Action: Other Workplan

Global Id: T0611100116
Action Type: RESPONSE
Date: 01/18/2008
Action: Well Installation Report

Global Id: T0611100116
Action Type: RESPONSE
Date: 10/31/2003
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 09/09/2005
Action: * Historical Enforcement - #MC18

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 01/01/2003
Action: Staff Letter

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 05/19/2004
Action: * Historical Enforcement - #L17

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/08/2009
Action: Staff Letter - #P&A2

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/27/2009
Action: Staff Letter - #L34

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 03/10/2009
Action: Staff Letter - #P&A

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 11/04/2005
Action: * Historical Enforcement - #19

Global Id: T0611100116
Action Type: RESPONSE
Date: 07/31/2004
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Date: 01/31/2005
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 07/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 10/30/2005
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: RESPONSE
Date: 01/30/2006
Action: Monitoring Report - Quarterly

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 02/08/2007
Action: Technical Correspondence / Assistance / Other - #L25

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 12/17/2005
Action: * Historical Enforcement - #20

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 02/15/2008
Action: File review

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/30/2009
Action: File review

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 04/30/2003
Action: * Corrective Action Orders

Global Id: T0611100116
Action Type: RESPONSE
Date: 08/31/2006
Action: Other Report / Document

Global Id: T0611100116
Action Type: RESPONSE
Date: 04/02/2007
Action: Other Report / Document

Global Id: T0611100116
Action Type: REMEDIATION
Date: 01/01/1950
Action: In Situ Physical/Chemical Treatment (other than SVE)

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

TOSCO #5238 (CIRCLE K) (Continued)

S105974831

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 05/09/2007
Action: * No Action

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 01/18/2008
Action: Technical Correspondence / Assistance / Other - #L31

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 06/01/2009
Action: Closure/No Further Action Letter - #RAAC

Global Id: T0611100116
Action Type: ENFORCEMENT
Date: 01/30/2009
Action: LOP Case Closure Summary to RB - #CIR

Global Id: T0611100116
Action Type: RESPONSE
Date: 01/29/2007
Action: Remedial Progress Report

Global Id: T0611100116
Action Type: RESPONSE
Date: 07/30/2008
Action: Other Report / Document

Global Id: T0611100116
Action Type: RESPONSE
Date: 05/30/2003
Action: Other Report / Document

VENTURA CO. LUST:

Region: VENTURA
Facility ID: 85011
Status: Remedial action (cleanup) Underway

**F26
NE
1/4-1/2
0.469 mi.
2477 ft.**

**CIRCLE K
765 HARVARD
SANTA PAULA, CA 93060
Site 3 of 4 in cluster F**

**HIST CORTESE U002168855
N/A**

**Relative:
Higher**

HIST CORTESE:
Region: CORTESE
Facility County Code: 56
Reg By: LTNKA
Reg Id: C-85011

**Actual:
243 ft.**

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

F27
NE
1/4-1/2
0.480 mi.
2533 ft.
GARRY COLLETT
741 HARVARD BLVD
SANTA PAULA, CA
Site 4 of 4 in cluster F

LUST **U002243999**
UST **N/A**

Relative:
Higher

LUST:

Actual:
244 ft.

Region: STATE
Global Id: T0611100457
Latitude: 34.3491702
Longitude: -119.0631151
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 10/01/1996
Lead Agency: VENTURA COUNTY LOP
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: C-89035
LOC Case Number: 89035
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:

Global Id: T0611100457
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Status History:

Global Id: T0611100457
Status: Open - Case Begin Date
Status Date: 03/14/1989

Global Id: T0611100457
Status: Completed - Case Closed
Status Date: 10/01/1996

Global Id: T0611100457
Status: Open - Site Assessment
Status Date: 03/14/1989

Global Id: T0611100457
Status: Open - Site Assessment
Status Date: 05/24/1995

Global Id: T0611100457
Status: Open - Remediation
Status Date: 05/24/1995

Regulatory Activities:

Global Id: T0611100457

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GARRY COLLETT (Continued)

U002243999

Action Type: ENFORCEMENT
Date: 03/14/1989
Action: * Historical Enforcement

Global Id: T0611100457
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0611100457
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

LUST REG 4:

Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-89035
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: 89035
Case Type: Soil
Abatement Method Used at the Site: No Action Required
Global ID: T0611100457
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: Not reported
Enforcement Type: EF
Date Leak Discovered: 3/14/1989
Date Leak First Reported: 3/14/1989
Date Leak Record Entered: Not reported
Date Confirmation Began: 3/14/1989
Date Leak Stopped: Not reported
Date Case Last Changed on Database: Not reported
Date the Case was Closed: 10/1/1996
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1265.9738201125393356031831301
Source of Cleanup Funding: F
Preliminary Site Assessment Workplan Submitted: 3/14/1989
Preliminary Site Assessment Began: 3/14/1989
Pollution Characterization Began: 5/24/1995
Remediation Plan Submitted: 5/24/1995
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: 3/14/1989
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

GARRY COLLETT (Continued)

U002243999

Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Not reported
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: AGOURA WEST DEVELOPMENT INC
RP Address: Not reported
Program: LUST
Lat/Long: 34.3410518 / -1
Local Agency Staff: DCS
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

VENTURA CO. LUST:

Region: VENTURA
Facility ID: 89035
Status: Case Closed

VENTURA CO. UST:

Facility ID: D 217
Facility Status: Inactive
York Number: 146055

28
NNE
1/4-1/2
0.485 mi.
2562 ft.

SATICOY LEMON ASSOCIATION
103 NORTH PECK ROAD
SANTA PAULA, CA 93060

LUST 1001610051
EMI N/A

Relative:
Higher

LUST:

Region: STATE
Global Id: T0611100142
Latitude: 34.340718
Longitude: -119.086155
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 11/16/1999
Lead Agency: VENTURA COUNTY LOP
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: C-86045
LOC Case Number: 86045
File Location: Not reported
Potential Media Affect: Other Groundwater (uses other than drinking water)
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Actual:
248 ft.

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0611100142
Contact Type: Regional Board Caseworker

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SATICOY LEMON ASSOCIATION (Continued)

1001610051

Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Status History:

Global Id: T0611100142
Status: Completed - Case Closed
Status Date: 11/16/1999

Global Id: T0611100142
Status: Open - Site Assessment
Status Date: 07/01/1988

Global Id: T0611100142
Status: Open - Case Begin Date
Status Date: 08/12/1986

Global Id: T0611100142
Status: Open - Site Assessment
Status Date: 03/15/1991

Global Id: T0611100142
Status: Open - Site Assessment
Status Date: 11/18/1986

Regulatory Activities:

Global Id: T0611100142
Action Type: ENFORCEMENT
Date: 08/21/1986
Action: * Historical Enforcement

Global Id: T0611100142
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Global Id: T0611100142
Action Type: ENFORCEMENT
Date: 11/16/1999
Action: Closure/No Further Action Letter

Global Id: T0611100142
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

EMI:

Year: 2000
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SATICOY LEMON ASSOCIATION (Continued)

1001610051

SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 1
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smlr Tons/Yr: 0

Year: 2001
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 1
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smlr Tons/Yr: 0

Year: 2002
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0
Carbon Monoxide Emissions Tons/Yr: 0
NOX - Oxides of Nitrogen Tons/Yr: 0
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 0
Part. Matter 10 Micrometers & Smlr Tons/Yr: 0

Year: 2003
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 0
Reactive Organic Gases Tons/Yr: 0

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SATICOY LEMON ASSOCIATION (Continued)

1001610051

Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smlr Tons/Yr:	0
Year:	2004
County Code:	56
Air Basin:	SCC
Facility ID:	130
Air District Name:	VEN
SIC Code:	723
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.06
Reactive Organic Gases Tons/Yr:	0.03
Carbon Monoxide Emissions Tons/Yr:	0.45
NOX - Oxides of Nitrogen Tons/Yr:	0.2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0.04
Part. Matter 10 Micrometers & Smlr Tons/Yr:	0.04
Year:	2005
County Code:	56
Air Basin:	SCC
Facility ID:	130
Air District Name:	VEN
SIC Code:	723
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.06
Reactive Organic Gases Tons/Yr:	.025332
Carbon Monoxide Emissions Tons/Yr:	.45
NOX - Oxides of Nitrogen Tons/Yr:	.2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.04
Part. Matter 10 Micrometers & Smlr Tons/Yr:	.04
Year:	2006
County Code:	56
Air Basin:	SCC
Facility ID:	130
Air District Name:	VEN
SIC Code:	723
Air District Name:	VENTURA COUNTY APCD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.06
Reactive Organic Gases Tons/Yr:	.025332
Carbon Monoxide Emissions Tons/Yr:	.45
NOX - Oxides of Nitrogen Tons/Yr:	.2
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	.04
Part. Matter 10 Micrometers & Smlr Tons/Yr:	.04

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SATICOY LEMON ASSOCIATION (Continued)

1001610051

Year: 2007
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .06
Reactive Organic Gases Tons/Yr: .025332
Carbon Monoxide Emissions Tons/Yr: .45
NOX - Oxides of Nitrogen Tons/Yr: .2
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .04
Part. Matter 10 Micrometers & Smlr Tons/Yr: .04

Year: 2008
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: .06
Reactive Organic Gases Tons/Yr: .025332
Carbon Monoxide Emissions Tons/Yr: .45
NOX - Oxides of Nitrogen Tons/Yr: .2
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: .04
Part. Matter 10 Micrometers & Smlr Tons/Yr: .04

Year: 2009
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723
Air District Name: VENTURA COUNTY APCD
Community Health Air Pollution Info System: Not reported
Consolidated Emission Reporting Rule: Not reported
Total Organic Hydrocarbon Gases Tons/Yr: 5.999999999999998E-2
Reactive Organic Gases Tons/Yr: 0.025332
Carbon Monoxide Emissions Tons/Yr: 0.45000000000000001
NOX - Oxides of Nitrogen Tons/Yr: 0.20000000000000001
SOX - Oxides of Sulphur Tons/Yr: 0
Particulate Matter Tons/Yr: 4.000000000000001E-2
Part. Matter 10 Micrometers & Smlr Tons/Yr: 4.000000000000001E-2

Year: 2010
County Code: 56
Air Basin: SCC
Facility ID: 130
Air District Name: VEN
SIC Code: 723

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

SATICOY LEMON ASSOCIATION (Continued)

1001610051

Air District Name: VENTURA COUNTY APCD
 Community Health Air Pollution Info System: Not reported
 Consolidated Emission Reporting Rule: Not reported
 Total Organic Hydrocarbon Gases Tons/Yr: 5.999999999999998E-2
 Reactive Organic Gases Tons/Yr: 0.025332
 Carbon Monoxide Emissions Tons/Yr: 0.4500000000000001
 NOX - Oxides of Nitrogen Tons/Yr: 0.2000000000000001
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr: 4.000000000000001E-2
 Part. Matter 10 Micrometers & Smlr Tons/Yr: 4.000000000000001E-2

Year: 2011
 County Code: 56
 Air Basin: SCC
 Facility ID: 130
 Air District Name: VEN
 SIC Code: 723

Air District Name: VENTURA COUNTY APCD
 Community Health Air Pollution Info System: Not reported
 Consolidated Emission Reporting Rule: Not reported
 Total Organic Hydrocarbon Gases Tons/Yr: 0.06
 Reactive Organic Gases Tons/Yr: 0.025332
 Carbon Monoxide Emissions Tons/Yr: 0.45
 NOX - Oxides of Nitrogen Tons/Yr: 0.2
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr: 0.04
 Part. Matter 10 Micrometers & Smlr Tons/Yr: 0.04

Year: 2012
 County Code: 56
 Air Basin: SCC
 Facility ID: 130
 Air District Name: VEN
 SIC Code: 723
 Air District Name: VENTURA COUNTY APCD
 Community Health Air Pollution Info System: N
 Consolidated Emission Reporting Rule: Not reported
 Total Organic Hydrocarbon Gases Tons/Yr: 0.06
 Reactive Organic Gases Tons/Yr: 0.025332
 Carbon Monoxide Emissions Tons/Yr: 0.45
 NOX - Oxides of Nitrogen Tons/Yr: 0.2
 SOX - Oxides of Sulphur Tons/Yr: 0
 Particulate Matter Tons/Yr: 0.04
 Part. Matter 10 Micrometers & Smlr Tons/Yr: 0.04

**G29
 NW
 1/4-1/2
 0.488 mi.
 2577 ft.**

**SANTA PAULA RANCH
 15442 SANTA PAULA ST
 SANTA PAULA, CA 93060**

**LUST U001580265
 HIST UST N/A**

Site 1 of 4 in cluster G

**Relative:
 Higher**

LUST REG 4:
 Region: 4
 Regional Board: 04
 County: Ventura
 Facility Id: 930600061
 Status: Case Closed
 Substance: Gasoline

**Actual:
 285 ft.**

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANTA PAULA RANCH (Continued)

U001580265

Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Soil
Abatement Method Used at the Site: Excavate and Dispose
Global ID: T0611100080
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: Not reported
Enforcement Type: Not reported
Date Leak Discovered: 3/12/1990
Date Leak First Reported: 4/29/1988
Date Leak Record Entered: 3/4/1990
Date Confirmation Began: Not reported
Date Leak Stopped: 3/9/1988
Date Case Last Changed on Database: 9/8/1994
Date the Case was Closed: 10/24/1994
How Leak Discovered: Tank Closure
How Leak Stopped: Not reported
Cause of Leak: UNK
Leak Source: Tank
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 3087.3525166457710354065501291
Source of Cleanup Funding: Tank
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: 4/29/1988
Remediation Plan Submitted: Not reported
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported
Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Yes
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: JM SHARP COMPANY
RP Address: P.O. BOX 4067, SATICOY, 93004
Program: LUST
Lat/Long: 34.3409647 / -1
Local Agency Staff: EHD
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: Not reported

HIST UST:

Region: STATE
Facility ID: 00000036506
Facility Type: Other

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANTA PAULA RANCH (Continued)

U001580265

Other Type: RANCH
Total Tanks: 0003
Contact Name: ERVIN SMITH
Telephone: 8056471424
Owner Name: J.M. SHARP CO.
Owner Address: 1253 S. WELLS RD.
Owner City,St,Zip: SATICOY, CA 93004

Tank Num: 001
Container Num: SP-1
Year Installed: Not reported
Tank Capacity: 00000285
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: SP-2 WEST
Year Installed: 1970
Tank Capacity: 00000285
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

Tank Num: 003
Container Num: SP-3 EAST
Year Installed: 1970
Tank Capacity: 00000285
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: Not reported
Leak Detection: Stock Inventor

**G30
NW
1/4-1/2
0.488 mi.
2577 ft.**

**J. M. SHARP COMPANY
15442 SANTA PAULA ST
SANTA PAULA, CA 93060**

Site 2 of 4 in cluster G

**LUST S104234346
N/A**

**Relative:
Higher**

LUST REG 4:
Region: 4
Regional Board: 04
County: Ventura
Facility Id: C-88202
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: 88202
Case Type: Soil
Abatement Method Used at the Site: Excavate and Dispose
Global ID: T0611100425
W Global ID: Not reported
Staff: UNK
Local Agency: 56000L
Cross Street: Not reported
Enforcement Type: EF

**Actual:
285 ft.**

Map ID
 Direction
 Distance
 Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
 EPA ID Number

J. M. SHARP COMPANY (Continued)

S104234346

Date Leak Discovered: 3/12/1990
 Date Leak First Reported: 3/12/1990
 Date Leak Record Entered: Not reported
 Date Confirmation Began: 3/12/1990
 Date Leak Stopped: Not reported
 Date Case Last Changed on Database: Not reported
 Date the Case was Closed: 4/2/1990
 How Leak Discovered: Not reported
 How Leak Stopped: Not reported
 Cause of Leak: Not reported
 Leak Source: Not reported
 Operator: Not reported
 Water System: Not reported
 Well Name: Not reported
 Approx. Dist To Production Well (ft): 3081.9351945316701584499587166
 Source of Cleanup Funding: F
 Preliminary Site Assessment Workplan Submitted: 3/12/1990
 Preliminary Site Assessment Began: Not reported
 Pollution Characterization Began: Not reported
 Remediation Plan Submitted: Not reported
 Remedial Action Underway: Not reported
 Post Remedial Action Monitoring Began: Not reported
 Enforcement Action Date: 3/12/1990
 Historical Max MTBE Date: Not reported
 Hist Max MTBE Conc in Groundwater: Not reported
 Hist Max MTBE Conc in Soil: Not reported
 Significant Interim Remedial Action Taken: Not reported
 GW Qualifier: Not reported
 Soil Qualifier: Not reported
 Organization: Not reported
 Owner Contact: Not reported
 Responsible Party: J. M. SHARP COMPANY
 RP Address: Not reported
 Program: LUST
 Lat/Long: 34.3408997 / -1
 Local Agency Staff: EHD
 Beneficial Use: Not reported
 Priority: Not reported
 Cleanup Fund Id: Not reported
 Suspended: Not reported
 Assigned Name: Not reported
 Summary: Not reported

G31 **SANTA PAULA RANCH**
NW **15442 SANTA PAULA ST**
1/4-1/2 **SANTA PAULA, CA 93060**
0.488 mi.
2577 ft. **Site 3 of 4 in cluster G**

HIST CORTESE **S103946454**
LUST **N/A**

Relative: HIST CORTESE:
Higher Region: CORTESE
 Facility County Code: 56
Actual: Reg By: LTNKA
285 ft. Reg Id: C-88202

 Region: CORTESE
 Facility County Code: 56
 Reg By: LTNKA

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANTA PAULA RANCH (Continued)

S103946454

Reg Id: 930600061

LUST:

Region: STATE
Global Id: T0611100080
Latitude: 34.339887
Longitude: -119.098006
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 10/24/1994
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: YR
Local Agency: Not reported
RB Case Number: 930600061
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:

Global Id: T0611100080
Contact Type: Regional Board Caseworker
Contact Name: YUE RONG
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4TH ST., SUITE 200
City: Los Angeles
Email: yrong@waterboards.ca.gov
Phone Number: Not reported

Status History:

Global Id: T0611100080
Status: Open - Site Assessment
Status Date: 04/29/1988

Global Id: T0611100080
Status: Open - Case Begin Date
Status Date: 03/09/1988

Global Id: T0611100080
Status: Completed - Case Closed
Status Date: 10/24/1994

Regulatory Activities:

Global Id: T0611100080
Action Type: Other
Date: 01/01/1950
Action: Leak Stopped

Global Id: T0611100080
Action Type: Other
Date: 01/01/1950
Action: Leak Reported

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANTA PAULA RANCH (Continued)

S103946454

Global Id: T0611100080
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

Region: STATE
Global Id: T0611100425
Latitude: 34.339887
Longitude: -119.098006
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 04/02/1990
Lead Agency: VENTURA COUNTY LOP
Case Worker: Not reported
Local Agency: Not reported
RB Case Number: C-88202
LOC Case Number: 88202
File Location: Not reported
Potential Media Affect: Soil
Potential Contaminants of Concern: Gasoline
Site History: Not reported

[Click here to access the California GeoTracker records for this facility:](#)

Contact:

Global Id: T0611100425
Contact Type: Regional Board Caseworker
Contact Name: DANIEL PIROTTON
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: dpirotton@waterboards.ca.gov
Phone Number: 2135766714

Status History:

Global Id: T0611100425
Status: Open - Case Begin Date
Status Date: 03/12/1990

Global Id: T0611100425
Status: Open - Site Assessment
Status Date: 03/12/1990

Global Id: T0611100425
Status: Completed - Case Closed
Status Date: 04/02/1990

Regulatory Activities:

Global Id: T0611100425
Action Type: ENFORCEMENT
Date: 03/12/1990
Action: * Historical Enforcement

Global Id: T0611100425
Action Type: Other
Date: 01/01/1950

Map ID
Direction
Distance
Elevation

MAP FINDINGS

Site

Database(s)

EDR ID Number
EPA ID Number

SANTA PAULA RANCH (Continued)

S103946454

Action: Leak Reported
Global Id: T0611100425
Action Type: Other
Date: 01/01/1950
Action: Leak Discovery

**G32
NW
1/4-1/2
0.488 mi.
2577 ft.**

**J.M. SHARP COMPANY
15442 SANTA PAULA ST
SANTA PAULA, CA**

**LUST S104970726
N/A**

Site 4 of 4 in cluster G

**Relative:
Higher**

VENTURA CO. LUST:
Region: VENTURA
Facility ID: 88202
Status: Case Closed

**Actual:
285 ft.**

Count: 20 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FILLMORE	S113459949	M & M FARM LABOR	EB HWY 126 MI MARKER: BR409	93060	HAZNET
OAK HILLS	S112911950	UNION PACIFIC RAILROAD	N OF HWY 138/4 MI E HWY 15 SUM	93060	HAZNET
SANTA PAULA	S112974121	CALTRANS D-7/CONSTR/EA07-1189A4	RTE 150 PM 15.5	93060	HAZNET
SANTA PAULA	S112971107	CALTRANS D-7/CONSTR/EA07-1189F4	RTE 150 PM 28.5	93060	HAZNET
SANTA PAULA	S112915913	CALTRANS DIST 7/CONSTRUCTION	@RTE 150 HWY SO.WEST CORNER	93060	HAZNET
SANTA PAULA	S117038774	THE TERMO COMPANY-SULPHUR CREST	HWY 150, 126		VENTURA CO. BWT
SANTA PAULA	1006248346	VINTAGE PETROLEUM INC	BRIDGE PLANT LEMON COUNTY ROAD	93060	FINDS, EMI
SANTA PAULA	S106571310	STAGECOACH GENERAL STORE	COR. SISAR RD & HWY 150	93060	WDS
SANTA PAULA	S106826187	ARGO PETROLEUM CORP.	FERNDALE RANCH LSE.-HWY 150	93060	EMI
SANTA PAULA	1000167000	UNOCAL SNYDER SETTING	LEMON COUNTY RD	93060	RCRA-SQG
SANTA PAULA	1006831355	SANTA PAULA CITY CLASS III	PALM ST W END OF AIRPORT RUNW	93060	FINDS
SANTA PAULA	1006248413	WEST STATES ENERGY	EAST SULPHUR MOUTAIN ROAD	93060	FINDS
SANTA PAULA	1015878134	SOUTHERN CALIFORNIA GAS COMPANY -	1691 FT SW OF INTERSECTION SOU	93060	FINDS
SANTA PAULA	1015740087	SOUTHERN CALIFORNIA GAS COMPANY -	1691 FT SW OF INTERSECTION SOU	93060	RCRA NonGen / NLR
SANTA PAULA	S113473619	M & M FARM LABOR INC	14495 TODD LN		VENTURA CO. BWT
SANTA PAULA	1011989298	SANTA PAULA	UNKNOWN	00000	FINDS
SOMIS	S112967572	MESA UNION SCHOOL DISTRICT	HWY 118 PM 7.0	93066	HAZNET
SOMIS	S112949626	VANPAK INC	HWY 18 AT PRICE RD	93066	HAZNET
VENTURA	1003879437	SOMIS ARROYO DISPOSAL SITE	COYOTE CANYON & ARROYO LAS POS	93066	CERC-NFRAP
VENTURA COUNTY	S107538751		HIGHWAY 33 IN MIRA MONTE		CDL

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 10/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 10/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 08/15/2011
Number of Days to Update: 56	Next Scheduled EDR Contact: 11/28/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: N/A
Date Made Active in Reports: 01/28/2014	Last EDR Contact: 10/08/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 08/28/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 07/21/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 10/07/2014	Telephone: 703-603-8704
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 10/07/2014
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Varies

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 11/11/2013	Telephone: 703-412-9810
Date Made Active in Reports: 02/13/2014	Last EDR Contact: 08/28/2014
Number of Days to Update: 94	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/10/2014
Date Data Arrived at EDR: 07/02/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/18/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/19/2014	Telephone: 703-603-0695
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/08/2014
Number of Days to Update: 31	Next Scheduled EDR Contact: 12/22/2014
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/18/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/19/2014	Telephone: 703-603-0695
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/08/2014
Number of Days to Update: 31	Next Scheduled EDR Contact: 12/22/2014
	Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/29/2014	Source: Department of the Navy
Date Data Arrived at EDR: 10/09/2014	Telephone: 843-820-7326
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 08/14/2014
Number of Days to Update: 11	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/30/2013	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 10/01/2013	Telephone: 202-267-2180
Date Made Active in Reports: 12/06/2013	Last EDR Contact: 09/30/2014
Number of Days to Update: 66	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 09/26/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 51	Next Scheduled EDR Contact: 11/17/2014
	Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 09/26/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 51	Next Scheduled EDR Contact: 11/17/2014
	Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inventory of solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/18/2014	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 08/18/2014	Telephone: 916-341-6320
Date Made Active in Reports: 10/03/2014	Last EDR Contact: 08/18/2014
Number of Days to Update: 46	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005	Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Date Data Arrived at EDR: 06/07/2005	Telephone: 760-241-7365
Date Made Active in Reports: 06/29/2005	Last EDR Contact: 09/12/2011
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004	Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Date Data Arrived at EDR: 02/26/2004	Telephone: 760-776-8943
Date Made Active in Reports: 03/24/2004	Last EDR Contact: 08/01/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003	Source: California Regional Water Quality Control Board Lahontan Region (6)
Date Data Arrived at EDR: 09/10/2003	Telephone: 530-542-5572
Date Made Active in Reports: 10/07/2003	Last EDR Contact: 09/12/2011
Number of Days to Update: 27	Next Scheduled EDR Contact: 12/26/2011
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 5: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008	Source: California Regional Water Quality Control Board Central Valley Region (5)
Date Data Arrived at EDR: 07/22/2008	Telephone: 916-464-4834
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 07/01/2011
Number of Days to Update: 9	Next Scheduled EDR Contact: 10/17/2011
	Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List

Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004	Source: California Regional Water Quality Control Board Los Angeles Region (4)
Date Data Arrived at EDR: 09/07/2004	Telephone: 213-576-6710
Date Made Active in Reports: 10/12/2004	Last EDR Contact: 09/06/2011
Number of Days to Update: 35	Next Scheduled EDR Contact: 12/19/2011
	Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003	Source: California Regional Water Quality Control Board Central Coast Region (3)
Date Data Arrived at EDR: 05/19/2003	Telephone: 805-542-4786
Date Made Active in Reports: 06/02/2003	Last EDR Contact: 07/18/2011
Number of Days to Update: 14	Next Scheduled EDR Contact: 10/31/2011
	Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List

Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004	Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Date Data Arrived at EDR: 10/20/2004	Telephone: 510-622-2433
Date Made Active in Reports: 11/19/2004	Last EDR Contact: 09/19/2011
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/02/2012
	Data Release Frequency: Quarterly

LUST REG 1: Active Toxic Site Investigation

Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001	Source: California Regional Water Quality Control Board North Coast (1)
Date Data Arrived at EDR: 02/28/2001	Telephone: 707-570-3769
Date Made Active in Reports: 03/29/2001	Last EDR Contact: 08/01/2011
Number of Days to Update: 29	Next Scheduled EDR Contact: 11/14/2011
	Data Release Frequency: No Update Planned

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 07/30/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/31/2014	Telephone: see region list
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 09/17/2014
Number of Days to Update: 22	Next Scheduled EDR Contact: 12/29/2014
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks

California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/15/2014
Date Data Arrived at EDR: 09/17/2014
Date Made Active in Reports: 10/23/2014
Number of Days to Update: 36

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/17/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 05/22/2014
Date Data Arrived at EDR: 08/22/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 27

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/14/2014
Date Data Arrived at EDR: 05/15/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 61

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/20/2014
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 184

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 03/01/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/01/2013	Telephone: 415-972-3372
Date Made Active in Reports: 04/12/2013	Last EDR Contact: 07/22/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 05/20/2014	Source: EPA Region 10
Date Data Arrived at EDR: 06/10/2014	Telephone: 206-553-2857
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 04/28/2014
Number of Days to Update: 73	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities

Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 07/30/2014	Source: SWRCB
Date Data Arrived at EDR: 07/31/2014	Telephone: 916-341-5851
Date Made Active in Reports: 08/20/2014	Last EDR Contact: 09/19/2014
Number of Days to Update: 20	Next Scheduled EDR Contact: 12/29/2014
	Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 08/01/2009	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/10/2009	Telephone: 916-327-5092
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 10/03/2014
Number of Days to Update: 21	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 08/20/2014	Source: EPA Region 7
Date Data Arrived at EDR: 08/22/2014	Telephone: 913-551-7003
Date Made Active in Reports: 09/18/2014	Last EDR Contact: 04/28/2014
Number of Days to Update: 27	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/13/2014	Source: EPA Region 8
Date Data Arrived at EDR: 08/15/2014	Telephone: 303-312-6137
Date Made Active in Reports: 08/22/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 7	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/25/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 25

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/01/2013
Date Data Arrived at EDR: 05/01/2013
Date Made Active in Reports: 01/27/2014
Number of Days to Update: 271

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 07/30/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 10

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/22/2014
Next Scheduled EDR Contact: 08/11/2014
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 08/04/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 17

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 7

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 05/20/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 66

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Quarterly

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 05/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 08/15/2014
Number of Days to Update: 45

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties

Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/05/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 09/26/2014
Number of Days to Update: 51

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/06/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 09/22/2014
Date Data Arrived at EDR: 09/23/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/23/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/17/2014
Date Made Active in Reports: 10/23/2014
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/17/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 09/08/2014
Date Data Arrived at EDR: 09/09/2014
Date Made Active in Reports: 10/22/2014
Number of Days to Update: 43

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/25/2014	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 09/09/2014	Telephone: 202-307-1000
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/03/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 12/15/2014
	Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database

The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 08/03/2006	Telephone: 916-323-3400
Date Made Active in Reports: 08/24/2006	Last EDR Contact: 02/23/2009
Number of Days to Update: 21	Next Scheduled EDR Contact: 05/25/2009
	Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/05/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/06/2014	Telephone: 916-323-3400
Date Made Active in Reports: 09/26/2014	Last EDR Contact: 08/06/2014
Number of Days to Update: 51	Next Scheduled EDR Contact: 11/17/2014
	Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/30/1995	Telephone: 916-227-4364
Date Made Active in Reports: 09/26/1995	Last EDR Contact: 01/26/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 04/27/2009
	Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 09/02/2014	Telephone: 916-255-6504
Date Made Active in Reports: 09/24/2014	Last EDR Contact: 10/10/2014
Number of Days to Update: 22	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/25/2014	Source: Drug Enforcement Administration
Date Data Arrived at EDR: 09/09/2014	Telephone: 202-307-1000
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/03/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 12/15/2014
	Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 09/05/1995	Telephone: 916-341-5851
Date Made Active in Reports: 09/29/1995	Last EDR Contact: 12/28/1998
Number of Days to Update: 24	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009	Source: Department of Public Health
Date Data Arrived at EDR: 09/23/2009	Telephone: 707-463-4466
Date Made Active in Reports: 10/01/2009	Last EDR Contact: 08/28/2014
Number of Days to Update: 8	Next Scheduled EDR Contact: 12/15/2014
	Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990	Source: State Water Resources Control Board
Date Data Arrived at EDR: 01/25/1991	Telephone: 916-341-5851
Date Made Active in Reports: 02/12/1991	Last EDR Contact: 07/26/2001
Number of Days to Update: 18	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/07/2005	Telephone: N/A
Date Made Active in Reports: 08/11/2005	Last EDR Contact: 06/03/2005
Number of Days to Update: 35	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/19/2014
Date Data Arrived at EDR: 08/20/2014
Date Made Active in Reports: 10/06/2014
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/08/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/22/2014
Number of Days to Update: 42

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/01/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 79

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/01/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 06/26/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 09/15/2014
Number of Days to Update: 49

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/28/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 09/15/2014
Date Data Arrived at EDR: 09/17/2014
Date Made Active in Reports: 10/22/2014
Number of Days to Update: 35

Source: State Water Quality Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/17/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 09/15/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 09/17/2014	Telephone: 866-480-1028
Date Made Active in Reports: 10/23/2014	Last EDR Contact: 09/17/2014
Number of Days to Update: 36	Next Scheduled EDR Contact: 12/29/2014
	Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012	Source: FirstSearch
Date Data Arrived at EDR: 01/03/2013	Telephone: N/A
Date Made Active in Reports: 02/22/2013	Last EDR Contact: 01/03/2013
Number of Days to Update: 50	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/10/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/02/2014	Telephone: (415) 495-8895
Date Made Active in Reports: 09/18/2014	Last EDR Contact: 10/01/2014
Number of Days to Update: 78	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 08/07/2012	Telephone: 202-366-4595
Date Made Active in Reports: 09/18/2012	Last EDR Contact: 08/06/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 11/17/2014
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 11/10/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/15/2014
Number of Days to Update: 62	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/06/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 09/18/2014
Number of Days to Update: 8

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 01/24/2014
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 31

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/30/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/09/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 01/30/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 07/15/2014
Number of Days to Update: 132

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/04/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/31/2013
Date Made Active in Reports: 09/13/2013
Number of Days to Update: 44

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/29/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 09/29/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 64

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/26/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 05/06/2014
Date Data Arrived at EDR: 05/16/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 32

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2013
Date Data Arrived at EDR: 07/17/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 107

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/15/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/22/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 11/01/2013
Number of Days to Update: 91

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/07/2014
Date Data Arrived at EDR: 10/08/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/08/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/16/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: 202-564-4104
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/01/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/23/2014	Telephone: 202-564-8600
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 07/22/2014
Number of Days to Update: 66	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2011	Source: EPA/NTIS
Date Data Arrived at EDR: 02/26/2013	Telephone: 800-424-9346
Date Made Active in Reports: 04/19/2013	Last EDR Contact: 08/29/2014
Number of Days to Update: 52	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989	Source: Department of Health Services
Date Data Arrived at EDR: 07/27/1994	Telephone: 916-255-2118
Date Made Active in Reports: 08/02/1994	Last EDR Contact: 05/31/1994
Number of Days to Update: 6	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

UIC: UIC Listing

A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 07/14/2014	Source: Department of Conservation
Date Data Arrived at EDR: 09/17/2014	Telephone: 916-445-2408
Date Made Active in Reports: 10/23/2014	Last EDR Contact: 09/17/2014
Number of Days to Update: 36	Next Scheduled EDR Contact: 12/29/2014
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/18/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/18/2014	Telephone: 916-445-9379
Date Made Active in Reports: 10/06/2014	Last EDR Contact: 08/18/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 06/30/2014	Source: CAL EPA/Office of Emergency Information
Date Data Arrived at EDR: 07/01/2014	Telephone: 916-323-3400
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 09/30/2014
Number of Days to Update: 27	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CAL SITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 01/22/2009	Telephone: 916-323-3400
Date Made Active in Reports: 04/08/2009	Last EDR Contact: 01/22/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 10/21/1993	Source: State Water Resources Control Board
Date Data Arrived at EDR: 11/01/1993	Telephone: 916-445-3846
Date Made Active in Reports: 11/19/1993	Last EDR Contact: 09/22/2014
Number of Days to Update: 18	Next Scheduled EDR Contact: 01/05/2015
	Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 06/28/2014	Source: Department of Toxic Substance Control
Date Data Arrived at EDR: 07/03/2014	Telephone: 916-327-4498
Date Made Active in Reports: 08/21/2014	Last EDR Contact: 09/08/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 12/22/2014
	Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009	Source: Los Angeles Water Quality Control Board
Date Data Arrived at EDR: 07/21/2009	Telephone: 213-576-6726
Date Made Active in Reports: 08/03/2009	Last EDR Contact: 09/29/2014
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/11/2014	Source: State Water Resources Control Board
Date Data Arrived at EDR: 08/12/2014	Telephone: 916-445-9379
Date Made Active in Reports: 09/30/2014	Last EDR Contact: 08/08/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2012	Source: California Environmental Protection Agency
Date Data Arrived at EDR: 07/16/2013	Telephone: 916-255-1136
Date Made Active in Reports: 08/26/2013	Last EDR Contact: 10/15/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2012	Source: California Air Resources Board
Date Data Arrived at EDR: 03/25/2014	Telephone: 916-322-2990
Date Made Active in Reports: 04/28/2014	Last EDR Contact: 09/26/2014
Number of Days to Update: 34	Next Scheduled EDR Contact: 01/05/2015
	Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005	Source: USGS
Date Data Arrived at EDR: 12/08/2006	Telephone: 202-208-3710
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/15/2014
Number of Days to Update: 34	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/09/2011	Telephone: 615-532-8599
Date Made Active in Reports: 05/02/2011	Last EDR Contact: 10/20/2014
Number of Days to Update: 54	Next Scheduled EDR Contact: 02/02/2015
	Data Release Frequency: Varies

WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007	Source: State Water Resources Control Board
Date Data Arrived at EDR: 06/20/2007	Telephone: 916-341-5227
Date Made Active in Reports: 06/29/2007	Last EDR Contact: 08/19/2014
Number of Days to Update: 9	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 11/11/2011	Source: Environmental Protection Agency
Date Data Arrived at EDR: 05/18/2012	Telephone: 703-308-4044
Date Made Active in Reports: 05/25/2012	Last EDR Contact: 08/15/2014
Number of Days to Update: 7	Next Scheduled EDR Contact: 11/24/2014
	Data Release Frequency: Varies

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013	Source: EPA
Date Data Arrived at EDR: 10/17/2014	Telephone: 202-564-6023
Date Made Active in Reports: 10/20/2014	Last EDR Contact: 09/30/2014
Number of Days to Update: 3	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Quarterly

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001	Source: American Journal of Public Health
Date Data Arrived at EDR: 10/27/2010	Telephone: 703-305-6451
Date Made Active in Reports: 12/02/2010	Last EDR Contact: 12/02/2009
Number of Days to Update: 36	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 06/04/2014	Source: Environmental Protection Agency
Date Data Arrived at EDR: 06/12/2014	Telephone: 703-603-8787
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 10/06/2014
Number of Days to Update: 46	Next Scheduled EDR Contact: 01/19/2015
	Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013	Source: Environmental Protection Agency
Date Data Arrived at EDR: 03/21/2014	Telephone: 617-520-3000
Date Made Active in Reports: 06/17/2014	Last EDR Contact: 08/15/2014
Number of Days to Update: 88	Next Scheduled EDR Contact: 11/24/2014
	Data Release Frequency: Quarterly

PROC: Certified Processors Database

A listing of certified processors.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/17/2014
Date Made Active in Reports: 10/23/2014
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/17/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Quarterly

Financial Assurance 1: Financial Assurance Information Listing Financial Assurance information

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 09/26/2014
Number of Days to Update: 52

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/18/2014
Date Made Active in Reports: 10/06/2014
Number of Days to Update: 49

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/01/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/23/2013
Date Data Arrived at EDR: 11/06/2013
Date Made Active in Reports: 12/06/2013
Number of Days to Update: 30

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Annually

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/04/2014
Date Data Arrived at EDR: 09/04/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 08/14/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: Quarterly

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/23/2013	Source: EPA
Date Data Arrived at EDR: 11/06/2013	Telephone: 202-564-2496
Date Made Active in Reports: 12/06/2013	Last EDR Contact: 09/29/2014
Number of Days to Update: 30	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Annually

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/26/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 08/26/2014	Telephone: 916-323-3400
Date Made Active in Reports: 10/06/2014	Last EDR Contact: 08/26/2014
Number of Days to Update: 41	Next Scheduled EDR Contact: 12/08/2014
	Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 07/14/2014	Source: Department of Toxic Substances Control
Date Data Arrived at EDR: 07/15/2014	Telephone: 916-440-7145
Date Made Active in Reports: 07/28/2014	Last EDR Contact: 10/15/2014
Number of Days to Update: 13	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: Quarterly

COAL ASH DOE: Sleam-Electric Plan Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005	Source: Department of Energy
Date Data Arrived at EDR: 08/07/2009	Telephone: 202-586-8719
Date Made Active in Reports: 10/22/2009	Last EDR Contact: 10/17/2014
Number of Days to Update: 76	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005	Source: U.S. Geological Survey
Date Data Arrived at EDR: 02/06/2006	Telephone: 888-275-8747
Date Made Active in Reports: 01/11/2007	Last EDR Contact: 10/15/2014
Number of Days to Update: 339	Next Scheduled EDR Contact: 01/26/2015
	Data Release Frequency: N/A

MWMP: Medical Waste Management Program Listing

The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/20/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/23/2014
Number of Days to Update: 43

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/10/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR US Hist Auto Stat: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR US Hist Cleaners: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A	Source: State Water Resources Control Board
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 12/30/2013	Last EDR Contact: 06/01/2012
Number of Days to Update: 182	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A	Source: Department of Resources Recycling and Recovery
Date Data Arrived at EDR: 07/01/2013	Telephone: N/A
Date Made Active in Reports: 01/13/2014	Last EDR Contact: 06/01/2012
Number of Days to Update: 196	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/25/2014	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 07/28/2014	Telephone: 510-567-6700
Date Made Active in Reports: 09/15/2014	Last EDR Contact: 09/29/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/25/2014	Source: Alameda County Environmental Health Services
Date Data Arrived at EDR: 07/28/2014	Telephone: 510-567-6700
Date Made Active in Reports: 08/20/2014	Last EDR Contact: 09/29/2014
Number of Days to Update: 23	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 09/08/2014	Source: Amador County Environmental Health
Date Data Arrived at EDR: 09/09/2014	Telephone: 209-223-6439
Date Made Active in Reports: 09/24/2014	Last EDR Contact: 09/08/2014
Number of Days to Update: 15	Next Scheduled EDR Contact: 12/22/2014
	Data Release Frequency: Varies

BUTTE COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 08/01/2013
Date Data Arrived at EDR: 08/02/2013
Date Made Active in Reports: 08/22/2013
Number of Days to Update: 20

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing

Cupa Facility Listing

Date of Government Version: 07/02/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/30/2014
Number of Days to Update: 27

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 06/11/2014
Date Data Arrived at EDR: 06/13/2014
Date Made Active in Reports: 07/07/2014
Number of Days to Update: 24

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Varies

CONTRA COSTA COUNTY:

Site List

List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/11/2014
Date Data Arrived at EDR: 08/14/2014
Date Made Active in Reports: 10/09/2014
Number of Days to Update: 56

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/05/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List

Cupa Facility list

Date of Government Version: 07/31/2014
Date Data Arrived at EDR: 08/05/2014
Date Made Active in Reports: 09/26/2014
Number of Days to Update: 52

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 07/30/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

EL DORADO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/25/2014
Date Data Arrived at EDR: 08/26/2014
Date Made Active in Reports: 09/29/2014
Number of Days to Update: 34

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/05/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/30/2014
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/19/2014
Number of Days to Update: 35

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Semi-Annually

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 09/10/2014
Date Data Arrived at EDR: 09/11/2014
Date Made Active in Reports: 09/25/2014
Number of Days to Update: 14

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 07/28/2014
Date Data Arrived at EDR: 07/30/2014
Date Made Active in Reports: 09/15/2014
Number of Days to Update: 47

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 09/10/2013
Date Data Arrived at EDR: 09/11/2013
Date Made Active in Reports: 10/14/2013
Number of Days to Update: 33

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

KERN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Underground Storage Tank Sites & Tank Listing Kern County Sites and Tanks Listing.

Date of Government Version: 08/31/2010
Date Data Arrived at EDR: 09/01/2010
Date Made Active in Reports: 09/30/2010
Number of Days to Update: 29

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 08/21/2014
Date Data Arrived at EDR: 08/26/2014
Date Made Active in Reports: 09/29/2014
Number of Days to Update: 34

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/23/2014
Date Data Arrived at EDR: 07/25/2014
Date Made Active in Reports: 08/22/2014
Number of Days to Update: 28

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern

San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/22/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: No Update Planned

HMS: Street Number List

Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/31/2014
Date Data Arrived at EDR: 06/06/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 41

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/14/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities

Solid Waste Facilities in Los Angeles County.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 07/21/2014
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/19/2014
Number of Days to Update: 29

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/22/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

City of Los Angeles Landfills

Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/17/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Varies

Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/07/2014
Date Data Arrived at EDR: 02/25/2014
Date Made Active in Reports: 03/25/2014
Number of Days to Update: 28

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/17/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 07/23/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 23

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 07/28/2014
Date Data Arrived at EDR: 07/28/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 23

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/25/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Annually

City of Torrance Underground Storage Tank

Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/13/2014
Date Data Arrived at EDR: 03/27/2014
Date Made Active in Reports: 04/28/2014
Number of Days to Update: 32

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List

A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 06/27/2014
Number of Days to Update: 16

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites

Currently permitted USTs in Marin County.

Date of Government Version: 07/02/2014
Date Data Arrived at EDR: 07/07/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 42

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/20/2014
Date Data Arrived at EDR: 08/26/2014
Date Made Active in Reports: 09/30/2014
Number of Days to Update: 35

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List

CUPA Facility List

Date of Government Version: 09/02/2014
Date Data Arrived at EDR: 09/05/2014
Date Made Active in Reports: 09/24/2014
Number of Days to Update: 19

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 09/02/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing

CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 28

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination

A listing of leaking underground storage tank sites located in Napa county.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/05/2011
Date Data Arrived at EDR: 12/06/2011
Date Made Active in Reports: 02/07/2012
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites

Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/28/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/18/2014
Date Made Active in Reports: 09/25/2014
Number of Days to Update: 7

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 09/16/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups

Petroleum and non-petroleum spills.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 52

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups

Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 09/26/2014
Number of Days to Update: 45

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities

Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 08/20/2014
Number of Days to Update: 8

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

PLACER COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Master List of Facilities

List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/10/2014
Date Made Active in Reports: 07/09/2014
Number of Days to Update: 29

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 09/22/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites

Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/08/2014
Date Data Arrived at EDR: 07/11/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 17

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/22/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Quarterly

Underground Storage Tank Tank List

Underground storage tank sites located in Riverside county.

Date of Government Version: 07/08/2014
Date Data Arrived at EDR: 07/11/2014
Date Made Active in Reports: 08/18/2014
Number of Days to Update: 38

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/22/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List

List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/06/2014
Date Data Arrived at EDR: 04/08/2014
Date Made Active in Reports: 04/29/2014
Number of Days to Update: 21

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/06/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/05/2014
Date Data Arrived at EDR: 07/17/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 11

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/21/2014
Next Scheduled EDR Contact: 01/19/2015
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/06/2014
Date Data Arrived at EDR: 08/07/2014
Date Made Active in Reports: 09/30/2014
Number of Days to Update: 54

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 09/23/2013
Date Data Arrived at EDR: 09/24/2013
Date Made Active in Reports: 10/17/2013
Number of Days to Update: 23

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 10/21/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2013
Date Data Arrived at EDR: 11/19/2013
Date Made Active in Reports: 12/31/2013
Number of Days to Update: 42

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/22/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversight Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/29/2010
Date Data Arrived at EDR: 03/10/2011
Date Made Active in Reports: 03/15/2011
Number of Days to Update: 5

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/27/2014
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/20/2014
Date Data Arrived at EDR: 06/23/2014
Date Made Active in Reports: 07/11/2014
Number of Days to Update: 18

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/22/2014
Next Scheduled EDR Contact: 01/05/2015
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 08/22/2014
Date Data Arrived at EDR: 08/26/2014
Date Made Active in Reports: 10/01/2014
Number of Days to Update: 36

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/20/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/07/2014
Date Data Arrived at EDR: 08/12/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 52

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/15/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 09/15/2014
Date Data Arrived at EDR: 09/16/2014
Date Made Active in Reports: 10/22/2014
Number of Days to Update: 36

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/15/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing

CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 10/21/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List

Cupa facility list

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 08/22/2014
Date Data Arrived at EDR: 08/26/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 38

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/22/2014
Next Scheduled EDR Contact: 09/15/2014
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/02/2014
Next Scheduled EDR Contact: 12/15/2014
Data Release Frequency: Annually

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/14/2014
Date Data Arrived at EDR: 08/18/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 46

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/24/2014
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List

CUPA facility listing.

Date of Government Version: 09/09/2014
Date Data Arrived at EDR: 09/11/2014
Date Made Active in Reports: 09/25/2014
Number of Days to Update: 14

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List

Cupa Facility List.

Date of Government Version: 09/16/2014
Date Data Arrived at EDR: 09/18/2014
Date Made Active in Reports: 10/22/2014
Number of Days to Update: 34

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Varies

SOLANO COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/26/2014
Date Made Active in Reports: 07/25/2014
Number of Days to Update: 29

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/15/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Quarterly

Underground Storage Tanks

Underground storage tank sites located in Solano county.

Date of Government Version: 06/19/2014
Date Data Arrived at EDR: 06/26/2014
Date Made Active in Reports: 07/25/2014
Number of Days to Update: 29

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/15/2014
Next Scheduled EDR Contact: 12/29/2014
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List

Cupa Facility list

Date of Government Version: 06/26/2014
Date Data Arrived at EDR: 08/20/2014
Date Made Active in Reports: 10/06/2014
Number of Days to Update: 47

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 07/03/2014
Date Made Active in Reports: 07/28/2014
Number of Days to Update: 25

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/29/2014
Next Scheduled EDR Contact: 01/12/2015
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 06/09/2014
Date Data Arrived at EDR: 06/11/2014
Date Made Active in Reports: 07/17/2014
Number of Days to Update: 36

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/08/2014
Next Scheduled EDR Contact: 12/22/2014
Data Release Frequency: Semi-Annually

TUOLUMNE COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/13/2014
Date Data Arrived at EDR: 08/15/2014
Date Made Active in Reports: 10/03/2014
Number of Days to Update: 49

Source: Division of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 08/08/2014
Next Scheduled EDR Contact: 11/10/2014
Data Release Frequency: Varies

VENTURA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks

The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 07/28/2014	Source: Ventura County Environmental Health Division
Date Data Arrived at EDR: 08/18/2014	Telephone: 805-654-2813
Date Made Active in Reports: 09/26/2014	Last EDR Contact: 08/14/2014
Number of Days to Update: 39	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites

Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011	Source: Environmental Health Division
Date Data Arrived at EDR: 12/01/2011	Telephone: 805-654-2813
Date Made Active in Reports: 01/19/2012	Last EDR Contact: 10/03/2014
Number of Days to Update: 49	Next Scheduled EDR Contact: 01/12/2015
	Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites

Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008	Source: Environmental Health Division
Date Data Arrived at EDR: 06/24/2008	Telephone: 805-654-2813
Date Made Active in Reports: 07/31/2008	Last EDR Contact: 08/13/2014
Number of Days to Update: 37	Next Scheduled EDR Contact: 12/01/2014
	Data Release Frequency: Quarterly

Medical Waste Program List

To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2014	Source: Ventura County Resource Management Agency
Date Data Arrived at EDR: 07/31/2014	Telephone: 805-654-2813
Date Made Active in Reports: 09/15/2014	Last EDR Contact: 07/28/2014
Number of Days to Update: 46	Next Scheduled EDR Contact: 11/10/2014
	Data Release Frequency: Quarterly

Underground Tank Closed Sites List

Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 05/27/2014	Source: Environmental Health Division
Date Data Arrived at EDR: 06/17/2014	Telephone: 805-654-2813
Date Made Active in Reports: 07/11/2014	Last EDR Contact: 09/17/2014
Number of Days to Update: 24	Next Scheduled EDR Contact: 12/29/2014
	Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report

Underground storage tank sites located in Yolo county.

Date of Government Version: 06/30/2014	Source: Yolo County Department of Health
Date Data Arrived at EDR: 07/07/2014	Telephone: 530-666-8646
Date Made Active in Reports: 08/18/2014	Last EDR Contact: 09/22/2014
Number of Days to Update: 42	Next Scheduled EDR Contact: 01/05/2015
	Data Release Frequency: Annually

YUBA COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility List

CUPA facility listing for Yuba County.

Date of Government Version: 08/05/2014
Date Data Arrived at EDR: 08/07/2014
Date Made Active in Reports: 10/06/2014
Number of Days to Update: 60

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 07/31/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/19/2014
Next Scheduled EDR Contact: 12/01/2014
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2011
Date Data Arrived at EDR: 07/19/2012
Date Made Active in Reports: 08/28/2012
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/10/2014
Next Scheduled EDR Contact: 01/26/2015
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 08/01/2014
Date Data Arrived at EDR: 08/07/2014
Date Made Active in Reports: 10/17/2014
Number of Days to Update: 71

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/07/2014
Next Scheduled EDR Contact: 11/17/2014
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/21/2014
Date Made Active in Reports: 08/25/2014
Number of Days to Update: 35

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/20/2014
Next Scheduled EDR Contact: 02/02/2015
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 07/15/2014
Date Made Active in Reports: 08/13/2014
Number of Days to Update: 29

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/26/2014
Next Scheduled EDR Contact: 12/08/2014
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2013

Date Data Arrived at EDR: 06/20/2014

Date Made Active in Reports: 08/07/2014

Number of Days to Update: 48

Source: Department of Natural Resources

Telephone: N/A

Last EDR Contact: 09/15/2014

Next Scheduled EDR Contact: 12/29/2014

Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities

Source: Department of Social Services

Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SANTA PAULA WEST
15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA 93060

TARGET PROPERTY COORDINATES

Latitude (North):	34.3333 - 34° 19' 59.88"
Longitude (West):	119.0919 - 119° 5' 30.84"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	307555.3
UTM Y (Meters):	3800899.0
Elevation:	233 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34119-C1 SANTA PAULA, CA
Most Recent Revision:	1967

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

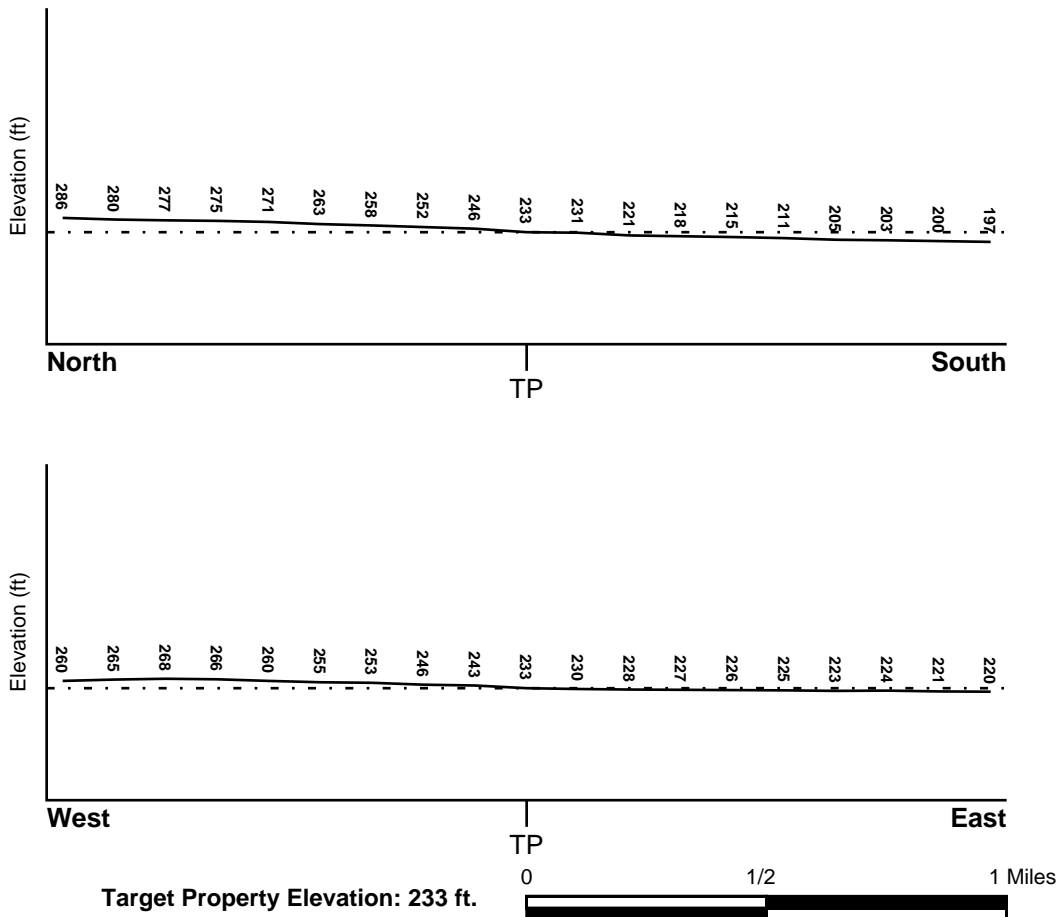
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u> VENTURA, CA	FEMA Flood <u>Electronic Data</u> YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property:	06111C - FEMA DFIRM Flood data
Additional Panels in search area:	Not Reported

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> SANTA PAULA	NWI Electronic <u>Data Coverage</u> YES - refer to the Overview Map and Detail Map
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HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

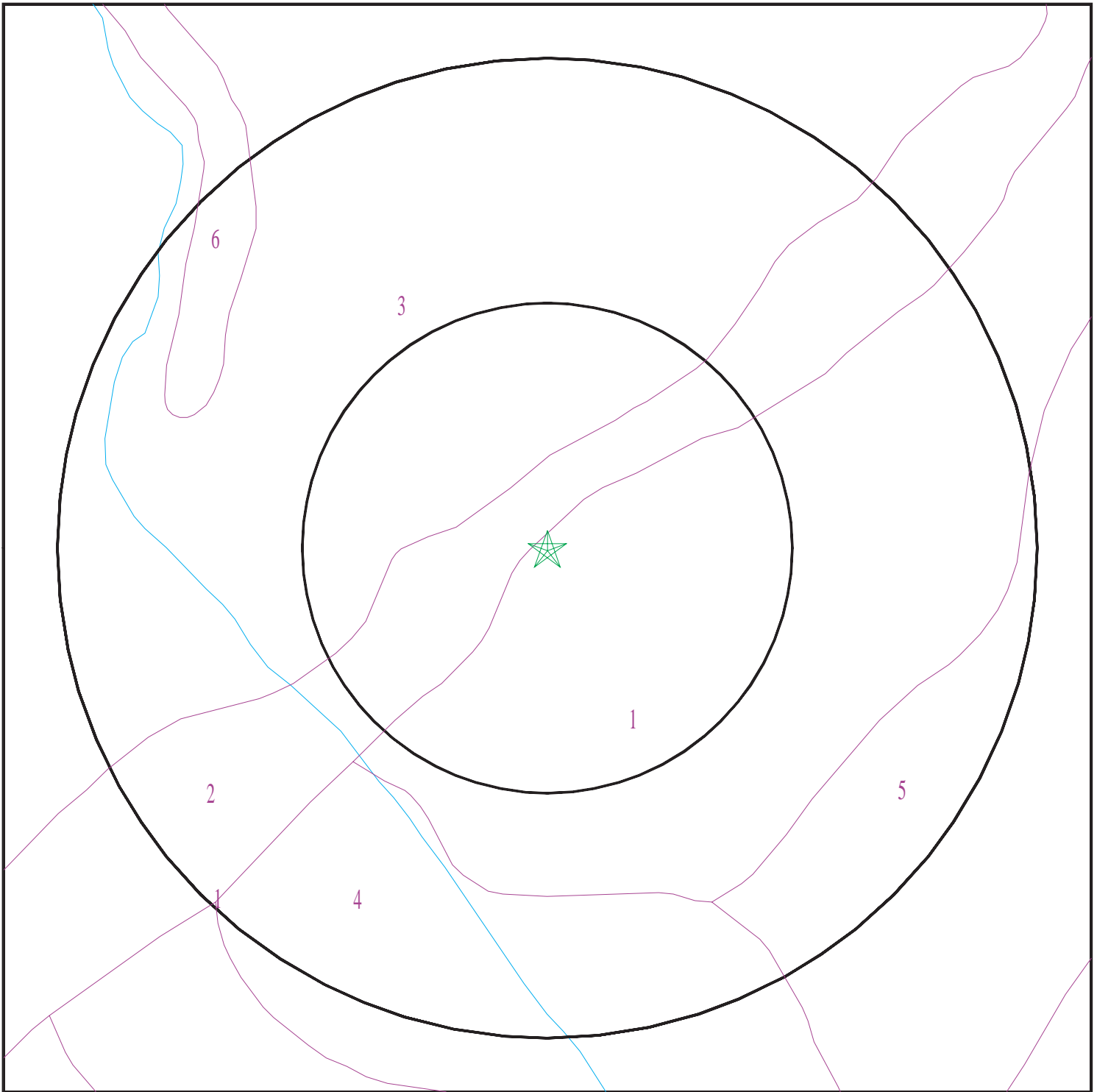
Era: Cenozoic
System: Quaternary
Series: Quaternary
Code: Q (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4114777.2s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Santa Paula West
ADDRESS: 15320 West Telegraph Road
Santa Paula CA 93060
LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
CONTACT: Bryn Home
INQUIRY #: 4114777.2s
DATE: October 24, 2014 12:29 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: MOCHO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: MOCHO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: MOCHO

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 4

Soil Component Name: MOCHO

Soil Surface Texture: gravelly loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	16 inches	59 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: PICO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	14 inches	53 inches	stratified sandy loam to loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
3	53 inches	59 inches	stratified gravelly sand to gravelly loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

Soil Map ID: 6

Soil Component Name: GULLIED LAND

Soil Surface Texture: variable

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	59 inches	variable	Not reported	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A3	USGS40000142946	1/2 - 1 Mile SSW
A4	USGS40000142947	1/2 - 1 Mile SSW
B5	USGS40000142967	1/2 - 1 Mile NE
B6	USGS40000142968	1/2 - 1 Mile NE
9	USGS40000142972	1/2 - 1 Mile NW
C10	USGS40000142975	1/2 - 1 Mile NNE
D15	USGS40000142983	1/2 - 1 Mile NE
D16	USGS40000142982	1/2 - 1 Mile NE
D17	USGS40000142985	1/2 - 1 Mile NE
D18	USGS40000142984	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CADW500000005572	1/4 - 1/2 Mile ESE
2	CADW500000005562	1/4 - 1/2 Mile South
B7	CADW500000005581	1/2 - 1 Mile NE
B8	CADW500000005580	1/2 - 1 Mile NE
11	CADW500000005578	1/2 - 1 Mile WNW
12	CADW500000005587	1/2 - 1 Mile NNW
C13	3427	1/2 - 1 Mile NNE
14	CADW500000005554	1/2 - 1 Mile SSW
D19	CADW500000005589	1/2 - 1 Mile NE
D20	CADW500000005588	1/2 - 1 Mile NE
D21	CADW500000005591	1/2 - 1 Mile NE
D22	CADW500000005590	1/2 - 1 Mile NE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

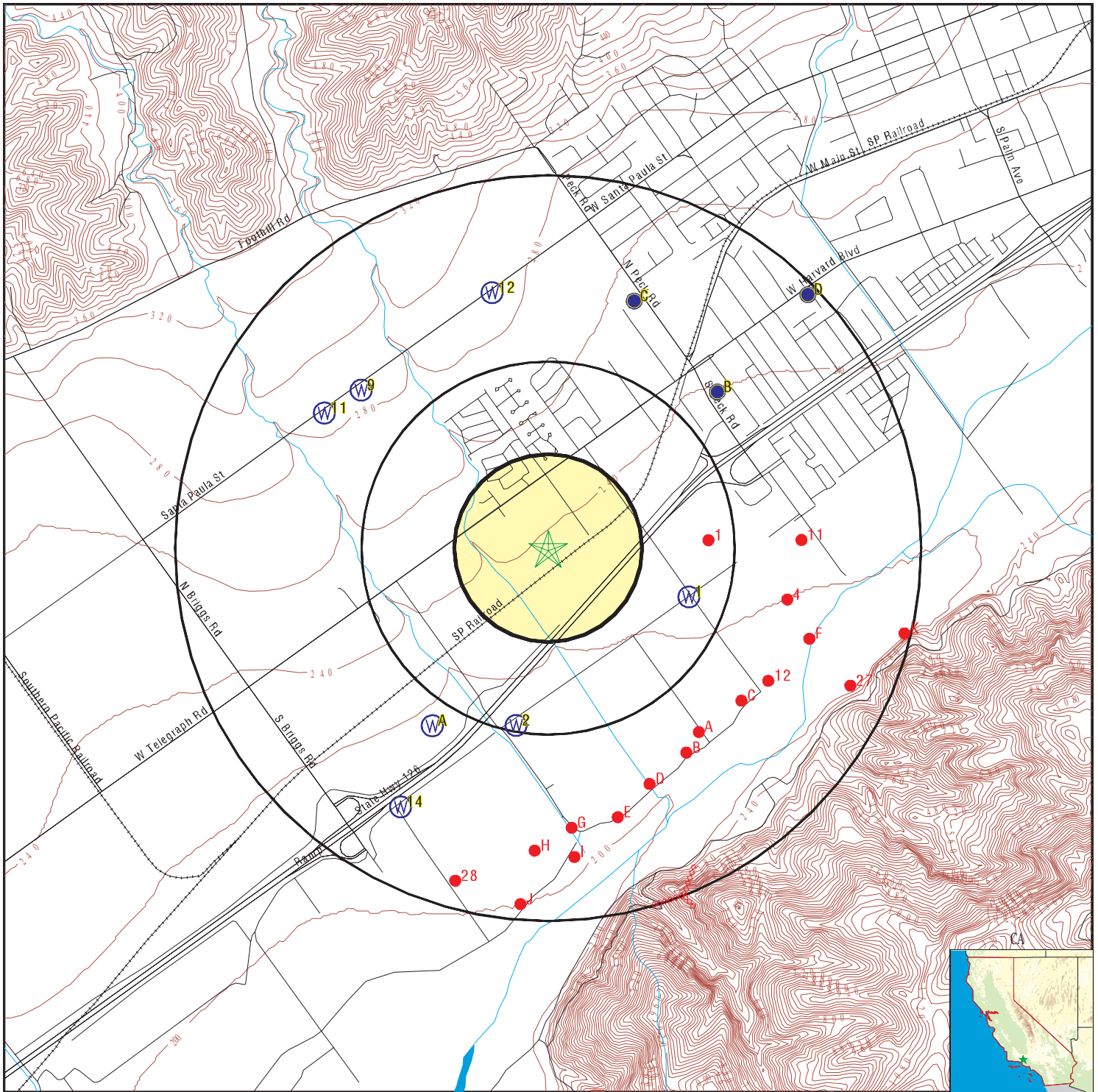
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CAOG9A000038495	1/4 - 1/2 Mile East

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

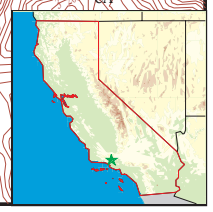
MAP ID	WELL ID	LOCATION FROM TP
A2	CAOG9A000038148	1/2 - 1 Mile SE
A3	CAOG9A000038109	1/2 - 1 Mile SE
4	CAOG9A000038377	1/2 - 1 Mile ESE
B5	CAOG9A000038088	1/2 - 1 Mile SSE
C6	CAOG9A000038173	1/2 - 1 Mile SE
C7	CAOG9A000038185	1/2 - 1 Mile SE
D8	CAOG9A000038056	1/2 - 1 Mile SSE
C9	CAOG9A000038204	1/2 - 1 Mile SE
B10	CAOG9A000038092	1/2 - 1 Mile SE
11	CAOG9A000038496	1/2 - 1 Mile East
12	CAOG9A000038230	1/2 - 1 Mile ESE
D13	CAOG9A000037963	1/2 - 1 Mile SSE
E14	CAOG9A000037894	1/2 - 1 Mile SSE
F15	CAOG9A000038282	1/2 - 1 Mile ESE
E16	CAOG9A000037870	1/2 - 1 Mile SSE
E17	CAOG9A000037871	1/2 - 1 Mile SSE
F18	CAOG9A000038324	1/2 - 1 Mile ESE
G19	CAOG9A000037769	1/2 - 1 Mile South
G20	CAOG9A000037764	1/2 - 1 Mile South
E21	CAOG9A000037775	1/2 - 1 Mile South
H22	CAOG9A000037570	1/2 - 1 Mile South
H23	CAOG9A000037557	1/2 - 1 Mile South
H24	CAOG9A000037522	1/2 - 1 Mile South
I25	CAOG9A000037492	1/2 - 1 Mile South
I26	CAOG9A000037469	1/2 - 1 Mile South
27	CAOG9A000038218	1/2 - 1 Mile ESE
28	CAOG9A000037247	1/2 - 1 Mile SSW
J29	CAOG9A000037122	1/2 - 1 Mile South
K30	CAOG9A000038300	1/2 - 1 Mile ESE
J31	CAOG9A000036943	1/2 - 1 Mile South
K32	CAOG9A000038315	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 4114777.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:29 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1			
ESE		CA WELLS	CADW50000005572
1/4 - 1/2 Mile			
Lower			
Latitude :	34.3314		
Longitude :	119.0853		
Site code:	343314N1190853W001	Casgem sta:	03N21W21B001S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005572

2			
South		CA WELLS	CADW50000005562
1/4 - 1/2 Mile			
Lower			
Latitude :	34.3264		
Longitude :	119.0934		
Site code:	343264N1190934W001	Casgem sta:	03N21W21E001S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005562

A3			
SSW		FED USGS	USGS40000142946
1/2 - 1 Mile			
Lower			
Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341935119054701		
Monloc name:	003N021W21E004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3263894
Longitude:	-119.0973274	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Aquifer type:	Not Reported	Welldepth:	102
Construction date:	Not Reported	Wellholedepth:	102
Welldepth units:	ft		
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A4
SSW
1/2 - 1 Mile
Lower

FED USGS USGS40000142947

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-341935119054702		
Monloc name:	003N021W21E003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3263894
Longitude:	-119.0973274	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	100
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B5
NE
1/2 - 1 Mile
Higher

FED USGS USGS40000142967

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342020119045801		
Monloc name:	003N021W16K002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3388888
Longitude:	-119.0837158	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Aquifer type:	Not Reported	Welldepth:	243
Construction date:	Not Reported	Wellholeddepth:	243
Welldepth units:	ft		
Wellholeddepth units:	ft		

Ground-water levels, Number of Measurements: 0

**B6
NE
1/2 - 1 Mile
Higher**

FED USGS USGS40000142968

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342020119050101		
Monloc name:	003N021W16K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.339722
Longitude:	-119.0845492	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	232
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	216
Welldepth units:	ft	Wellholeddepth:	216
Wellholeddepth units:	ft		

Ground-water levels, Number of Measurements: 0

**B7
NE
1/2 - 1 Mile
Higher**

CA WELLS CADW50000005581

Latitude :	34.3397		
Longitude :	119.0845		
Site code:	343397N1190845W001	Casgem sta:	03N21W16K001S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005581

**B8
NE
1/2 - 1 Mile
Higher**

CA WELLS CADW50000005580

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Latitude :	34.3392		
Longitude :	119.0831		
Site code:	343392N1190831W001	Casgem sta:	03N21W16K002S
Local well:	Not Reported	Casgem s 1:	Unknown
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005580

**9
NW
1/2 - 1 Mile
Higher**

FED USGS USGS40000142972

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342022119055901		
Monloc name:	003N021W16K003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3394443
Longitude:	-119.1006609	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	238.0
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	196208	Welldepth:	760
Welldepth units:	ft	Wellholedepth:	795
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

**C10
NNE
1/2 - 1 Mile
Higher**

FED USGS USGS40000142975

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342033119051301		
Monloc name:	003N021W16G001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3424997
Longitude:	-119.0878827	Sourcemap scale:	24000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	366
Welldepth units:	ft	Wellholedepth:	366
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

**11
WNW
1/2 - 1 Mile
Higher**

CA WELLS CADW50000005578

Latitude :	34.338553		
Longitude :	119.102388		
Site code:	343386N1191023W001	Casgem sta:	03N21W17Q001S
Local well:	03N21W17Q01S	Casgem s 1:	Irrigation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005578

**12
NNW
1/2 - 1 Mile
Higher**

CA WELLS CADW50000005587

Latitude :	34.343233		
Longitude :	119.094526		
Site code:	343432N1190945W001	Casgem sta:	03N21W16E002S
Local well:	03N21W16E02S	Casgem s 1:	Irrigation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005587

**C13
NNE
1/2 - 1 Mile
Higher**

CA WELLS 3427

Water System Information:

Prime Station Code:	03N/21W-16G01 S	User ID:	TAP
FRDS Number:	5610011008	County:	Ventura
District Number:	06	Station Type:	WELL/AMBNT/MUN/INTAKE
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	342036.9 1190513.0	Precision:	1,000 Feet (10 Seconds)
Source Name:	WELL 06 (1953) - INACTIVE		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number: 5610011
 System Name: City of Santa Paula
 Organization That Operates System:
 117 N. 10TH ST.
 SANTA PAULA, CA 93061
 Pop Served: 28310
 Area Served: SANTA PAULA VIC
 Connections: 6854

**14
SSW
1/2 - 1 Mile
Lower**

CA WELLS CADW50000005554

Latitude :	34.323236	Casgem sta:	03N21W20J003S
Longitude :	119.098813	Casgem s 1:	Residential
Site code:	343232N1190988W001	Basin desc:	Santa Paula
Local well:	03N21W20J03S	Site id:	CADW50000005554
County id:	56		
Basin cd:	4-4.04		
Org unit n:	Southern Region Office		

**D15
NE
1/2 - 1 Mile
Higher**

FED USGS USGS40000142983

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342035119044402		
Monloc name:	003N021W16H006S		
Monloc type:	Well		
Monloc desc:	SP2@310		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3430552
Longitude:	-119.0798268	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	240.0
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19940502	Welldepth:	310
Welldepth units:	ft	Wellholedepth:	600
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 6

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-09-05	54.15		1995-10-12	49.65	
1995-04-05	34.20		1994-08-22	50.81	
1994-08-04	50.49		1994-06-15	46.52	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

D16
NE
1/2 - 1 Mile
Higher

FED USGS USGS40000142982

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342035119044401		
Monloc name:	003N021W16H005S		
Monloc type:	Well		
Monloc desc:	SP2@550		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3430552
Longitude:	-119.0798268	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	240.0
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19940502	Welldepth:	550
Welldepth units:	ft	Wellholedepth:	600
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 6

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-09-05	55.43		1995-10-12	50.58	
1995-04-05	34.61		1994-08-22	50.69	
1994-08-04	50.26		1994-06-15	46.25	

D17
NE
1/2 - 1 Mile
Higher

FED USGS USGS40000142985

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342035119044404		
Monloc name:	003N021W16H008S		
Monloc type:	Well		
Monloc desc:	SP2@70		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3430552
Longitude:	-119.0798268	Sourcemap scale:	24000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	240.0
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19940502	Welldepth:	70
Welldepth units:	ft	Wellholedepth:	600
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 6

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
-----			-----		
1996-09-05	40.69		1995-10-12	37.27	
1995-04-05	27.91		1994-08-22	39.16	
1994-08-04	38.46		1994-06-15	36.01	

**D18
NE
1/2 - 1 Mile
Higher**

FED USGS USGS40000142984

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-342035119044403		
Monloc name:	003N021W16H007S		
Monloc type:	Well		
Monloc desc:	SP2@170		
Huc code:	18070102	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	34.3430552
Longitude:	-119.0798268	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	240.0
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19940502	Welldepth:	170
Welldepth units:	ft	Wellholedepth:	600
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 6

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
-----			-----		
1996-09-05	53.09		1995-10-12	49.85	
1995-04-05	33.64		1994-08-22	50.38	
1994-08-04	50.07		1994-06-15	46.24	

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

D19
NE
1/2 - 1 Mile
Higher

CA WELLS CADW50000005589

Latitude :	34.343267		
Longitude :	119.07962		
Site code:	343431N1190798W004	Casgem sta:	03N21W16H008S
Local well:	03N21W16H08S	Casgem s 1:	Observation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005589

D20
NE
1/2 - 1 Mile
Higher

CA WELLS CADW50000005588

Latitude :	34.343267		
Longitude :	119.07962		
Site code:	343431N1190798W002	Casgem sta:	03N21W16H006S
Local well:	03N21W16H06S	Casgem s 1:	Observation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005588

D21
NE
1/2 - 1 Mile
Higher

CA WELLS CADW50000005591

Latitude :	34.343267		
Longitude :	119.07962		
Site code:	343431N1190798W003	Casgem sta:	03N21W16H007S
Local well:	03N21W16H07S	Casgem s 1:	Observation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005591

D22
NE
1/2 - 1 Mile
Higher

CA WELLS CADW50000005590

Latitude :	34.343267		
Longitude :	119.07962		
Site code:	343431N1190798W001	Casgem sta:	03N21W16H005S
Local well:	03N21W16H05S	Casgem s 1:	Observation
County id:	56		
Basin cd:	4-4.04	Basin desc:	Santa Paula
Org unit n:	Southern Region Office	Site id:	CADW50000005590

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1

East
1/4 - 1/2 Mile

OIL_GAS CAOG9A000038495

Districtnu:	2	Apinumber:	11105911
Blmwell:	N	Redrillcan:	No
Dryhole:	Y	Wellstatus:	P
Operatorna:	Shell Western Exploration & Production Inc.		
Countyname:	Ventura	Fieldname:	Any Field
Areaname:	Any Area		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.333607		
Glong:	-119.084385		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S. (North)	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038495

A2

SE
1/2 - 1 Mile

OIL_GAS CAOG9A000038148

Districtnu:	2	Apinumber:	11102568
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.326544		
Glong:	-119.084544		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	45
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038148

A3

SE
1/2 - 1 Mile

OIL_GAS CAOG9A000038109

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102551
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.325746		
Glong:	-119.085127		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	26
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038109

**4
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038377

Districtnu:	2	Apinumber:	11102565
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.331301		
Glong:	-119.080686		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	42
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038377

**B5
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038088

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102570
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.32528		
Glong:	-119.085727		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	47
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038088

**C6
SE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038173

Districtnu:	2	Apinumber:	11102564
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.327122		
Glong:	-119.083147		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	41
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038173

**C7
SE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038185

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102574
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.327374		
Glong:	-119.082817		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	51
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038185

**D8
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038056

Districtnu:	2	Apinumber:	11102528
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.324584		
Glong:	-119.087006		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	20
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038056

**C9
SE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038204

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102566
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.327605		
Glong:	-119.082552		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	43
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038204

B10
SE
1/2 - 1 Mile

OIL_GAS CAOG9A000038092

Districtnu:	2	Apinumber:	11102573
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	I
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.325416		
Glong:	-119.085113		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	50
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038092

11
East
1/2 - 1 Mile

OIL_GAS CAOG9A000038496

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11105909
Blmwell:	N	Redrillcan:	No
Dryhole:	Y	Wellstatus:	P
Operatorna:	Oak Ridge Oil Co.	Fieldname:	Any Field
Countyname:	Ventura	Range:	21W
Areaname:	Any Area	Elevation:	Not Reported
Section:	21		
Township:	03N		
Basemeridi:	SB		
Locationde:	Not Reported		
Glat:	34.333617		
Glong:	-119.080028		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Saticoy	Wellnumber:	2
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038496

**12
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038230

Districtnu:	2	Apinumber:	11102563
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	I
Operatorna:	Vintage Production California LLC	Fieldname:	Saticoy
Countyname:	Ventura	Range:	21W
Areaname:	Main	Elevation:	Not Reported
Section:	21		
Township:	03N		
Basemeridi:	SB		
Locationde:	Not Reported		
Glat:	34.328137		
Glong:	-119.081583		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	40
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038230

**D13
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000037963

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102572
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.323673		
Glong:	-119.087288		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	49
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037963

**E14
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000037894

Districtnu:	2	Apinumber:	11102550
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.323082		
Glong:	-119.088234		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	25
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037894

**F15
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038282

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102560
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.329264		
Glong:	-119.079917		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	37
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038282

**E16
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000037870

Districtnu:	2	Apinumber:	11102579
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.322893		
Glong:	-119.088625		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	56
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037870

**E17
SSE
1/2 - 1 Mile**

OIL_GAS CAOG9A000037871

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102562
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.322909		
Glong:	-119.088372		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	39
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037871

**F18
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038324

Districtnu:	2	Apinumber:	11102559
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Any Area		
Section:	22		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.330283		
Glong:	-119.079394		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	36
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038324

**G19
South
1/2 - 1 Mile**

OIL_GAS CAOG9A000037769

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102582
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.322433		
Glong:	-119.091149		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Santa Paula & Saticoy	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037769

G20
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037764

Districtnu:	2	Apinumber:	11102541
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.322411		
Glong:	-119.090445		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	15
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037764

E21
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037775

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102576
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	I
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.322449		
Glong:	-119.089323		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	53
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037775

H22
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037570

Districtnu:	2	Apinumber:	11102578
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.321627		
Glong:	-119.092442		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	55
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037570

H23
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037557

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102558
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.321548		
Glong:	-119.092549		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	34
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037557

H24
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037522

Districtnu:	2	Apinumber:	11102553
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	I
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.321422		
Glong:	-119.092617		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	28
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037522

I25
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037492

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102577
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.321327		
Glong:	-119.090597		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	54
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037492

I26
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037469

Districtnu:	2	Apinumber:	11102575
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	I
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.321245		
Glong:	-119.090748		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	52
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037469

27
ESE
1/2 - 1 Mile

OIL_GAS CAOG9A000038218

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102571
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	22		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.32795		
Glong:	-119.077734		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	48
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038218

28
SSW
1/2 - 1 Mile

OIL_GAS CAOG9A000037247

Districtnu:	2	Apinumber:	11102580
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.320364		
Glong:	-119.096257		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	57
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037247

J29
South
1/2 - 1 Mile

OIL_GAS CAOG9A000037122

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102561
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.319858		
Glong:	-119.092742		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	38
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	19-JAN-60
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000037122

**K30
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038300

Districtnu:	2	Apinumber:	11103303
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Sage-California		
Countyname:	Ventura	Fieldname:	South Mountain
Areaname:	Bridge		
Section:	22		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.329831		
Glong:	-119.075483		
Gissourcec:	hud		
Comments:	Not Reported		
Leasename:	Saticoy	Wellnumber:	19
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038300

**J31
South
1/2 - 1 Mile**

OIL_GAS CAOG9A000036943

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Districtnu:	2	Apinumber:	11102536
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	A
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	Saticoy
Areaname:	Main		
Section:	21		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.319044		
Glong:	-119.093658		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	S.P.S.	Wellnumber:	9
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	30-DEC-99
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000036943

**K32
ESE
1/2 - 1 Mile**

OIL_GAS CAOG9A000038315

Districtnu:	2	Apinumber:	11103308
Blmwell:	N	Redrillcan:	No
Dryhole:	N	Wellstatus:	P
Operatorna:	Vintage Production California LLC		
Countyname:	Ventura	Fieldname:	South Mountain
Areaname:	Any Area		
Section:	22		
Township:	03N	Range:	21W
Basemeridi:	SB	Elevation:	Not Reported
Locationde:	Not Reported		
Glat:	34.330135		
Glong:	-119.07491		
Gissourcec:	gps		
Comments:	Not Reported		
Leasename:	Saticoy	Wellnumber:	23
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	13-OCT-60
Welldeptha:	Not Reported	Redrillfoo:	Not Reported
Abandonedd:	//	Completion:	//
Gissymbol:	Not Reported	Site id:	CAOG9A000038315

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93060	63	2

Federal EPA Radon Zone for VENTURA County: 1

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 93060

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.820 pCi/L	100%	0%	0%
Living Area - 2nd Floor	1.200 pCi/L	100%	0%	0%
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Santa Paula West

15320 West Telegraph Road
Santa Paula, CA 93060

Inquiry Number: 4114777.2s
October 24, 2014

EDR Summary Radius Map Report

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Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA 93060

COORDINATES

Latitude (North):	34.3333000 - 34° 19' 59.88"
Longitude (West):	119.0919000 - 119° 5' 30.84"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	307555.3
UTM Y (Meters):	3800899.0
Elevation:	233 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:	TP
Source:	USGS 7.5 min quad index

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20120506
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
 15320 WEST TELEGRAPH ROAD
 SANTA PAULA, CA 93060

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft.) DIRECTION
A1	BANNON RANCH	15320 TELEGRAPH RD	HAZNET		TP
A2	BANNON RANCH	15320 W TELEGRAPH RD	RGA LUST		TP
A3	BANNON RANCH	15320 W TELEGRAPH RD	LUST		TP
A4	BANNON RANCH	15320 W TELEGRAPH RD	SLIC, HIST UST		TP
A5	BANNON RANCH	15320 TELEGRAPH RD	UST		TP
6	TWYFORD PLANT LAB.,	15245 TELEGRAPH RD.	RCRA-SQG, FINDS	Higher	21, WNW
B7	ARGO PETROLEUM	411 S BECKWITH RD	HIST UST	Higher	26, North
B8	WEST SIDE INVESTMENT	411 BECKWITH RD S	HIST CORTESE, LUST, VENTURA CO. BWT	Higher	26, North
B9	WESTSIDE INVESTMENTS	411 BECKWITH ROAD	UST	Higher	26, North
B10	HELIPOWER SVC	15500 TELEGRAPH RD C	RCRA-SQG, FINDS, VENTURA CO. BWT, HAZNET	Higher	35, North
C11	WEATHERFORD ETERA (F	401 BECKWITH	SLIC	Higher	56, NNE
C12	OILFIELD RENTAL TOOL	401 BECKWITH ROAD	UST	Higher	56, NNE
C13	WEATHERFORD ETERA (F	401 S. BECKWITH RD	SLIC, VENTURA CO. BWT	Higher	56, NNE
C14	OIL FIELD RENTALS SA	401 S BECKWITH RD	RCRA NonGen / NLR, HAZNET	Higher	56, NNE
D15		957 FAULKNER RD	EDR US Hist Auto Stat	Lower	409, ENE
D16	CQ OF SANTA PAULA CA	957 FAULKNER RD	RCRA-SQG, HAZNET	Lower	409, ENE
D17	JUNIOR RECYCLING CEN	957 FAULKNER RD	SWRCY	Lower	409, ENE
18	BALDEN RANCH CO. INC	265 BECKWITH ROAD	UST	Higher	536, NNW
19	JAMES LOCKSHAW & TOL	112 TODD ROAD	UST	Higher	702, NNE
20	RANCHO RODORO	15740 W TELEGRAPH RD	HIST UST	Higher	1083, NNE
E21	GALBRAITH RANCHES	14915 W TELEGRAPH RD	HIST UST	Higher	1209, WSW
E22	ORANGE GROVE	14914 W TELEGRAPH RD	HIST UST	Higher	1210, WSW
23	K-MART	150 LINDSAY LANE	UST	Higher	1274, NE
F24	TOSCO #5238 (CIRCLE	765 HARVARD BLVD W	LUST	Higher	2406, NE
F25	TOSCO #5238 (CIRCLE	765 HARVARD BLVD W	LUST	Higher	2406, NE
F26	CIRCLE K	765 HARVARD	HIST CORTESE	Higher	2477, NE
F27	GARRY COLLETT	741 HARVARD BLVD	LUST, UST	Higher	2533, NE
28	SATICOY LEMON ASSOCI	103 NORTH PECK ROAD	LUST, EMI	Higher	2562, NNE
G29	SANTA PAULA RANCH	15442 SANTA PAULA ST	LUST, HIST UST	Higher	2577, NW
G30	J. M. SHARP COMPANY	15442 SANTA PAULA ST	LUST	Higher	2577, NW
G31	SANTA PAULA RANCH	15442 SANTA PAULA ST	HIST CORTESE, LUST	Higher	2577, NW
G32	J.M. SHARP COMPANY	15442 SANTA PAULA ST	LUST	Higher	2577, NW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

<u>Site</u>	<u>Database(s)</u>	<u>EPA ID</u>
BANNON RANCH 15320 TELEGRAPH RD SANTA PAULA, CA 93060	HAZNET	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA	RGA LUST	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA	LUST	N/A
BANNON RANCH 15320 W TELEGRAPH RD SANTA PAULA, CA 93060	SLIC Facility Status: Completed - Case Closed HIST UST	N/A
BANNON RANCH 15320 TELEGRAPH RD SANTA PAULA, CA	UST	N/A

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-SQG: A review of the RCRA-SQG list, as provided by EDR, and dated 06/10/2014 has revealed that

EXECUTIVE SUMMARY

there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
TWYFORD PLANT LAB., HELIPOWER SVC	15245 TELEGRAPH RD. 15500 TELEGRAPH RD C	WNW 0 - 1/8 (0.004 mi.) N 0 - 1/8 (0.007 mi.)	6 B10	9 9
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
CQ OF SANTA PAULA CA	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D16	11

State and tribal leaking storage tank lists

LUST: A review of the LUST list, as provided by EDR, and dated 07/30/2014 has revealed that there are 9 LUST sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WEST SIDE INVESTMENT Status: Completed - Case Closed	411 BECKWITH RD S	N 0 - 1/8 (0.005 mi.)	B8	9
TOSCO #5238 (CIRCLE	765 HARVARD BLVD W	NE 1/4 - 1/2 (0.456 mi.)	F24	12
TOSCO #5238 (CIRCLE Status: Completed - Case Closed	765 HARVARD BLVD W	NE 1/4 - 1/2 (0.456 mi.)	F25	13
GARRY COLLETT Status: Completed - Case Closed	741 HARVARD BLVD	NE 1/4 - 1/2 (0.480 mi.)	F27	13
SATICOY LEMON ASSOCI Status: Completed - Case Closed	103 NORTH PECK ROAD	NNE 1/4 - 1/2 (0.485 mi.)	28	13
SANTA PAULA RANCH J. M. SHARP COMPANY	15442 SANTA PAULA ST 15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.) NW 1/4 - 1/2 (0.488 mi.)	G29 G30	14 14
SANTA PAULA RANCH Status: Completed - Case Closed	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G31	14
J.M. SHARP COMPANY	15442 SANTA PAULA ST	NW 1/4 - 1/2 (0.488 mi.)	G32	14

SLIC: A review of the SLIC list, as provided by EDR, and dated 09/15/2014 has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WEATHERFORD ETERA (F	401 BECKWITH	NNE 0 - 1/8 (0.011 mi.)	C11	10
WEATHERFORD ETERA (F Facility Status: Completed - Case Closed	401 S. BECKWITH RD	NNE 0 - 1/8 (0.011 mi.)	C13	10

State and tribal registered storage tank lists

UST: A review of the UST list, as provided by EDR, and dated 07/30/2014 has revealed that there are 5 UST sites within approximately 0.25 miles of the target property.

EXECUTIVE SUMMARY

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
WESTSIDE INVESTMENTS	411 BECKWITH ROAD	N 0 - 1/8 (0.005 mi.)	B9	9
OILFIELD RENTAL TOOL	401 BECKWITH ROAD	NNE 0 - 1/8 (0.011 mi.)	C12	10
BALDEN RANCH CO. INC	265 BECKWITH ROAD	NNW 0 - 1/8 (0.102 mi.)	18	11
JAMES LOCKSHAW & TOL	112 TODD ROAD	NNE 1/8 - 1/4 (0.133 mi.)	19	11
K-MART	150 LINDSAY LANE	NE 1/8 - 1/4 (0.241 mi.)	23	12

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A review of the SWRCY list, as provided by EDR, and dated 09/16/2014 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
JUNIOR RECYCLING CEN	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D17	11

Local Lists of Registered Storage Tanks

HIST UST: A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 4 HIST UST sites within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
ARGO PETROLEUM	411 S BECKWITH RD	N 0 - 1/8 (0.005 mi.)	B7	9
RANCHO RODORO	15740 W TELEGRAPH RD	NNE 1/8 - 1/4 (0.205 mi.)	20	12
GALBRAITH RANCHES	14915 W TELEGRAPH RD	WSW 1/8 - 1/4 (0.229 mi.)	E21	12
ORANGE GROVE	14914 W TELEGRAPH RD	WSW 1/8 - 1/4 (0.229 mi.)	E22	12

Other Ascertainable Records

RCRA NonGen / NLR: A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 06/10/2014 has revealed that there is 1 RCRA NonGen / NLR site within approximately 0.25 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>OIL FIELD RENTALS SA</i>	<i>401 S BECKWITH RD</i>	<i>NNE 0 - 1/8 (0.011 mi.)</i>	<i>C14</i>	<i>10</i>

EXECUTIVE SUMMARY

HIST CORTESE: A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 3 HIST CORTESE sites within approximately 0.5 miles of the target property.

<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
<i>WEST SIDE INVESTMENT</i>	<i>411 BECKWITH RD S</i>	<i>N 0 - 1/8 (0.005 mi.)</i>	<i>B8</i>	<i>9</i>
<i>CIRCLE K</i>	<i>765 HARVARD</i>	<i>NE 1/4 - 1/2 (0.469 mi.)</i>	<i>F26</i>	<i>13</i>
<i>SANTA PAULA RANCH</i>	<i>15442 SANTA PAULA ST</i>	<i>NW 1/4 - 1/2 (0.488 mi.)</i>	<i>G31</i>	<i>14</i>

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR US Hist Auto Stat: A review of the EDR US Hist Auto Stat list, as provided by EDR, has revealed that there is 1 EDR US Hist Auto Stat site within approximately 0.25 miles of the target property.

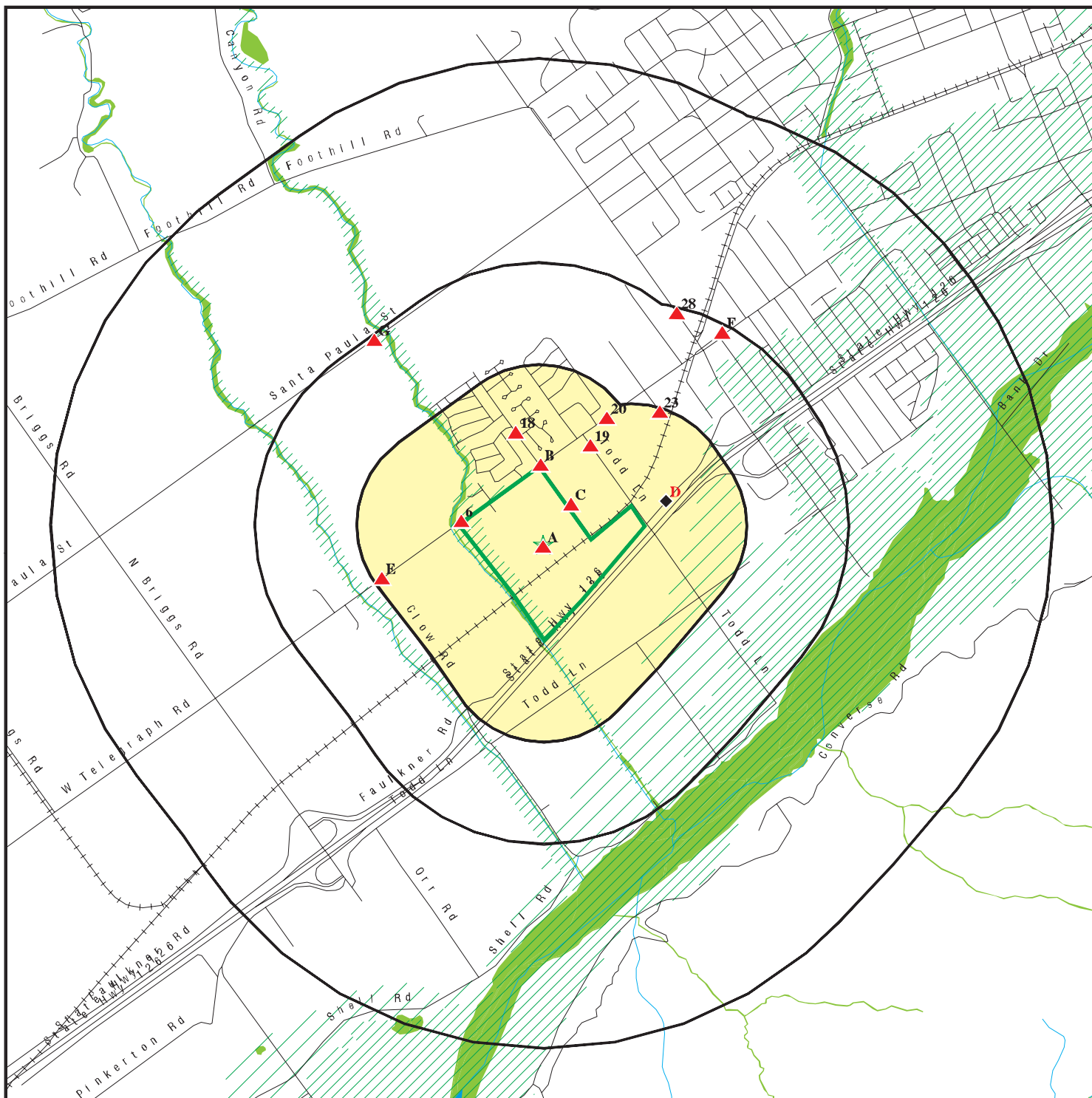
<u>Lower Elevation</u>	<u>Address</u>	<u>Direction / Distance</u>	<u>Map ID</u>	<u>Page</u>
Not reported	957 FAULKNER RD	ENE 0 - 1/8 (0.077 mi.)	D15	11

Count: 20 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
FILLMORE	S113459949	M & M FARM LABOR	EB HWY 126 MI MARKER: BR409	93060	HAZNET
OAK HILLS	S112911950	UNION PACIFIC RAILROAD	N OF HWY 138/4 MI E HWY 15 SUM	93060	HAZNET
SANTA PAULA	S112974121	CALTRANS D-7/CONSTR/EA07-1189A4	RTE 150 PM 15.5	93060	HAZNET
SANTA PAULA	S112971107	CALTRANS D-7/CONSTR/EA07-1189F4	RTE 150 PM 28.5	93060	HAZNET
SANTA PAULA	S112915913	CALTRANS DIST 7/CONSTRUCTION	@RTE 150 HWY SO.WEST CORNER	93060	HAZNET
SANTA PAULA	S117038774	THE TERMO COMPANY-SULPHUR CREST	HWY 150, 126		VENTURA CO. BWT
SANTA PAULA	1006248346	VINTAGE PETROLEUM INC	BRIDGE PLANT LEMON COUNTY ROAD	93060	FINDS, EMI
SANTA PAULA	S106571310	STAGECOACH GENERAL STORE	COR. SISAR RD & HWY 150	93060	WDS
SANTA PAULA	S106826187	ARGO PETROLEUM CORP.	FERNDALE RANCH LSE.-HWY 150	93060	EMI
SANTA PAULA	1000167000	UNOCAL SNYDER SETTING	LEMON COUNTY RD	93060	RCRA-SQG
SANTA PAULA	1006831355	SANTA PAULA CITY CLASS III	PALM ST W END OF AIRPORT RUNW	93060	FINDS
SANTA PAULA	1006248413	WEST STATES ENERGY	EAST SULPHUR MOUTAIN ROAD	93060	FINDS
SANTA PAULA	1015878134	SOUTHERN CALIFORNIA GAS COMPANY -	1691 FT SW OF INTERSECTION SOU	93060	FINDS
SANTA PAULA	1015740087	SOUTHERN CALIFORNIA GAS COMPANY -	1691 FT SW OF INTERSECTION SOU	93060	RCRA NonGen / NLR
SANTA PAULA	S113473619	M & M FARM LABOR INC	14495 TODD LN		VENTURA CO. BWT
SANTA PAULA	1011989298	SANTA PAULA	UNKNOWN	00000	FINDS
SOMIS	S112967572	MESA UNION SCHOOL DISTRICT	HWY 118 PM 7.0	93066	HAZNET
SOMIS	S112949626	VANPAK INC	HWY 18 AT PRICE RD	93066	HAZNET
VENTURA	1003879437	SOMIS ARROYO DISPOSAL SITE	COYOTE CANYON & ARROYO LAS POS	93066	CERC-NFRAP
VENTURA COUNTY	S107538751		HIGHWAY 33 IN MIRA MONTE		CDL

OVERVIEW MAP - 4114777.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Oil & Gas pipelines from USGS

100-year flood zone

500-year flood zone

National Wetland Inventory

Areas of Concern

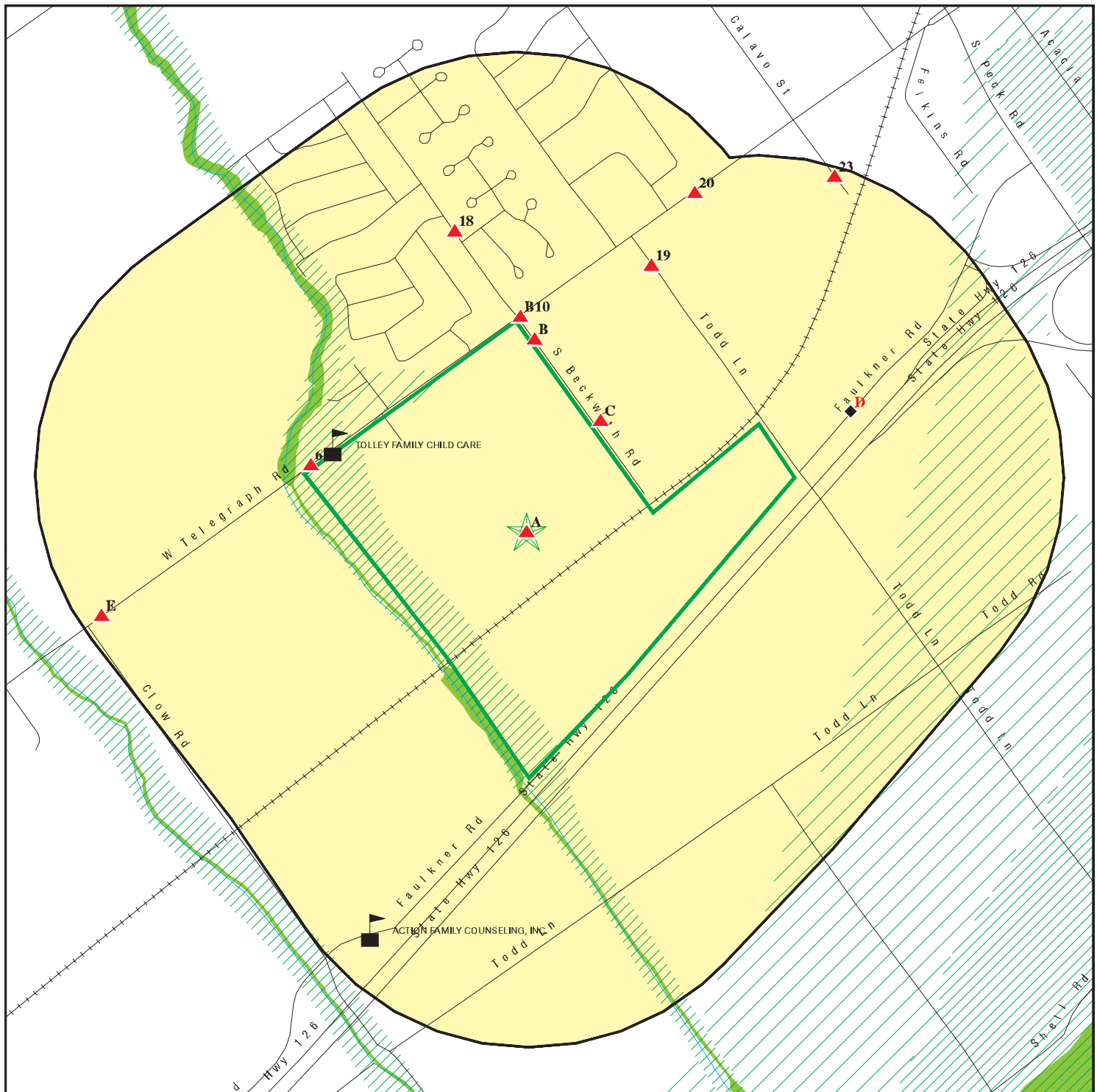















This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

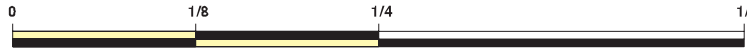
SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:27 pm

DETAIL MAP - 4114777.2S



-  Target Property
-  Sites at elevations higher than or equal to the target property
-  Sites at elevations lower than the target property
-  Manufactured Gas Plants
-  Sensitive Receptors
-  National Priority List Sites
-  Dept. Defense Sites
-  Indian Reservations BIA
-  Oil & Gas pipelines from USGS
-  100-year flood zone
-  500-year flood zone
-  National Wetland Inventory
-  Areas of Concern



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:28 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
<i>Federal NPL site list</i>								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
<i>Federal Delisted NPL site list</i>								
Delisted NPL	1.000		0	0	0	0	NR	0
<i>Federal CERCLIS list</i>								
CERCLIS	0.500		0	0	0	NR	NR	0
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
<i>Federal CERCLIS NFRAP site List</i>								
CERC-NFRAP	0.500		0	0	0	NR	NR	0
<i>Federal RCRA CORRACTS facilities list</i>								
CORRACTS	1.000		0	0	0	0	NR	0
<i>Federal RCRA non-CORRACTS TSD facilities list</i>								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
<i>Federal RCRA generators list</i>								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		3	0	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
<i>Federal institutional controls / engineering controls registries</i>								
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
LUCIS	0.500		0	0	0	NR	NR	0
<i>Federal ERNS list</i>								
ERNS	0.001		0	NR	NR	NR	NR	0
<i>State- and tribal - equivalent NPL RESPONSE</i>								
RESPONSE	1.000		0	0	0	0	NR	0
<i>State- and tribal - equivalent CERCLIS ENVIROSTOR</i>								
ENVIROSTOR	1.000		0	0	0	0	NR	0
<i>State and tribal landfill and/or solid waste disposal site lists</i>								
SWF/LF	0.500		0	0	0	NR	NR	0
<i>State and tribal leaking storage tank lists</i>								
LUST	0.500	1	1	0	8	NR	NR	10

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SLIC	0.500	1	2	0	0	NR	NR	3
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST	0.250	1	3	2	NR	NR	NR	6
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
FEMA UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
SWRCY	0.500		1	0	0	NR	NR	1
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL	0.001		0	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
US HIST CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250	1	1	3	NR	NR	NR	5
SWEEPS UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS 2	0.001		0	NR	NR	NR	NR	0
LIENS	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	0	NR	NR	NR	1
DOT OPS	0.001		0	NR	NR	NR	NR	0
DOD	1.000		0	0	0	0	NR	0
FUDS	1.000		0	0	0	0	NR	0
CONSENT	1.000		0	0	0	0	NR	0
ROD	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
Cortese	0.500		0	0	0	NR	NR	0
HIST CORTESE	0.500		1	0	2	NR	NR	3
CUPA Listings	0.250		0	0	NR	NR	NR	0
Notify 65	1.000		0	0	0	0	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
VENTURA CO. BWT	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
ENF	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001	1	0	NR	NR	NR	NR	1
EMI	0.001		0	NR	NR	NR	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
MED WASTE VENTURA	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
HWT	0.250		0	0	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	1.000		0	0	0	0	NR	0
EDR US Hist Auto Stat	0.250		1	0	NR	NR	NR	1
EDR US Hist Cleaners	0.250		0	0	NR	NR	NR	0

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001	1	0	NR	NR	NR	NR	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID Direction Distance Elevation		Database(s)	EDR ID Number EPA ID Number
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A1	BANNON RANCH	HAZNET	S112949437
Target	15320 TELEGRAPH RD		N/A
Property	SANTA PAULA, CA 93060		

Actual: [Click here for full text details](#)
233 ft.

A2	BANNON RANCH	RGA LUST	S114580139
Target	15320 W TELEGRAPH RD		N/A
Property	SANTA PAULA, CA		

Actual: [Click here for full text details](#)
233 ft.

A3	BANNON RANCH	LUST	S108245883
Target	15320 W TELEGRAPH RD		N/A
Property	SANTA PAULA, CA		

Actual: [Click here for full text details](#)
233 ft.

LUST
Facility Id: SR026
Status: Case Closed

A4	BANNON RANCH	SLIC	U001580099
Target	15320 W TELEGRAPH RD	HIST UST	N/A
Property	SANTA PAULA, CA 93060		

Actual: [Click here for full text details](#)
233 ft.

SLIC
Facility Status: Completed - Case Closed
Facility Status: Completed - Case Closed

HIST UST
Facility Id: 00000031377

A5	BANNON RANCH	UST	U004052549
Target	15320 TELEGRAPH RD		N/A
Property	SANTA PAULA, CA		

Actual: [Click here for full text details](#)
233 ft.

UST
Facility Id: D 1551

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
6 WNW < 1/8 0.004 mi. 21 ft.	TWYFORD PLANT LAB., INC. 15245 TELEGRAPH RD. SANTA PAULA, CA 93060 Click here for full text details	RCRA-SQG FINDS	1000230215 CAD982409997
Relative: Higher	RCRA-SQG EPA Id: CAD982409997		
B7 North < 1/8 0.005 mi. 26 ft.	ARGO PETROLEUM 411 S BECKWITH RD SANTA PAULA, CA 93060 Click here for full text details	HIST UST	U001580094 N/A
Relative: Higher	HIST UST Facility Id: 00000010572		
B8 North < 1/8 0.005 mi. 26 ft.	WEST SIDE INVESTMENT 411 BECKWITH RD S SANTA PAULA, CA 93060 Click here for full text details	HIST CORTESE LUST VENTURA CO. BWT	S100876783 N/A
Relative: Higher	LUST Status: Completed - Case Closed Facility Id: C-87112 Status: Case Closed VENTURA CO. BWT Facility Id: FA0006363		
B9 North < 1/8 0.005 mi. 26 ft.	WESTSIDE INVESTMENTS 411 BECKWITH ROAD SANTA PAULA, CA Click here for full text details	UST	U002243875 N/A
Relative: Higher	UST Facility Id: D 34		
B10 North < 1/8 0.007 mi. 35 ft.	HELIPower SVC 15500 TELEGRAPH RD C21 SANTA PAULA, CA 93060 Click here for full text details	RCRA-SQG FINDS VENTURA CO. BWT HAZNET	1000818865 CAD983647942
Relative: Higher	RCRA-SQG EPA Id: CAD983647942 VENTURA CO. BWT		

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
	HELIPOWER SVC (Continued) Facility Id: FA0006147		1000818865
C11 NNE < 1/8 0.011 mi. 56 ft.	WEATHERFORD ETERA (FORMER) 401 BECKWITH SANTA PAULA, CA 93060 Click here for full text details	SLIC	S105911428 N/A
Relative: Higher	SLIC Facility Status: No further action required		
C12 NNE < 1/8 0.011 mi. 56 ft.	OILFIELD RENTAL TOOLS 401 BECKWITH ROAD SANTA PAULA, CA Click here for full text details	UST	U002243874 N/A
Relative: Higher	UST Facility Id: D 33		
C13 NNE < 1/8 0.011 mi. 56 ft.	WEATHERFORD ETERA (FORMER) 401 S. BECKWITH RD SANTA PAULA, CA 93060 Click here for full text details	SLIC VENTURA CO. BWT	S110326446 N/A
Relative: Higher	SLIC Facility Status: Completed - Case Closed Facility Status: Completed - Case Closed		
	VENTURA CO. BWT Facility Id: FA0006971 Facility Id: FA0024278		
C14 NNE < 1/8 0.011 mi. 56 ft.	OIL FIELD RENTALS SANTA PAULA 401 S BECKWITH RD SANTA PAULA, CA 93060 Click here for full text details	RCRA NonGen / NLR HAZNET	1000597594 CAD983616111
Relative: Higher	RCRA NonGen / NLR EPA Id: CAD983616111		

MAP FINDINGS

Map ID	Direction	Distance	Elevation	Site	Database(s)	EDR ID Number	EPA ID Number
D15	ENE	< 1/8	0.077 mi. 409 ft.	957 FAULKNER RD SANTA PAULA, CA 93060	EDR US Hist Auto Stat	1015684008	N/A
				Click here for full text details			
Relative: Lower							
D16	ENE	< 1/8	0.077 mi. 409 ft.	CQ OF SANTA PAULA CA NO 7313 957 FAULKNER RD SANTA PAULA, CA 93060	RCRA-SQG HAZNET	1014387976	CAR000216358
				Click here for full text details			
Relative: Lower				RCRA-SQG EPA Id: CAR000216358			
D17	ENE	< 1/8	0.077 mi. 409 ft.	JUNIOR RECYCLING CENTER 957 FAULKNER RD SANTA PAULA, CA 93060	SWRCY	S108991919	N/A
				Click here for full text details			
Relative: Lower							
18	NNW	< 1/8	0.102 mi. 536 ft.	BALDEN RANCH CO. INC. 265 BECKWITH ROAD SANTA PAULA, CA	UST	U002097654	N/A
				Click here for full text details			
Relative: Higher				UST Facility Id: D 32			
19	NNE	1/8-1/4	0.133 mi. 702 ft.	JAMES LOCKSHAW & TOLO INC. 112 TODD ROAD SANTA PAULA, CA	UST	U002169474	N/A
				Click here for full text details			
Relative: Higher				UST Facility Id: D 917			

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
20 NNE 1/8-1/4 0.205 mi. 1083 ft.	RANCHO RODORO 15740 W TELEGRAPH RD SANTA PAULA, CA 93060 Click here for full text details	HIST UST	U001580240 N/A
Relative: Higher	HIST UST Facility Id: 00000015322		
E21 WSW 1/8-1/4 0.229 mi. 1209 ft.	GALBRAITH RANCHES 14915 W TELEGRAPH RD SANTA PAULA, CA 93454 Click here for full text details	HIST UST	U001585942 N/A
Relative: Higher	HIST UST Facility Id: 00000038221		
E22 WSW 1/8-1/4 0.229 mi. 1210 ft.	ORANGE GROVE 14914 W TELEGRAPH RD SANTA PAULA, CA 93060 Click here for full text details	HIST UST	U001580211 N/A
Relative: Higher	HIST UST Facility Id: 00000031285		
23 NE 1/8-1/4 0.241 mi. 1274 ft.	K-MART 150 LINDSAY LANE SANTA PAULA, CA Click here for full text details	UST	U002244044 N/A
Relative: Higher	UST Facility Id: D 281		
F24 NE 1/4-1/2 0.456 mi. 2406 ft.	TOSCO #5238 (CIRCLE K) 765 HARVARD BLVD W SANTA PAULA, CA 93060 Click here for full text details	LUST	S104530853 N/A
Relative: Higher	LUST Facility Id: C-85011 Status: Pollution Characterization		

MAP FINDINGS

Map ID			EDR ID Number
Direction			EPA ID Number
Distance		Database(s)	
Elevation	Site		

F25 NE 1/4-1/2 0.456 mi. 2406 ft.	TOSCO #5238 (CIRCLE K) 765 HARVARD BLVD W SANTA PAULA, CA 93060	LUST	S105974831 N/A
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[Click here for full text details](#)

Relative:
Higher

LUST
 Status: Completed - Case Closed
 Facility Id: 85011
 Status: Remedial action (cleanup) Underway

F26 NE 1/4-1/2 0.469 mi. 2477 ft.	CIRCLE K 765 HARVARD SANTA PAULA, CA 93060	HIST CORTESE	U002168855 N/A
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[Click here for full text details](#)

Relative:
Higher

F27 NE 1/4-1/2 0.480 mi. 2533 ft.	GARRY COLLETT 741 HARVARD BLVD SANTA PAULA, CA	LUST UST	U002243999 N/A
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[Click here for full text details](#)

Relative:
Higher

LUST
 Status: Completed - Case Closed
 Facility Id: C-89035
 Facility Id: 89035
 Status: Case Closed
 Status: Case Closed

UST
 Facility Id: D 217

28 NNE 1/4-1/2 0.485 mi. 2562 ft.	SATICOY LEMON ASSOCIATION 103 NORTH PECK ROAD SANTA PAULA, CA 93060	LUST EMI	1001610051 N/A
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[Click here for full text details](#)

Relative:
Higher

LUST
 Status: Completed - Case Closed

EMI
 Facility Id: 130

MAP FINDINGS

Map ID Direction Distance Elevation	Site	Database(s)	EDR ID Number EPA ID Number
G29 NW 1/4-1/2 0.488 mi. 2577 ft.	SANTA PAULA RANCH 15442 SANTA PAULA ST SANTA PAULA, CA 93060 Click here for full text details	LUST HIST UST	U001580265 N/A
Relative: Higher	LUST Facility Id: 930600061 Status: Case Closed HIST UST Facility Id: 00000036506		
G30 NW 1/4-1/2 0.488 mi. 2577 ft.	J. M. SHARP COMPANY 15442 SANTA PAULA ST SANTA PAULA, CA 93060 Click here for full text details	LUST	S104234346 N/A
Relative: Higher	LUST Facility Id: C-88202 Status: Case Closed		
G31 NW 1/4-1/2 0.488 mi. 2577 ft.	SANTA PAULA RANCH 15442 SANTA PAULA ST SANTA PAULA, CA 93060 Click here for full text details	HIST CORTESE LUST	S103946454 N/A
Relative: Higher	LUST Status: Completed - Case Closed		
G32 NW 1/4-1/2 0.488 mi. 2577 ft.	J.M. SHARP COMPANY 15442 SANTA PAULA ST SANTA PAULA, CA Click here for full text details	LUST	S104970726 N/A
Relative: Higher	LUST Facility Id: 88202 Status: Case Closed		

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	AST	Aboveground Petroleum Storage Tank Facilities	California Environmental Protection Agency	08/01/2009	09/10/2009	10/01/2009
CA	CA BOND EXP. PLAN	Bond Expenditure Plan	Department of Health Services	01/01/1989	07/27/1994	08/02/1994
CA	CA FID UST	Facility Inventory Database	California Environmental Protection Agency	10/31/1994	09/05/1995	09/29/1995
CA	CDL	Clandestine Drug Labs	Department of Toxic Substances Control	06/30/2014	09/02/2014	09/24/2014
CA	CHMIRS	California Hazardous Material Incident Report System	Office of Emergency Services	06/26/2014	07/28/2014	09/15/2014
CA	CORTESE	"Cortese" Hazardous Waste & Substances Sites List	CAL EPA/Office of Emergency Information	06/30/2014	07/01/2014	07/28/2014
CA	DEED	Deed Restriction Listing	DTSC and SWRCB	09/08/2014	09/10/2014	10/22/2014
CA	DRYCLEANERS	Cleaner Facilities	Department of Toxic Substance Control	06/28/2014	07/03/2014	08/21/2014
CA	EMI	Emissions Inventory Data	California Air Resources Board	12/31/2012	03/25/2014	04/28/2014
CA	ENF	Enforcement Action Listing	State Water Resources Control Board	08/11/2014	08/12/2014	09/30/2014
CA	ENVIROSTOR	EnviroStor Database	Department of Toxic Substances Control	08/05/2014	08/06/2014	09/26/2014
CA	Financial Assurance 1	Financial Assurance Information Listing	Department of Toxic Substances Control	07/31/2014	08/05/2014	09/26/2014
CA	Financial Assurance 2	Financial Assurance Information Listing	California Integrated Waste Management Board	08/14/2014	08/18/2014	10/06/2014
CA	HAULERS	Registered Waste Tire Haulers Listing	Integrated Waste Management Board	09/08/2014	09/09/2014	10/22/2014
CA	HAZNET	Facility and Manifest Data	California Environmental Protection Agency	12/31/2012	07/16/2013	08/26/2013
CA	HIST CAL-SITES	Calsites Database	Department of Toxic Substance Control	08/08/2005	08/03/2006	08/24/2006
CA	HIST CORTESE	Hazardous Waste & Substance Site List	Department of Toxic Substances Control	04/01/2001	01/22/2009	04/08/2009
CA	HIST UST	Hazardous Substance Storage Container Database	State Water Resources Control Board	10/15/1990	01/25/1991	02/12/1991
CA	HWP	EnviroStor Permitted Facilities Listing	Department of Toxic Substances Control	08/26/2014	08/26/2014	10/06/2014
CA	HWT	Registered Hazardous Waste Transporter Database	Department of Toxic Substances Control	07/14/2014	07/15/2014	07/28/2014
CA	LDS	Land Disposal Sites Listing	State Water Quality Control Board	09/15/2014	09/17/2014	10/22/2014
CA	LIENS	Environmental Liens Listing	Department of Toxic Substances Control	08/19/2014	08/20/2014	10/06/2014
CA	LUST	Geotracker's Leaking Underground Fuel Tank Report	State Water Resources Control Board	07/30/2014	07/31/2014	08/22/2014
CA	LUST REG 1	Active Toxic Site Investigation	California Regional Water Quality Control Boa	02/01/2001	02/28/2001	03/29/2001
CA	LUST REG 2	Fuel Leak List	California Regional Water Quality Control Boa	09/30/2004	10/20/2004	11/19/2004
CA	LUST REG 3	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	05/19/2003	05/19/2003	06/02/2003
CA	LUST REG 4	Underground Storage Tank Leak List	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	LUST REG 5	Leaking Underground Storage Tank Database	California Regional Water Quality Control Boa	07/01/2008	07/22/2008	07/31/2008
CA	LUST REG 6L	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	09/09/2003	09/10/2003	10/07/2003
CA	LUST REG 6V	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	06/07/2005	06/07/2005	06/29/2005
CA	LUST REG 7	Leaking Underground Storage Tank Case Listing	California Regional Water Quality Control Boa	02/26/2004	02/26/2004	03/24/2004
CA	LUST REG 8	Leaking Underground Storage Tanks	California Regional Water Quality Control Boa	02/14/2005	02/15/2005	03/28/2005
CA	LUST REG 9	Leaking Underground Storage Tank Report	California Regional Water Quality Control Boa	03/01/2001	04/23/2001	05/21/2001
CA	MCS	Military Cleanup Sites Listing	State Water Resources Control Board	09/15/2014	09/17/2014	10/23/2014
CA	MWMP	Medical Waste Management Program Listing	Department of Public Health	08/20/2014	09/10/2014	10/23/2014
CA	NOTIFY 65	Proposition 65 Records	State Water Resources Control Board	10/21/1993	11/01/1993	11/19/1993
CA	NPDES	NPDES Permits Listing	State Water Resources Control Board	08/18/2014	08/18/2014	10/06/2014
CA	PROC	Certified Processors Database	Department of Conservation	09/16/2014	09/17/2014	10/23/2014
CA	RESPONSE	State Response Sites	Department of Toxic Substances Control	08/05/2014	08/06/2014	09/26/2014
CA	RGALF	Recovered Government Archive Solid Waste Facilities List	Department of Resources Recycling and Recover		07/01/2013	01/13/2014
CA	RGALUST	Recovered Government Archive Leaking Underground Storage Tan	State Water Resources Control Board		07/01/2013	12/30/2013
CA	SCH	School Property Evaluation Program	Department of Toxic Substances Control	08/05/2014	08/06/2014	09/26/2014
CA	SLIC	Statewide SLIC Cases	State Water Resources Control Board	09/15/2014	09/17/2014	10/23/2014
CA	SLIC REG 1	Active Toxic Site Investigations	California Regional Water Quality Control Boa	04/03/2003	04/07/2003	04/25/2003
CA	SLIC REG 2	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board San Fran	09/30/2004	10/20/2004	11/19/2004
CA	SLIC REG 3	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	05/18/2006	05/18/2006	06/15/2006
CA	SLIC REG 4	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Region Water Quality Control Board Los Angele	11/17/2004	11/18/2004	01/04/2005

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
CA	SLIC REG 5	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board Central	04/01/2005	04/05/2005	04/21/2005
CA	SLIC REG 6L	SLIC Sites	California Regional Water Quality Control Boa	09/07/2004	09/07/2004	10/12/2004
CA	SLIC REG 6V	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	Regional Water Quality Control Board, Victortv	05/24/2005	05/25/2005	06/16/2005
CA	SLIC REG 7	SLIC List	California Regional Quality Control Board, Co	11/24/2004	11/29/2004	01/04/2005
CA	SLIC REG 8	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Region Water Quality Control Board	04/03/2008	04/03/2008	04/14/2008
CA	SLIC REG 9	Spills, Leaks, Investigation & Cleanup Cost Recovery Listing	California Regional Water Quality Control Boa	09/10/2007	09/11/2007	09/28/2007
CA	SPILLS 90	SPILLS90 data from FirstSearch	FirstSearch	06/06/2012	01/03/2013	02/22/2013
CA	SWEEPS UST	SWEEPS UST Listing	State Water Resources Control Board	06/01/1994	07/07/2005	08/11/2005
CA	SWF/LF (SWIS)	Solid Waste Information System	Department of Resources Recycling and Recover	08/18/2014	08/18/2014	10/03/2014
CA	SWRCY	Recycler Database	Department of Conservation	09/16/2014	09/17/2014	10/23/2014
CA	TOXIC PITS	Toxic Pits Cleanup Act Sites	State Water Resources Control Board	07/01/1995	08/30/1995	09/26/1995
CA	UIC	UIC Listing	Deaprtment of Conservation	07/14/2014	09/17/2014	10/23/2014
CA	UST	Active UST Facilities	SWRCB	07/30/2014	07/31/2014	08/20/2014
CA	UST MENDOCINO	Mendocino County UST Database	Department of Public Health	09/23/2009	09/23/2009	10/01/2009
CA	VCP	Voluntary Cleanup Program Properties	Department of Toxic Substances Control	08/05/2014	08/06/2014	09/26/2014
CA	WDS	Waste Discharge System	State Water Resources Control Board	06/19/2007	06/20/2007	06/29/2007
CA	WIP	Well Investigation Program Case List	Los Angeles Water Quality Control Board	07/03/2009	07/21/2009	08/03/2009
CA	WMUDS/SWAT	Waste Management Unit Database	State Water Resources Control Board	04/01/2000	04/10/2000	05/10/2000
US	2020 COR ACTION	2020 Corrective Action Program List	Environmental Protection Agency	11/11/2011	05/18/2012	05/25/2012
US	BRS	Biennial Reporting System	EPA/NTIS	12/31/2011	02/26/2013	04/19/2013
US	CERCLIS	Comprehensive Environmental Response, Compensation, and Liab	EPA	10/25/2013	11/11/2013	02/13/2014
US	CERCLIS-NFRAP	CERCLIS No Further Remedial Action Planned	EPA	10/25/2013	11/11/2013	02/13/2014
US	COAL ASH DOE	Sleam-Electric Plan Operation Data	Department of Energy	12/31/2005	08/07/2009	10/22/2009
US	COAL ASH EPA	Coal Combustion Residues Surface Impoundments List	Environmental Protection Agency	07/01/2014	09/10/2014	10/20/2014
US	CONSENT	Superfund (CERCLA) Consent Decrees	Department of Justice, Consent Decree Library	12/31/2013	01/24/2014	02/24/2014
US	CORRACTS	Corrective Action Report	EPA	06/10/2014	07/02/2014	09/18/2014
US	DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations	EPA, Region 9	01/12/2009	05/07/2009	09/21/2009
US	DELISTED NPL	National Priority List Deletions	EPA	10/25/2013	11/11/2013	01/28/2014
US	DOD	Department of Defense Sites	USGS	12/31/2005	11/10/2006	01/11/2007
US	DOT OPS	Incident and Accident Data	Department of Transporation, Office of Pipeli	07/31/2012	08/07/2012	09/18/2012
US	EDR MGP	EDR Proprietary Manufactured Gas Plants	EDR, Inc.			
US	EDR US Hist Auto Stat	EDR Exclusive Historic Gas Stations	EDR, Inc.			
US	EDR US Hist Cleaners	EDR Exclusive Historic Dry Cleaners	EDR, Inc.			
US	EPA WATCH LIST	EPA WATCH LIST	Environmental Protection Agency	08/30/2013	03/21/2014	06/17/2014
US	ERNS	Emergency Response Notification System	National Response Center, United States Coast	09/30/2013	10/01/2013	12/06/2013
US	FEDERAL FACILITY	Federal Facility Site Information listing	Environmental Protection Agency	07/21/2014	10/07/2014	10/20/2014
US	FEDLAND	Federal and Indian Lands	U.S. Geological Survey	12/31/2005	02/06/2006	01/11/2007
US	FEMA UST	Underground Storage Tank Listing	FEMA	01/01/2010	02/16/2010	04/12/2010
US	FINDS	Facility Index System/Facility Registry System	EPA	08/16/2014	09/10/2014	10/20/2014
US	FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA/Office of Prevention, Pesticides and Toxi	04/09/2009	04/16/2009	05/11/2009
US	FTTS INSP	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fu	EPA	04/09/2009	04/16/2009	05/11/2009
US	FUDS	Formerly Used Defense Sites	U.S. Army Corps of Engineers	06/06/2014	09/10/2014	09/18/2014
US	HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HIST FTTS INSP	FIFRA/TSCA Tracking System Inspection & Enforcement Case Lis	Environmental Protection Agency	10/19/2006	03/01/2007	04/10/2007
US	HMIRS	Hazardous Materials Information Reporting System	U.S. Department of Transportation	06/30/2014	07/01/2014	09/18/2014
US	ICIS	Integrated Compliance Information System	Environmental Protection Agency	05/06/2014	05/16/2014	06/17/2014
US	INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land	EPA Region 1	02/01/2013	05/01/2013	11/01/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land	EPA Region 10	05/20/2014	06/10/2014	08/22/2014
US	INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land	EPA Region 4	07/30/2014	08/12/2014	08/22/2014
US	INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land	EPA, Region 5	08/04/2014	08/05/2014	08/22/2014
US	INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land	EPA Region 6	05/14/2014	05/15/2014	07/15/2014
US	INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land	EPA Region 7	05/22/2014	08/22/2014	09/18/2014
US	INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land	EPA Region 8	08/13/2014	08/15/2014	08/22/2014
US	INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land	Environmental Protection Agency	03/01/2013	03/01/2013	04/12/2013
US	INDIAN ODI	Report on the Status of Open Dumps on Indian Lands	Environmental Protection Agency	12/31/1998	12/03/2007	01/24/2008
US	INDIAN RESERV	Indian Reservations	USGS	12/31/2005	12/08/2006	01/11/2007
US	INDIAN UST R1	Underground Storage Tanks on Indian Land	EPA, Region 1	02/01/2013	05/01/2013	01/27/2014
US	INDIAN UST R10	Underground Storage Tanks on Indian Land	EPA Region 10	05/20/2014	06/10/2014	08/15/2014
US	INDIAN UST R4	Underground Storage Tanks on Indian Land	EPA Region 4	07/30/2014	08/12/2014	08/22/2014
US	INDIAN UST R5	Underground Storage Tanks on Indian Land	EPA Region 5	08/04/2014	08/05/2014	08/22/2014
US	INDIAN UST R6	Underground Storage Tanks on Indian Land	EPA Region 6	07/25/2014	07/28/2014	08/22/2014
US	INDIAN UST R7	Underground Storage Tanks on Indian Land	EPA Region 7	08/20/2014	08/22/2014	09/18/2014
US	INDIAN UST R8	Underground Storage Tanks on Indian Land	EPA Region 8	08/13/2014	08/15/2014	08/22/2014
US	INDIAN UST R9	Underground Storage Tanks on Indian Land	EPA Region 9	08/14/2014	08/15/2014	08/22/2014
US	INDIAN VCP R1	Voluntary Cleanup Priority Listing	EPA, Region 1	05/30/2014	07/01/2014	08/15/2014
US	INDIAN VCP R7	Voluntary Cleanup Priority Lisitng	EPA, Region 7	03/20/2008	04/22/2008	05/19/2008
US	LEAD SMELTER 1	Lead Smelter Sites	Environmental Protection Agency	06/04/2014	06/12/2014	07/28/2014
US	LEAD SMELTER 2	Lead Smelter Sites	American Journal of Public Health	04/05/2001	10/27/2010	12/02/2010
US	LIENS 2	CERCLA Lien Information	Environmental Protection Agency	02/18/2014	03/18/2014	04/24/2014
US	LUCIS	Land Use Control Information System	Department of the Navy	08/29/2014	10/09/2014	10/20/2014
US	MLTS	Material Licensing Tracking System	Nuclear Regulatory Commission	07/22/2013	08/02/2013	11/01/2013
US	NPL	National Priority List	EPA	10/25/2013	11/11/2013	01/28/2014
US	NPL LIENS	Federal Superfund Liens	EPA	10/15/1991	02/02/1994	03/30/1994
US	ODI	Open Dump Inventory	Environmental Protection Agency	06/30/1985	08/09/2004	09/17/2004
US	PADS	PCB Activity Database System	EPA	06/01/2013	07/17/2013	11/01/2013
US	PCB TRANSFORMER	PCB Transformer Registration Database	Environmental Protection Agency	02/01/2011	10/19/2011	01/10/2012
US	PRP	Potentially Responsible Parties	EPA	10/25/2013	10/17/2014	10/20/2014
US	Proposed NPL	Proposed National Priority List Sites	EPA	10/25/2013	11/11/2013	01/28/2014
US	RAATS	RCRA Administrative Action Tracking System	EPA	04/17/1995	07/03/1995	08/07/1995
US	RADINFO	Radiation Information Database	Environmental Protection Agency	10/07/2014	10/08/2014	10/20/2014
US	RCRA NonGen / NLR	RCRA - Non Generators	Environmental Protection Agency	06/10/2014	07/02/2014	09/18/2014
US	RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generators	Environmental Protection Agency	06/10/2014	07/02/2014	09/18/2014
US	RCRA-LQG	RCRA - Large Quantity Generators	Environmental Protection Agency	06/10/2014	07/02/2014	09/18/2014
US	RCRA-SQG	RCRA - Small Quantity Generators	Environmental Protection Agency	06/10/2014	07/02/2014	09/18/2014
US	RCRA-TSDF	RCRA - Treatment, Storage and Disposal	Environmental Protection Agency	06/10/2014	07/02/2014	09/18/2014
US	RMP	Risk Management Plans	Environmental Protection Agency	04/01/2014	05/23/2014	07/28/2014
US	ROD	Records Of Decision	EPA	11/25/2013	12/12/2013	02/24/2014
US	SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing	Environmental Protection Agency	03/07/2011	03/09/2011	05/02/2011
US	SSTS	Section 7 Tracking Systems	EPA	12/31/2009	12/10/2010	02/25/2011
US	TRIS	Toxic Chemical Release Inventory System	EPA	12/31/2011	07/31/2013	09/13/2013
US	TSCA	Toxic Substances Control Act	EPA	12/31/2006	09/29/2010	12/02/2010
US	UMTRA	Uranium Mill Tailings Sites	Department of Energy	09/14/2010	10/07/2011	03/01/2012
US	US AIRS (AFS)	Aerometric Information Retrieval System Facility Subsystem (EPA	10/23/2013	11/06/2013	12/06/2013
US	US AIRS MINOR	Air Facility System Data	EPA	10/23/2013	11/06/2013	12/06/2013

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

St	Acronym	Full Name	Government Agency	Gov Date	Arvl. Date	Active Date
US	US BROWNFIELDS	A Listing of Brownfields Sites	Environmental Protection Agency	09/22/2014	09/23/2014	10/20/2014
US	US CDL	Clandestine Drug Labs	Drug Enforcement Administration	07/25/2014	09/09/2014	10/20/2014
US	US ENG CONTROLS	Engineering Controls Sites List	Environmental Protection Agency	09/18/2014	09/19/2014	10/20/2014
US	US FIN ASSUR	Financial Assurance Information	Environmental Protection Agency	09/04/2014	09/04/2014	10/20/2014
US	US HIST CDL	National Clandestine Laboratory Register	Drug Enforcement Administration	07/25/2014	09/09/2014	10/20/2014
US	US INST CONTROL	Sites with Institutional Controls	Environmental Protection Agency	09/18/2014	09/19/2014	10/20/2014
US	US MINES	Mines Master Index File	Department of Labor, Mine Safety and Health A	01/30/2014	03/05/2014	07/15/2014
CT	CT MANIFEST	Hazardous Waste Manifest Data	Department of Energy & Environmental Protecti	07/30/2013	08/19/2013	10/03/2013
NJ	NJ MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2011	07/19/2012	08/28/2012
NY	NY MANIFEST	Facility and Manifest Data	Department of Environmental Conservation	08/01/2014	08/07/2014	10/17/2014
PA	PA MANIFEST	Manifest Information	Department of Environmental Protection	12/31/2013	07/21/2014	08/25/2014
RI	RI MANIFEST	Manifest information	Department of Environmental Management	12/31/2013	07/15/2014	08/13/2014
WI	WI MANIFEST	Manifest Information	Department of Natural Resources	12/31/2013	06/20/2014	08/07/2014
US	Oil/Gas Pipelines	GeoData Digital Line Graphs from 1:100,000-Scale Maps	USGS			
US	AHA Hospitals	Sensitive Receptor: AHA Hospitals	American Hospital Association, Inc.			
US	Medical Centers	Sensitive Receptor: Medical Centers	Centers for Medicare & Medicaid Services			
US	Nursing Homes	Sensitive Receptor: Nursing Homes	National Institutes of Health			
US	Public Schools	Sensitive Receptor: Public Schools	National Center for Education Statistics			
US	Private Schools	Sensitive Receptor: Private Schools	National Center for Education Statistics			
CA	Daycare Centers	Sensitive Receptor: Licensed Facilities	Department of Social Services			
US	Flood Zones	100-year and 500-year flood zones	Emergency Management Agency (FEMA)			
US	NWI	National Wetlands Inventory	U.S. Fish and Wildlife Service			
US	USGS 7.5' Topographic Map	Scanned Digital USGS 7.5' Topographic Map (DRG)	USGS			

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SANTA PAULA WEST
15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA 93060

TARGET PROPERTY COORDINATES

Latitude (North):	34.3333 - 34° 19' 59.88"
Longitude (West):	119.0919 - 119° 5' 30.84"
Universal Transverse Mercator:	Zone 11
UTM X (Meters):	307555.3
UTM Y (Meters):	3800899.0
Elevation:	233 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	34119-C1 SANTA PAULA, CA
Most Recent Revision:	1967

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

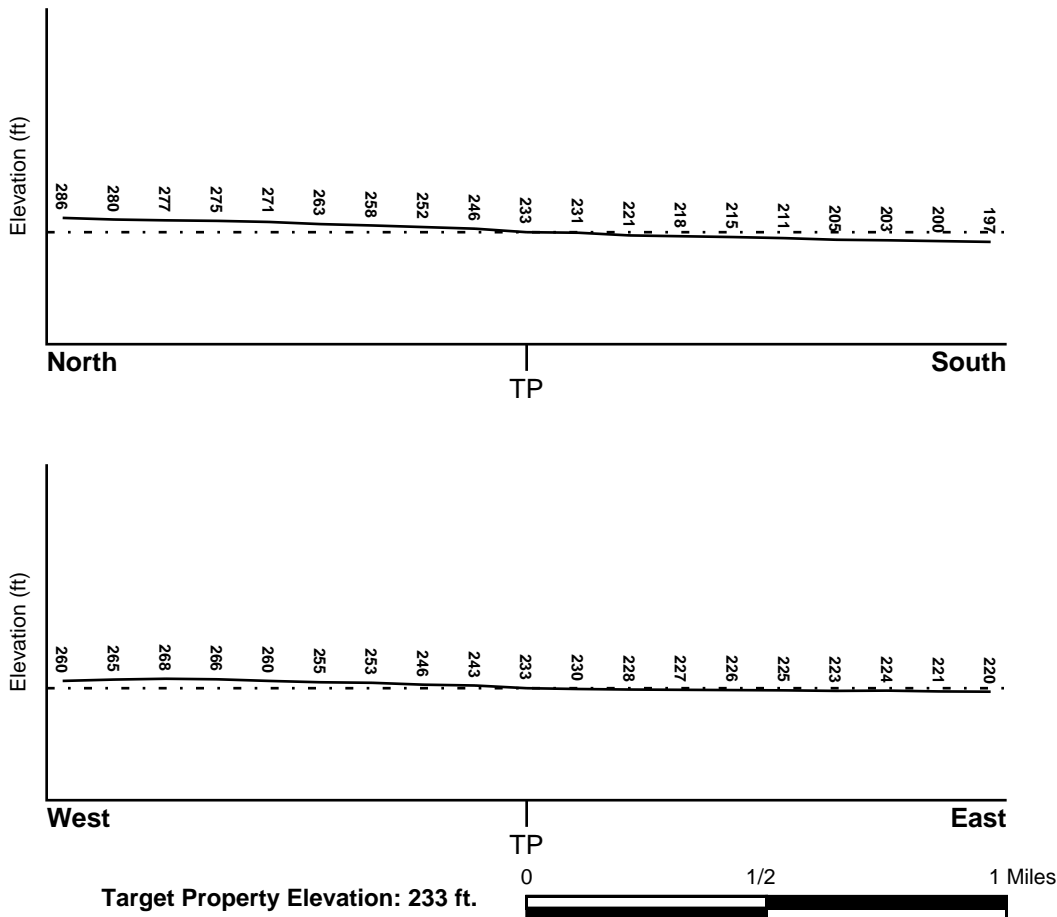
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u> VENTURA, CA	FEMA Flood <u>Electronic Data</u> YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property:	06111C - FEMA DFIRM Flood data
Additional Panels in search area:	Not Reported

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> SANTA PAULA	NWI Electronic <u>Data Coverage</u> YES - refer to the Overview Map and Detail Map
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HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

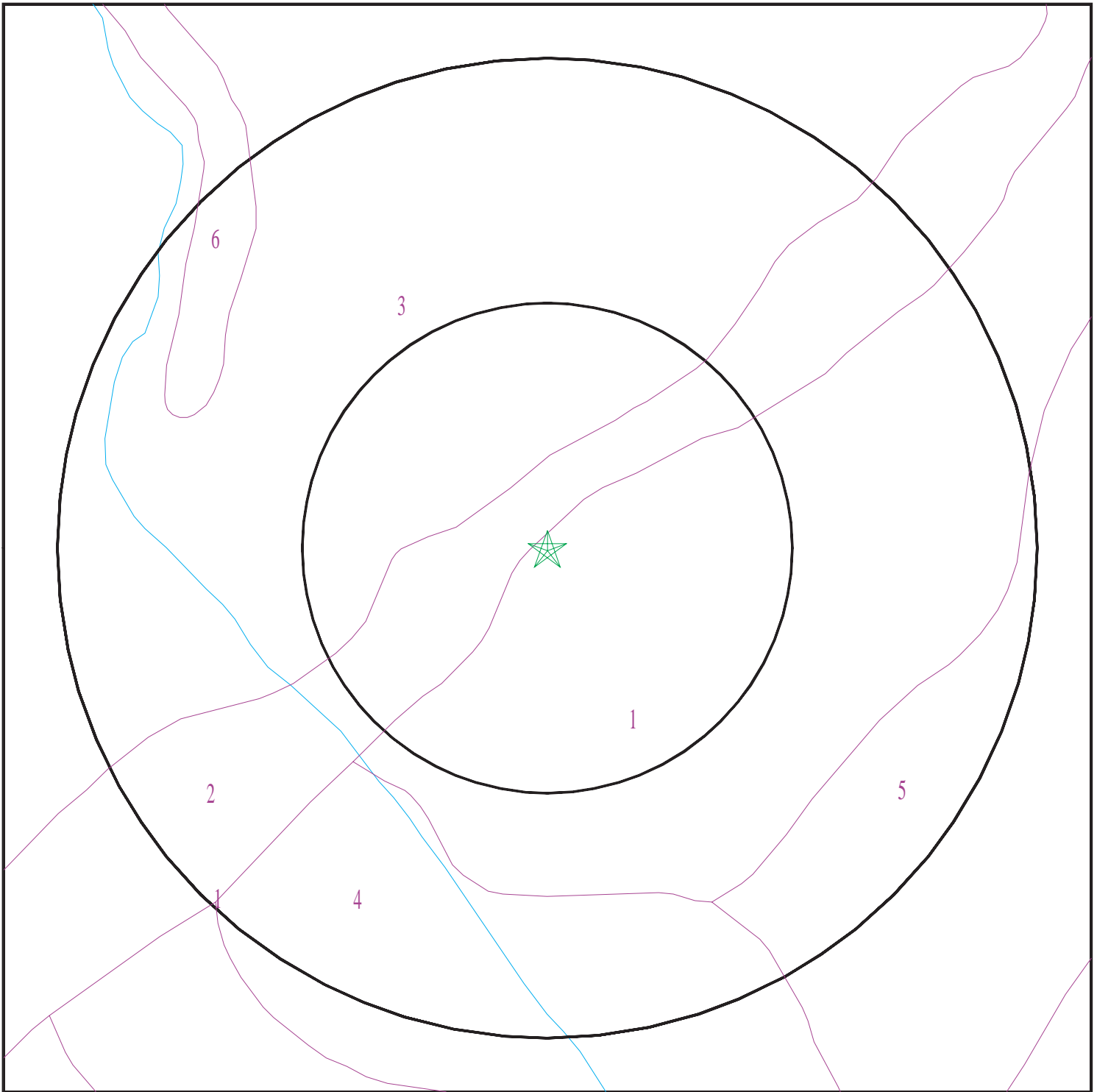
Era: Cenozoic
System: Quaternary
Series: Quaternary
Code: Q (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

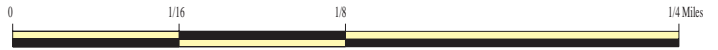
Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4114777.2s



- ★ Target Property
- SSURGO Soil
- Water



SITE NAME: Santa Paula West
ADDRESS: 15320 West Telegraph Road
Santa Paula CA 93060
LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
CONTACT: Bryn Home
INQUIRY #: 4114777.2s
DATE: October 24, 2014 12:29 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: MOCHO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 2

Soil Component Name: MOCHO

Soil Surface Texture: loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 3

Soil Component Name: MOCHO

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9
2	16 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay Soils.	Max: 4 Min: 1.4	Max: 8.4 Min: 7.9

Soil Map ID: 4

Soil Component Name: MOCHO

Soil Surface Texture: gravelly loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	16 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
2	16 inches	59 inches	gravelly loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14 Min: 4	Max: 8.4 Min: 7.9

Soil Map ID: 5

Soil Component Name: PICO

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	14 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 42 Min: 14	Max: 8.4 Min: 7.9
2	14 inches	53 inches	stratified sandy loam to loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 42 Min: 14	Max: 8.4 Min: 7.9

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
3	53 inches	59 inches	stratified gravelly sand to gravelly loamy coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 141 Min: 42	Max: 8.4 Min: 7.9

Soil Map ID: 6

Soil Component Name: GULLIED LAND

Soil Surface Texture: variable

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	59 inches	variable	Not reported	Not reported	Max: Min:	Max: Min:

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
A3	USGS40000142946	1/2 - 1 Mile SSW
A4	USGS40000142947	1/2 - 1 Mile SSW
B5	USGS40000142967	1/2 - 1 Mile NE
B6	USGS40000142968	1/2 - 1 Mile NE
9	USGS40000142972	1/2 - 1 Mile NW
C10	USGS40000142975	1/2 - 1 Mile NNE
D15	USGS40000142983	1/2 - 1 Mile NE
D16	USGS40000142982	1/2 - 1 Mile NE
D17	USGS40000142985	1/2 - 1 Mile NE
D18	USGS40000142984	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CADW50000005572	1/4 - 1/2 Mile ESE
2	CADW50000005562	1/4 - 1/2 Mile South
B7	CADW50000005581	1/2 - 1 Mile NE
B8	CADW50000005580	1/2 - 1 Mile NE
11	CADW50000005578	1/2 - 1 Mile WNW
12	CADW50000005587	1/2 - 1 Mile NNW
C13	3427	1/2 - 1 Mile NNE
14	CADW50000005554	1/2 - 1 Mile SSW
D19	CADW50000005589	1/2 - 1 Mile NE
D20	CADW50000005588	1/2 - 1 Mile NE
D21	CADW50000005591	1/2 - 1 Mile NE
D22	CADW50000005590	1/2 - 1 Mile NE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

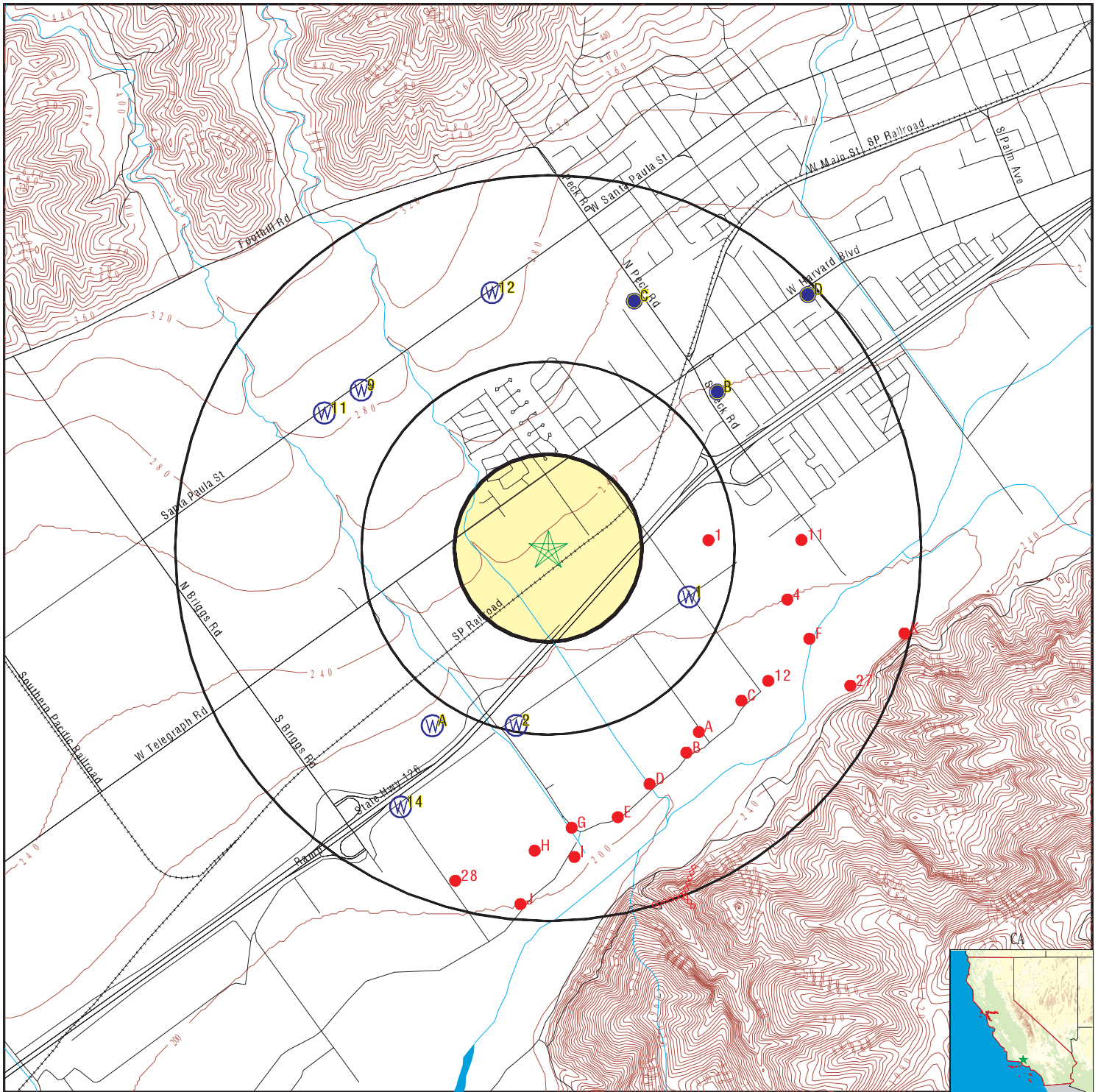
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	CAOG9A000038495	1/4 - 1/2 Mile East

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE OIL/GAS WELL INFORMATION

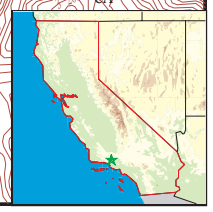
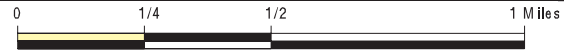
MAP ID	WELL ID	LOCATION FROM TP
A2	CAOG9A000038148	1/2 - 1 Mile SE
A3	CAOG9A000038109	1/2 - 1 Mile SE
4	CAOG9A000038377	1/2 - 1 Mile ESE
B5	CAOG9A000038088	1/2 - 1 Mile SSE
C6	CAOG9A000038173	1/2 - 1 Mile SE
C7	CAOG9A000038185	1/2 - 1 Mile SE
D8	CAOG9A000038056	1/2 - 1 Mile SSE
C9	CAOG9A000038204	1/2 - 1 Mile SE
B10	CAOG9A000038092	1/2 - 1 Mile SE
11	CAOG9A000038496	1/2 - 1 Mile East
12	CAOG9A000038230	1/2 - 1 Mile ESE
D13	CAOG9A000037963	1/2 - 1 Mile SSE
E14	CAOG9A000037894	1/2 - 1 Mile SSE
F15	CAOG9A000038282	1/2 - 1 Mile ESE
E16	CAOG9A000037870	1/2 - 1 Mile SSE
E17	CAOG9A000037871	1/2 - 1 Mile SSE
F18	CAOG9A000038324	1/2 - 1 Mile ESE
G19	CAOG9A000037769	1/2 - 1 Mile South
G20	CAOG9A000037764	1/2 - 1 Mile South
E21	CAOG9A000037775	1/2 - 1 Mile South
H22	CAOG9A000037570	1/2 - 1 Mile South
H23	CAOG9A000037557	1/2 - 1 Mile South
H24	CAOG9A000037522	1/2 - 1 Mile South
I25	CAOG9A000037492	1/2 - 1 Mile South
I26	CAOG9A000037469	1/2 - 1 Mile South
27	CAOG9A000038218	1/2 - 1 Mile ESE
28	CAOG9A000037247	1/2 - 1 Mile SSW
J29	CAOG9A000037122	1/2 - 1 Mile South
K30	CAOG9A000038300	1/2 - 1 Mile ESE
J31	CAOG9A000036943	1/2 - 1 Mile South
K32	CAOG9A000038315	1/2 - 1 Mile ESE

PHYSICAL SETTING SOURCE MAP - 4114777.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



SITE NAME: Santa Paula West
 ADDRESS: 15320 West Telegraph Road
 Santa Paula CA 93060
 LAT/LONG: 34.3333 / 119.0919

CLIENT: PW Environmental
 CONTACT: Bryn Home
 INQUIRY #: 4114777.2s
 DATE: October 24, 2014 12:29 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
1 East 1/4 - 1/2 Mile	Click here for full text details	OIL_GAS	CAOG9A000038495
A2 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038148
A3 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038109
4 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038377
B5 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038088
C6 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038173
C7 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038185
D8 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038056
C9 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038204
B10 SE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038092

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
11 East 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038496
12 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038230
D13 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037963
E14 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037894
F15 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038282
E16 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037870
E17 SSE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037871
F18 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038324
G19 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037769
G20 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037764

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
E21 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037775
H22 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037570
H23 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037557
H24 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037522
I25 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037492
I26 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037469
27 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038218
28 SSW 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037247
J29 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000037122
K30 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038300

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
J31 South 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000036943
K32 ESE 1/2 - 1 Mile	Click here for full text details	OIL_GAS	CAOG9A000038315
1 ESE 1/4 - 1/2 Mile Lower	Click here for full text details	CA WELLS	CADW50000005572
2 South 1/4 - 1/2 Mile Lower	Click here for full text details	CA WELLS	CADW50000005562
A3 SSW 1/2 - 1 Mile Lower	Click here for full text details	FED USGS	USGS40000142946
A4 SSW 1/2 - 1 Mile Lower	Click here for full text details	FED USGS	USGS40000142947
B5 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142967
B6 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142968
B7 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005581

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
B8 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005580
9 NW 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142972
C10 NNE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142975
11 WNW 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005578
12 NNW 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005587
C13 NNE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	3427
14 SSW 1/2 - 1 Mile Lower	Click here for full text details	CA WELLS	CADW50000005554
D15 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142983
D16 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142982

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation		Database	EDR ID Number
D17 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142985
D18 NE 1/2 - 1 Mile Higher	Click here for full text details	FED USGS	USGS40000142984
D19 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005589
D20 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005588
D21 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005591
D22 NE 1/2 - 1 Mile Higher	Click here for full text details	CA WELLS	CADW50000005590

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
93060	63	2

Federal EPA Radon Zone for VENTURA County: 1

- Note: Zone 1 indoor average level > 4 pCi/L.
- : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
- : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 93060

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.820 pCi/L	100%	0%	0%
Living Area - 2nd Floor	1.200 pCi/L	100%	0%	0%
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Public Health

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

Oil and Gas well locations in the state.

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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Santa Paula West

15320 West Telegraph Road
Santa Paula, CA 93060

Inquiry Number: 4114777.3

October 23, 2014

Certified Sanborn® Map Report



6 Armstrong Road, 4th Floor
Shelton, Connecticut 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/23/14

Site Name:

Santa Paula West
15320 West Telegraph Road
Santa Paula, CA 93060

Client Name:

PW Environmental
230 Dove Court
Santa Paula, CA 93060

EDR Inquiry # 4114777.3

Contact: Bryn Home



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Certified Sanborn Results:

Site Name: Santa Paula West
Address: 15320 West Telegraph Road
City, State, Zip: Santa Paula, CA 93060
Cross Street:
P.O. # 1511-OS-19299
Project: Santa Paula West
Certification # 5052-47C8-86AC



Sanborn® Library search results
Certification # 5052-47C8-86AC

UNMAPPED PROPERTY

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- Library of Congress
- University Publications of America
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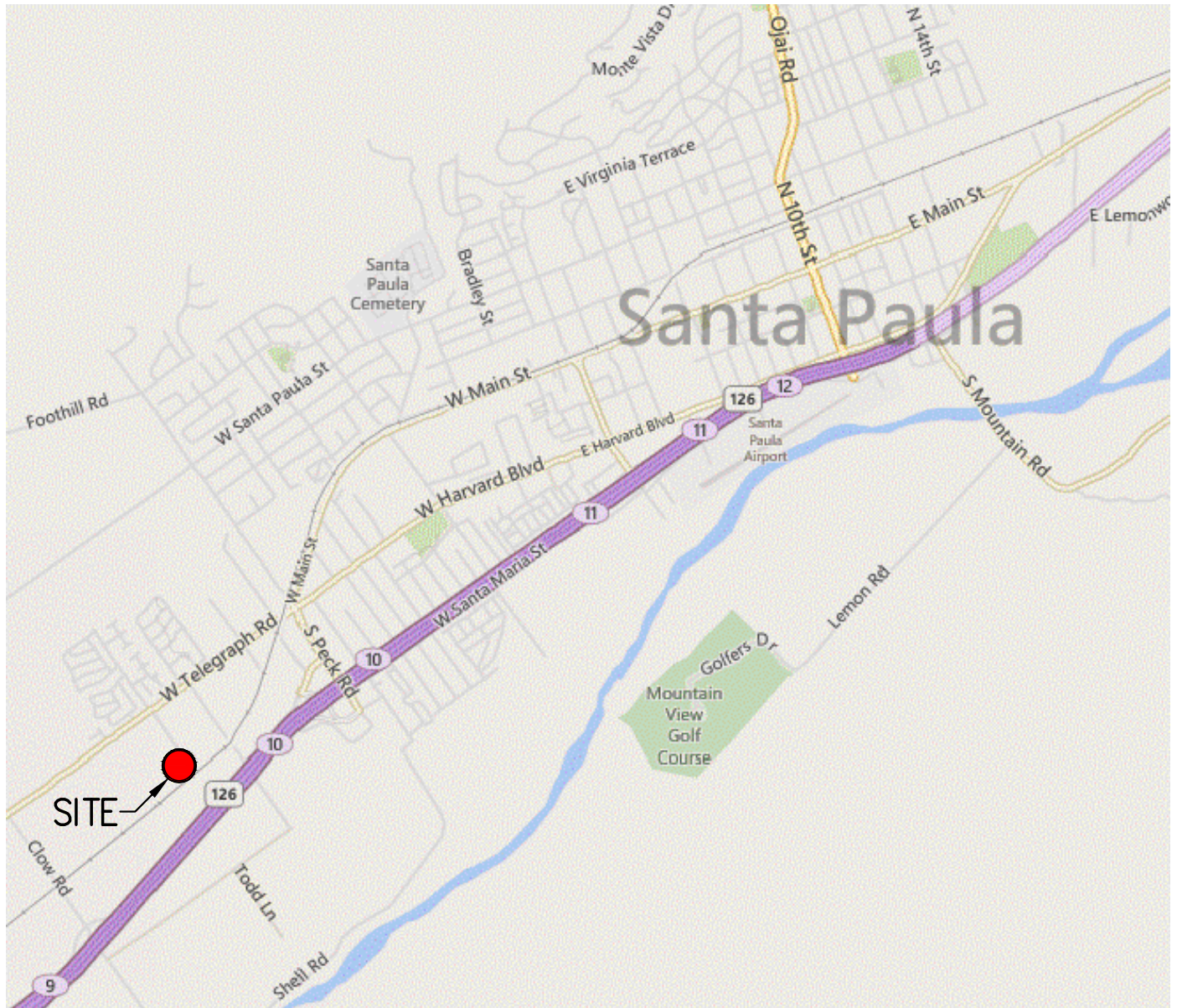
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SITE LOCATION MAP

FIGURE 1



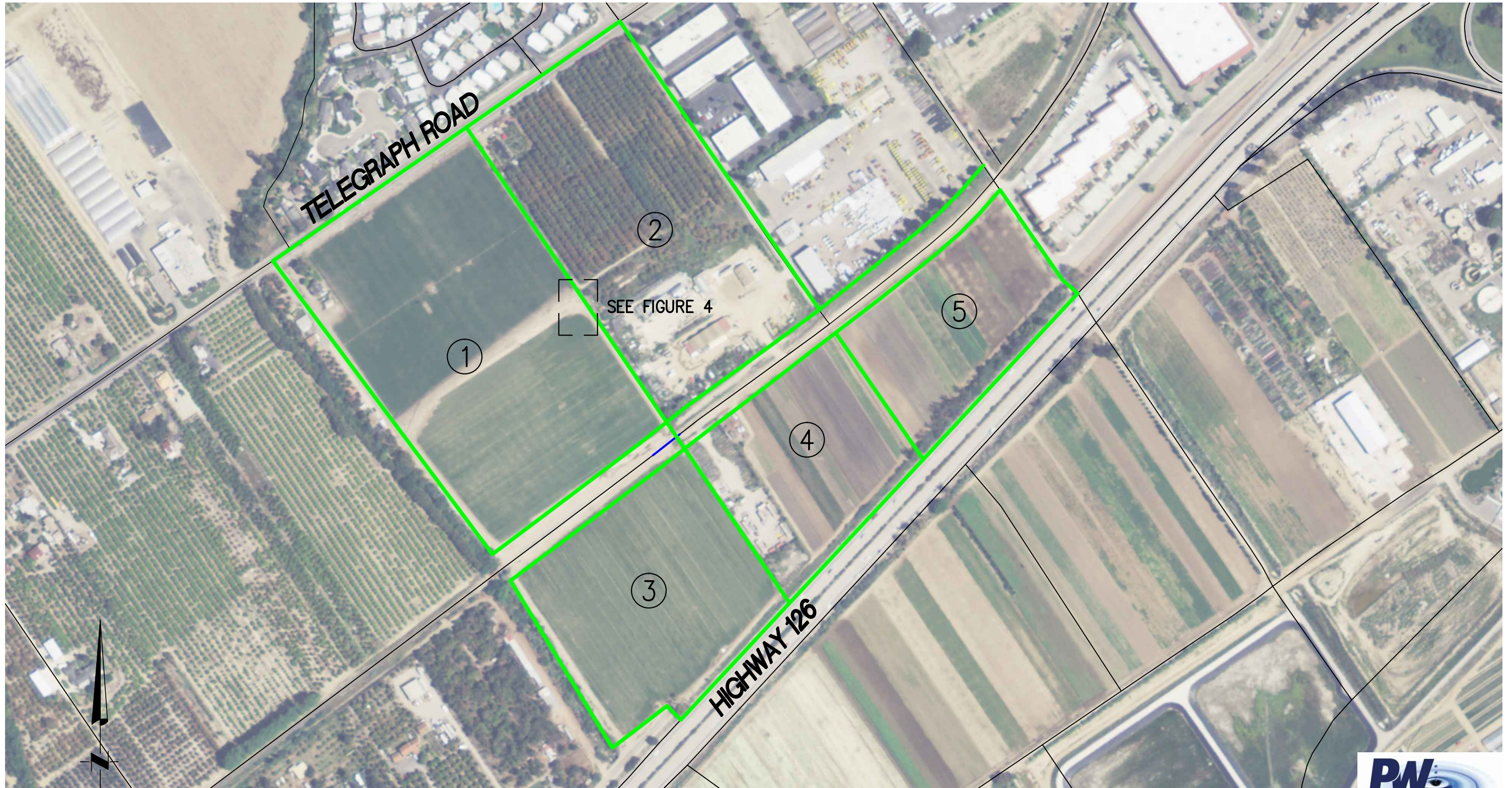
NOT TO SCALE



230 DOVE COURT
SANTA PAULA, CA 93060
PH: 805-525-5563
FAX: 805-525-2896

SANTA PAULA WEST

FIGURE 2



SCALE: 1"=300'

LEGEND

- ① PARCEL DESIGNATION, FOR REPORT PURPOSES ONLY
- EXTENTS OF PROJECT

PREPARED FOR:

MERIDIAN CONSULTANTS
860 HAMPSHIRE ROAD, SUITE P
WESTLAKE VILLAGE, CA 91361

PROPERTY ADDRESS:

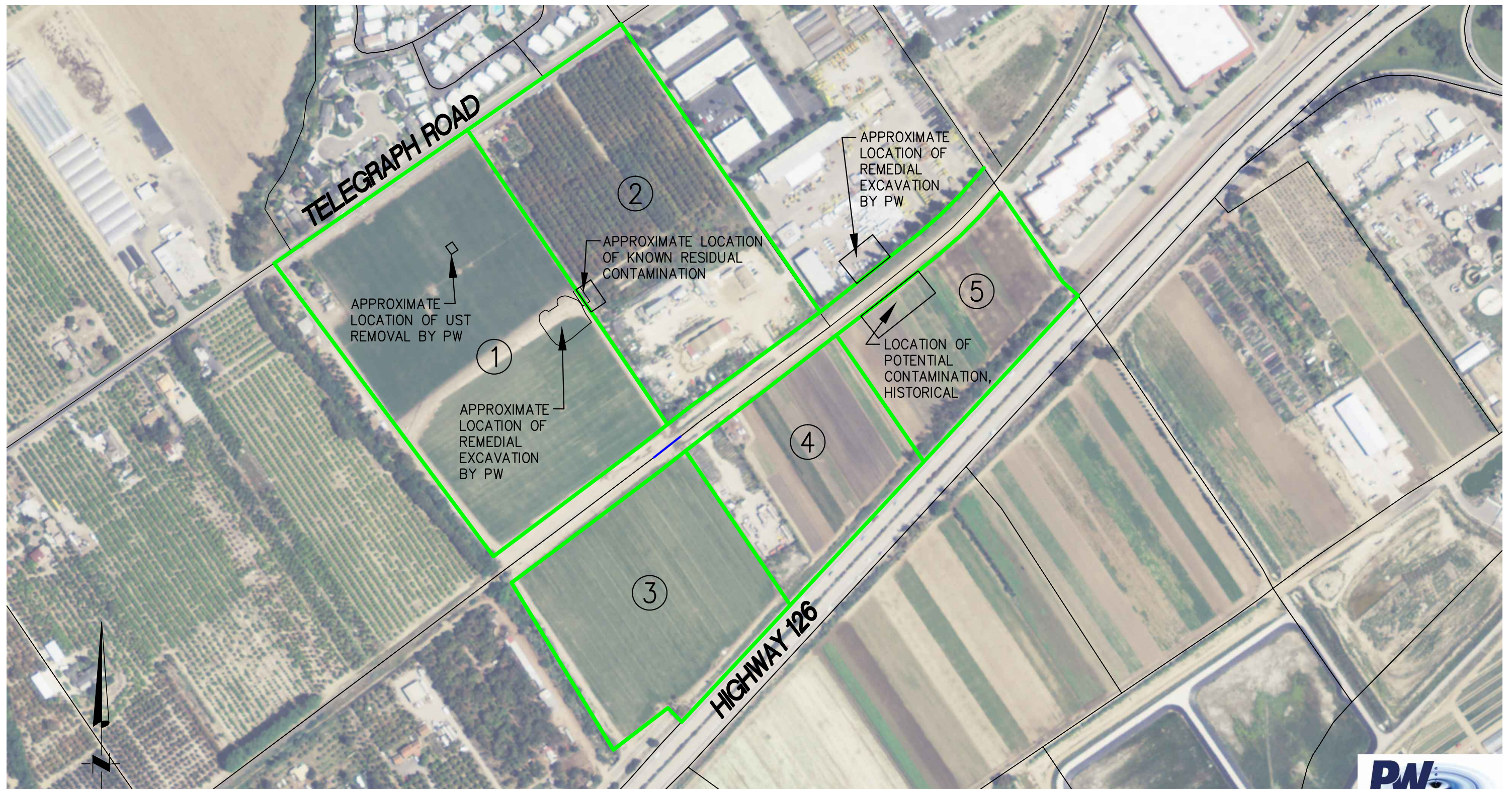
15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA



230 DOVE COURT
SANTA PAULA, CA 93060
PH: 805-525-5563
FAX: 805-525-2896

SANTA PAULA WEST

FIGURE 3



SCALE: 1"=300'

LEGEND

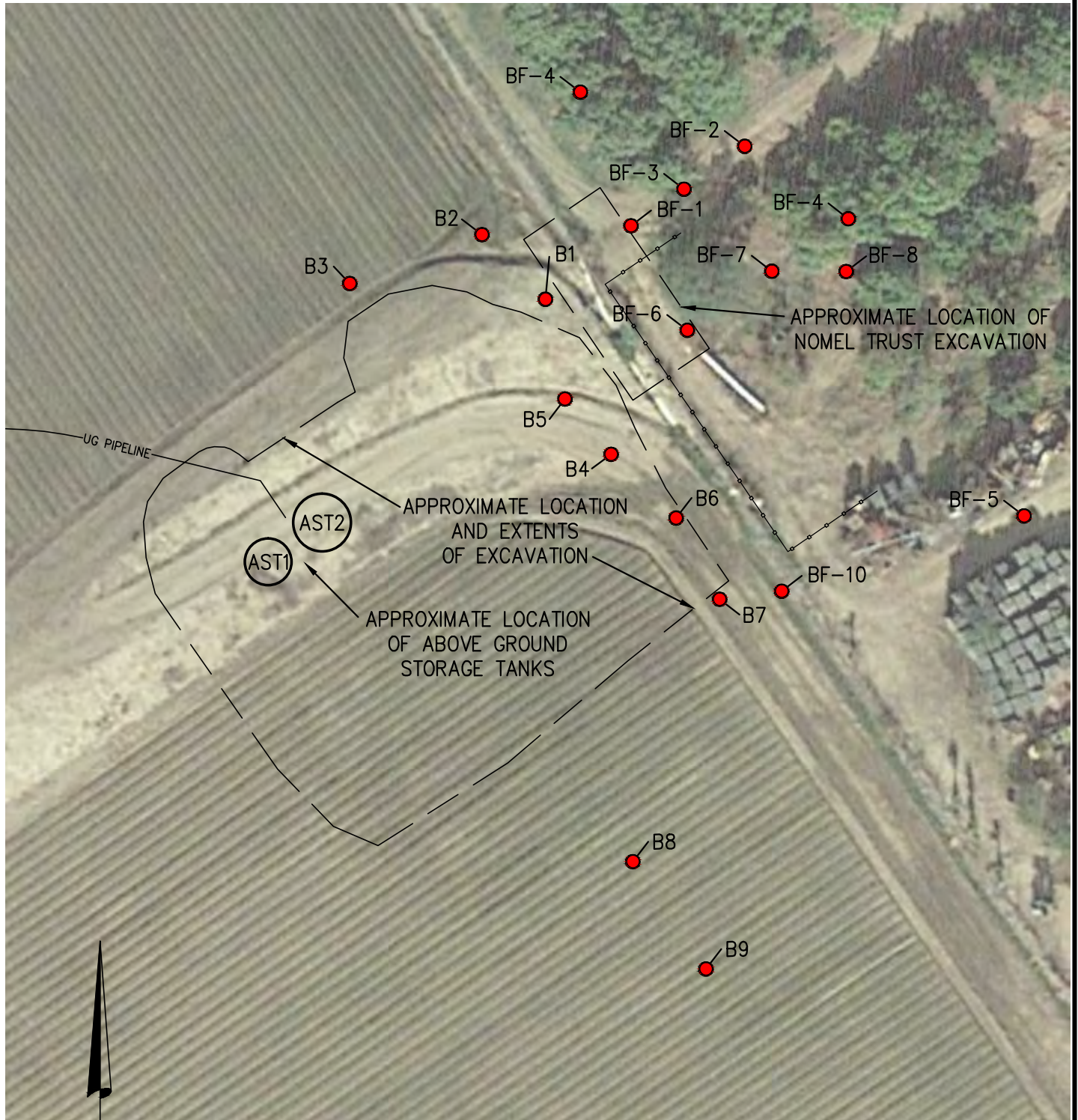
- ① PARCEL DESIGNATION, FOR REPORT PURPOSES ONLY
- EXTENTS OF PROJECT



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HISTORIC SAMPLING LOCATION MAP

FIGURE 4



SCALE: 1"=40'

LEGEND

- BF-1 BENDER FARMS BORING NUMBER
- B1 BORING NUMBER
- BORING LOCATION



230 DOVE COURT
SANTA PAULA, CA 93060
PH: 805-525-5563
FAX: 805-525-2896



October 31, 2014

Mr. Brian McCarthy
Meridian Consultants
860 Hampshire Road, Suite P
Westlake Village, CA 91361

Subject: Santa Paula West Business Park
15320 West Telegraph Road, Santa Paula
Environmental Case Review

Dear Mr. McCarthy:

PW Environmental (PW) prepared this *Environmental Case Review* for the properties located at the future Santa Paula West Business Park. This report outlines historical work done at the properties and nearby properties by PW, along with information obtained while conducting this work. This report also contains a general file search conducted on the properties by Environmental Data Resources, along with PW's interpretation of the findings.

We trust this report addresses your current requirements. Please contact the undersigned should you have questions or comments regarding this report.

Respectfully submitted,

PW ENVIRONMENTAL

A blue ink signature of Bryn Home, consisting of a stylized first name and a last name.

Bryn Home
Project Scientist

A black ink signature of Richard Botke, featuring a large, circular initial 'R' and a long horizontal line extending to the right.

Richard Botke
Senior Vice President

ENVIRONMENTAL HISTORY REVIEW SANTA PAULA WEST BUSINESS PARK SANTA PAULA, CALIFORNIA

EXECUTIVE SUMMARY

Areas described below are presented on Figures 1 through 4.

GENERAL PARCEL DESCRIPTIONS

The sites are bordered by West Telegraph Road to the north, the 126 to the south, Beckwith and Todd road to the east, and agricultural land to the west, in Santa Paula (Figure 1). They were formerly operated as agricultural land, with some storage areas for agricultural equipment and supplies, along with vehicular storage. A Railroad track splits the parcels in the center, running northeast/southwest.

Historically leaking aboveground storage tanks (AST) were previously located within Parcels #1 and #2 (Figure 2). PW was involved with the complete cleanup and site closure of diesel contaminated soil on Parcel #1. During the investigation on Parcel #1, it was determined that there was residual contamination left on Parcel #2 from a previous site excavation. The contamination on Parcel #2 was left in place.

Generally speaking, the search of Environmental Data Resources (EDR) records did not indicate any unknown recognized environmental conditions at the property.

RECOMMENDATIONS

The extent of residual contamination on Parcel #2 has not been delineated and is current unknown. At this time, it is anticipated that contamination is in the 15-25 feet below ground surface range. Geoprobe borings would need to be conducted in this area to delineate the residual contamination to determine if it would cause an issue during grading activities.

There is a possibility for residual contamination to be present at the northern edge of Parcel #5, from an uncompleted remedial excavation on the parcel to the north. Geoprobe borings would need to be conducted in this area to determine if residual contamination extended to this parcel.

All of the parcels have been used as agricultural land from as far back as 1938 (last aerial photograph), and most likely from much later. Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few. Surface grab samples would need to be conducted throughout the parcels to determine if there is residual lead, arsenic, or other pesticides from historical land uses.

The residence in the northwest corner of the Parcel #1 has been in place since sometime between 1947 and 1959, and may contain lead paint and/or asbestos.

It appears that power poles still exist on the property. Any old transformers located on-site may contain PCB oils, and areas around the transformer locations may contain PCBs.

General storage areas are in location on Parcel #2 and #4. It is unknown what was stored at the location. A visual check of the areas should be performed to see if there is any visual surface staining, which could indicate historical contamination from leaks or spills.

PARCEL #1
15320 WEST TELEGRAPH ROAD
SANTA PAULA, CA
Former Bannon Ranch
VCP File #V0002601
Global ID #T0611116855
AP#0980010155

SITE HISTORY, PW INVOLVEMENT

Areas described below are presented on Figures 1 through 4. Copies of the reports listed below are available upon request.

Above Ground Storage Tanks

In December of 2005, PW removed one, 15,000-gallon Aboveground Storage Tank (AST) and one, 20,000-gallon AST. Following AST removal activities, two confirmation soil samples (AST-1 and AST-2) were collected and analyzed for total petroleum hydrocarbons as oil and diesel (TPH-O and TPH-D).

Evaluation of the laboratory analytical results for soil samples AST-1 and AST-2 indicated petroleum hydrocarbon contamination beneath the former AST locations. PW's *AST Removal Report*, dated January 9, 2006, summarized the AST removal activities.

To further evaluate the extent of hydrocarbon contamination associated with the former AST locations, PW advanced nine hand auger borings on January 5, 2006. The borings varied in depth from 5 feet bgs to 16 feet below ground surface (bgs). Hydrocarbon odors and staining were observed in collected soil samples. Groundwater was observed at 16 feet bgs.

Concentrations of TPH-D and TPH-O were reported in the majority of the analyzed soil samples. TPH-D and TPH-O were detected above the state Recommended Cleanup Levels (RCLs) in soil samples collected from borings HA1, HA2, HA3, HA4, HA5, HA7, and HA9. The results of this assessment are outlined in PW's *Hand Auger Assessment Report*, dated January 11, 2006.

Based on the findings in the *AST Removal Report* and PW's *Hand Auger Assessment Report*, PW commenced remedial excavation activities in January of 2006. Approximately 20,000 cubic yards of "clean" soil were excavated, along with approximately 6,000 cubic yards of contaminated soil.

As soil excavation progressed, evaluation of field and analytical data indicated that contaminant concentrations were decreasing from the center heading to the north and east. But as confirmation soil samples were collected further to the east, soil hydrocarbon concentrations began to increase, indicating an off-site source. An assessment was conducted along the eastern property line of Bannon Ranch to evaluate the potential for an off-site contaminant source. In February of 2006, nine borings were advanced between approximately 15 and 50 feet bgs (B1 through B9). Groundwater samples were collected from borings B1, B3, and B8. Indications of

hydrocarbon contamination in the soil were observed in borings B1, B4, B5, B7 and B8. Evaluation of field and laboratory analytical data suggested a source of diesel and oil contamination from the adjacent property, which appeared to be contributing to the contamination observed on the Bannon Ranch property. The results of this assessment were detailed in PW's *Property-Line Soil and Groundwater Assessment Report*, dated March 15, 2006.

The excavated contaminated soil was treated on site through a screener/shredder while a compost mixture was added. Three groundwater monitoring wells (MW1 through MW3) were installed in April 2006. The interpretation of the analytical data from these wells indicated that the groundwater was not impacted above the State MCLs. The results of this assessment were detailed in PW's *Remedial Excavation Report*, dated June 6, 2006, and *Groundwater Assessment*, dated February 23, 2007.

Underground Storage Tanks

PW removed one, 500-gallon steel Underground Storage Tank (UST) on December 14, 2005. The UST was located between the former location of the barns, near the center of the property. After the UST removal activities, four confirmation soil samples were collected. Sample results indicated that there were no major releases from the UST.

SITE HISTORY REVIEW, EDR

A review of EDR records did not indicate any recognized environmental conditions outside of what was previously known by PW. A copy of the EDR report is included as Appendix A.

DISCUSSION

The majority of contaminated soil was removed from under the former ASTs. Only minor contamination is present at depths of approximately 20 feet bgs, and should not pose an issue during grading of the site.

Although there are no recognized environmental conditions at the property, it has been used as agricultural land from as far back as 1938 (last aerial photograph). Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few.

The residence in the northwest corner of the property has been in place since sometime between 1947 and 1959, and may contain lead paint and/or asbestos.

It appears that power poles still exist on the property. Any old transformers located on-site may contain PCB oils, and areas around the transformer locations may contain PCBs.

**PARCEL #2
SANTA PAULA, CA
Former Bender Farms
AP#0980010165**

SITE HISTORY, PW INVOLVEMENT

Areas described below are presented on Figures 1 through 4. Copies of the reports listed below are available upon request.

Based on findings from the remedial excavation at Bannon Ranch (Parcel #1), it was apparent there was an offsite source of contamination mingling with the current contaminant plume. PW obtained historical topographic maps and aerial photographs from Environmental Data Resources, Inc. Review of the aerial photographs, indicated that ASTs have been in the specific and general location of the removed ASTs since at least 1929. At least one AST was present on the adjacent property to the east. Later aerial photographs showed the AST on the adjacent property to be approximately 5 to 10 feet east of the current property line.

After further research on the site, PW obtained a copy of the *Report on Excavation of Oil-Containing Soil at the Former Nomel Trust Ranch on Telegraph Road Santa Paula, California*, dated, August 13, 1999, generated by Holguin, Fahan, and Associates, Inc. (HFA). The HFA report summarizes the remedial excavation activities performed on the adjacent eastern property to remove "oil-containing soil beneath the location of a former aboveground storage tank". The oil was "used to fill smudge pots". Excavation activities were performed from July 16 through 21, 1999. The report states that the remedial excavation was 36 feet wide by 54 feet long by 20 feet deep. Approximately 1,053 cubic yards of soil was removed and spread on the property roads as base material. One soil sample was collected and submitted for laboratory analysis. The one soil sample was analyzed for benzene, toluene, ethylbenzene, and xylenes using EPA Method 8020. The laboratory analytical results indicated concentrations of ethylbenzene and xylenes at 0.015 and 0.059 mg/kg, respectively. Based on the soil sample Chain-of-Custody (COC), that was included in the report, the one soil sample was not analyzed for TPH-O or TPH-D.

An assessment was conducted along the eastern property line of Bannon Ranch to verify that contamination was removed during the remedial excavation conducted by HFA. The results of this assessment were detailed in PW's *Property-Line Soil and Groundwater Assessment Report*, dated March 15, 2006. Groundwater was first encountered in boring B1 approximately 24 feet bgs during drilling. No hydrocarbon odors or sheen were observed in the groundwater sample collected from B1 but a septic odor was apparent. In B8, saturated intervals were observed approximately 30 feet bgs and 37 feet bgs. These intervals were separated by a 3-foot thick, lean clay.

Four cross-sections were completed using soil analytical data from the property-line assessment and the remedial excavation. The cross-section locations are displayed on Figures 2. Cross-section A-A' (Figure 3) extends from B1 to B5 and show the approximate impacted soil contact projected through sandy and clayey intervals. Cross-section B-B' (Figure 4) extends along the

eastern property line from B2 through B7 (includes B1) and displays clayey soil with lenses of sand and gravel with corresponding hydrocarbon concentrations. Cross-section C-C' (Figure 5) extends from hand auger HA16 through boring B9. This cross-section extends from the southern edge of the remedial excavation to the south and displays the southern terminus of soil contamination. Figure 6 is a schematic drawing that displays the approximate location of the former AST in relation to the remedial excavation, boring B1, and the eastern property line. This figure also shows the location and hydrocarbon concentrations and depths of selected remedial excavation samples in respect to B1.

SITE HISTORY REVIEW, EDR

EDR did not report any findings for the property, including the AST removal and remedial excavation. This indicates the excavation work was not conducted under regulatory oversight, and was done solely at the discretion of the owner. A copy of the EDR report is included as Appendix A.

DISCUSSION

As of April of 2006, contamination remained in place on the property at approximate depths of 20 to 25 feet, near the western border in the location of the sloped area (Figure 3).

The parcel has been used as agricultural land from as far back as 1938 (last aerial photograph). Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few.

There is also what appears to be a storage area on the south side of the property, which was put in some time between 1994 and 2005. It is unknown what was stored at the location. A visual check of the area should be performed to see if there is any visual surface staining, which could indicate historical contamination from leaks or spills.

**PARCEL #3
SANTA PAULA, CA
AP#0980010195**

SITE HISTORY, PW INVOLVEMENT

PW has had no historical involvement with this property.

SITE HISTORY REVIEW, EDR

A review of EDR records did not indicate any recognized environmental conditions at the property. A copy of the EDR report is included as Appendix A.

DISCUSSION

Areas described below are presented on Figures 1 through 4.

Although there are no recognized environmental conditions at the property, it has been used as agricultural land from as far back as 1938 (last aerial photograph). Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few.

It appears that power poles still exist on the property. Any old transformers located on-site may contain PCB oils, and areas around the transformer locations may contain PCBs.

**PARCEL #4
SANTA PAULA, CA
AP#0980010185**

SITE HISTORY, PW INVOLVEMENT

PW has had no historical involvement with this property.

SITE HISTORY REVIEW, EDR

A review of EDR records did not indicate any recognized environmental conditions at the property. A copy of the EDR report is included as Appendix A.

DISCUSSION

Areas described below are presented on Figures 1 through 4.

Although there are no recognized environmental conditions at the property, it has been used as agricultural land from as far back as 1938 (last aerial photograph). Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few.

There is also what appears to be a storage area on the western side of the property, which was put in some time between 2005 and 2009. It is unknown what was stored at the location. A visual check of the area should be performed to see if there is any visual surface staining, which could indicate historical contamination from leaks or spills.

It appears that power poles still exist on the property. Any old transformers located on-site may contain PCB oils, and areas around the transformer locations may contain PCBs.

**PARCEL #5
SANTA PAULA, CA
AP#0980020045**

SITE HISTORY, PW INVOLVEMENT

Although PW has had no historical involvement directly with this property, PW was involved with an Underground Storage Tank (UST) removal and remedial excavation directly across the train tracks to the north in 1987. The excavation was halted prior to the removal of all contaminated soil, and a subsequent assessment was not conducted to determine the extent of the soil contamination plume or if there were any impacts to groundwater. The case was closed with contamination in place.

SITE HISTORY REVIEW, EDR

A review of EDR records did not indicate any recognized environmental conditions at the property, but did include the former leaking UST case mentioned above at the parcel to the north. A copy of the EDR report is included as Appendix A.

DISCUSSION

Areas described below are presented on Figures 1 through 4.

Although there are no recognized environmental conditions at the property, it is unknown if the contamination to the north impacted soil and/or groundwater on the northern border of the property.

The parcel has been used as agricultural land from as far back as 1938 (last aerial photograph). Shallow soils may contain residual legacy pesticides, such as DDT, Chlordane, and lead arsenate, to name a few.

LIMITATIONS

This report, including all attached exhibits, describes results of all or a portion of PW Environmental's investigation into subsurface conditions at the subject site. The findings and recommendations are based on the application of a variety of scientific and technical disciplines to data developed regarding the subject property. The data was developed by observation, sampling, and gathering of information (both documentary and oral) about the property. Some of this data is subject to change over time. Some of this data is based on information not currently observable or measurable, but recorded by documents or orally reported by individuals. The findings and recommendations are based, in part, on application of sampling techniques. Said techniques inherently involve a risk of overstating or understating the presence or severity of contamination. The findings and recommendations are based also on sampling only for the specific contaminants shown in the laboratory reports. The samples taken were not subjected to testing for every contaminant known to the environmental industry, and every biological and/or chemical condition known to the environmental industry.

PW Environmental is not responsible for the accuracy of data not developed by PW Environmental or its agents or subcontractors. PW Environmental is not responsible for overstating or understating the presence or severity of contamination. PW Environmental is not responsible for failing to test for contaminants or biological/chemical conditions it had no reason to know were of concern at the subject site.

PW Environmental has performed this investigation in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. No warranty, either expressed or implied, was made. PW Environmental is not responsible for the ramifications caused by the concealment, withholding or failure to disclose of relevant information known to anyone contacted by PW Environmental in connection with its work at the subject site. This report and all field data, notes, laboratory test data on which it is based (hereinafter collectively designated "Information") were prepared by PW Environmental solely for the benefit of PW Environmental's client Meridian Consultants. Meridian Consultants has the legal right to release all or a portion of this Information, in its discretion, to third parties. Said third parties may not have access to all information upon which this report was based, nor access to prior reports, nor to other information developed and not placed in any report (hereinafter collectively designated "Additional Information"). The presence or absence of such Additional Information may materially affect the statement contained in this report. Any use or reliance upon this report of Information by a party other than Meridian Consultants, therefore, shall be solely at the risk of such third party and without legal recourse against PW Environmental, its employees, officers, or directors, regardless of whether the action in which recovery of damages is sought based upon contract, tort, statute or otherwise.

APPENDIX A

EDR REPORT

APPENDIX 4.9

**Adams Barranca Existing Condition Hydrology Study and Preliminary Hydrology
Report for Santa Paula West Business Park**

Adams Barranca
Existing Condition Hydrology Study
Santa Paula, CA

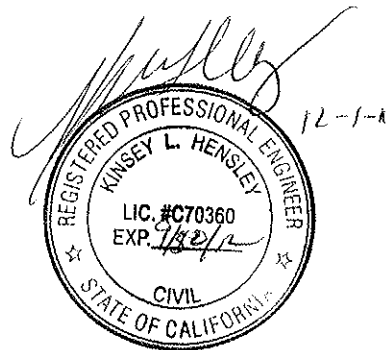
Prepared for:

McGaelic Group
&
Bender Realty Ltd

September, 2011
Revised November, 2011
Revised December, 2011

Prepared by:

Jensen Design & Survey, Inc
1672 Donlon Street
Ventura, CA 93003



ADAMS BARRANCA HYDROLOGY STUDY

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APPENDIX

- A: Overall Drainage Exhibit, Exhibit 1
- B: Existing Soils Map, Exhibit 2
- C: 100 year hydrology rainfall contours, Exhibit 3
- D: Existing Hydrology Calculations
- E: FEMA FIRM Maps
- F: VcRAT 2.6 Output
- G: VcRAT 2.2 Output
- H: Time of Concentration Output
- I: Reference Material

ADAMS BARRANCA HYDROLOGY STUDY

Introduction

The Santa Paula West Business Park is a planned commercial and industrial development containing a mixture of industrial, research and development, retail, office and commercial uses. The Specific Plan project site is located just outside the limits, but within the sphere of influence, of the City of Santa Paula. The land use is currently agricultural. The property is bounded by industrial development on the east, Adams Barranca on the west, Telegraph Road to the north, and Highway 126 to the south. Splitting the property east/west is the railroad operated by the Ventura County Transportation Commission Railroad (VCTC). The property ranges in elevation from approximately 250 to 222 feet above mean sea level and generally slopes from the north to the south. The Regional Location Map is shown below as Figure 1.

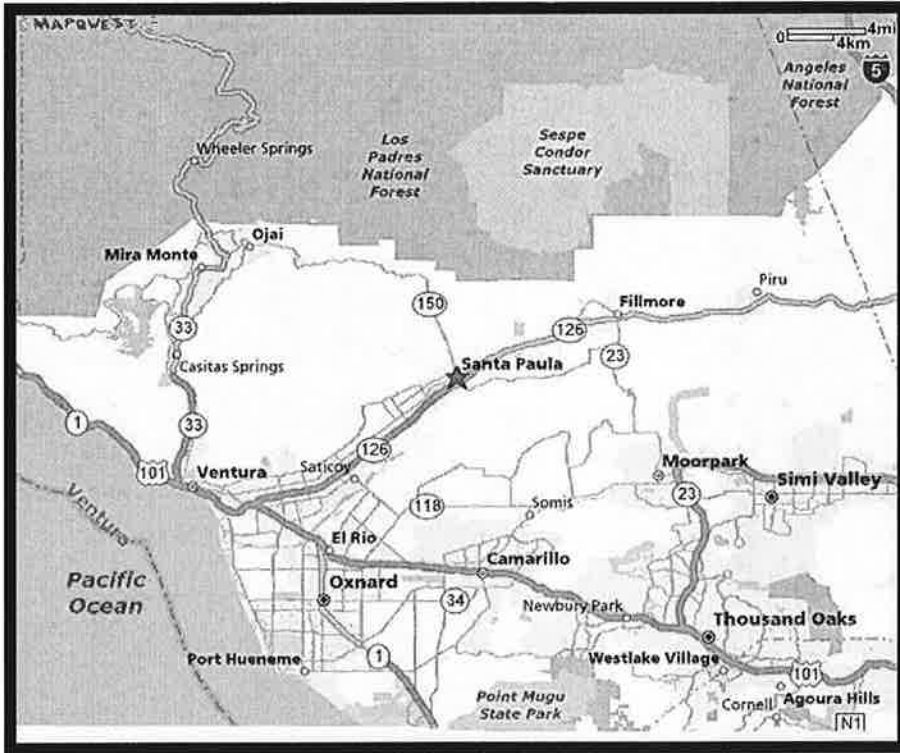


FIGURE 1 - REGIONAL LOCATION MAP

ADAMS BARRANCA HYDROLOGY STUDY

Purpose

The Santa Paula West Business Park Specific Plan encompasses approximately 58 acres of land in unincorporated Ventura County west of the City of Santa Paula. The proposed Specific Plan would permit the development of a variety of clean office, industrial and retail buildings ranging in size.

Access to the site is provided by Beckwith Road, Telegraph Road, and Faulkner Road. Secondary access is provided by Todd Lane (a private road). Figure 2 shows the project location. This study provides an evaluation of the existing drainage condition within and adjacent to Adams Barranca. Existing site conditions show that the proposed project is located within a Floodplain Zone A. A CLOMR will be filed with the development of this proposed project to redefine the flood zone limits using the flows determined by this supporting hydrology study. This primary reason for this report is to have an agreement between the affected agencies (FEMA, City of Santa Paula, and County of Ventura) on existing conditions within Adams Barranca.

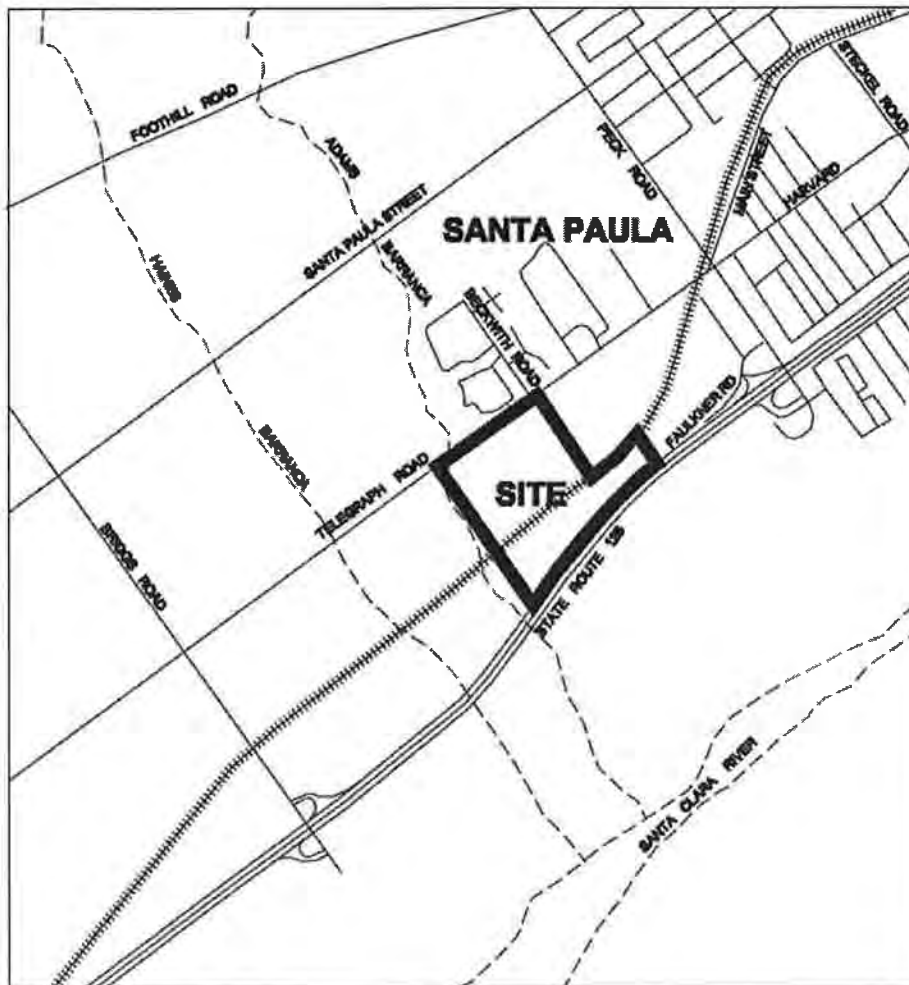


FIGURE 2 – PROJECT LOCATION MAP

ADAMS BARRANCA HYDROLOGY STUDY

Existing Drainage Area Descriptions

Adams Barranca watershed is tributary to the Santa Clara River in Ventura County and is approximately 8.8 square miles. Adams Canyon flows in a north south direction for approximately seven miles before it's confluence with the Santa Clara River. The 2005 Lidar topography provided by the County of Ventura on NAVD 1988 vertical datum shows the watershed as generally steep canyon areas, with the downstream two miles extending from Foothill Road to the Santa Clara River being flat agricultural area.

Adams Canyon is currently undeveloped. The land use in the watershed is mostly classified as herbaceous, scrub and brush rangeland, with some cropland, pasture and orchards. The watershed has high debris production potential and there is an existing debris basin just upstream of the Foothill Road Crossing. The debris basin has not been considered in this report for any storm attenuation. The soils types are mostly classified as Ventura Soil Type 1, equating to NRCS hydrologic soil group D described as "clay loam, silty clay loam, sandy clay, silty clay or clay." (NRCS, 2007) The remaining watershed is mainly classified as Ventura Soils Types 2 and 3, equating to NRCS hydrologic soil group C: "Hydrologic group C soils are sandy clay loam" (NRCS, 2007). Refer to **Exhibit 2** for soils types.

Hydrology Methodology

The existing hydrology conditions of the Adams Canyon Watershed were determined according to the Ventura County Watershed Protection District Hydrology Manual, the County's Time of Concentration Calculator and Rational Method Design Program, VCRat 2.6 and VCRat 2.2.

The watershed was subdivided into approximately 98 subareas ranging from 5.5 to 108 acres subareas using Lidar topography. Ventura County standards prefer a range of 40-80 acre watersheds, which 84% of the subareas are, but allows for an absolute maximum subarea of 120 acres. Then each of these were broken down into an overland flowpath and a channel flowpath to calculate the Time of Concentration. A Time of Concentration was determined for 25% of the subareas (Appendix D), and the parameters are listed below:

- Rainfall Zone K
- Flood Zone 2
- 100 – year storm frequency
- Undeveloped

ADAMS BARRANCA HYDROLOGY STUDY

- 100% impervious for all subareas
- Weighted soil average calculated in GIS from Ventura County soils information.

Once the Time of Concentration was determined for 25% of the subareas, we analyzed the remaining subareas based on engineering judgment for similar traits and assigned those subareas times of concentration based on the calculated subareas. The VCRat 2.6 program was then used to calculate the 100-year peak flow rate and volume for the entire watershed area. Runoff hydrographs are computed within the model for each subarea, routed through a conveyance system and combined with other subarea hydrographs as the analysis proceeds downstream through the watershed. The additional VcRat 2.6 Parameters are listed below:

- Routing Type was mountain channel if slope is >5%. Natural Valley if slope <5%
- Routing Length used Lidar and best judgment
- Routing slope used Lidar Topography.

Once a VCRat file was complete, an aerial reduction factor was calculated for the overall watershed and each confluence point that has a contributing area greater than 640 acres. Ventura County allows for an aerial reduction, which is a factor that accounts for the varying intensities over watersheds greater than 640 acres. An aerial reduction factor is computed by taking the VCRat 2.6 output file and using VCRat 2.2 to calculate the revised flow rates, see **Appendix G** for the program output. Each confluence point has a different aerial reduction factor due to the difference in contributing drainage areas.

Table 1 – Aerial Reduction Factors

Node	Acres	Aerial Reduction Factor
14	951	0.924
48	961	0.923
60	3116	0.854
114	5580	0.794
116	5580	0.791

ADAMS BARRANCA HYDROLOGY STUDY

A fattening factor was used to adjust the volumes calculated by VCRAT to be more accurate based on the watershed location. The composite soil type for each basin was converted to the corresponding NRCS hydrologic soil group (Group C) and appropriate curve numbers were calculated on the basis of land use, vegetation type, and soil condition per Exhibit 14A in the Ventura County Hydrology Manual. Supplemental information provided in a report completed by PACE Engineering shows the composite curve numbers for each Node (**Appendix I**), which was used for the generation of the Curve Numbers below. The weighted average 100-year 24-hour rainfall value was calculated using GIS and this was used to calculate the fattening factor used in the VcRAT 2.6 program.

Table 2 – Fattening Factors

Node	SCS CN	Rainfall Contour (in)
14	60	12.0
48	61	11.65
60	60	11.5
114	60	10.75
116	60	10.65

Table 3 – Adams Canyon 100 year Discharges and Volumes

Node	Acres	Q100 (cfs)	Volume 100-year (ac-ft)
14	951	2436	520
48	961	2412	515
60	3116	5688	1595
114	5580	5861	2561
116	5580	5690	2525

ADAMS BARRANCA HYDROLOGY STUDY

Table 4 – Adams Canyon Existing Structure Capacities

	Type of Undercrossing	Approximate Capacity (cfs)
Telegraph Road	10' H x 24' W RCB	3,200
Railroad Crossing	8' H x 28' W Crossing	2,400
Highway 126	Double 12' H x 10' W	2,200

Adams Barranca Summary

Santa Paula West Business Park does not discharge water to Adams Barranca along the west boundary of the project. The amount of water that is within the creek and overtops the creek banks is due to insufficient capacity at existing crossings along the channel. Along with the proposed development, the creek is proposed to be altered to contain the existing flows and route floodwaters away from the proposed structures to remove the future development from the current Flood Zone 'A' per FIRM Panels 778 and 779 of 1275 (**Appendix E**). The primary reason for this report is to have an agreement between the affected agencies (FEMA, City of Santa Paula, and County of Ventura) on existing conditions. Once the existing flow rate conditions are agreed upon, we can move forward with a proposed design condition that will benefit the property. Santa Paula West Business Park will file a CLOMR and a LOMR to adjust the current FIRM Maps with the County using the adjusted flow rates and the proposed design along the eastern boundary of the project.

References

- Ventura County Watershed Protection District, December 2006, "Ventura County Hydrology Manual"
- National Resources Conservation Service (NRCS) 2007. Summary description of NRCS Hydrologic Soil Groups. <http://soils.usda.gov/>
- PACE, Inc, "Regional Hydrological Investigation, Adams Canyon", October 2007

APPENDIX A

Node 14	
VCRAT Results:	
Q ₁₀₀ Peak Discharge (cfs)	2436
Q ₁₀₀ Volume (acre-ft)	520
Tributary Area (acres)	951

Node 48	
VCRAT Results:	
Q ₁₀₀ Peak Discharge (cfs)	2412
Q ₁₀₀ Volume (acre-ft)	515
Tributary Area (acres)	961

Node 60	
VCRAT Results:	
Q ₁₀₀ Peak Discharge (cfs)	5688
Q ₁₀₀ Volume (acre-ft)	1595
Tributary Area (acres)	3115

Basin 114	
VCRAT Results:	
Q ₁₀₀ Peak Discharge (cfs)	5861
Q ₁₀₀ Volume (acre-ft)	2561
Tributary Area (acres)	5580

Basin 116	
VCRAT Results:	
Q ₁₀₀ Peak Discharge (cfs)	5690
Q ₁₀₀ Volume (acre-ft)	2525
Tributary Area (acres)	5580

Nodes (Red dot)
 Streams (Blue line)
 Project Boundary (Red dashed line)
 VCRAT Subareas (Grey box with ID)

1,200 600 0 1,200
 Feet
 1 inch equals 1,200 feet



FIGURE

JOB

SCALE 1" = 1200'

DESIGNED

DRAWING

CHECKED

DATE

JOB NO.

SANTA PAULA

ADAMS CANYON RANCH

CA


TITLE

VCRAT SUBAREA
PARAMETERS











APPENDIX B

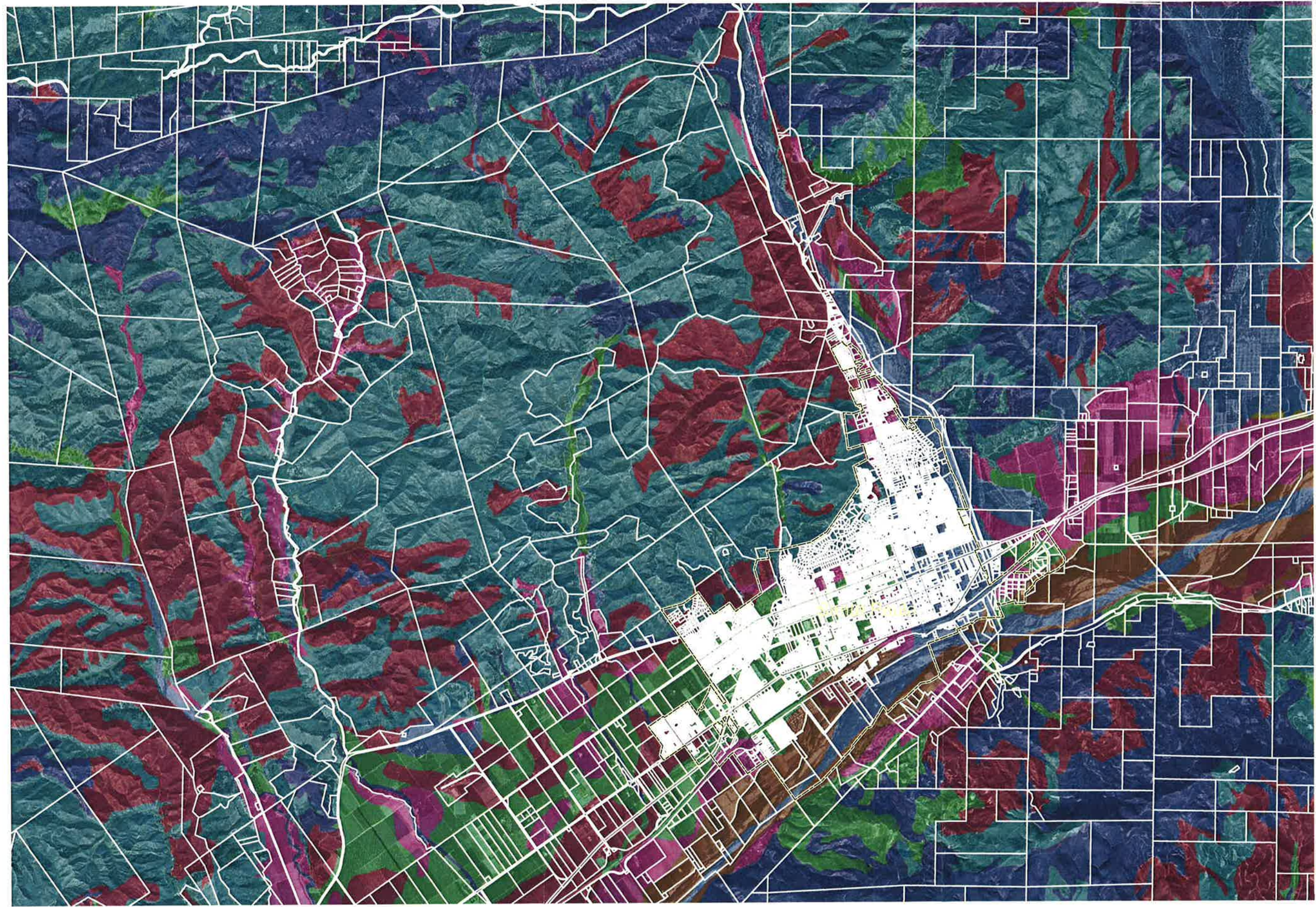
Legend

allsoil

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SOILNO

-  0
-  1
-  2
-  3
-  4
-  5
-  6
-  7
-  10
-  99



Prepared by: Jensen Design & Survey Inc.

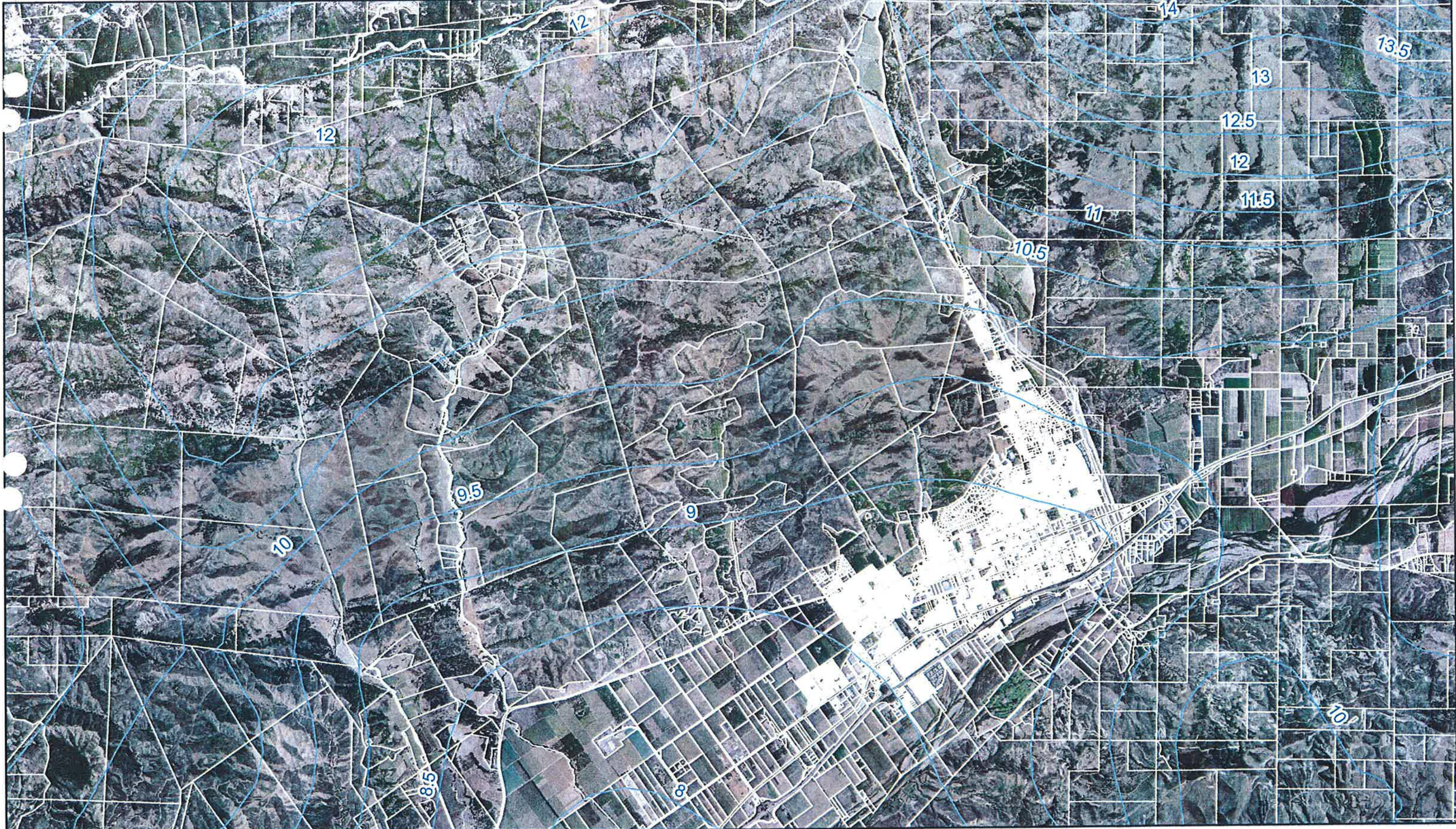
Parcel boundaries on this exhibit are a graphical representation only. They should not be used in place of record boundary information and/or field survey data and do not accurately define property boundaries.

Soils Map Adams Barranca

1 inch = 4,000 feet



APPENDIX C



Prepared by: Jensen Design & Survey Inc.

Parcel boundaries on this exhibit are a graphical representation only. They should not be used in place of record boundary information and/or field survey data and do not accurately define property boundaries.

ADAMS RAINFALL CONTOUR 100 YR

1 inch = 4,000 feet

EXHIBIT 3



APPENDIX D

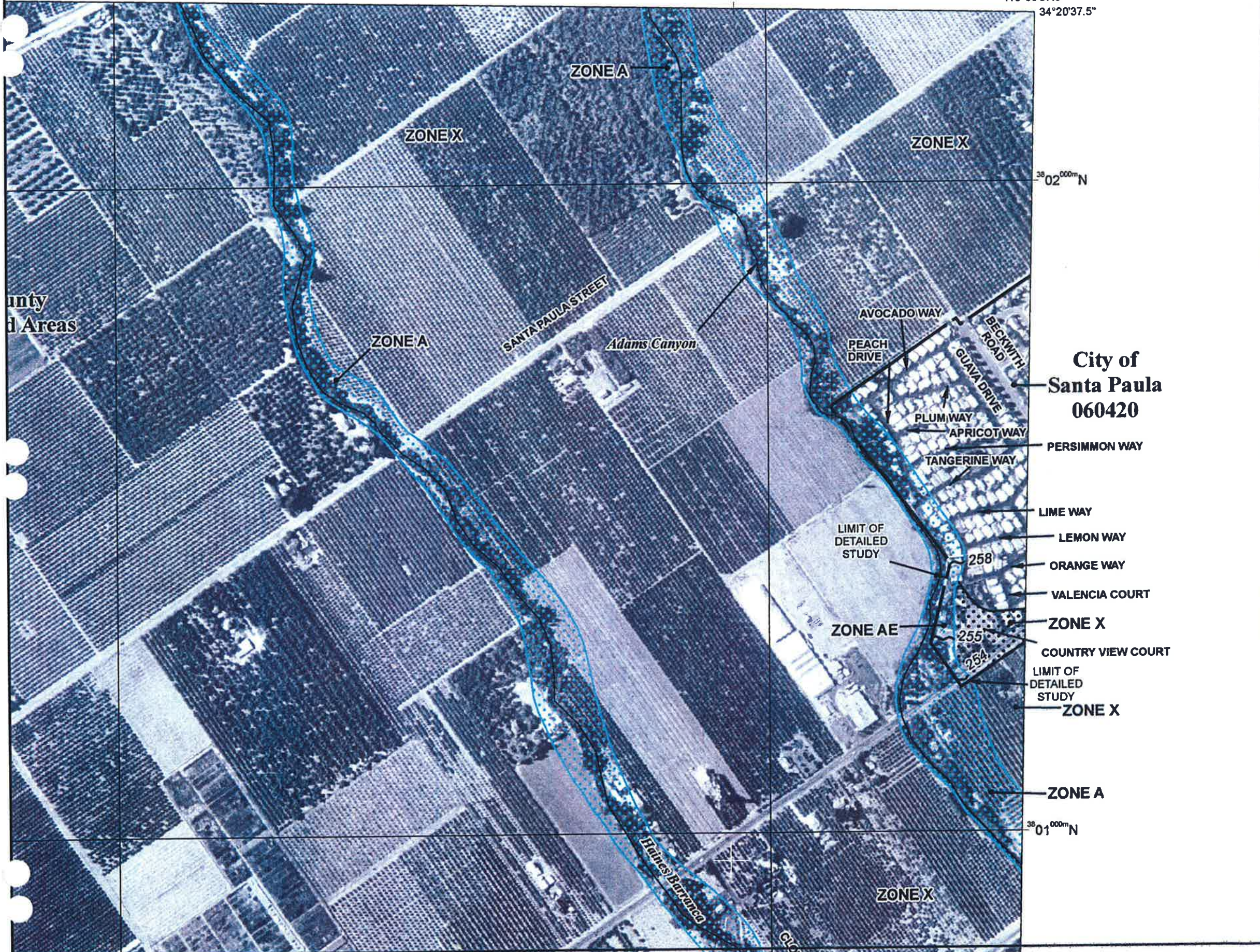
APPENDIX D: EXISTING CONDITION SUBAREA SUMMARY

Adams Barranca
11/28/2011

BASIN ID	AREA (acres)	100 year Tc (mins)	Vc Soil Type	Routing Length (ft)	Min Elev (ft)	Max Elev (ft)	Routing Slope	Routing Type	Q100 (before AR factor) (cfs)	Q100 (cfs)	AR Factor	Volume (ac-ft)
1A*	85.4	10	1.3	1635	1200	1484	0.174	N.M.				
2A	78.9	9	1.6	1750	1069	1200	0.075	N.M.				
3A*	72.9	5	2	-	-	-	-	-				
4B	87.8	9	1.2	-	-	-	-	-				
5B*	54.0	7	1.1	2148	1069	1375	0.142	N.M.				
6B	80.2	10	1.6	-	-	-	-	-				
7AB	459.1			2215	948	1069	0.055	N.M.			n/a	
8A	94.5	7	2.5	-	-	-	-	-				
9C	78.8	6	1.9	2067	1461	2303	0.407	N.M.				
10C*	73.1	7	1.1	1977	1116	1461	0.175	N.M.				
11C	51.0	6	1.6	-	-	-	-	-				
12C*	108.1	5	2.1	1913	948	1116	0.088	N.M.				
13C	86.5	12	2.4	-	-	-	-	-				
14AC	951.0			1101	904	948	0.040	N.V.	2637	2436	0.924	520
15A	30.0	5	2.9	-	-	-	-	-				
16D	80.4	7	2.1	830	904	952	0.058	N.M.				
17D	12.2	5	2.8	-	-	-	-	-				
18AD	1073.6			2430	817	904	0.036	N.V.	2832	2609	0.921	
19A	66.4	7	2.7	-	-	-	-	-				
20E	70.8	5	2	1615	875	974	0.061	N.M.				
21E	67.5	5	2	1242	817	875	0.047	N.V.				
22E*	38.8	5	2	-	-	-	-	-				
23E	49.6	5	2	-	-	-	-	-				
24AE	1366.7			818	796	817	0.026	N.V.	3265	2945	0.902	
25A	18.0	5	3.3	-	-	-	-	-				
26A	55.8	7	2	790	775	796	0.027	N.V.				
27A*	79.2	6	2.2	950	752	775	0.024	N.V.				
28A	64.0	10	2.4	1069	724	752	0.026	N.V.				
29A	46.4	7	2	-	-	-	-	-				
30A*	40.3	5	2.1	1537	679	724	0.029	N.V.				
31A	52.8	7	2	-	-	-	-	-				

32B	99.3	7	1.5	735	1067	1149	0.112	N.M.				
33B	47.1	7	1.5	-	-	-	-	-				
34B	35.5	6	2.4	1710	969	1067	0.057	N.M.				
35B*	77.6	9	1.8	-	-	-	-	-				
36B*	99.6	9	2.1	736	931	969	0.052	N.M.				
37B	13.1	5	2.3	-	-	-	-	-				
38B	70.9	9	1.6	1438	881	931	0.035	N.V.				
39B	48.8	7	2.2	-	-	-	-	-				
40C	86.7	10	1.7	2063	1069	1405	0.163	N.M.				
41C	75.8	10	2.1	-	-	-	-	-				
42C*	107.2	12	1.4	1338	961	1069	0.081	N.M.				
43C	22.5	5	2.8	-	-	-	-	-				
44D	79.9	9	1.7	1840	960	1113	0.083	N.M.				
45D*	54.4	5	2.2	-	-	-	-	-				
46CD	426.6			1426	881	961	0.056	N.M.			n/a	
47C	42.6	7	2.2	-	-	-	-	-				
48BC	961.1			768	859	881	0.029	N.V.	2613	2412	0.923	515
49B	50.1	7	2.1	1183	818	859	0.035	N.V.				
50B*	78.8	7	2.5	1240	776	818	0.034	N.V.				
51B	27.5	5	2.4	-	-	-	-	-				
52E	78.6	9	2.3	782	776	823	0.060	N.M.				
53E	25.3	5	2.9	-	-	-	-	-				
54BE	1221.3			853	742	776	0.040	N.V.	2726	2688	0.986	
55B	13.7	5	2.4	-	-	-	-	-				
56F*	87.5	6	2	1222	742	801	0.048	N.V.				
57F	30.0	5	2.5	-	-	-	-	-				
58BF	1352.5			1584	643	742	0.063	N.M.	3116	2823	0.906	
59B*	39.7	5	2	-	-	-	-	-				
60BA	3115.4			1530	643	679	0.024	N.V.	6657	5688	0.854	1594.6
61A	54.9	7	1.6	-	-	-	-	-				
62A	79.9	6	2	1254	621	643	0.018	N.V.				
63A	41.3	6	1.3	-	-	-	-	-				
64B*	65.8	5	1.7	1577	616	736	0.076	N.M.				
65B	49.0	6	1.6	-	-	-	-	-				
66AB	3406.3			885	600	621	0.024	N.V.	6798	5757	0.847	
67A	24.3	5	1.5	-	-	-	-	-				
68A	56.8	6	2.7	1682	577	600	0.014	N.V.				

APPENDIX E



...ed in the Flood Insurance Study report for this jurisdiction.

...d insurance is available in this community, contact your Ins...
...al Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0778E

FIRM
FLOOD INSURANCE RATE MAP
VENTURA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 778 OF 1275
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0778	E
VENTURA COUNTY	060413	0778	E

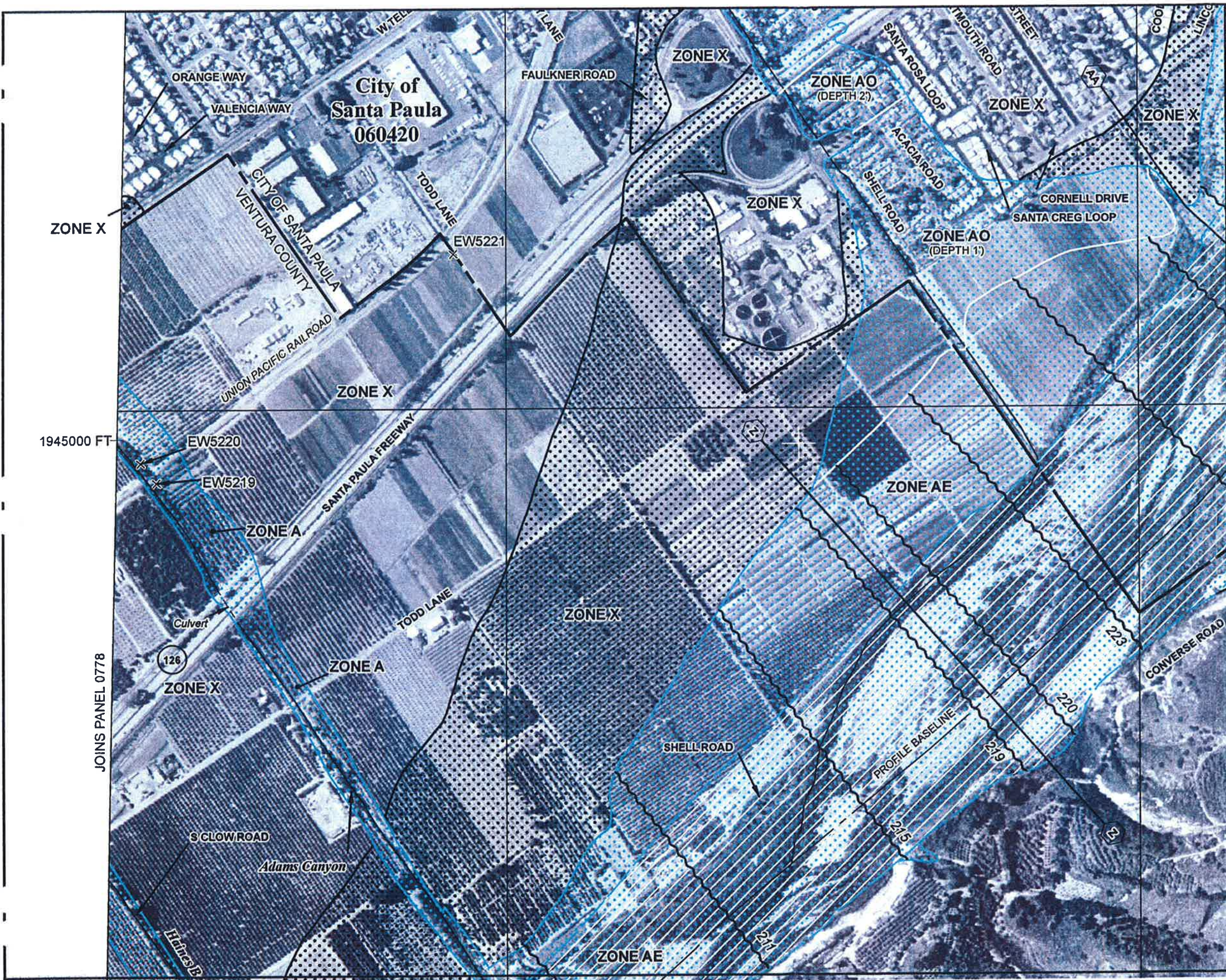
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



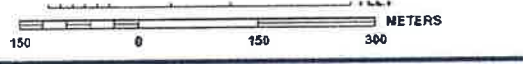
MAP NUMBER
06111C0778E
EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Insurance is available in this community, contact your Insurance Agent for more information. If you are not in the Flood Insurance Study report for this jurisdiction, contact your Insurance Agent for more information. For more information on the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0779E

FIRM
FLOOD INSURANCE RATE MAP
VENTURA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 779 OF 1275
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0779	E
VENTURA COUNTY	060413	0779	E

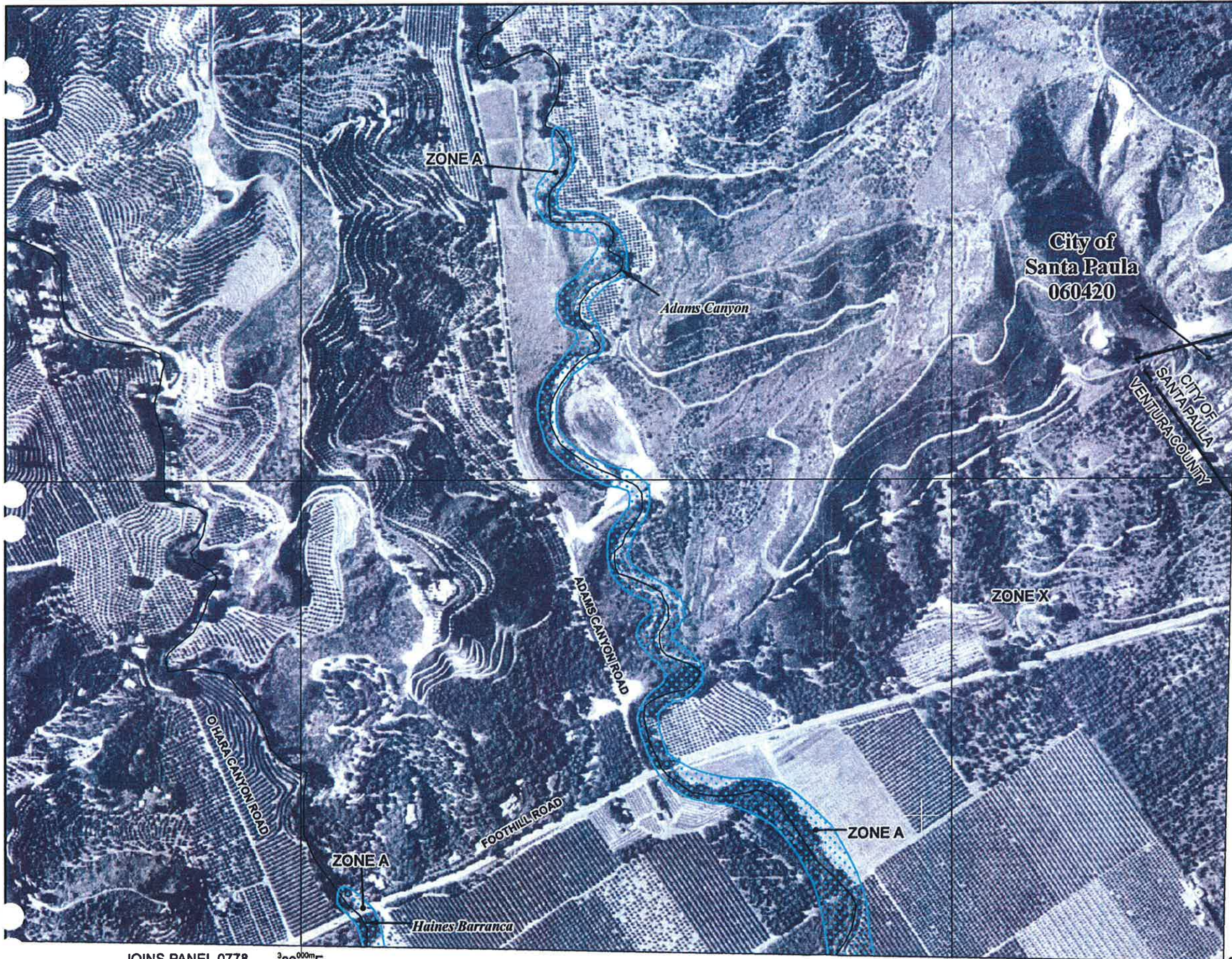
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06111C0779E

EFFECTIVE DATE
JANUARY 20, 2010

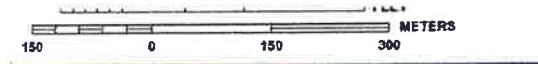
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



ated in the Flood Insurance Study Report for this jurisdiction.

d insurance is available in this community, contact your Ins
 al Flood Insurance Program at 1-800-638-6620.



PANEL 0776E

NFIP
NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP
VENTURA COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 776 OF 1275
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0776	E
VENTURA COUNTY	060413	0776	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06111C0776E

EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

JOINS PANEL 0778 3'06"000m E

3'07"000m E

34°20'3" 119°05'37.5"

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps, check the FEMA Flood Map Store at www.msc.fema.gov

APPENDIX F

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Modified Rational Model Results Report

Job: 4492 Project: Adams County VC Rat

Project Description

100 YEAR EVENT

VCRat version: 2.6.2008.11
VCRatIn version: 200703
DOS EXE version: PC 2.2-200809

9

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Page: 2

Mode] Results																
ROUTING AFTER ACCUMULATION																
Mode] Results																
ACCUMULATED DATA																
SUBAREA DATA AND RESULTS																
Node	Soil	Rain	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values	
ID	Type	Zone	(min)	Imp	(AC)	(CFS)	(AC)	(CFS)	(min)	Type	(ft)	(ft/ft)	(ft)	(Z)	CHNL	SIDES
(ft/s)	(ft)															
1A	Subshed 1A															
1A	010 K100	10	0	85	278	85	278	1154	1154	MOUNTAIN	1635	0.17400				
2A	Subshed 2A															
2A	020 K100	9	0	79	254	164	506	1156	1156	MOUNTAIN	1750	0.07500				
3A	Subshed 3A															
3A	020 K100	5	0	73	332	237	633	1156	1156							
4B	Subshed 4B															
4B	010 K100	9	0	88	303	88	303	1153	1153							
5B	Subshed 5B															
5B	010 K100	7	0	54	212	142	515	1153	1153	MOUNTAIN	2148	0.14200				
6B	Subshed 6B															

Basin ID	Subshed	Area (ac)	Peak (cfs)	Volume (acre-ft)	Topography	Other Data
6B	020 K100	10	0	80	244	Adams_Cyn_VCRat_basin_14AR.OUT
7AB	---	---	---	222	711	711 1157
8A	Subshed 8A	7	0	94	347	---
8A	020 K100	7	0	94	347	---
9C	Subshed 9C	6	0	79	320	---
9C	020 K100	6	0	79	320	---
10C	Subshed 11C	7	0	51	188	---
10C	020 K100	7	0	51	188	---
11C	Subshed 10C	6	0	73	313	---
11C	010 K100	6	0	73	313	---
12C	Subshed 12C	5	0	108	491	---
12C	020 K100	5	0	108	491	---
13C	Subshed 13C	12	0	87	236	---
13C	020 K100	12	0	87	236	---
14AC	---	---	---	398	1226	---
14A	---	---	---	951	2436	---
15A	---	---	---	951	2436	---
16A	Subshed 15A	5	0	30	129	---
16A	030 K100	5	0	30	129	---
17D	Subshed 16D	7	0	80	295	---
17D	020 K100	7	0	80	295	---
18D	Subshed 17D	5	0	12	51	---
18D	030 K100	5	0	12	51	---
19AD	---	---	---	92	324	---
20A	Subshed 19A	7	0	66	229	---
20A	030 K100	7	0	66	229	---
21E	Subshed 20E	5	0	71	323	---
21E	020 K100	5	0	71	323	---
22E	Subshed 22E	5	0	39	177	---
22E	020 K100	5	0	39	177	---
23E	Subshed 21E	5	0	68	309	---
23E	020 K100	5	0	68	309	---

```

*****
* INCOMING HYDROGRAPH PEAK (cfs): 2636.54 VOLUME (acre-ft): 181.79 *
* HYDROGRAPH ADJUSTMENT FACTOR: 0.92400 *
* ADJUSTED HYDROGRAPH PEAK (cfs): 2436.16 VOLUME (acre-ft): 167.97 *
* RUNOFF FACTOR(in): 6.56 TOTAL RAIN(in): 12.00 SCS Curve: 60 *
* FATTENED HYDROGRAPH PEAK (cfs): 2436.16 VOLUME (acre-ft): 519.71 *
*****

```


Model Results																	
ROUTING AFTER ACCUMULATION																	
SUBAREA DATA AND RESULTS																	
NODE	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES	
DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
(FT/S)	(FT)																
24E	:	Subshed 23E															
24E	:	020 K100	5	0	50	227	228	747	1155								
25AE	:				228	747	1367	3340	1157	VALLEY	818	0.02600					
26A	:	Subshed 25A															
26A	:	030 K100	5	0	18	77	1385	3355	1158								
27A	:	Subshed 26A															
27A	:	020 K100	7	0	56	207	1441	3497	1158	VALLEY	790	0.02700					
28A	:	Subshed 27A															
28A	:	020 K100	6	0	79	320	1520	3695	1157	VALLEY	950	0.02400					
29A	:	Subshed 28A															
29A	:	020 K100	10	0	64	195	1584	3829	1158	VALLEY	1069	0.02600					
30A	:	Subshed 29A															
30A	:	020 K100	7	0	46	170	1630	3890	1158								
31A	:	Subshed 30A															
31A	:	020 K100	5	0	40	182	1670	3929	1158	VALLEY	1537	0.02900					
32A	:	Subshed 31A															
32A	:	020 K100	7	0	53	196	1723	3959	1159								
33B	:	Subshed 32B															
33B	:	Clearing Hydrograph Bank: B															
33B	:	010 K100	7	0	99	389	99	389	1153	MOUNTAIN	735	0.11200					
34B	:	Subshed 33B															
34B	:	020 K100	7	0	47	174	146	555	1155								
35B	:	Subshed 34B															
35B	:	020 K100	6	0	36	146	182	687	1154	MOUNTAIN	1710	0.05700					
36B	:	Subshed 35B															
36B	:	020 K100	9	0	78	251	260	844	1157								
37B	:	Subshed 36B															
37B	:	020 K100	9	0	100	321	360	1142	1157	MOUNTAIN	736	0.05200					
38B	:	Subshed 37B															
38B	:	020 K100	5	0	13	59	373	1128	1158								
39B	:	Subshed 38B															
39B	:	020 K100	9	0	71	228	444	1320	1157	VALLEY	1438	0.03500					
40B	:	Subshed 39B															

Node	Code	Zone	Imp	Area (AC)	Flow (CFS)	Area (AC)	Flow (CFS)	Time (min)	Channel Type	Length (ft)	Slope	Size (ft)	H:V	N Values
40B	020	K100	7	0	49	181								
41C	Subshed 40C													
41C	Clearing Hydrograph Bank: C													
41C	020	K100	10	0	87	265	87	265	1154	MOUNTAIN	2063	0.16300		
42C	Subshed 41C													
42C	020	K100	10	0	76	231	163	460	1157					
43C	Subshed 42C													
43C	010	K100	12	0	107	314	270	766	1156	MOUNTAIN	1338	0.08100		
44C	Subshed 43C													
44C	010	K100	5	0	23	110	293	780	1156					
45D	Subshed 44D													
45D	020	K100	9	0	80	257	80	257	1153	MOUNTAIN	1840	0.08300		
46D	Subshed 45D													
46D	020	K100	5	0	54	246	134	384	1156					
47CD	Subshed 46D													
47CD					134	384	427	1165	1156	MOUNTAIN	1426	0.05600		
48C	Subshed 47C													
48C	020	K100	7	0	43	159	470	1206	1158					

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Model Results
ROUTING AFTER ACCUMULATION

Node	Code	Zone	Imp	Area (AC)	Flow (CFS)	Area (AC)	Flow (CFS)	Time (min)	Channel Type	Length (ft)	Slope	Size (ft)	H:V	N Values
49BC				470	1206	963	2613	1158	VALLEY	768	0.02900			
50B	Subshed 49B													
50B	020	K100	7	0	50	185	1013	2655	1158	VALLEY	1183	0.03500		
51B	Subshed 50B													
51B	020	K100	7	0	79	292	1092	2726	1159	VALLEY	1240	0.03400		
52B	Subshed 51B													
52B	020	K100	5	0	28	127	1120	2731	1160					
53E	Subshed 52E													
53E	Clearing Hydrograph Bank: E													
53E	020	K100	9	0	79	254	79	254	1153	MOUNTAIN	782	0.06000		
54E	Subshed 53E													
54E	030	K100	5	0	25	107	104	325	1156					
55BE	Subshed 54E													
55BE					104	325	1224	2947	1160	VALLEY	853	0.04000		

Adams_Cyn_VCRat_basin_14AR.OUT

56B :	Subshed 55B	5	0	14	64	1238	2937	1160	-----	-----	-----	-----
56B :	020 K100											
57F :	Subshed 56F	6	0	87	352	87	352	1153	VALLEY	1222	0.04800	-----
57F :	020 K100											
58F :	Subshed 57F	5	0	30	129	117	426	1155	-----	-----	-----	-----
58F :	030 K100											
59BF :	Subshed 59BF	117	0	117	426	1355	3116	1160	MOUNTAIN	1584	0.06300	-----
59BF :	020 K100											
60B :	Subshed 59B	5	0	40	182	1395	3105	1161	-----	-----	-----	-----
60B :	020 K100											
61LAB :	Subshed 61LAB	1395	0	1395	3105	3118	6985	1160	VALLEY	1530	0.02400	-----
61LAB :	020 K100											
62A :	Subshed 61A	7	0	55	203	3173	6989	1161	-----	-----	-----	-----
62A :	020 K100											
63A :	Subshed 62A	6	0	80	324	3253	7040	1161	VALLEY	1254	0.01800	-----
63A :	020 K100											
64A :	Subshed 63A	6	0	41	176	3294	7041	1162	-----	-----	-----	-----
64A :	010 K100											
65B :	Subshed 64B	5	0	66	300	66	300	1153	MOUNTAIN	1577	0.07600	-----
65B :	020 K100											
66B :	Subshed 65B	6	0	49	198	115	383	1155	-----	-----	-----	-----
66B :	020 K100											
67AB :	Subshed 67AB	115	0	115	383	3409	7174	1162	VALLEY	885	0.02400	-----
67AB :	020 K100											
68A :	Subshed 67A	5	0	24	115	3433	7173	1163	-----	-----	-----	-----
68A :	010 K100											
69A :	Subshed 68A	6	0	57	218	3490	7195	1163	VALLEY	1682	0.01400	-----
69A :	030 K100											
70A :	Subshed 69A	8	0	50	171	3540	7193	1164	-----	-----	-----	-----
70A :	020 K100											
71C :	Subshed 70C	58	0	58	264	58	264	1153	MOUNTAIN	1208	0.05000	-----
71C :	Clearing Hydrograph Bank: C											
71C :	020 K100											
72C :	Subshed 71C	6	0	75	304	133	451	1154	VALLEY	1403	0.04800	-----
72C :	020 K100											
73C :	Subshed 72C	7	0	74	273	207	676	1155	-----	-----	-----	-----
73C :	020 K100											
74C :	Subshed 73C	6	0	54	219	261	863	1155	VALLEY	814	0.02700	-----
74C :	020 K100											

Ventura County Watershed Protection District
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Model Results
 Page 5

----- SUBAREA DATA AND RESULTS ----- |----- ACCUMULATED DATA -----|----- ROUTING AFTER ACCUMULATION -----

VEL (FT/S)	NODE DEPTH	SOIL TYPE	RAIN ZONE	TC (MIN)	IMP	AREA (AC)	FLOW (CFS)	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V (Z)	N VALUES
	75C : Subshed 74C															
	75C : 020 K100		5	0	20	91	281	911	1156							
	76C : Subshed 75C															
	76C : 020 K100		7	0	43	159	324	1044	1156		VALLEY	1738	0.03400			
	77C : Subshed 76C															
	77C : 020 K100		8	0	89	305	413	1243	1157							
	78AC															
	78AC : ---					413	1243	3953	1163		VALLEY	1110	0.01900			
	79A : Subshed 78A															
	79A : 030 K100		7	0	30	104	3983	7771	1164							
	80A : Subarea 79A															
	80A : 020 K100		5	0	41	186	4024	7792	1164		VALLEY	2463	0.01700			
	81A : Subshed 80A															
	81A : 020 K100		6	0	83	336	4107	7792	1166							
	82D : Subshed 81D															
	82D : Clearing Hydrograph Bank: D															
	82D : 020 K100		6	0	51	206	51	206	1153		MOUNTAIN	1093	0.07600			
	83D : Subshed 82D															
	83D : 020 K100		6	0	47	190	98	337	1155							
	84AD															
	84AD : ---					98	337	4205	1166		VALLEY	977	0.03300			
	85A : Subarea 84A															
	85A : 020 K100		5	0	46	209	4251	7858	1166							
	86A : Subarea 85A															
	86A : 020 K100		7	0	67	247	4318	7886	1166		VALLEY	1211	0.00700			
	87A : Subarea 86A															
	87A : 020 K100		6	0	33	134	4351	7876	1168							
	88A : Subarea 87A															
	88A : 020 K100		5	0	93	423	4444	7907	1168		VALLEY	524	0.01100			
	89A : Subarea 88A															
	89A : 040 K100		5	0	5	20	4449	7900	1168							
	90A															
	90A : ---						4449	7900	1168							
	91E : Subshed 90E															
	91E : Clearing Hydrograph Bank: E															
	91E : 020 K100		5	0	39	177	39	177	1153		MOUNTAIN	1621	0.05900			
	92E : Subshed 91E															
	92E : 020 K100		7	0	59	218	98	305	1155							

Node	Subarea	Rain	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values
VEL DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(Z)	CHNL SIDES
(FT/S)	(FT)														
93AE						98	305	4547	7955	1168	VALLEY	926	0.01100		
94A	Subshed 93A														
94A	030 K100	5	0	22	94	4569	7949	1169							
95A	Subshed 94A														
95A	020 K100	5	0	61	277	4630	7968	1169							
96A	Subshed 95A														
96A	020 K100	8	0	75	257	4705	7996	1169	VALLEY	1651	0.01600				
97F	Subshed 96F														
97F	Clearing Hydrograph Bank: F														
97F	030 K100	5	0	39	167	39	167	1153	MOUNTAIN	1064	0.05300				
98F	Subshed 97F														
98F	020 K100	6	0	33	134	72	233	1155							
99F	Subshed 98F														
99F	020 K100	7	0	50	185	122	414	1155	MOUNTAIN	595	0.09400				

Ventura County Watershed Protection District
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Mode] Results															
ROUTING AFTER ACCUMULATION															
--- SUBAREA DATA AND RESULTS --- ACCUMULATED DATA ---															
Node	Subarea	Rain	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values
VEL DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(Z)	CHNL SIDES
(FT/S)	(FT)														
100F	Subshed 99F														
100F	020 K100	6	0	36	146	158	531	1155	VALLEY	1714	0.04600				
101F	Subshed 100F														
101F	020 K100	7	0	48	177	206	633	1156							
102AF															
102AF						206	633	4911	8078	1170	VALLEY	1147	0.01000		
103A	Subshed 102A														
103A	020 K100	7	0	42	155	4953	8074	1172	VALLEY	1111	0.01800				
104A	Subshed 103A														
104A	020 K100	7	0	65	240	5018	8079	1173							
105A	Subshed 104A														
105A	020 K100	7	0	82	303	5100	8100	1173	VALLEY	1606	0.01800				
106A	Subshed 105A														
106A	030 K100	7	0	60	209	5160	8100	1174							
107A	Subshed 106A														
107A	020 K100	9	0	69	222	5229	8119	1174	VALLEY	1408	0.02100				
108A	Subshed 107A														

108A	030	K100	7	0	58	202	5287	8115	1175	-----	-----	-----
109A :	Subshed 108A											
109A	030	K100	5	0	31	133	5318	8119	1175	VALLEY	1467	0.01500
110A :	Subshed 109A											
110A	030	K100	6	0	42	160	5360	8106	1176	VALLEY	2733	0.01400
111A :	Subshed 110A											
111A	030	K100	9	0	73	221	5433	8072	1179	VALLEY	3056	0.01300
112A :	Subshed 111A											
112A	030	K100	21	0	56	101	5489	8026	1182	-----	-----	-----
113B :	Subshed 112B											
113B :	Clearing Hydrograph Bank: B											
113B	030	K100	12	0	50	127	50	127	1154	VALLEY	2779	0.01700
114B :	Subshed 113B											
114B	040	K100	21	0	43	72	93	168	1164	-----	-----	-----
115AB	---	---	---	---	93	168	5582	8056	1182	VALLEY	1726	0.01000
116A :	routing											
116A	---	---	---	---	---	---	5582	8035	1184	VALLEY	5400	0.01000
117A :	SC RIVER											
117A	---	---	---	---	---	---	5582	7886	1189	-----	-----	-----
118A	---	---	---	---	---	---	5582	7886	1189	-----	-----	-----

Issue/warning Messages

Caution Err1008 SUBAREA 89A TC and Area are set to minimum values(5). May be an attempt to run the model on a smaller area than acceptable to VCRat.
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

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 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 2A

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	0.40	200	0.40	300	2.61
							400
							3.28

	4.21	6.18	7.36	800	9.81	900	16.11
1000	27.89	41.57	47.99	1110	71.76	1120	71.82
1130	99.90	102.34	104.66	1133	108.00	1134	111.14
1135	113.66	114.02	118.10	1137	121.17	1139	124.18
1140	128.27	134.61	139.24	1143	144.13	1144	150.62
1145	163.40	172.58	183.42	1148	196.10	1149	234.08
1150	273.65	288.68	376.35	1153	432.08	1154	469.42
1155	496.67	506.39	503.02	1158	466.29	1159	425.71
1160	413.88	322.12	264.78	1163	230.89	1164	196.89
1165	156.93	129.83	110.97	1168	98.12	1169	89.79
1170	80.35	75.74	71.36	1173	63.50	1174	62.13
1175	59.20	57.23	53.66	1178	47.95	1179	48.73
1180	46.61	44.82	43.38	1183	41.39	1184	40.76
1185	40.11	39.53	39.52	1188	39.08	1189	38.72
1190	38.01	38.01	38.03	1193	37.97	1194	37.86
1195	38.22	37.64	37.65	1198	37.65	1199	37.66
1200	37.66	37.13	36.55	1203	35.47	1204	34.81
1205	34.05	32.68	31.71	1208	30.65	1209	29.54
1210	28.97	27.84	27.77	1213	27.21	1214	26.68
1215	26.35	26.17	26.55	1218	25.88	1219	25.83
1220	26.38	26.40	25.84	1223	25.81	1224	26.43
1225	26.50	25.92	25.86	1228	26.47	1229	26.53
1230	25.94	25.88	26.48	1233	26.03	1234	25.44
1235	25.88	25.90	25.34	1238	25.23	1239	25.15
1240	25.10	25.05	24.96	1243	24.82	1244	24.78
1245	24.76	24.67	24.68	1248	24.68	1249	24.62
1250	24.64	24.65	24.60	1253	24.62	1254	24.64
1255	24.59	24.62	24.64	1258	24.59	1259	24.61
1260	24.64	24.58	23.60	1263	23.12	1264	23.06
1265	22.45	21.67	20.82	1268	20.05	1269	19.75
1270	18.82	18.42	18.58	1273	18.20	1274	17.28
1275	16.94	17.30	17.23	1278	16.59	1279	16.44
1280	16.93	16.97	16.39	1283	16.30	1284	16.83
1285	16.90	16.34	16.26	1288	16.80	1289	16.88
1290	16.33	16.25	16.80	1293	16.36	1294	16.37
1295	16.25	16.74	16.76	1298	16.22	1299	16.17
1300	16.74	10.59	7.12	1303	6.46	1304	6.48
1305	5.13	2.43	0.80	1308	0.46	1309	0.41
1400	0.40	0.40	0.40	1460	0.40	1500	0.40

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HYDROGRAPH FATTENED AT 14A

*****	INCOMING HYDROGRAPH PEAK (cfs):	2636.54	VOLUME (acre-ft):	181.79
*	HYDROGRAPH ADJUSTMENT FACTOR:	0.92400	VOLUME (acre-ft):	167.97
*	ADJUSTED HYDROGRAPH PEAK (cfs):	2436.16	SCS Curve:	60
*	RUNOFF FACTOR(in):	6.56	TOTAL RAIN(in):	12.00
*	FATTENED HYDROGRAPH PEAK (cfs):	2436.16	VOLUME (acre-ft):	519.71

Adams_Cyn_VCRat_basin_14AR.OUT						
TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	FATTENED (cfs)
0	0.00	0.00	0.00	100	1.20	1.11
200	1.20	1.11	18.08	300	6.47	5.98
400	11.98	11.07	36.71	500	14.07	13.00
600	20.88	19.29	62.60	700	25.69	23.74
800	35.36	32.67	120.76	900	69.39	64.12
1000	134.98	124.72	381.73	1050	207.24	191.49
1100	254.38	235.05	830.95	1110	325.63	300.88
1120	373.22	344.85	1054.87	1130	482.49	445.82
1131	494.85	457.24	1224.51	1132	507.39	468.83
1133	521.97	482.30	1258.85	1134	537.74	496.87
1135	552.76	510.75	1295.33	1136	563.49	520.67
1137	584.53	540.11	1332.39	1138	604.17	558.25
1139	623.17	575.81	1373.11	1140	641.77	593.00
1141	664.28	613.79	1414.97	1142	685.98	633.85
1143	714.70	660.38	1461.37	1144	743.43	686.93
1145	782.31	722.85	1515.87	1146	822.40	759.90
1147	867.18	801.27	1577.90	1148	917.59	847.85
1149	1030.94	952.59	1675.99	1150	1156.38	1068.49
1151	1233.62	1139.87	1788.76	1152	1510.69	1395.88
1153	1727.76	1596.45	2028.02	1154	1958.40	1809.56
1155	2232.84	2063.14	2260.00	1156	2408.67	2225.61
1157	2533.38	2340.85	2392.50	1158	2636.54	2436.16
1159	2516.07	2324.85	2385.21	1160	2378.08	2197.35
1161	2222.51	2053.60	2255.85	1162	2052.34	1896.37
1163	1895.38	1751.33	2104.35	1164	1681.99	1554.16
1165	1478.18	1365.84	1903.89	1166	1310.83	1211.20
1167	1155.33	1067.52	1738.57	1168	1025.13	947.22
1169	921.30	851.28	1609.31	1170	820.31	757.97
1171	735.53	679.63	1499.31	1172	667.99	617.22
1173	607.84	561.64	1415.24	1174	558.93	516.45
1175	515.00	475.86	1347.10	1176	469.88	434.17
1177	439.15	405.77	1286.68	1178	408.12	377.10
1179	384.42	355.21	1236.73	1180	362.52	334.96
1181	339.32	313.53	1191.64	1182	323.05	298.49
1183	305.70	282.47	1152.72	1184	292.64	270.40
1185	281.63	260.23	1119.21	1186	269.76	249.26
1187	260.59	240.79	1087.65	1188	252.27	233.10
1189	245.04	226.42	1059.52	1190	237.98	219.89
1191	231.95	214.32	1033.18	1192	226.16	208.97

Ventura County Watershed Protection District
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Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	FATTENED (cfs)
1193	222.87	205.93	1009.59	1194	219.16	202.50
1195	216.38	199.94	987.99	1196	212.29	196.15
1197	210.48	194.49	967.20	1198	208.87	192.99
1199	206.81	191.09	948.22	1200	205.37	189.76
1201	201.90	186.56	928.94	1202	200.24	185.02
1203	197.57	182.55	910.45	1204	195.68	180.81
1205	191.99	177.40	891.59	1206	188.63	174.29
1207	185.29	171.21	872.42	1208	182.45	168.58

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1209	179.29	165.66	854.06	1210	175.54	162.20	844.54
1211	167.52	158.48	834.92	1212	168.99	156.14	826.35
1213	171.20	154.49	818.37	1214	162.94	150.55	808.84
1215	159.80	147.65	800.13	1216	156.76	144.84	791.57
1217	155.18	143.39	784.06	1218	152.44	140.86	775.87
1219	148.49	137.20	766.93	1220	146.57	135.43	759.44
1221	145.42	134.37	752.55	1222	143.50	132.59	745.22
1223	140.81	130.11	737.45	1224	139.35	128.76	730.58
1225	139.06	128.49	724.60	1226	138.03	127.54	718.18
1227	136.13	125.78	711.24	1228	135.27	124.99	705.10
1229	135.55	125.25	699.82	1230	135.05	124.79	694.07
1231	133.65	123.49	687.77	1232	133.25	123.13	682.24
1233	132.71	122.62	676.67	1234	132.50	122.43	671.42
1235	132.54	122.47	666.41	1236	131.09	121.13	660.40
1237	130.47	120.55	655.06	1238	131.23	121.26	650.76
1239	129.99	120.11	645.10	1240	129.25	119.43	639.86
1241	129.64	119.78	635.49	1242	128.49	118.72	630.07
1243	128.21	118.46	625.34	1244	128.53	118.76	621.11
1245	127.30	117.63	615.81	1246	127.01	117.36	611.25
1247	127.35	117.68	607.21	1248	126.14	116.55	602.08
1249	125.86	116.30	597.70	1250	126.24	116.65	593.85
1251	125.08	115.57	588.91	1252	124.87	115.38	584.73
1253	125.32	115.80	581.10	1254	124.23	114.79	576.37
1255	124.09	114.66	572.39	1256	124.62	115.15	568.96
1257	123.59	114.20	564.42	1258	123.53	114.14	560.64
1259	124.11	114.68	557.40	1260	123.15	113.79	553.04
1261	123.13	113.77	549.44	1262	121.38	112.16	544.58
1263	119.26	110.20	539.48	1264	119.29	110.22	536.04
1265	118.73	109.71	532.19	1266	116.24	107.40	526.92
1267	114.14	105.47	521.99	1268	112.48	103.93	517.43
1269	111.92	103.41	513.73	1270	110.11	101.74	509.12
1271	106.89	98.77	503.48	1272	105.33	97.33	499.13
1273	104.75	96.79	495.56	1274	103.25	95.40	491.33
1275	100.64	92.99	486.27	1276	98.75	91.24	481.80
1277	97.87	89.78	478.14	1278	96.31	88.99	473.99
1279	93.77	86.64	469.11	1280	91.93	84.95	464.80
1281	91.16	84.23	461.35	1282	89.84	83.01	457.50
1283	87.64	80.98	453.00	1284	86.17	79.62	449.09
1285	85.77	79.25	446.05	1286	84.85	78.40	442.63
1287	83.06	76.75	438.57	1288	82.00	75.77	435.09
1289	81.98	75.75	432.47	1290	81.43	75.24	429.45

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1291	80.01	73.93	425.78	1292	79.29	73.27	422.69
1293	78.39	72.43	419.48	1294	79.33	73.30	417.74
1295	78.18	72.24	414.39	1296	77.70	71.79	411.59
1297	78.14	72.20	409.55	1298	77.85	71.94	406.96
1299	76.74	70.90	403.73	1300	77.23	71.36	401.81
1310	62.55	57.79	368.18	1320	51.00	47.12	339.05
1330	37.53	34.68	310.10	1340	29.46	27.22	287.11
1350	25.09	23.18	268.59	1360	21.91	20.25	252.33
1370	17.53	16.20	236.20	1380	12.44	11.49	220.46

Adams_Cyn_VCRat_basin_14AR.OUT
 1400 5.80 5.36 194.57
 1440 1.67 1.54 158.83
 1500 1.20 1.11 124.37

1390 8.49 7.85 206.58
 1420 2.85 2.64 174.74
 1460 1.29 1.19 145.60

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 117A

DESCRIPTION: SC RIVER
 TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 7886 cfs
 TIME OF PEAK: 1189 minutes
 HYDROGRAPH VOLUME: 1204.10 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	13.40	200	13.54	300	14.98	400	21.33
500	35.34	600	52.75	700	72.13	800	103.97	900	198.06
1000	499.42	1050	806.01	1100	1267.88	1110	1375.18	1120	1504.93
1130	1677.32	1131	1697.38	1132	1717.92	1133	1738.84	1134	1760.08
1135	1781.65	1136	1804.05	1137	1827.12	1138	1850.87	1139	1875.47
1140	1901.21	1141	1928.32	1142	1956.51	1143	1985.82	1144	2016.37
1145	2048.52	1146	2081.80	1147	2116.98	1148	2154.00	1149	2192.95
1150	2233.94	1151	2277.14	1152	2322.82	1153	2371.30	1154	2423.10
1155	2479.18	1156	2540.57	1157	2608.18	1158	2683.51	1159	2768.15
1160	2862.94	1161	2969.08	1162	3088.76	1163	3225.02	1164	3381.31
1165	3560.43	1166	3763.29	1167	3988.12	1168	4230.88	1169	4486.22
1170	4749.21	1171	5015.63	1172	5280.77	1173	5538.71	1174	5782.56
1175	6005.87	1176	6205.91	1177	6384.02	1178	6542.95	1179	6689.06
1180	6831.43	1181	6976.86	1182	7127.46	1183	7280.94	1184	7431.47
1185	7571.22	1186	7692.24	1187	7787.86	1188	7853.39	1189	7885.92
1190	7884.83	1191	7851.10	1192	7786.86	1193	7695.33	1194	7579.82
1195	7444.16	1196	7292.27	1197	7127.57	1198	6953.30	1199	6772.31
1200	6586.91	1201	6399.23	1202	6211.05	1203	6023.77	1204	5838.37
1205	5655.68	1206	5476.83	1207	5302.61	1208	5132.47	1209	4968.03
1210	4808.56	1211	4654.47	1212	4506.23	1213	4363.11	1214	4226.11
1215	4094.13	1216	3968.10	1217	3846.91	1218	3731.58	1219	3620.66
1220	3515.51	1221	3414.58	1222	3318.46	1223	3226.83	1224	3139.27
1225	3055.99	1226	2976.64	1227	2900.95	1228	2828.91	1229	2760.49
1230	2695.32	1231	2633.27	1232	2574.22	1233	2518.01	1234	2464.45
1235	2413.40	1236	2364.69	1237	2318.20	1238	2273.81	1239	2231.43
1240	2190.97	1241	2152.33	1242	2115.45	1243	2080.22	1244	2046.54
1245	2014.26	1246	1983.29	1247	1953.55	1248	1924.96	1249	1897.46
1250	1871.34	1251	1846.17	1252	1821.77	1253	1798.16	1254	1775.38
1255	1753.58	1256	1732.37	1257	1711.71	1258	1691.62	1259	1672.10
1260	1653.16	1261	1634.82	1262	1617.06	1263	1599.87	1264	1583.24
1265	1567.62	1266	1552.33	1267	1537.33	1268	1522.62	1269	1508.20
1270	1494.05	1271	1480.16	1272	1466.54	1273	1453.20	1274	1440.11
1275	1427.83	1276	1415.66	1277	1403.53	1278	1391.45	1279	1379.44
1280	1367.51	1281	1355.66	1282	1343.90	1283	1332.23	1284	1321.07
1285	1310.09	1286	1299.11	1287	1288.15	1288	1277.20	1289	1266.28
1290	1255.41	1291	1244.59	1292	1233.85	1293	1223.18	1294	1212.61

Adams_Cyn_VCRat_basin_14AR_OUT
 1295 1202.14 1296 1191.77 1297 1181.53 1298 1171.41 1299 1161.43
 1300 1151.60 1310 1065.07 1320 993.38 1330 925.12 1340 854.63
 1350 787.65 1360 718.91 1370 656.81 1380 602.40 1390 553.59
 1400 510.10 1420 429.28 1440 361.59 1460 311.37 1500 246.38

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 118A

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	13.40	200	13.54	300	14.98	400	21.33		
500	35.34	600	52.75	700	72.13	800	103.97	900	198.06		
1000	499.42	1050	806.01	1100	1267.88	1110	1375.18	1120	1504.93		
1130	1677.32	1131	1697.38	1132	1717.92	1133	1738.84	1134	1760.08		
1135	1781.65	1136	1804.05	1137	1827.12	1138	1850.87	1139	1875.47		
1140	1901.21	1141	1928.32	1142	1956.51	1143	1985.82	1144	2016.37		
1145	2048.32	1146	2081.80	1147	2116.98	1148	2154.00	1149	2192.95		
1150	2233.94	1151	2277.14	1152	2322.82	1153	2371.30	1154	2423.10		
1155	2479.18	1156	2540.57	1157	2608.18	1158	2683.51	1159	2768.15		
1160	2862.94	1161	2969.08	1162	3088.76	1163	3225.02	1164	3381.31		
1165	3560.43	1166	3763.29	1167	3988.12	1168	4230.88	1169	4486.22		
1170	4749.21	1171	5015.63	1172	5280.77	1173	5538.71	1174	5782.56		
1175	6005.87	1176	6205.91	1177	6384.02	1178	6542.95	1179	6689.06		
1180	6831.43	1181	6976.86	1182	7127.46	1183	7280.94	1184	7431.47		
1185	7571.22	1186	7692.24	1187	7787.86	1188	7853.39	1189	7885.92		
1190	7884.83	1191	7851.10	1192	7786.86	1193	7695.33	1194	7579.82		
1195	7444.16	1196	7292.27	1197	7127.57	1198	6953.30	1199	6772.31		
1200	6586.91	1201	6399.23	1202	6211.05	1203	6023.77	1204	5838.37		
1205	5635.68	1206	5476.83	1207	5302.61	1208	5132.47	1209	4968.03		
1210	4808.56	1211	4654.47	1212	4506.23	1213	4363.11	1214	4226.11		
1215	4094.13	1216	3968.10	1217	3846.91	1218	3731.58	1219	3620.66		
1220	3515.51	1221	3414.58	1222	3318.46	1223	3226.83	1224	3139.27		
1225	3055.99	1226	2976.64	1227	2900.95	1228	2828.91	1229	2760.49		
1230	2695.32	1231	2633.27	1232	2574.22	1233	2518.01	1234	2464.45		
1235	2413.40	1236	2364.69	1237	2318.20	1238	2273.81	1239	2231.43		
1240	2190.97	1241	2152.33	1242	2115.45	1243	2080.22	1244	2046.54		
1245	2014.26	1246	1983.29	1247	1953.55	1248	1924.96	1249	1897.46		
1250	1871.34	1251	1846.17	1252	1821.77	1253	1798.16	1254	1775.38		
1255	1753.58	1256	1732.37	1257	1711.71	1258	1691.62	1259	1672.10		
1260	1653.16	1261	1634.82	1262	1617.06	1263	1599.87	1264	1583.24		
1265	1567.62	1266	1552.33	1267	1537.33	1268	1522.62	1269	1508.20		
1270	1494.05	1271	1480.16	1272	1466.54	1273	1453.20	1274	1440.11		
1275	1427.83	1276	1415.66	1277	1403.53	1278	1391.45	1279	1379.44		
1280	1367.51	1281	1355.66	1282	1343.90	1283	1332.23	1284	1321.07		
1285	1310.09	1286	1299.11	1287	1288.15	1288	1277.20	1289	1266.28		
1290	1255.41	1291	1244.59	1292	1233.85	1293	1223.18	1294	1212.61		
1295	1202.14	1296	1191.77	1297	1181.53	1298	1171.41	1299	1161.43		

C

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

VCRat Model Input

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Mode] Lines

006	4492	043C	010000010712B98101338008100
006	4492	044C	01000002305B98
006	4492	045D	0200000809B98101840008300
006	4492	046D	020000005405B98
006	4492	047C	020000004307B98
006	4492	048C	020000004307B98
006	4492	049C	020000004307B98
006	4492	050B	020000005007B98201183003500
006	4492	051B	020000007907B98201240003400
006	4492	052B	020000002805B98
006	4492	053E	020000007909B98100782006000
006	4492	054E	030000002505B98
006	4492	055E	010000001405B98
006	4492	056B	020000001405B98
006	4492	057F	02000008706B98201222004800
006	4492	058F	030000003005B98
006	4492	059B	0100000015840066300
006	4492	060B	020000004005B98
006	4492	061A	0200000015300002400
006	4492	062A	020000005507B98
006	4492	063A	0200000806B98201254001800
006	4492	064A	010000004106B98
006	4492	065B	02000006605B98101577007600
006	4492	066B	020000004906B98
006	4492	067A	020000002405B98
006	4492	068A	010000002405B98
006	4492	069A	03000005706B98201682001400
006	4492	070A	020000005008B98
006	4492	071C	020000005805B98101208005000
006	4492	072C	020000007506B98201403004800
006	4492	073C	020000007407B98
006	4492	074C	020000005406B98200814002700
006	4492	075C	020000002005B98
006	4492	076C	020000004307B98201738003400
006	4492	077C	020000008908B98
006	4492	078A	020000001100001900
006	4492	079A	030000003007B98
006	4492	080A	020000004105B98202463001700
006	4492	081A	02000000306B98
006	4492	082D	020000005106B98101093007600
006	4492	083D	020000004706B98
006	4492	084D	020000004706B98
006	4492	085A	020000004605B98
006	4492	086A	020000006707B98201211000700
006	4492	087A	02000000306B98
006	4492	088A	020000009305B98200524001100
006	4492	089A	0400000000505B98
006	4492	090A	01000000099A97
006	4492	091E	020000003905B98101621005900

006 4492 092E 020000005907B98
006 4492 093AE010 A97200926001100
006 4492 094A 030000002205B98

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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VCRat Model Input

Model Lines

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006 4492 095A 020000006105B98
006 4492 096A 020000007508B98201651001600
006 4492 097F 030000003905B98101064005300
006 4492 098F 020000003306B98
006 4492 099F 020000005007B98100595009400
006 4492 100F 020000003606B98201714004600
006 4492 101F 020000004807B98
006 4492 102AF010 A97201147001000
006 4492 103A 020000004207B98201111001800
006 4492 104A 020000006507B98
006 4492 105A 020000008207B98201606001800
006 4492 106A 030000006007B98
006 4492 107A 020000006909B98201408002100
006 4492 108A 030000005807B98
006 4492 109A 030000003105B98201467001500
006 4492 110A 030000004206B98202733001400
006 4492 111A 030000007309B98203056001300
006 4492 112A 030000005621B98
006 4492 113B 030000005012B98202779001700
006 4492 114B 040000004321B98
006 4492 115AB010 A97201726001000
006 4492 116A 010 099A97205400001000
006 4492 117A 010 099A97
006 4492 118A 010 099A97
999

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F

B

1 1
1 2

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	278.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	254.	506.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73.	332.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	303.	303.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	212.	142.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	244.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	347.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	320.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	188.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	313.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	236.	1226.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1226.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	260.	260.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	237.	472.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73.	311.	585.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	283.	283.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	199.	142.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	227.	663.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	663.	1241.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	324.	1299.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	299.	299.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	176.	454.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	293.	719.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	460.	1012.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	220.	1137.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1137.	2436.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	120.	2405.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	276.	276.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	48.	301.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	301.	2620.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	214.	2606.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	302.	302.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	166.	348.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	289.	576.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	213.	693.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	693.	2993.	2	818.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	72.	2988.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	193.	3054.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	299.	3099.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	182.	1584.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	159.	1630.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	170.	3219.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	183.	3253.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	364.	364.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	162.	519.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	136.	641.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00

LOCATTION	SUBAREA	Header place holder	SUBAREA	SUBAREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	STORM RAIN ZONE	DAY PCT IMPV
4492	35B	78	234	260	784	0	0	0.00000	0.00	0.00	0.00	0.00	20	9	B98	0.00
4492	36B	100	300	360	1061	1	736	0.05200	0.00	0.00	0.00	0.00	20	9	B98	0.00
4492	37B	13	55	373	1047	0	0	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	38B	71	213	444	1222	2	1438	0.03500	0.00	0.00	0.00	0.00	20	9	B98	0.00
4492	39B	49	169	493	1300	0	0	0.00000	0.00	0.00	0.00	0.00	20	10	B98	0.00
4492	40C	87	247	87	247	0	2063	0.16300	0.00	0.00	0.00	0.00	20	10	B98	0.00
4492	41C	76	216	163	428	0	0	0.00000	0.00	0.00	0.00	0.00	20	10	B98	0.00
4492	42C	107	293	270	713	1	1338	0.08100	0.00	0.00	0.00	0.00	20	12	B98	0.00
4492	43C	23	104	293	725	0	0	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	44D	80	240	80	240	1	1840	0.08300	0.00	0.00	0.00	0.00	20	9	B98	0.00
4492	45D	54	230	134	355	0	0	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	46CD	134	355	427	1078	1	1426	0.05600	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	47C	43	148	470	1113	0	0	0.00000	0.00	0.00	0.00	0.00	20	0	A97	0.00
4492	488C	470	1113	963	2413	2	768	0.02900	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	49B	50	172	1013	2446	2	1183	0.03500	0.00	0.00	0.00	0.00	20	0	A97	0.00
4492	50B	79	273	1092	2509	2	1240	0.03400	0.00	0.00	0.00	0.00	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

LOCATTION	SUBAREA	SUBAREA	SUBAREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	STORM RAIN ZONE	DAY PCT IMPV
4492	51B	28	119	1120	2513	0	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	52E	79	237	79	237	1	782	0.06000	0.00	0.00	0.00	20	9	B98	0.00
4492	53E	25	100	104	302	0	0	0.00000	0.00	0.00	0.00	30	5	B98	0.00
4492	548E	104	302	1224	2715	2	853	0.04000	0.00	0.00	0.00	10	0	A97	0.00
4492	558	14	60	1238	2704	0	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	56F	87	329	87	329	2	1222	0.04800	0.00	0.00	0.00	20	6	B98	0.00
4492	57F	30	120	117	397	0	0	0.00000	0.00	0.00	0.00	30	5	B98	0.00
4492	588F	117	397	1355	2866	1	1584	0.06300	0.00	0.00	0.00	10	0	A97	0.00
4492	59B	40	170	1395	2854	0	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	60AB	1395	2854	3118	6107	2	1530	0.02400	0.00	0.00	0.00	10	0	A97	0.00
4492	61A	55	190	3173	6105	0	0	0.00000	0.00	0.00	0.00	20	7	B98	0.00
4492	62A	80	303	3253	6139	2	1254	0.01800	0.00	0.00	0.00	20	6	B98	0.00
4492	63A	41	165	3294	6137	0	0	0.00000	0.00	0.00	0.00	10	6	B98	0.00
4492	64B	66	281	66	281	1	1577	0.07600	0.00	0.00	0.00	20	5	B98	0.00
4492	65B	49	185	115	354	0	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	66AB	115	354	3409	6229	2	885	0.02400	0.00	0.00	0.00	10	0	A97	0.00
4492	67A	24	108	3433	6221	0	0	0.00000	0.00	0.00	0.00	10	5	B98	0.00
4492	68A	57	203	3490	6238	2	1682	0.01400	0.00	0.00	0.00	30	6	B98	0.00
4492	69A	50	160	3540	6219	0	0	0.00000	0.00	0.00	0.00	20	8	B98	0.00
4492	70C	58	247	58	247	1	1208	0.05000	0.00	0.00	0.00	20	5	B98	0.00
4492	71C	75	284	133	419	2	1403	0.04800	0.00	0.00	0.00	20	6	B98	0.00
4492	72C	74	255	207	627	0	0	0.00000	0.00	0.00	0.00	20	7	B98	0.00
4492	73C	54	204	261	801	2	814	0.02700	0.00	0.00	0.00	20	6	B98	0.00
4492	74C	20	85	281	846	0	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	75C	43	148	324	969	2	1738	0.03400	0.00	0.00	0.00	20	7	B98	0.00
4492	76C	89	284	413	1149	0	0	0.00000	0.00	0.00	0.00	20	8	B98	0.00
4492	77AC	413	1149	3953	6605	2	1110	0.01900	0.00	0.00	0.00	10	0	A97	0.00
4492	78A	30	97	3983	6595	0	0	0.00000	0.00	0.00	0.00	30	7	B98	0.00
4492	79A	41	174	4024	6607	2	2463	0.01700	0.00	0.00	0.00	20	5	B98	0.00
4492	80A	83	314	4107	6600	0	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	81D	51	193	51	193	1	1093	0.07600	0.00	0.00	0.00	20	6	B98	0.00
4492	82D	47	178	98	312	0	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	83AD	98	312	4205	6640	2	977	0.03300	0.00	0.00	0.00	10	0	A97	0.00
4492	84A	46	196	4251	6638	0	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	85A	67	231	4318	6661	2	1211	0.00700	0.00	0.00	0.00	20	7	B98	0.00
4492	86A	33	125	4351	6646	0	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	87A	93	396	4444	6668	2	524	0.01100	0.00	0.00	0.00	20	5	B98	0.00
4492	88A	5	19	4449	6654	0	0	0.00000	0.00	0.00	0.00	40	5	B98	0.00
4492	89A	0	0	4449	6654	0	0	0.00000	0.00	0.00	0.00	10	99	A97	0.00

1225	27.	1226	26.	1227	144ARO.TXT	1228	26.	1229	27.
1230	26.	1231	26.	1232	26.	1233	26.	1234	25.
1235	26.	1236	26.	1237	25.	1238	25.	1239	25.
1240	25.	1241	25.	1242	25.	1243	25.	1244	25.
1245	25.	1246	25.	1247	25.	1248	25.	1249	25.
1250	25.	1251	25.	1252	25.	1253	25.	1254	25.
1255	25.	1256	25.	1257	24.	1258	23.	1259	23.
1260	22.	1261	22.	1262	21.	1263	20.	1264	20.
1265	17.	1266	17.	1267	19.	1268	17.	1269	17.
1270	17.	1271	17.	1272	17.	1273	17.	1274	16.
1275	17.	1276	17.	1277	16.	1278	16.	1279	17.
1280	17.	1281	16.	1282	16.	1283	16.	1284	17.
1285	16.	1286	16.	1287	17.	1288	17.	1289	17.
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.
1300	5.	1310	11.	1320	7.	1330	6.	1340	6.
1350	0.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 ZA Header place holder STORM DAY 4 REDUCTION FACTOR = 0.941

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	1.	400	1.
500	3.	600	4.	700	5.	800	7.	900	12.
1000	23.	1050	36.	1100	42.	1110	64.	1120	64.
1130	91.	1131	93.	1132	95.	1133	98.	1134	101.
1135	104.	1136	104.	1137	108.	1138	111.	1139	113.
1140	117.	1141	123.	1142	128.	1143	132.	1144	138.
1145	150.	1146	159.	1147	169.	1148	181.	1149	181.
1150	253.	1151	267.	1152	349.	1153	401.	1154	436.
1155	462.	1156	472.	1157	469.	1158	435.	1159	397.
1160	387.	1161	301.	1162	247.	1163	215.	1164	184.
1165	146.	1166	120.	1167	102.	1168	90.	1169	82.
1170	73.	1171	69.	1172	64.	1173	57.	1174	56.
1175	53.	1176	51.	1177	48.	1178	42.	1179	43.
1180	41.	1181	39.	1182	38.	1183	36.	1184	35.
1185	35.	1186	34.	1187	34.	1188	34.	1189	33.
1190	33.	1191	33.	1192	33.	1193	32.	1194	32.
1195	33.	1196	32.	1197	32.	1198	32.	1199	32.
1200	32.	1201	32.	1202	31.	1203	30.	1204	30.
1205	29.	1206	28.	1207	27.	1208	26.	1209	25.
1210	24.	1211	23.	1212	23.	1213	22.	1214	22.
1215	22.	1216	21.	1217	22.	1218	21.	1219	21.
1220	22.	1221	22.	1222	21.	1223	21.	1224	22.
1225	22.	1226	21.	1227	21.	1228	22.	1229	22.
1230	21.	1231	21.	1232	22.	1233	21.	1234	21.
1235	21.	1236	21.	1237	21.	1238	20.	1239	20.
1240	20.	1241	20.	1242	20.	1243	20.	1244	20.
1245	20.	1246	20.	1247	20.	1248	20.	1249	20.
1250	20.	1251	20.	1252	20.	1253	20.	1254	20.
1255	20.	1256	20.	1257	20.	1258	20.	1259	20.
1260	20.	1261	20.	1262	19.	1263	18.	1264	18.
1265	18.	1266	17.	1267	16.	1268	16.	1269	15.
1270	15.	1271	14.	1272	14.	1273	14.	1274	13.
1275	13.	1276	13.	1277	13.	1278	12.	1279	12.
1280	13.	1281	13.	1282	12.	1283	12.	1284	13.
1285	13.	1286	12.	1287	12.	1288	13.	1289	13.
1290	12.	1291	12.	1292	13.	1293	12.	1294	12.
1295	12.	1296	12.	1297	12.	1298	12.	1299	12.

14ARO.TXT
 1300 12. 1310 9. 1320 5. 1330 5. 1340 5.
 1350 4. 1360 2. 1370 1. 1380 0. 1390 0.
 1400 0. 1420 0. 1440 0. 1460 0. 1500 0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.941

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	7.
500	8.	600	12.	700	18.	800	29.	900	53.
1000	177.	1030	357.	1100	674.	1110	747.	1120	832.
1130	942.	1131	954.	1132	967.	1133	981.	1134	994.
1135	1008.	1136	1022.	1137	1037.	1138	1052.	1139	1068.
1140	1084.	1141	1100.	1142	1118.	1143	1136.	1144	1156.
1145	1176.	1146	1196.	1147	1218.	1148	1241.	1149	1265.
1150	1291.	1151	1318.	1152	1346.	1153	1377.	1154	1409.
1155	1443.	1156	1481.	1157	1522.	1158	1567.	1159	1618.
1160	1676.	1161	1742.	1162	1816.	1163	1899.	1164	1995.
1165	2105.	1166	2232.	1167	2378.	1168	2542.	1169	2723.
1170	2918.	1171	3121.	1172	3332.	1173	3547.	1174	3764.
1175	3975.	1176	4175.	1177	4360.	1178	4527.	1179	4675.
1180	4810.	1181	4937.	1182	5065.	1183	5198.	1184	5341.
1185	5494.	1186	5654.	1187	5817.	1188	5976.	1189	6124.
1190	6255.	1191	6363.	1192	6443.	1193	6494.	1194	6515.
1195	6505.	1196	6466.	1197	6401.	1198	6314.	1199	6206.
1200	6082.	1201	5944.	1202	5797.	1203	5642.	1204	5482.
1205	5318.	1206	5154.	1207	4990.	1208	4827.	1209	4666.
1210	4508.	1211	4353.	1212	4202.	1213	4056.	1214	3914.
1215	3777.	1216	3645.	1217	3517.	1218	3395.	1219	3277.
1220	3164.	1221	3055.	1222	2951.	1223	2851.	1224	2756.
1225	2663.	1226	2576.	1227	2492.	1228	2412.	1229	2334.
1230	2261.	1231	2190.	1232	2123.	1233	2058.	1234	1996.
1235	1937.	1236	1880.	1237	1825.	1238	1773.	1239	1724.
1240	1676.	1241	1630.	1242	1586.	1243	1544.	1244	1503.
1245	1464.	1246	1427.	1247	1391.	1248	1356.	1249	1323.
1250	1292.	1251	1261.	1252	1232.	1253	1203.	1254	1176.
1255	1150.	1256	1125.	1257	1101.	1258	1078.	1259	1056.
1260	1035.	1261	1015.	1262	995.	1263	976.	1264	958.
1265	941.	1266	923.	1267	907.	1268	891.	1269	876.
1270	861.	1271	847.	1272	833.	1273	819.	1274	806.
1275	793.	1276	781.	1277	770.	1278	758.	1279	747.
1280	735.	1281	725.	1282	715.	1283	705.	1284	695.
1285	686.	1286	677.	1287	668.	1288	659.	1289	651.
1290	643.	1291	635.	1292	627.	1293	620.	1294	613.
1295	606.	1296	599.	1297	592.	1298	585.	1299	578.
1300	572.	1310	511.	1320	458.	1330	412.	1340	376.
1350	345.	1360	316.	1370	290.	1380	265.	1390	241.
1400	218.	1420	177.	1440	140.	1460	111.	1500	75.

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Modified Rational Model Results Report

Job: 4492 Project: Adams County VC Rat

Project Description

100 YEAR EVENT

VCRat version: 2.6.2008.11
VCRain version: 200703
DOS EXE version: PC 2.2-200809

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Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Mode] Results																
ROUTING AFTER ACCUMULATION																
--- SUBAREA DATA AND RESULTS --- ACCUMULATED DATA ---																
Node	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES
VEL	DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
(FT/S)	(FT)															
1A	:	Subshed 1A														
1A	:	010 K100	10	0	85	278	85	278	1154	MOUNTAIN	1635	0.17400	---	---	---	---
2A	:	Subshed 2A														
2A	:	020 K100	9	0	79	254	164	506	1156	MOUNTAIN	1750	0.07500	---	---	---	---
3A	:	Subshed 3A														
3A	:	020 K100	5	0	73	332	237	633	1156	---	---	---	---	---	---	---
4B	:	Subshed 4B														
4B	:	010 K100	9	0	88	303	88	303	1153	---	---	---	---	---	---	---
5B	:	Subshed 5B														
5B	:	010 K100	7	0	54	212	142	515	1153	MOUNTAIN	2148	0.14200	---	---	---	---
6B	:	Subshed 6B														

Adams_Cyn_VCRat_basin_48AR.OUT
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results																	
ROUTING AFTER ACCUMULATION																	
SUBAREA DATA AND RESULTS																	
NO DEPT ID	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES	
(FT/S)	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES	
28A	:	Subshed 28A															
28A	:	020 K100	10	0	64	195	1584	3488	1160	VALLEY	1069	0.02600	---	---	---	---	---
29A	:	Subshed 29A															
29A	:	020 K100	7	0	46	170	1630	3516	1161	---	---	---	---	---	---	---	---
30A	:	Subshed 30A															
30A	:	020 K100	5	0	40	182	1670	3539	1161	VALLEY	1537	0.02900	---	---	---	---	---
31A	:	Subshed 31A															
31A	:	020 K100	7	0	53	196	1723	3557	1162	---	---	---	---	---	---	---	---
32B	:	Subshed 32B															
32B	:	Clearing Hydrograph Bank: B															
32B	:	010 K100	7	0	99	389	99	389	1153	MOUNTAIN	735	0.11200	---	---	---	---	---
33B	:	Subshed 33B															
33B	:	020 K100	7	0	47	174	146	555	1155	---	---	---	---	---	---	---	---
34B	:	Subshed 34B															
34B	:	020 K100	6	0	36	146	182	687	1154	MOUNTAIN	1710	0.05700	---	---	---	---	---
35B	:	Subshed 35B															
35B	:	020 K100	9	0	78	251	260	844	1157	---	---	---	---	---	---	---	---
36B	:	Subshed 36B															
36B	:	020 K100	9	0	100	321	360	1142	1157	MOUNTAIN	736	0.05200	---	---	---	---	---
37B	:	Subshed 37B															
37B	:	020 K100	5	0	13	59	373	1128	1158	---	---	---	---	---	---	---	---
38B	:	Subshed 38B															
38B	:	020 K100	9	0	71	228	444	1320	1157	VALLEY	1438	0.03500	---	---	---	---	---
39B	:	Subshed 39B															
39B	:	020 K100	7	0	49	181	493	1407	1158	---	---	---	---	---	---	---	---
40C	:	Subshed 40C															
40C	:	Clearing Hydrograph Bank: C															
40C	:	020 K100	10	0	87	265	87	265	1154	MOUNTAIN	2063	0.16300	---	---	---	---	---
41C	:	Subshed 41C															
41C	:	020 K100	10	0	76	231	163	460	1157	---	---	---	---	---	---	---	---
42C	:	Subshed 42C															
42C	:	010 K100	12	0	107	314	270	766	1156	MOUNTAIN	1338	0.08100	---	---	---	---	---

Adams_Cyn_VCRat_basin_48AR.OUT

56B : Subshed 55B	5	0	14	64	1238	2978	1157	---	---	---	---	---	---
56B : Subshed 56F	6	0	87	352	87	352	1153	VALLEY	1222	0.04800	---	---	---
58F : Subshed 57F	5	0	30	129	117	426	1155	---	---	---	---	---	---
58F : Subshed 58F	5	0	117	426	1355	3346	1156	MOUNTAIN	1584	0.06300	---	---	---
60B : Subshed 59B	5	0	40	182	1395	3339	1158	---	---	---	---	---	---
60B : Subshed 60B	5	0	1395	3339	3118	6655	1161	VALLEY	1530	0.02400	---	---	---
62A : Subshed 61A - START OF LOWER WATERSHED	7	0	55	203	3173	6670	1162	---	---	---	---	---	---
63A : Subshed 62A	6	0	80	324	3253	6714	1162	VALLEY	1254	0.01800	---	---	---
64A : Subshed 63A	6	0	41	176	3294	6722	1163	---	---	---	---	---	---
65B : Subshed 64B	5	0	66	300	66	300	1153	MOUNTAIN	1577	0.07600	---	---	---
66B : Subshed 65B	6	0	49	198	115	383	1155	---	---	---	---	---	---
67AB : Subshed 67A	5	0	24	115	3433	6842	1163	---	---	---	---	---	---
68A : Subshed 68A	6	0	57	218	3490	6865	1163	VALLEY	1682	0.01400	---	---	---
70A : Subshed 69A	8	0	50	171	3540	6868	1165	---	---	---	---	---	---
71C : Subshed 70C	5	0	58	264	58	264	1153	MOUNTAIN	1208	0.05000	---	---	---
71C : Clearing Hydrograph Bank: C	5	0	75	304	133	451	1154	VALLEY	1403	0.04800	---	---	---
72C : Subshed 71C	6	0	74	273	207	676	1155	---	---	---	---	---	---
73C : Subshed 72C	7	0	54	219	261	863	1155	VALLEY	814	0.02700	---	---	---
74C : Subshed 73C	6	0	54	219	261	863	1155	VALLEY	814	0.02700	---	---	---

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Model Results
Page 5

Node	Subshed	TC	IMP	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V (Z)	N VALUES
93AE		0	0	305	4547	7618	VALLEY	926	0.01100			
94A	Subshed 93A	5	0	94	4569	7616						
94A	K100	5	0	94	4569	7616						
95A	Subshed 94A	5	0	277	4630	7635						
95A	K100	5	0	277	4630	7635						
96A	Subshed 95A	8	0	257	4705	7663	VALLEY	1651	0.01600			
96A	K100	8	0	257	4705	7663	VALLEY	1651	0.01600			
97F	Subshed 96F	39	0	167	39	167	MOUNTAIN	1064	0.05300			
97F	Clearing Hydrograph Bank:	39	0	167	39	167	MOUNTAIN	1064	0.05300			
97F	K100	39	0	167	39	167	MOUNTAIN	1064	0.05300			
98F	Subshed 97F	6	0	134	72	233						
98F	K100	6	0	134	72	233						
99F	Subshed 98F	7	0	185	122	414	MOUNTAIN	595	0.09400			
99F	K100	7	0	185	122	414	MOUNTAIN	595	0.09400			

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Mode] Results
----- SUBAREA DATA AND RESULTS ----- ACCUMULATED DATA ----- ROUTING AFTER ACCUMULATION

Node	Subshed	TC	IMP	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V (Z)	N VALUES
100F	Subshed 99F	6	0	36	146	531	VALLEY	1714	0.04600			
100F	K100	6	0	36	146	531	VALLEY	1714	0.04600			
101F	Subshed 100F	7	0	48	177	633						
101F	K100	7	0	48	177	633						
102AF		0	0	206	633	4911	VALLEY	1147	0.01000			
103A	Subshed 102A	7	0	42	155	7750	VALLEY	1111	0.01800			
103A	K100	7	0	42	155	7750	VALLEY	1111	0.01800			
104A	Subshed 103A	7	0	240	633	7758						
104A	K100	7	0	240	633	7758						
105A	Subshed 104A	7	0	82	303	7780	VALLEY	1606	0.01800			
105A	K100	7	0	82	303	7780	VALLEY	1606	0.01800			
106A	Subshed 105A	7	0	60	209	7782						
106A	K100	7	0	60	209	7782						
107A	Subshed 106A	9	0	69	222	7800	VALLEY	1408	0.02100			
107A	K100	9	0	69	222	7800	VALLEY	1408	0.02100			
108A	Subshed 107A											

	4.21	6.18	7.00	7.36	800	9.81	900	16.11
1000	27.89	41.57	1100	47.99	1110	71.76	1120	71.82
1100	99.90	102.34	1132	104.66	1133	108.00	1134	111.14
1135	113.66	114.02	1137	118.10	1138	121.17	1139	124.18
1140	128.27	134.61	1142	139.24	1143	144.13	1144	150.62
1145	163.40	172.58	1147	183.42	1148	196.10	1149	234.08
1150	273.65	288.68	1152	376.35	1153	432.08	1154	469.42
1155	496.67	506.39	1157	503.02	1158	466.29	1159	425.71
1160	413.88	322.12	1162	264.78	1163	230.89	1164	196.89
1165	156.93	129.83	1167	110.97	1168	98.12	1169	89.79
1170	80.35	75.74	1172	71.36	1173	63.50	1174	62.13
1175	59.20	57.23	1177	53.66	1178	47.95	1179	48.73
1180	46.61	44.82	1182	43.38	1183	41.39	1184	40.76
1185	40.11	39.53	1187	39.52	1188	39.08	1189	38.72
1190	38.01	38.01	1192	38.03	1193	37.97	1194	37.86
1195	38.22	37.64	1197	37.65	1198	37.65	1199	37.66
1200	37.66	37.13	1202	36.55	1203	35.47	1204	34.81
1205	34.05	32.68	1207	31.71	1208	30.65	1209	29.54
1210	28.97	27.84	1212	27.77	1213	27.21	1214	26.68
1215	26.35	26.17	1217	26.55	1218	25.88	1219	25.83
1220	26.38	26.40	1222	25.84	1223	25.81	1224	26.43
1225	26.50	25.92	1227	25.86	1228	26.47	1229	26.53
1230	25.94	25.88	1232	26.48	1233	26.03	1234	25.44
1235	25.88	25.90	1237	25.34	1238	25.23	1239	25.15
1240	25.10	25.05	1242	24.96	1243	24.82	1244	24.78
1245	24.76	24.67	1247	24.68	1248	24.68	1249	24.62
1250	24.64	24.65	1252	24.60	1253	24.62	1254	24.64
1255	24.59	24.62	1257	24.64	1258	24.59	1259	24.61
1260	24.64	24.58	1262	23.60	1263	23.12	1264	23.06
1265	22.45	21.67	1267	20.82	1268	20.05	1269	19.75
1270	18.82	18.42	1272	18.58	1273	18.20	1274	17.28
1275	16.94	17.30	1277	17.23	1278	16.59	1279	16.44
1280	16.93	16.97	1282	16.39	1283	16.30	1284	16.83
1285	16.90	16.34	1287	16.26	1288	16.80	1289	16.88
1290	16.33	16.25	1292	16.80	1293	16.36	1294	16.32
1295	16.25	16.74	1297	16.76	1298	16.22	1299	16.17
1300	16.74	10.59	1320	7.12	1330	6.46	1340	6.48
1350	5.13	2.43	1370	0.80	1380	0.46	1390	0.41
1400	0.40	0.40	1440	0.40	1460	0.40	1500	0.40

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
Hydrograph Printouts

HYDROGRAPH FATTENED AT 48B

*****	INCOMING HYDROGRAPH PEAK (cfs):	2613.09	VOLUME (acre-ft):	175.17
*	HYDROGRAPH ADJUSTMENT FACTOR:	0.92300	VOLUME (acre-ft):	161.68
*	ADJUSTED HYDROGRAPH PEAK (cfs):	2411.88	SCS Curve:	61
*	RUNOFF FACTOR(in):	6.42	TOTAL RAIN(in):	11.65
*	FATTENED HYDROGRAPH PEAK (cfs):	2411.88	VOLUME (acre-ft):	515.03

Adams_Cyn_VCRat_basin_48AR_OUT 843.85
 1210 171.27 158.09 843.85
 1211 164.65 151.98 825.62
 1212 157.86 145.70 807.62
 1213 151.54 139.87 790.25
 1214 146.15 134.90 773.82
 1215 140.34 129.53 757.42
 1216 136.37 125.87 742.56
 1217 132.49 122.29 728.07
 1218 130.72 120.65 715.32
 1219 128.59 118.69 702.64
 1220 128.17 118.30 691.42
 1221 126.92 117.15 679.93
 1222 126.28 116.56 669.15
 1223 125.04 115.41 658.22
 1224 124.95 115.33 648.37
 1225 123.34 113.85 637.70
 1226 122.58 113.14 627.88
 1227 122.42 112.99 618.73
 1228 120.87 111.56 608.81
 1229 120.11 110.86 599.68
 1230 120.03 110.78 591.27
 1231 118.61 109.47 582.09
 1232 118.07 108.98 573.76
 1233 118.30 109.19 566.19
 1234 117.20 108.18 557.84
 1235 116.97 107.96 550.31
 1236 115.94 107.01 542.37
 1237 114.13 105.34 534.01
 1238 110.97 102.42 524.79
 1239 107.47 99.20 515.46
 1240 104.70 96.64 506.83
 1241 100.47 92.73 497.24
 1242 97.35 89.85 488.61
 1243 92.99 85.83 479.18
 1244 90.02 83.09 470.93
 1245 85.83 79.22 461.86
 1246 83.22 76.81 454.14
 1247 79.65 73.52 445.79
 1248 77.90 71.90 438.97
 1249 75.25 69.45 431.56
 1250 74.40 68.67 425.67
 1251 74.40 68.67 425.67
 1252 104.70 96.64 506.83
 1253 100.47 92.73 497.24
 1254 97.35 89.85 488.61
 1255 92.99 85.83 479.18
 1256 90.02 83.09 470.93
 1257 85.83 79.22 461.86
 1258 83.22 76.81 454.14
 1259 79.65 73.52 445.79
 1260 77.90 71.90 438.97
 1261 75.25 69.45 431.56
 1262 74.40 68.67 425.67
 1263 74.40 68.67 425.67
 1264 104.70 96.64 506.83
 1265 100.47 92.73 497.24
 1266 97.35 89.85 488.61
 1267 92.99 85.83 479.18
 1268 90.02 83.09 470.93
 1269 85.83 79.22 461.86
 1270 83.22 76.81 454.14
 1271 79.65 73.52 445.79
 1272 77.90 71.90 438.97
 1273 75.25 69.45 431.56
 1274 74.40 68.67 425.67
 1275 74.40 68.67 425.67
 1276 104.70 96.64 506.83
 1277 100.47 92.73 497.24
 1278 97.35 89.85 488.61
 1279 92.99 85.83 479.18
 1280 90.02 83.09 470.93
 1281 85.83 79.22 461.86
 1282 83.22 76.81 454.14
 1283 79.65 73.52 445.79
 1284 77.90 71.90 438.97
 1285 75.25 69.45 431.56
 1286 74.40 68.67 425.67
 1287 74.40 68.67 425.67
 1288 74.40 68.67 425.67
 1289 74.40 68.67 425.67

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1291	73.01	67.39	422.01	1292	72.54	66.95	419.09
1292	72.07	66.52	416.21	1294	72.36	66.79	413.95
1293	71.20	65.72	410.57	1296	70.85	65.39	407.86
1294	70.96	65.75	405.76	1298	70.91	65.45	403.12
1295	69.96	64.57	400.01	1300	70.64	65.20	398.22
1296	68.09	63.62	366.20	1320	44.04	40.65	334.96
1297	66.11	62.51	307.06	1340	24.94	23.02	284.83
1298	64.11	61.41	265.89	1360	16.05	14.81	248.76
1299	62.11	60.31	232.80	1380	8.50	7.85	218.36

Adams_Cyn_VCRat_basin_48AR.OUT
 1400 3.87 3.57 194.05
 1440 1.46 1.34 159.60
 1500 1.20 1.11 125.14

1390 5.70 5.26 205.39
 1420 2.08 1.92 175.11
 1460 1.24 1.15 146.44

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Page: 11 Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 117A

DESCRIPTION: SC RIVER
 TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 7632 cfs
 TIME OF PEAK: 1190 minutes
 HYDROGRAPH VOLUME: 1207.99 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	13.45	200	13.64	300	15.37	400	22.27		
500	36.33	600	53.66	700	73.72	800	106.39	900	202.02		
1000	505.79	1050	814.46	1100	1281.51	1110	1390.29	1120	1521.91		
1130	1696.71	1131	1717.04	1132	1737.83	1133	1759.02	1134	1780.52		
1135	1802.35	1136	1825.01	1137	1848.35	1138	1872.36	1139	1897.22		
1140	1923.23	1141	1950.60	1142	1979.03	1143	2008.57	1144	2039.35		
1145	2071.50	1146	2105.19	1147	2140.54	1148	2177.72	1149	2216.80		
1150	2257.88	1151	2301.15	1152	2346.85	1153	2395.32	1154	2447.08		
1155	2503.08	1156	2564.34	1157	2631.78	1158	2706.91	1159	2791.28		
1160	2885.72	1161	2991.43	1162	3110.62	1163	3246.30	1164	3401.85		
1165	3580.04	1166	3781.67	1167	4004.93	1168	4245.73	1169	4498.70		
1170	4758.83	1171	5021.84	1172	5282.96	1173	5536.18	1174	5774.48		
1175	5991.23	1176	6183.33	1177	6351.70	1178	6498.24	1179	6628.72		
1180	6751.56	1181	6873.46	1182	6997.34	1183	7122.18	1184	7244.12		
1185	7357.61	1186	7456.84	1187	7536.86	1188	7594.04	1189	7626.02		
1190	7631.91	1191	7611.96	1192	7567.43	1193	7499.92	1194	7411.66		
1195	7304.95	1196	7182.31	1197	7046.32	1198	6899.47	1199	6744.02		
1200	6581.97	1201	6415.15	1202	6245.30	1203	6073.89	1204	5902.04		
1205	5731.01	1206	5562.09	1207	5395.20	1208	5231.82	1209	5072.24		
1210	4916.25	1211	4765.61	1212	4618.51	1213	4477.53	1214	4340.19		
1215	4209.12	1216	4081.87	1217	3960.64	1218	3843.29	1219	3731.79		
1220	3624.19	1221	3521.80	1222	3423.50	1223	3329.55	1224	3239.92		
1225	3154.04	1226	3072.08	1227	2993.86	1228	2919.03	1229	2847.59		
1230	2779.55	1231	2714.54	1232	2652.46	1233	2593.17	1234	2536.54		
1235	2482.41	1236	2430.64	1237	2381.09	1238	2333.64	1239	2288.19		
1240	2244.67	1241	2202.98	1242	2163.06	1243	2124.83	1244	2088.19		
1245	2053.03	1246	2019.24	1247	1986.75	1248	1955.47	1249	1925.37		
1250	1896.68	1251	1869.16	1252	1842.51	1253	1816.74	1254	1791.92		
1255	1768.14	1256	1745.03	1257	1722.58	1258	1700.82	1259	1679.74		
1260	1659.36	1261	1639.66	1262	1620.65	1263	1602.27	1264	1585.01		
1265	1568.19	1266	1551.74	1267	1535.65	1268	1519.94	1269	1504.57		
1270	1489.55	1271	1474.91	1272	1460.60	1273	1447.00	1274	1433.86		
1275	1420.83	1276	1407.90	1277	1395.11	1278	1382.44	1279	1369.92		
1280	1357.55	1281	1345.32	1282	1333.76	1283	1322.36	1284	1311.00		
1285	1299.69	1286	1288.44	1287	1277.25	1288	1266.11	1289	1255.03		
1290	1244.01	1291	1233.07	1292	1222.21	1293	1211.44	1294	1200.77		

1295 1190.21 1296 1179.78 1297 1169.47 1298 1159.32 1299 1149.33
 1300 1139.53 1310 1053.26 1320 981.37 1330 912.90 1340 844.68
 1350 778.02 1360 711.69 1370 651.81 1380 598.68 1390 550.02
 1400 507.33 1420 425.34 1440 358.91 1460 309.51 1500 244.87

Adams_Cvn_VCRat_basin_48AR.OUT

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 118A

TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 7632 cfs
 TIME OF PEAK: 1190 minutes
 HYDROGRAPH VOLUME: 1207.99 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	13.45	200	13.64	300	15.37	400	22.27
500	36.33	600	53.66	700	73.72	800	106.39	900	202.02
1000	505.79	1050	814.46	1100	1281.51	1110	1390.29	1120	1521.91
1130	1696.71	1131	1717.04	1132	1737.83	1133	1759.02	1134	1780.52
1135	1802.35	1136	1825.01	1137	1848.35	1138	1872.36	1139	1897.22
1140	1923.23	1141	1950.60	1142	1979.03	1143	2008.57	1144	2039.35
1145	2071.50	1146	2105.19	1147	2140.54	1148	2177.72	1149	2216.80
1150	2257.88	1151	2301.15	1152	2346.85	1153	2395.32	1154	2447.08
1155	2503.08	1156	2564.34	1157	2631.78	1158	2706.91	1159	2791.28
1160	2885.72	1161	2991.43	1162	3110.62	1163	3246.30	1164	3401.85
1165	3580.04	1166	3781.67	1167	4004.93	1168	4245.73	1169	4498.70
1170	4758.83	1171	5021.84	1172	5282.96	1173	5536.18	1174	5774.48
1175	5991.23	1176	6183.33	1177	6351.70	1178	6498.24	1179	6628.72
1180	6751.56	1181	6873.46	1182	6997.34	1183	7122.18	1184	7244.12
1185	7357.61	1186	7456.84	1187	7536.86	1188	7594.04	1189	7626.02
1190	7631.91	1191	7611.96	1192	7567.43	1193	7499.92	1194	7411.66
1195	7304.95	1196	7182.31	1197	7046.32	1198	6899.47	1199	6744.02
1200	6581.97	1201	6415.15	1202	6245.30	1203	6073.89	1204	5902.04
1205	5731.01	1206	5562.09	1207	5395.20	1208	5231.82	1209	5072.24
1210	4916.25	1211	4765.61	1212	4618.51	1213	4477.53	1214	4340.19
1215	4209.12	1216	4081.87	1217	3960.64	1218	3843.29	1219	3731.79
1220	3624.19	1221	3521.80	1222	3423.50	1223	3329.55	1224	3239.92
1225	3154.04	1226	3072.08	1227	2993.86	1228	2919.03	1229	2847.59
1230	2779.55	1231	2714.54	1232	2652.46	1233	2593.17	1234	2536.54
1235	2482.41	1236	2430.64	1237	2381.09	1238	2333.64	1239	2288.19
1240	2247.03	1241	2202.98	1242	2163.06	1243	2124.83	1244	2088.19
1245	2053.03	1246	2019.24	1247	1986.75	1248	1955.47	1249	1925.37
1250	1896.68	1251	1869.16	1252	1842.51	1253	1816.74	1254	1791.92
1255	1768.14	1256	1745.03	1257	1722.58	1258	1700.82	1259	1679.74
1260	1659.36	1261	1639.66	1262	1620.65	1263	1602.27	1264	1585.01
1265	1568.19	1266	1551.74	1267	1535.65	1268	1519.94	1269	1504.57
1270	1489.55	1271	1474.91	1272	1460.60	1273	1447.00	1274	1433.86
1275	1420.83	1276	1407.90	1277	1395.11	1278	1382.44	1279	1369.92
1280	1357.55	1281	1345.32	1282	1333.76	1283	1322.36	1284	1311.00
1285	1299.69	1286	1288.44	1287	1277.25	1288	1266.11	1289	1255.03
1290	1244.01	1291	1233.07	1292	1222.21	1293	1211.44	1294	1200.77
1295	1190.21	1296	1179.78	1297	1169.47	1298	1159.32	1299	1149.33

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

VCRat Model Input

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Model Lines

006	4492	046CD010	A97101426005600	
006	4492	047C	020000004307B98	
006	4492	048BC010	A97	1
110				
111		0.92300	6.42	
110				
006	4492	049A	010	099A97200768002900
006	4492	050B	020000005007B98201183003500	
006	4492	051B	020000007907B98201240003400	
006	4492	052B	020000002805B98	
006	4492	053E	020000007909B98100782006000	E
006	4492	054E	030000002505B98	
006	4492	055BE010	A97200853004000	
006	4492	056B	020000001405B98	
006	4492	057F	020000008706B98201222004800	
006	4492	058F	030000003005B98	
006	4492	059BF010	A97101584006300	
006	4492	060B	020000004005B98	
006	4492	061AB010	A97201530002400	
006	4492	062A	020000005507B98	
006	4492	063A	02000000806B98201254001800	
006	4492	064A	010000004106B98	
006	4492	065B	020000006605B98101577007600	
006	4492	066B	020000004906B98	
006	4492	067AB010	A97200885002400	
006	4492	068A	010000002405B98	
006	4492	069A	030000005706B98201682001400	
006	4492	070A	020000005008B98	
006	4492	071C	020000005805B98101208005000	C
006	4492	072C	020000007506B98201403004800	
006	4492	073C	020000007407B98	
006	4492	074C	020000005406B98200814002700	
006	4492	075C	020000002005B98	
006	4492	076C	020000004307B98201738003400	
006	4492	077C	020000008908B98	
006	4492	078AC010	A97201110001900	
006	4492	079A	030000003007B98	
006	4492	080A	020000004105B98202463001700	
006	4492	081A	020000008306B98	
006	4492	082D	020000005106B98101093007600	D
006	4492	083D	020000004706B98	
006	4492	084AD010	A97200977003300	
006	4492	085A	020000004605B98	
006	4492	086A	020000006707B98201211000700	
006	4492	087A	020000003306B98	
006	4492	088A	020000009305B98200524001100	
006	4492	089A	0400000000505B98	
006	4492	090A	010	099A97
006	4492	091E	020000003905B98101621005900	E

006 4492 092E 020000005907B98
 006 4492 093AE010 A97200926001100
 006 4492 094A 030000002205B98

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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VCRat Model Input

Model Lines

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006 4492 095A 020000006105B98
006 4492 096A 020000007508B98201651001600
006 4492 097F 030000003905B98101064005300
006 4492 098F 020000003306B98
006 4492 099F 020000005007B98100595009400
006 4492 100F 020000003606B98201714004600
006 4492 101F 020000004807B98
006 4492 102AF010 A97201147001000
006 4492 103A 020000004207B98201111001800
006 4492 104A 020000006507B98
006 4492 105A 020000008207B98201606001800
006 4492 106A 030000006007B98
006 4492 107A 020000006909B98201408002100
006 4492 108A 030000005807B98
006 4492 109A 030000003105B98201467001500
006 4492 110A 030000004206B98202733001400
006 4492 111A 030000007309B98203056001300
006 4492 112A 030000005621B98
006 4492 113B 030000005012B98202779001700
006 4492 114B 040000004321B98
006 4492 115AB010 A97201726001000
006 4492 116A 010 099A97205400001000
006 4492 117A 010 099A97
006 4492 118A 010 099A97
999
    
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F

B

1
1 2

4492	56F	87.	329.	0.04800	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	57F	117.	397.	0.06300	0.00	0.00	0.00	0.00	30	5	B98	0.00
4492	58BF	1355.	2865.	0.00000	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	59B	1395.	2853.	0.02400	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	60AB	1395.	2853.	0.00000	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	61A	3118.	6102.	0.00000	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	55	3173.	6137.	0.01800	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	62A	3253.	6135.	0.00000	0.00	0.00	0.00	0.00	10	0	B98	0.00
4492	63A	3294.	6135.	0.07600	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	64B	66.	281.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	65B	115.	354.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	66AB	115.	3409.	0.02400	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	67A	24.	6218.	0.00000	0.00	0.00	0.00	0.00	10	5	B98	0.00
4492	68A	57.	6235.	0.01400	0.00	0.00	0.00	0.00	30	6	B98	0.00
4492	69A	50.	6216.	0.00000	0.00	0.00	0.00	0.00	20	8	B98	0.00
4492	70C	58.	247.	0.05000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	71C	75.	419.	0.04800	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	72C	74.	627.	0.00000	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	73C	54.	204.	0.02700	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	74C	20.	85.	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	75C	43.	324.	0.03400	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	76C	89.	148.	0.00000	0.00	0.00	0.00	0.00	20	8	B98	0.00
4492	77AC	413.	1149.	0.01900	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	78A	30.	97.	0.00000	0.00	0.00	0.00	0.00	30	7	B98	0.00
4492	79A	41.	174.	0.01700	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	80A	83.	314.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	81D	51.	193.	0.07600	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	82D	47.	178.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	83AD	98.	312.	0.03300	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	84A	46.	196.	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	85A	67.	331.	0.00700	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	86A	33.	221.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	87A	93.	396.	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	88A	5.	19.	0.01100	0.00	0.00	0.00	0.00	40	5	B98	0.00
4492	89A	0.	0.	0.00000	0.00	0.00	0.00	0.00	99	99	A97	0.00
4492	90E	39.	166.	0.05900	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	91E	59.	203.	0.00000	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	92AE	98.	282.	0.01100	0.00	0.00	0.00	0.00	10	0	A97	0.00
4492	93A	22.	88.	0.00000	0.00	0.00	0.00	0.00	30	5	B98	0.00
4492	94A	61.	259.	0.00000	0.00	0.00	0.00	0.00	20	5	B98	0.00
4492	95A	75.	4630.	0.01600	0.00	0.00	0.00	0.00	20	8	B98	0.00
4492	96F	39.	4705.	0.05300	0.00	0.00	0.00	0.00	30	5	B98	0.00
4492	97F	33.	156.	0.00000	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	98F	50.	216.	0.09400	0.00	0.00	0.00	0.00	20	7	B98	0.00
4492	99F	36.	385.	0.04600	0.00	0.00	0.00	0.00	20	6	B98	0.00
4492	100F	48.	493.	0.00000	0.00	0.00	0.00	0.00	20	7	B98	0.00
			584.	0.00000	0.00	0.00	0.00	0.00	0.	9	B98	0.00

Header place holder		SUBAREA		SUBAREA		SUBAREA		SUBAREA		SUBAREA		SUBAREA		SUBAREA		SUBAREA	
LOCATION	AREA	Q	TOTAL	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	CONV	
4492	101AF	206.	4911.	2	1147.	0.01000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	102A	42.	4953.	2	1111.	0.01800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	103A	65.	5018.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	104A	82.	5100.	2	1606.	0.01800	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	105A	60.	5160.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	106A	69.	5229.	2	1408.	0.02100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	107A	58.	5287.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	108A	31.	5318.	2	1467.	0.01500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	109A	42.	5360.	2	2733.	0.01400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4492	110A	73.	5433.	2	3056.	0.01300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

4492	111A	93	5489.	6671.	0	48ARO.TXT	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492	112B	118.	50.	118.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492	113B	66.	93.	155.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	155.	5582.	6691.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	115A	0.	5582.	6671.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492	116A	0.	5582.	6511.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

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MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT	Header place holder	STORM DAY 4	REDUCTION FACTOR =
4492	111A	93	1.000
4492	112B	118.	1.000
4492	113B	66.	1.000
4492	114AB	155.	1.000
4492	115A	0.	1.000
4492	116A	0.	1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	3.	400	3.
500	4.	600	6.	700	7.	800	7.	900	10.
1000	28.	1050	42.	1100	48.	1110	72.	1120	72.
1130	100.	1131	102.	1132	105.	1133	108.	1134	111.
1135	114.	1136	114.	1137	118.	1138	121.	1139	124.
1140	128.	1141	135.	1142	139.	1143	144.	1144	151.
1145	163.	1146	173.	1147	183.	1148	196.	1149	234.
1150	274.	1151	289.	1152	376.	1153	432.	1154	469.
1155	497.	1156	506.	1157	503.	1158	466.	1159	426.
1160	414.	1161	322.	1162	265.	1163	231.	1164	197.
1165	157.	1166	130.	1167	111.	1168	98.	1169	90.
1170	80.	1171	76.	1172	71.	1173	64.	1174	62.
1175	59.	1176	57.	1177	54.	1178	48.	1179	49.
1180	47.	1181	45.	1182	43.	1183	41.	1184	41.
1185	40.	1186	40.	1187	40.	1188	39.	1189	39.
1190	38.	1191	38.	1192	38.	1193	38.	1194	38.
1195	38.	1196	38.	1197	38.	1198	38.	1199	38.
1200	38.	1201	37.	1202	37.	1203	35.	1204	35.
1205	34.	1206	33.	1207	32.	1208	31.	1209	30.
1210	29.	1211	28.	1212	28.	1213	27.	1214	27.
1215	26.	1216	26.	1217	27.	1218	26.	1219	26.
1220	26.	1221	26.	1222	26.	1223	26.	1224	26.
1225	27.	1226	26.	1227	26.	1228	26.	1229	27.
1230	26.	1231	26.	1232	26.	1233	26.	1234	25.
1235	26.	1236	26.	1237	25.	1238	25.	1239	25.
1240	25.	1241	25.	1242	25.	1243	25.	1244	25.
1245	25.	1246	25.	1247	25.	1248	25.	1249	25.
1250	25.	1251	25.	1252	25.	1253	25.	1254	25.
1255	25.	1256	25.	1257	25.	1258	25.	1259	25.
1260	25.	1261	25.	1262	24.	1263	23.	1264	23.
1265	22.	1266	22.	1267	21.	1268	20.	1269	20.
1270	19.	1271	18.	1272	19.	1273	18.	1274	17.
1275	17.	1276	17.	1277	17.	1278	17.	1279	16.
1280	17.	1281	17.	1282	16.	1283	16.	1284	17.
1285	17.	1286	16.	1287	16.	1288	17.	1289	17.
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.
1300	17.	1310	11.	1320	7.	1330	6.	1340	6.
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT	Header place holder	STORM DAY 4	REDUCTION FACTOR =
4492	111A	93	0.941
4492	112B	118.	0.941
4492	113B	66.	0.941
4492	114AB	155.	0.941
4492	115A	0.	0.941
4492	116A	0.	0.941

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	1.	400	1.
500	3.	600	4.	700	5.	800	7.	900	12.
1000	23.	1050	36.	1100	42.	1110	64.	1120	64.

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TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1130	90.	1131	93.	1132	48ARO.TXT	1133	98.	1134	101.				
1135	104.	1136	104.	1137	95.	1138	111.	1139	113.				
1140	117.	1141	123.	1142	108.	1143	132.	1144	138.				
1145	150.	1146	159.	1147	169.	1148	181.	1149	217.				
1150	253.	1151	277.	1152	349.	1153	401.	1154	436.				
1155	462.	1156	472.	1157	469.	1158	435.	1159	397.				
1160	387.	1161	301.	1162	247.	1163	215.	1164	184.				
1165	146.	1166	120.	1167	102.	1168	90.	1169	82.				
1170	73.	1171	69.	1172	64.	1173	57.	1174	56.				
1175	53.	1176	51.	1177	48.	1178	42.	1179	43.				
1180	41.	1181	39.	1182	38.	1183	36.	1184	35.				
1185	35.	1186	34.	1187	34.	1188	34.	1189	33.				
1190	33.	1191	32.	1192	33.	1193	32.	1194	32.				
1195	33.	1196	32.	1197	32.	1198	32.	1199	32.				
1200	32.	1201	32.	1202	31.	1203	30.	1204	29.				
1205	29.	1206	28.	1207	27.	1208	26.	1209	25.				
1210	24.	1211	23.	1212	23.	1213	22.	1214	22.				
1215	22.	1216	21.	1217	22.	1218	21.	1219	21.				
1220	22.	1221	22.	1222	21.	1223	21.	1224	22.				
1225	22.	1226	21.	1227	21.	1228	22.	1229	22.				
1230	21.	1231	21.	1232	22.	1233	21.	1234	21.				
1235	21.	1236	21.	1237	21.	1238	20.	1239	20.				
1240	20.	1241	20.	1242	20.	1243	20.	1244	20.				
1245	20.	1246	20.	1247	20.	1248	20.	1249	20.				
1250	20.	1251	20.	1252	20.	1253	20.	1254	20.				
1255	20.	1256	20.	1257	20.	1258	20.	1259	20.				
1260	20.	1261	20.	1262	19.	1263	18.	1264	18.				
1265	18.	1266	17.	1267	16.	1268	16.	1269	15.				
1270	15.	1271	14.	1272	14.	1273	14.	1274	13.				
1275	13.	1276	13.	1277	13.	1278	12.	1279	12.				
1280	13.	1281	13.	1282	12.	1283	12.	1284	13.				
1285	13.	1286	12.	1287	12.	1288	12.	1289	13.				
1290	12.	1291	12.	1292	12.	1293	12.	1294	12.				
1295	12.	1296	12.	1297	12.	1298	12.	1299	12.				
1300	12.	1310	9.	1320	5.	1330	5.	1340	5.				
1350	4.	1360	2.	1370	1.	1380	0.	1390	0.				
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.				

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder

HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.941

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	7.
500	8.	600	12.	700	18.	800	29.	900	53.
1000	176.	1050	356.	1100	673.	1110	746.	1120	831.
1130	940.	1131	953.	1132	966.	1133	980.	1134	993.
1135	1007.	1136	1021.	1137	1036.	1138	1051.	1139	1066.
1140	1082.	1141	1099.	1142	1117.	1143	1135.	1144	1154.
1145	1174.	1146	1195.	1147	1217.	1148	1240.	1149	1264.
1150	1290.	1151	1316.	1152	1345.	1153	1375.	1154	1407.
1155	1442.	1156	1479.	1157	1520.	1158	1565.	1159	1616.
1160	1674.	1161	1740.	1162	1814.	1163	1897.	1164	1993.
1165	2103.	1166	2229.	1167	2375.	1168	2539.	1169	2720.
1170	2915.	1171	3118.	1172	3329.	1173	3544.	1174	3760.
1175	3971.	1176	4171.	1177	4356.	1178	4523.	1179	4672.
1180	4806.	1181	4933.	1182	5061.	1183	5194.	1184	5337.
1185	5490.	1186	5613.	1187	5813.	1188	5972.	1189	6120.
1190	6251.	1191	6359.	1192	6439.	1193	6491.	1194	6511.
1195	6501.	1196	6463.	1197	6399.	1198	6311.	1199	6203.
1200	6080.	1201	5942.	1202	5795.	1203	5640.	1204	5480.

1205	5317.	1206	5153.	1207	4888.	1208	4825.	1209	4665.
1210	4507.	1211	4352.	1212	4201.	1213	4055.	1214	3913.
1215	3776.	1216	3644.	1217	3516.	1218	3394.	1219	3276.
1220	3163.	1221	3054.	1222	2951.	1223	2850.	1224	2755.
1225	2663.	1226	2576.	1227	2491.	1228	2411.	1229	2334.
1230	2260.	1231	2190.	1232	2122.	1233	2057.	1234	1995.
1235	1936.	1236	1879.	1237	1825.	1238	1773.	1239	1723.
1240	1675.	1241	1629.	1242	1585.	1243	1543.	1244	1503.
1245	1464.	1246	1426.	1247	1391.	1248	1356.	1249	1323.
1250	1291.	1251	1261.	1252	1231.	1253	1203.	1254	1176.
1255	1150.	1256	1124.	1257	1101.	1258	1078.	1259	1056.
1260	1035.	1261	1014.	1262	995.	1263	976.	1264	958.
1265	940.	1266	923.	1267	906.	1268	890.	1269	875.
1270	861.	1271	846.	1272	832.	1273	819.	1274	805.
1275	793.	1276	781.	1277	769.	1278	758.	1279	746.
1280	735.	1281	724.	1282	714.	1283	704.	1284	695.
1285	685.	1286	676.	1287	667.	1288	659.	1289	650.
1290	642.	1291	635.	1292	627.	1293	619.	1294	612.
1295	605.	1296	598.	1297	591.	1298	584.	1299	578.
1300	571.	1310	511.	1320	457.	1330	411.	1340	375.
1350	344.	1360	316.	1370	290.	1380	265.	1390	241.
1400	217.	1420	176.	1440	140.	1460	111.	1500	75.

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Modified Rational Model Results Report

Job: 4492 Project: Adams County VC Rat

Project Description

100 YEAR EVENT

VCRat version: 2.6.2008.11
VCRain version: 200703
DOS EXE version: PC 2.2-200809

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Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results																
ROUTING AFTER ACCUMULATION																
ACCUMULATED DATA																
Node	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES
DEPTH	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
(FT/S)	(FT)															
1A : Subshed 1A																
1A 010	K100	10	0	0	85	278	85	278	1154	MOUNTAIN	1635	0.17400				
2A : Subshed 2A																
2A 020	K100	9	0	0	79	254	164	506	1156	MOUNTAIN	1750	0.07500				
3A : Subshed 3A																
3A 020	K100	5	0	0	73	332	237	633	1156							
4B : Subshed 4B																
4B 010	K100	9	0	0	88	303	88	303	1153							
5B : Subshed 5B																
5B 010	K100	7	0	0	54	212	142	515	1153	MOUNTAIN	2148	0.14200				
6B : Subshed 6B																

		Adams_Cyn_VCRat_basin_60AR.OUT					
		222	711	1157	-----	---	---
6B	020 K100	10	0	80	244	---	---
7AB	---	---	---	222	711	---	---
8A	Subshed 8A	7	0	94	347	---	---
8A	020 K100	7	0	94	347	---	---
9C	Subshed 9C	6	0	79	320	---	---
9C	020 K100	6	0	79	320	---	---
10C	Subshed 11C	7	0	51	188	---	---
10C	020 K100	7	0	51	188	---	---
11C	Subshed 10C	6	0	73	313	---	---
11C	010 K100	6	0	73	313	---	---
12C	Subshed 12C	5	0	108	491	---	---
12C	020 K100	5	0	108	491	---	---
13C	Subshed 13C	12	0	87	236	---	---
13C	020 K100	12	0	87	236	---	---
14AC	---	---	---	398	1226	---	---
15A	Subshed 15A	5	0	30	129	---	---
15A	030 K100	5	0	30	129	---	---
16D	Subshed 16D	7	0	80	295	---	---
16D	020 K100	7	0	80	295	---	---
17D	Subshed 17D	5	0	12	51	---	---
17D	030 K100	5	0	12	51	---	---
18AD	---	---	---	92	324	---	---
19A	Subshed 19A	7	0	66	229	---	---
19A	030 K100	7	0	66	229	---	---
20E	Subshed 20E	5	0	71	323	---	---
20E	020 K100	5	0	71	323	---	---
21E	Subshed 22E	5	0	39	177	---	---
21E	020 K100	5	0	39	177	---	---
22E	Subshed 21E	5	0	68	309	---	---
22E	020 K100	5	0	68	309	---	---
23E	Subshed 23E	5	0	50	227	---	---
23E	020 K100	5	0	50	227	---	---
24AE	---	---	---	228	747	---	---
25A	Subshed 25A	5	0	18	77	---	---
25A	030 K100	5	0	18	77	---	---
26A	Subshed 26A	7	0	56	207	---	---
26A	020 K100	7	0	56	207	---	---
27A	Subshed 27A	6	0	79	320	---	---
27A	020 K100	6	0	79	320	---	---

Adams_Cyn_VCRat_basin_60AR.OUT
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat V2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results
 ROUTING AFTER ACCUMULATION

SUBAREA DATA AND RESULTS		ACCUMULATED DATA										ROUTING AFTER ACCUMULATION		
NODE DEPTH ID	SOIL TYPE	RAIN ZONE (MIN)	TC IMP	AREA (AC)	FLOW (CFS)	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V (Z)	N VALUES CHNL SIDES
28A : 28A	Subshed 28A 020 K100	10	0	64	195	1584	3488	1160	VALLEY	1069	0.02600	---	---	---
29A : 29A	Subshed 29A 020 K100	7	0	46	170	1630	3516	1161	---	---	---	---	---	---
30A : 30A	Subshed 30A 020 K100	5	0	40	182	1670	3539	1161	VALLEY	1537	0.02900	---	---	---
31A : 31A	Subshed 31A 020 K100	7	0	53	196	1723	3557	1162	---	---	---	---	---	---
32B : 32B : 32B	Subshed 32B Clearing Hydrograph Bank: B 010 K100	7	0	99	389	99	389	1153	MOUNTAIN	735	0.11200	---	---	---
33B : 33B	Subshed 33B 020 K100	7	0	47	174	146	555	1155	---	---	---	---	---	---
34B : 34B	Subshed 34B 020 K100	6	0	36	146	182	687	1154	MOUNTAIN	1710	0.05700	---	---	---
35B : 35B	Subshed 35B 020 K100	9	0	78	251	260	844	1157	---	---	---	---	---	---
36B : 36B	Subshed 36B 020 K100	9	0	100	321	360	1142	1157	MOUNTAIN	736	0.05200	---	---	---
37B : 37B	Subshed 37B 020 K100	5	0	13	59	373	1128	1158	---	---	---	---	---	---
38B : 38B	Subshed 38B 020 K100	9	0	71	228	444	1320	1157	VALLEY	1438	0.03500	---	---	---
39B : 39B	Subshed 39B 020 K100	7	0	49	181	493	1407	1158	---	---	---	---	---	---
40C : 40C : 40C	Subshed 40C Clearing Hydrograph Bank: C 020 K100	10	0	87	265	87	265	1154	MOUNTAIN	2063	0.16300	---	---	---
41C : 41C	Subshed 41C 020 K100	10	0	76	231	163	460	1157	---	---	---	---	---	---
42C : 42C	Subshed 42C 010 K100	12	0	107	314	270	766	1156	MOUNTAIN	1338	0.08100	---	---	---

Node ID	Subshed	Rain (in)	TC (%)	Imp (min)	Area (ac)	Flow (cfs)	Area (ac)	Flow (cfs)	Time (min)	Channel Type	Length (ft)	Slope (ft/ft)	Size (ft)	H:V	N Values
43C	Subshed 43C	0.10	5	0	23	110	293	780	1156						
44D	Subshed 44D	0.20	9	0	80	257	80	257	1153	MOUNTAIN	1840	0.08300			
45D	Subshed 45D	0.20	5	0	54	246	134	384	1156						
46CD					134	384	427	1165	1156	MOUNTAIN	1426	0.05600			
47C	Subshed 47C	0.20	7	0	43	159	470	1206	1158						
48BC					470	1206	963	2613	1158	VALLEY	768	0.02900			
49B	Subshed 49B	0.20	7	0	50	185	1013	2655	1158	VALLEY	1183	0.03500			
50B	Subshed 50B	0.20	7	0	79	292	1092	2726	1159	VALLEY	1240	0.03400			
51B	Subshed 51B	0.20	5	0	28	127	1120	2731	1160						

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat V2.6)

Job: 4492 Project: Adams County VC Rat

Model Results
ROUTING AFTER ACCUMULATION

Node ID	Subshed	Rain (in)	TC (%)	Imp (min)	Area (ac)	Flow (cfs)	Area (ac)	Flow (cfs)	Time (min)	Channel Type	Length (ft)	Slope (ft/ft)	Size (ft)	H:V	N Values
52E	Subshed 52E	0.20	9	0	79	254	79	254	1153	MOUNTAIN	782	0.06000			
53E	Subshed 53E	0.30	5	0	25	107	104	325	1156						
54BE					104	325	1224	2947	1160	VALLEY	853	0.04000			
55B	Subshed 55B	0.20	5	0	14	64	1238	2937	1160						
56F	Subshed 56F	0.20	6	0	87	352	87	352	1153	VALLEY	1222	0.04800			
57F	Subshed 57F	0.30	5	0	30	129	117	426	1155						
58BF					117	426	1355	3116	1160	MOUNTAIN	1584	0.06300			

Adams_Cyn_VCRat_basin_60AR.OUT

Node	Subshed	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values
59B	Subshed 59B													
59B	020 K100	5	0	40	182	1395	3105	1161						
60AB														
60AB														
***** * INCOMING HYDROGRAPH PEAK (cfs): 6657.08 VOLUME (acre-ft): 532.19 * * HYDROGRAPH ADJUSTMENT FACTOR: 0.85400 * * ADJUSTED HYDROGRAPH PEAK (cfs): 5685.14 VOLUME (acre-ft): 454.49 * * RUNOFF FACTOR(in): 6.14 TOTAL RAIN(in): 11.50 SCS Curve: 60 * * FATTENED HYDROGRAPH PEAK (cfs): 5685.14 VOLUME (acre-ft): 1594.65 * *****														
60A														
60A														
61A														
61A														
62A	Subshed 61A - START OF LOWER WATERSHED													
62A	020 K100	7	0	55	203	3173	5707	1163						
63A	Subshed 62A													
63A	020 K100	6	0	80	324	3253	5746	1163						
64A	Subshed 63A													
64A	010 K100	6	0	41	176	3294	5767	1164						
65B	Subshed 64B													
65B	020 K100	5	0	66	300	66	300	1153						
66B	Subshed 65B													
66B	020 K100	6	0	49	198	115	383	1155						
67AB														
67AB														
68A	Subshed 67A													
68A	010 K100	5	0	24	115	3433	5944	1158						
69A	Subshed 68A													
69A	030 K100	6	0	57	218	3490	6068	1157						
70A	Subshed 69A													
70A	020 K100	8	0	50	171	3540	6145	1159						
71C	Subshed 70C													
71C	Clearing Hydrograph Bank: C													
71C	020 K100	5	0	58	264	58	264	1153						
72C	Subshed 71C													
72C	020 K100	6	0	75	304	133	451	1154						
73C	Subshed 72C													
73C	020 K100	7	0	74	273	207	676	1155						

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Adams_Cyn_VCRat_basin_60AR.OUT

VEL (FT/S)	DEPTH (FT)	ID	TYPE	ZONE (MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
		74C	Subshed	73C	6	0	54	219	261	863	1155	VALLEY	814	0.02700			
		74C	020	K100													
		75C	Subshed	74C	5	0	20	91	281	911	1156						
		75C	020	K100													
		76C	Subshed	75C	7	0	43	159	324	1044	1156	VALLEY	1738	0.03400			
		76C	020	K100													
		77C	Subshed	76C	8	0	89	305	413	1243	1157						
		77C	020	K100													
		78AC					413	1243	3953	7327	1158	VALLEY	1110	0.01900			
		79A	Subshed	78A	7	0	30	104	3983	7357	1159						
		79A	030	K100													
		80A	Subarea	79A	5	0	41	186	4024	7388	1159	VALLEY	2463	0.01700			
		80A	020	K100													
		81A	Subshed	80A	6	0	83	336	4107	7386	1161						
		81A	020	K100													
		82D	Subshed	81D													
		82D	020	K100													
		82D	Clearing	Hydrograph	bank:	D	51	206	51	206	1153	MOUNTAIN	1093	0.07600			
		83D	Subshed	82D	6	0	47	190	98	337	1155						
		83D	020	K100													
		84AD					98	337	4205	7524	1160	VALLEY	977	0.03300			
		85A	Subarea	84A	5	0	46	209	4251	7542	1161						
		85A	020	K100													
		86A	Subarea	85A	7	0	67	247	4318	7589	1161	VALLEY	1211	0.00700			
		86A	020	K100													
		87A	Subarea	86A	6	0	33	134	4351	7572	1162						
		87A	020	K100													
		88A	Subarea	87A	5	0	93	423	4444	7620	1162	VALLEY	524	0.01100			
		88A	020	K100													
		89A	Subarea	88A	5	0	5	20	4449	7611	1163						
		89A	040	K100													
		90A							4449	7611	1163						
		91E	Subshed	90E													
		91E	Clearing	Hydrograph	bank:	E	39	177	39	177	1153	MOUNTAIN	1621	0.05900			
		91E	020	K100													
		92E	Subshed	91E	7	0	59	218	98	305	1155						
		92E	020	K100													

Node	Subshed	TC	IMP	AREA (AC)	FLOW (CFS)	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V	N VALUES
93AE		0	0	98	305	4547	7716	1162	VALLEY	926	0.01100			
94A	Subshed 93A	5	0	22	94	4569	7713	1163						
95A	Subshed 94A	5	0	61	277	4630	7742	1164						
96A	Subshed 95A	8	0	75	257	4705	7784	1163	VALLEY	1651	0.01600			
97F	Subshed 96F													
97F	Clearing Hydrograph Bank: F	5	0	39	167	39	167	1153	MOUNTAIN	1064	0.05300			
98F	Subshed 97F	6	0	33	134	72	233	1155						

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Model Results

ROUTING AFTER ACCUMULATION

ACCUMULATED DATA

SUBAREA DATA AND RESULTS

Node	Subshed	TC	IMP	AREA (AC)	FLOW (CFS)	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V	N VALUES
99F	Subshed 98F	7	0	50	185	122	414	1155	MOUNTAIN	595	0.09400			
100F	Subshed 99F	6	0	36	146	158	531	1155	VALLEY	1714	0.04600			
101F	Subshed 100F	7	0	48	177	206	633	1156						
102AF				206	633	4911	8008	1161	VALLEY	1147	0.01000			
103A	Subshed 102A	7	0	42	155	4953	8029	1162	VALLEY	1111	0.01800			
104A	Subshed 103A	7	0	65	240	5018	8060	1163						
105A	Subshed 104A	7	0	82	303	5100	8109	1162	VALLEY	1606	0.01800			
106A	Subshed 105A	7	0	60	209	5160	8130	1164						
107A	Subshed 106A	9	0	69	222	5229	8171	1164	VALLEY	1408	0.02100			
108A	Subshed 107A													

TYPE	ERR NO	PROCEDURE	LOCATION	MESSAGE	Issue/Warning Messages
108A	030	K100	7 0 58 202	5287 8190 1164	Adams_Cyn_VCRat_basin_60AR.OUT
109A	Subshed 108A				
109A	030	K100	5 0 31 133	5318 8202 1164	VALLEY 1467 0.01500
110A	Subshed 109A				
110A	030	K100	6 0 42 160	5360 8208 1166	VALLEY 2733 0.01400
111A	Subshed 110A				
111A	030	K100	9 0 73 221	5433 8212 1169	VALLEY 3056 0.01300
112A	Subshed 111A				
112A	030	K100	21 0 56 101	5489 8245 1172	
113B	Subshed 112B				
113B	030	K100	12 0 50 127	50 127 1154	VALLEY 2779 0.01700
114B	Subshed 113B				
114B	040	K100	21 0 43 72	93 168 1164	
115AB					
115AB			93 168	5582 8357 1171	VALLEY 1726 0.01000
116A	routing				
116A				5582 8351 1173	VALLEY 5400 0.01000
117A	SC RIVER				
117A				5582 8218 1180	
118A				5582 8218 1180	
119A				5582 8218 1180	

Issue/Warning Messages

Caution Err1008 SUBAREA 89A TC and Area are set to minimum values(5). May be an attempt to run the model on a smaller area

than acceptable to VCRat.

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 2A

DESCRIPTION: Subshed 2A
TOTAL AREA TO HYDROGRAPH: 164 acres
HYDROGRAPH PEAK: 506 cfs
TIME OF PEAK: 1156 minutes
HYDROGRAPH VOLUME: 35.60 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)

Adams_Cyn_VCRat_basin_60AR.OUT

0	0.00	100	0.40	200	0.40	300	2.61	400	3.28
500	4.21	600	6.18	700	7.36	800	9.81	900	16.11
1000	27.89	1050	41.57	1100	47.99	1110	71.76	1120	71.82
1130	99.90	1131	102.34	1132	104.66	1133	108.00	1134	111.14
1135	113.66	1136	114.02	1137	118.10	1138	121.17	1139	124.18
1140	128.27	1141	134.61	1142	139.24	1143	144.13	1144	150.62
1145	163.40	1146	172.58	1147	183.42	1148	196.10	1149	234.08
1150	273.65	1151	288.68	1152	376.35	1153	432.08	1154	469.42
1155	496.67	1156	506.39	1157	503.02	1158	466.29	1159	425.71
1160	413.88	1161	322.12	1162	264.78	1163	230.89	1164	196.89
1165	156.93	1166	129.83	1167	110.97	1168	98.12	1169	89.79
1170	80.35	1171	75.74	1172	71.36	1173	63.50	1174	62.13
1175	59.20	1176	57.23	1177	53.66	1178	47.95	1179	48.73
1180	46.61	1181	44.82	1182	43.38	1183	41.39	1184	40.76
1185	40.11	1186	39.53	1187	39.52	1188	39.08	1189	38.72
1190	38.01	1191	38.01	1192	38.03	1193	37.97	1194	37.86
1195	38.22	1196	37.64	1197	37.65	1198	37.65	1199	37.66
1200	37.66	1201	37.13	1202	36.55	1203	35.47	1204	34.81
1205	34.05	1206	32.68	1207	31.71	1208	30.65	1209	29.54
1210	28.97	1211	27.84	1212	27.77	1213	27.21	1214	26.68
1215	26.35	1216	26.17	1217	26.55	1218	25.88	1219	25.83
1220	26.38	1221	26.40	1222	25.84	1223	25.81	1224	26.43
1225	26.50	1226	25.92	1227	25.86	1228	26.47	1229	26.53
1230	25.94	1231	25.88	1232	26.48	1233	26.03	1234	25.44
1235	25.88	1236	25.90	1237	25.34	1238	25.23	1239	25.15
1240	25.10	1241	25.05	1242	24.96	1243	24.82	1244	24.78
1245	24.76	1246	24.67	1247	24.68	1248	24.68	1249	24.62
1250	24.64	1251	24.65	1252	24.60	1253	24.62	1254	24.64
1255	24.59	1256	24.62	1257	24.64	1258	24.59	1259	24.61
1260	24.64	1261	24.58	1262	23.60	1263	23.12	1264	23.06
1265	22.45	1266	21.67	1267	20.82	1268	20.05	1269	19.75
1270	18.82	1271	18.42	1272	18.58	1273	18.20	1274	17.28
1275	16.94	1276	17.30	1277	17.23	1278	16.59	1279	16.44
1280	16.93	1281	16.97	1282	16.39	1283	16.30	1284	16.83
1285	16.90	1286	16.34	1287	16.26	1288	16.80	1289	16.88
1290	16.33	1291	16.25	1292	16.80	1293	16.36	1294	16.32
1295	16.25	1296	16.74	1297	16.76	1298	16.22	1299	16.17
1300	16.74	1310	10.59	1320	7.12	1330	6.46	1340	6.48
1350	5.13	1360	2.43	1370	0.80	1380	0.46	1390	0.41
1400	0.40	1420	0.40	1440	0.40	1460	0.40	1500	0.40

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
Hydrograph Printouts

HYDROGRAPH FATTENED AT 60A

 * INCOMING HYDROGRAPH PEAK (cfs): 6657.08 VOLUME (acre-ft): 532.19 *
 * HYDROGRAPH ADJUSTMENT FACTOR: 0.85400 VOLUME (acre-ft): 454.49 *
 * ADJUSTED HYDROGRAPH PEAK (cfs): 5685.14 TOTAL RAIN(in): 11.50 SCS Curve: 60 *
 * RUNOFF FACTOR(in): 6.14 VOLUME (acre-ft): 1594.65 *
 * FATTENED HYDROGRAPH PEAK (cfs): 5685.14 VOLUME (acre-ft): 1594.65 *

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TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
0	0.00	0.00	0.00	100	4.00	3.42	28.45
200	4.00	3.42	63.18	300	8.56	7.31	80.01
400	19.75	16.87	107.13	500	25.79	22.02	137.17
600	34.13	29.14	181.04	700	45.65	38.99	248.32
800	63.90	54.57	360.81	900	154.95	132.33	616.10
1000	354.18	302.47	1163.49	1050	565.63	483.05	1700.91
1100	750.23	640.69	2495.98	1110	871.75	744.47	2752.24
1120	1037.03	885.62	3047.08	1130	1296.75	1107.42	3398.05
1131	1328.06	1134.17	3435.81	1132	1358.87	1160.47	3473.37
1133	1394.69	1191.07	3513.03	1134	1434.00	1224.64	3554.07
1135	1475.29	1259.90	3595.84	1136	1514.58	1293.45	3636.71
1137	1560.68	1332.82	3680.19	1138	1606.20	1371.69	3723.27
1139	1654.43	1412.88	3767.25	1140	1704.49	1455.64	3811.72
1141	1762.20	1504.92	3858.83	1142	1822.09	1556.06	3906.43
1143	1890.73	1614.68	3956.86	1144	1961.72	1675.31	4007.69
1145	2044.51	1746.02	4062.18	1146	2133.42	1821.94	4118.16
1147	2232.86	1906.86	4177.02	1148	2342.01	2000.07	4238.29
1149	2511.14	2144.51	4318.36	1150	2717.58	2320.81	4408.84
1151	2922.73	2496.02	4496.77	1152	3291.37	2810.83	4633.62
1153	3694.98	3155.51	4777.06	1154	4151.91	3545.73	4931.95
1155	4654.91	3975.29	5095.12	1156	5177.74	4421.79	5258.10
1157	5617.33	4797.20	5391.30	1158	6027.18	5147.21	5510.98
1159	6291.02	5372.53	5586.18	1160	6507.26	5557.20	5645.57
1161	6635.33	5666.57	5679.54	1162	6657.08	5685.14	5685.14
1163	6577.16	5616.90	5664.56	1164	6418.26	5481.20	5622.20
1165	6187.16	5283.84	5558.49	1166	5916.49	5052.68	5481.19
1167	5606.13	4787.64	5389.58	1168	5269.85	4500.45	5286.97
1169	4916.57	4198.75	5175.58	1170	4553.12	3888.37	5057.21
1171	4195.69	3583.12	4936.66	1172	3858.69	3295.32	4818.55
1173	3538.77	3022.11	4702.23	1174	3241.03	2767.84	4589.67
1175	2967.46	2534.21	4481.94	1176	2715.83	2319.32	4378.73
1177	2494.20	2130.05	4283.15	1178	2292.76	1958.02	4192.37
1179	2113.16	1804.64	4107.32	1180	1953.57	1668.35	4027.72
1181	1810.56	1546.21	3952.67	1182	1683.91	1438.06	3882.39
1183	1570.57	1341.26	3816.00	1184	1471.15	1256.36	3753.98
1185	1381.87	1180.12	3695.09	1186	1300.11	1110.29	3638.52
1187	1227.45	1048.25	3584.99	1188	1163.79	993.88	3534.59
1189	1106.26	944.74	3486.33	1190	1052.89	899.17	3439.53
1191	1005.20	858.44	3394.84	1192	961.33	820.98	3351.60

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1193	924.14	789.21	3311.05	1194	889.35	759.51	3271.48
1195	857.56	732.36	3233.19	1196	827.36	706.56	3195.62
1197	802.27	685.14	3160.29	1198	778.93	665.20	3125.83
1199	756.97	646.45	3092.08	1200	737.30	629.65	3059.48
1201	717.97	613.15	3027.17	1202	700.98	598.63	2996.05
1203	684.78	584.80	2965.46	1204	670.08	572.25	2935.73

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1205	654.48	558.93	2905.76	1206	640.67	547.13	2876.79
1207	627.08	535.53	2848.11	1208	614.28	524.60	2819.99
1209	602.08	514.18	2792.34	1210	590.53	504.31	2765.19
1211	579.05	494.51	2738.28	1212	568.63	485.61	2712.07
1213	559.12	477.49	2686.50	1214	548.64	468.54	2660.65
1215	540.21	461.34	2636.02	1216	532.26	454.55	2611.83
1217	524.42	447.86	2587.90	1218	516.29	440.91	2564.03
1219	508.64	434.38	2540.60	1220	501.91	428.63	2517.85
1221	495.14	422.85	2495.27	1222	487.81	416.59	2472.61
1223	480.79	410.60	2450.30	1224	474.50	405.23	2428.57
1225	467.99	399.67	2406.91	1226	460.81	393.53	2385.09
1227	453.92	387.65	2363.61	1228	447.85	382.46	2342.76
1229	441.67	377.19	2322.04	1230	434.93	371.43	2301.19
1231	428.64	366.06	2280.76	1232	423.33	361.52	2261.06
1233	417.15	356.24	2241.05	1234	411.37	351.31	2221.44
1235	406.82	347.42	2202.69	1236	401.51	342.89	2183.69
1237	396.51	338.62	2165.04	1238	393.16	335.76	2147.48
1239	388.68	331.94	2129.47	1240	384.62	328.47	2111.86
1241	382.20	326.40	2095.35	1242	378.52	323.25	2078.30
1243	370.60	316.49	2029.93	1244	373.49	318.96	2046.03
1247	367.08	313.48	1999.54	1248	364.83	311.57	1984.30
1249	362.89	309.91	1969.40	1250	362.45	309.54	1955.55
1251	360.64	307.99	1941.04	1252	359.02	306.61	1926.80
1253	358.87	306.48	1913.58	1254	357.30	305.13	1899.67
1255	355.86	303.90	1885.99	1256	355.83	303.88	1873.31
1257	354.35	302.62	1859.89	1258	352.98	301.45	1846.69
1259	353.01	301.47	1834.47	1260	351.55	300.23	1821.50
1261	350.27	299.13	1808.76	1262	348.58	297.69	1795.90
1263	346.23	295.68	1782.78	1264	344.48	294.19	1770.14
1265	342.85	292.80	1757.71	1266	339.70	290.10	1744.45
1267	337.32	288.07	1731.80	1268	335.47	286.49	1719.60
1269	333.23	284.58	1707.28	1270	330.04	281.85	1694.46
1271	326.81	279.09	1681.74	1272	324.15	276.82	1669.49
1273	321.10	274.22	1657.10	1274	317.13	270.83	1644.23
1275	313.38	267.62	1631.61	1276	310.52	265.19	1619.66
1277	307.54	262.64	1607.73	1278	303.76	259.41	1595.39
1279	300.21	256.38	1583.30	1280	297.53	254.09	1571.87
1281	294.67	251.65	1560.42	1282	290.95	248.48	1548.51
1283	287.40	245.44	1536.80	1284	284.63	243.08	1525.70
1285	281.61	240.49	1514.52	1286	277.65	237.11	1502.82
1287	273.80	233.83	1491.28	1288	270.74	231.21	1480.34
1289	267.43	228.39	1469.33	1290	263.23	224.80	1457.82

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCrat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1291	259.20	221.36	1446.50	1292	256.05	218.66	1435.84
1293	251.82	215.05	1424.55	1294	248.56	212.27	1413.99
1295	244.50	208.80	1402.97	1296	241.42	206.18	1392.68
1297	238.41	203.60	1382.52	1298	235.04	200.73	1372.20
1299	231.04	197.30	1361.52	1300	229.00	195.56	1352.25
1310	193.70	165.42	1253.33	1320	163.03	139.22	1164.09
1330	137.39	117.33	1084.19	1340	112.54	96.11	1010.02

1350	89.61	76.52	941.84	Adams_Cyn_VCRat_basin_60AR_OUT	1360	71.39	60.97	881.22
1370	58.75	50.17	828.43		1380	49.24	42.05	781.35
1390	41.27	35.24	738.50		1400	34.62	29.56	699.41
1420	23.43	20.01	630.12		1440	15.52	13.26	571.59
1460	10.39	8.87	522.03		1500	5.58	4.76	443.37

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Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

Page: 11

HYDROGRAPH PRINTOUT AT: 117A

DESCRIPTION: SC RIVER
 TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 8218 cfs
 TIME OF PEAK: 1180 minutes
 HYDROGRAPH VOLUME: 1901.66 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	30.85	200	33.15	300	46.53	400	74.15
50	103.34	600	137.35	700	187.69	800	270.50	900	469.18
1000	974.15	1050	1454.47	1100	2203.23	1110	2384.69	1120	2606.21
1130	2894.33	1131	2927.07	1132	2960.30	1133	2993.91	1134	3027.83
1135	3062.70	1136	3098.44	1137	3135.06	1138	3172.72	1139	3212.16
1140	3252.93	1141	3294.98	1142	3338.41	1143	3383.38	1144	3430.07
1145	3478.57	1146	3529.01	1147	3581.53	1148	3636.17	1149	3693.01
1150	3752.25	1151	3814.21	1152	3879.26	1153	3947.95	1154	4021.24
1155	4100.40	1156	4186.30	1157	4280.42	1158	4384.94	1159	4501.20
1160	4630.55	1161	4775.41	1162	4938.88	1163	5124.22	1164	5333.70
1165	5366.83	1166	5820.31	1167	6088.57	1168	6364.54	1169	6641.21
1170	6912.66	1171	7172.63	1172	7413.74	1173	7628.68	1174	7811.26
1175	7957.65	1176	8068.90	1177	8147.31	1178	8195.28	1179	8217.03
1180	8218.15	1181	8201.63	1182	8168.28	1183	8118.10	1184	8051.56
1185	7969.22	1186	7873.59	1187	7766.81	1188	7652.79	1189	7533.54
1190	7412.82	1191	7291.65	1192	7172.60	1193	7055.60	1194	6941.33
1195	6829.66	1196	6719.44	1197	6611.49	1198	6504.17	1199	6396.96
1200	6291.13	1201	6184.79	1202	6078.42	1203	5973.09	1204	5867.59
1205	5763.07	1206	5659.77	1207	5557.24	1208	5457.23	1209	5358.55
1210	5262.34	1211	5168.37	1212	5077.00	1213	4988.31	1214	4902.38
1215	4819.16	1216	4738.81	1217	4661.03	1218	4586.17	1219	4513.77
1220	4444.14	1221	4376.95	1222	4312.12	1223	4249.78	1224	4189.58
1225	4131.47	1226	4075.49	1227	4021.45	1228	3969.26	1229	3918.84
1230	3870.18	1231	3823.10	1232	3777.48	1233	3733.23	1234	3690.31
1235	3648.54	1236	3607.84	1237	3568.18	1238	3529.57	1239	3491.91
1240	3455.17	1241	3419.36	1242	3384.51	1243	3350.56	1244	3317.46
1245	3285.15	1246	3253.59	1247	3222.76	1248	3192.63	1249	3163.30
1250	3134.80	1251	3106.76	1252	3079.20	1253	3052.15	1254	3025.73
1255	3000.05	1256	2974.82	1257	2950.07	1258	2925.75	1259	2901.81
1260	2878.21	1261	2854.96	1262	2832.06	1263	2809.50	1264	2787.29
1265	2765.47	1266	2744.04	1267	2723.02	1268	2702.84	1269	2683.11
1270	2663.61	1271	2644.33	1272	2625.21	1273	2606.21	1274	2587.33
1275	2568.54	1276	2549.84	1277	2531.23	1278	2512.74	1279	2494.37
1280	2476.11	1281	2458.69	1282	2441.36	1283	2423.99	1284	2406.53

1285	2388.96	1286	2371.31	1287	2353.58	1288	2335.81	1289	2318.03
1290	2300.25	1291	2282.76	1292	2265.92	1293	2249.00	1294	2232.04
1295	2215.08	1296	2198.17	1297	2181.35	1298	2164.63	1299	2148.03
1300	2131.59	1310	1977.83	1320	1842.10	1330	1719.49	1340	1603.48
1350	1491.70	1360	1387.83	1370	1289.10	1380	1203.55	1390	1129.12
1400	1062.07	1420	944.96	1440	840.88	1460	753.98	1500	625.15

Adams_Cyn_VCRat_basin_60AR.OUT
 2335.81 1289 2318.03
 2249.00 1294 2232.04
 2164.63 1299 2148.03
 1719.49 1340 1603.48
 1203.55 1390 1129.12
 753.98 1500 625.15

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Page: 12 Job: 4492 Project: Adams County VC Rat Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 119A

TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 8218 cfs
 TIME OF PEAK: 1180 minutes
 HYDROGRAPH VOLUME: 1901.66 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	30.85	200	33.15	300	46.53	400	74.15
500	103.34	600	137.35	700	187.69	800	270.50	900	469.18
1000	974.15	1050	1454.47	1100	2203.23	1110	2384.69	1120	2606.21
1130	2894.33	1131	2927.07	1132	2960.30	1133	2993.91	1134	3027.83
1135	3062.70	1136	3098.44	1137	3135.06	1138	3172.72	1139	3212.16
1140	3252.93	1141	3294.98	1142	3338.41	1143	3383.38	1144	3430.07
1145	3478.57	1146	3529.01	1147	3581.53	1148	3636.17	1149	3693.01
1150	3752.25	1151	3814.21	1152	3879.26	1153	3947.95	1154	4021.24
1155	4100.40	1156	4186.30	1157	4280.42	1158	4384.93	1159	4501.20
1160	4630.55	1161	4775.41	1162	4938.88	1163	5124.22	1164	5333.70
1165	5566.83	1166	5820.31	1167	6088.57	1168	6364.54	1169	6641.21
1170	6912.66	1171	7172.63	1172	7413.74	1173	7628.68	1174	7811.26
1175	7957.65	1176	8068.90	1177	8147.31	1178	8195.28	1179	8217.03
1180	8218.15	1181	8201.63	1182	8168.28	1183	8118.10	1184	8051.56
1185	7969.22	1186	7873.59	1187	7766.81	1188	7652.79	1189	7533.54
1190	7412.82	1191	7291.65	1192	7172.60	1193	7055.60	1194	6941.33
1195	6829.66	1196	6719.44	1197	6611.49	1198	6504.17	1199	6396.96
1200	6291.13	1201	6184.79	1202	6078.42	1203	5973.09	1204	5867.59
1205	5763.07	1206	5659.77	1207	5557.24	1208	5457.23	1209	5358.55
1210	5262.34	1211	5168.37	1212	5077.00	1213	4988.31	1214	4902.38
1215	4819.16	1216	4738.81	1217	4661.03	1218	4586.17	1219	4513.77
1220	4444.14	1221	4376.95	1222	4312.12	1223	4249.78	1224	4189.58
1225	4131.47	1226	4075.49	1227	4021.45	1228	3969.26	1229	3918.84
1230	3870.18	1231	3823.10	1232	3777.48	1233	3733.23	1234	3690.31
1235	3648.54	1236	3607.84	1237	3568.18	1238	3529.57	1239	3491.91
1240	3455.17	1241	3419.36	1242	3384.51	1243	3350.56	1244	3317.46
1245	3285.15	1246	3253.59	1247	3222.76	1248	3192.63	1249	3163.30
1250	3134.80	1251	3106.76	1252	3079.20	1253	3052.15	1254	3025.73
1255	3000.05	1256	2974.82	1257	2950.07	1258	2925.75	1259	2901.81
1260	2768.21	1261	2854.96	1262	2832.06	1263	2809.50	1264	2787.29
1265	2765.47	1266	2744.04	1267	2723.02	1268	2702.84	1269	2683.11
1270	2663.61	1271	2644.33	1272	2625.21	1273	2606.21	1274	2587.33
1275	2568.54	1276	2549.84	1277	2531.23	1278	2512.74	1279	2494.37
1280	2476.11	1281	2458.69	1282	2441.56	1283	2423.99	1284	2406.53
1285	2388.96	1286	2371.31	1287	2353.58	1288	2335.81	1289	2318.03

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCrat v2.6)

Job: 4492 Project: Adams County VC Rat

VCrat Model Input

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Model Lines

006	4492	040C	020000008710898102063016300
006	4492	041C	020000007610898
006	4492	042C	010000010712898101338008100
006	4492	043C	010000002305898
006	4492	044D	020000008009898101840008300
006	4492	045D	020000005405898
006	4492	046CD010	A97101426005600
006	4492	047C	020000004307898
006	4492	048BC010	A97200768002900
006	4492	049B	02000005007898201183003500
006	4492	050B	020000007907898201240003400
006	4492	051B	020000002805898
006	4492	052E	02000007909898100782006000
006	4492	053E	030000002505898
006	4492	054BE010	A97200853004000
006	4492	055B	020000001405898
006	4492	056F	02000008706898201222004800
006	4492	057F	030000003005898
006	4492	058BF010	A97101584006300
006	4492	059B	020000004005898
006	4492	060AB010	A97
110			
111			
110		0.85400	6.14
006	4492	061A	010 099A97201530002400
006	4492	062A	020000005507898
006	4492	063A	02000008006898201254001800
006	4492	064A	010000004106898
006	4492	065B	020000006605898101577007600
006	4492	066B	020000004906898
006	4492	067AB010	A97200885002400
006	4492	068A	010000002405898
006	4492	069A	030000005706898201682001400
006	4492	070A	020000005008898
006	4492	071C	020000005805898101208005000
006	4492	072C	020000007506898201403004800
006	4492	073C	020000007407898
006	4492	074C	020000005406898200814002700
006	4492	075C	020000002005898
006	4492	076C	020000004307898201738003400
006	4492	077C	020000008908898
006	4492	078AC010	A97201110001900
006	4492	079A	030000003007898
006	4492	080A	020000004105898202463001700
006	4492	081A	020000008306898
006	4492	082D	020000005106898101093007600
006	4492	083D	020000004706898
006	4492	084AD010	A97200977003300
006	4492	085A	020000004605898
006	4492	086A	020000006707898201211000700
006	4492	087A	020000003306898
006	4492	088A	020000009305898200524001100
006	4492	089A	0400000000505898

E

I

C

D

E

006 4492 090A 010 099A97
 006 4492 091E 020000003905B98101621005900
 006 4492 092E 020000003907B98
 006 4492 093AE010 A97200926001100
 006 4492 094A 030000002205B98

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

VCRat Model Input

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Model Lines

006 4492 095A 020000006105B98
 006 4492 096A 020000007508B98201651001600
 006 4492 097F 030000003905B98101064005300
 006 4492 098F 020000003306B98
 006 4492 099F 020000005007B98100595009400
 006 4492 100F 020000003606B98201714004600
 006 4492 101F 020000004807B98
 006 4492 102AF010 A97201147001000
 006 4492 103A 020000004207B98201111001800
 006 4492 104A 020000006507B98
 006 4492 105A 020000008207B98201606001800
 006 4492 106A 030000006007B98
 006 4492 107A 020000006909B98201408002100
 006 4492 108A 030000005807B98
 006 4492 109A 030000003105B98201467001500
 006 4492 110A 030000004206B98202733001400
 006 4492 111A 030000007309B98203056001300
 006 4492 112A 030000005621B98
 006 4492 113B 030000005012B98202779001700
 006 4492 114B 040000004321B98
 006 4492 115A8010 A97201726001000
 006 4492 116A 010 099A97203400001000
 006 4492 117A 010 099A97
 006 4492 118A 010 099A97
 006 4492 119A 010 099A97

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B

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60ARO.TXT															
LOCATION	SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	TC	RAIN	PCT
	AREA	Q	AREA	Q	TYPE	LNGLTH	SLOPE	SIZE	Z	Q	NAME			ZONE	IMPV
4492	51B	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00	
4492	28.	79.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00	
4492	52E	254.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00	
4492	53E	107.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00	
4492	54BE	104.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00	
4492	55B	14.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00	
4492	56F	87.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00	
4492	57F	30.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00	
4492	58BF	117.	1395.	3105.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00	
4492	59B	40.	182.	6657.	2	1530.	0.02400	0.00	0.00	0.	10	0	A97	0.00 ²	
4492	60AB	1395.	3118.	6657.	2	1530.	0.02400	0.00	0.00	0.	20	0	A97	0.00 ²	

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder														
LOCATION	SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	TC	RAIN	PCT
	AREA	Q	AREA	Q	TYPE	LNGLTH	SLOPE	SIZE	Z	Q	NAME		ZONE	IMPV
4492	1A	85.	85.	247.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492	2A	79.	164.	446.	1	1750.	0.07500	0.00	0.00	0.	20	19	B98	0.00
4492	3A	73.	237.	548.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	4B	88.	142.	269.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492	5B	54.	222.	457.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492	6B	80.	222.	627.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492	7AB	222.	459.	1167.	1	2215.	0.03500	0.00	0.00	0.	10	0	A97	0.00
4492	8A	94.	553.	1214.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	9C	79.	79.	283.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492	10C	51.	130.	429.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	11C	73.	203.	679.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492	12C	108.	311.	953.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492	13C	87.	398.	1070.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492	14AC	398.	951.	2284.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	15A	30.	981.	2254.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	16D	80.	80.	261.	1	830.	0.03800	0.00	0.00	0.	20	7	B98	0.00
4492	17D	12.	92.	284.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	18AD	92.	1073.	2458.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492	19A	66.	1139.	2442.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	20E	71.	71.	286.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492	21E	39.	110.	327.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	22E	68.	178.	543.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492	23E	50.	228.	652.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	24AE	228.	1367.	2788.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492	25A	18.	1385.	2789.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	26A	56.	1441.	2844.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	27A	79.	1520.	2886.	2	790.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492	28A	64.	1584.	2985.	2	950.	0.02400	0.00	0.00	0.	20	10	B98	0.00
4492	29A	46.	1630.	2994.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	30A	40.	1670.	3013.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492	31A	53.	1723.	3023.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	32B	99.	99.	345.	1	735.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	33B	47.	146.	492.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492	34B	36.	182.	607.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492	35B	78.	260.	738.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492	36B	100.	360.	1000.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492	37B	13.	373.	985.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	38B	71.	444.	1148.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492	39B	49.	493.	1219.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	40C	87.	87.	233.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492	41C	76.	163.	403.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492	42C	107.	270.	672.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492	43C	23.	293.	683.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00

4492 99F 36. 129. 158. 465. 2 60ARO.TXT 0.04600 0.00 0.00 0.00 6 B98 0.00
 4492 100F 48. 157. 206. 548. 0 1714. 0.00000 0.00 0.00 0.00 7 B98 0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

LOCATION	Header place holder SUBAREA	Header place holder SUBAREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LNTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	STORM RAIN ZONE	DAY PCT
4492 101AF	548.	548.	4911.	6265.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 102A	42.	137.	4953.	6259.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 103A	65.	212.	5018.	6259.	2	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 104A	82.	267.	5100.	6272.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 105A	60.	184.	5160.	6258.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 106A	69.	195.	5229.	6267.	2	1408.	0.02100	0.00	0.00	0.	20	9	B98	0.00
4492 107A	58.	178.	5287.	6257.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 108A	31.	118.	5318.	6258.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492 109A	42.	142.	5360.	6246.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492 110A	73.	194.	5433.	6205.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00
4492 111A	56.	88.	5489.	6161.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492 112B	50.	112.	50.	112.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492 113B	43.	62.	93.	145.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492 114AB	93.	145.	5582.	6178.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 115A	0.	0.	5582.	6159.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492 116A	0.	0.	5582.	6002.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 Header place holder 2A

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	0	0.	0	0.	0	0.	0	0.	0	0.
500	4.	100	6.	200	7.	300	3.	400	3.	400	3.
1000	28.	600	42.	700	48.	800	10.	900	16.	900	16.
1130	100.	1050	102.	1100	105.	1110	72.	1120	72.	1120	72.
1135	114.	1136	114.	1132	108.	1133	108.	1134	111.	1134	111.
1140	128.	1141	135.	1137	118.	1138	121.	1139	124.	1139	124.
1145	163.	1146	173.	1142	139.	1143	144.	1144	151.	1144	151.
1150	274.	1151	289.	1147	183.	1148	196.	1149	234.	1149	234.
1155	497.	1156	506.	1152	376.	1153	432.	1154	469.	1154	469.
1160	414.	1161	322.	1157	503.	1158	466.	1159	426.	1159	426.
1165	157.	1166	130.	1162	265.	1163	231.	1164	197.	1164	197.
1170	80.	1171	76.	1167	111.	1168	98.	1169	90.	1169	90.
1175	59.	1176	57.	1172	71.	1173	64.	1174	62.	1174	62.
1180	47.	1181	45.	1177	54.	1178	48.	1179	49.	1179	49.
1185	40.	1186	40.	1182	43.	1183	41.	1184	41.	1184	41.
1190	38.	1191	38.	1187	40.	1188	39.	1189	39.	1189	39.
1195	38.	1196	38.	1192	38.	1193	38.	1194	38.	1194	38.
1200	38.	1196	38.	1197	38.	1198	38.	1199	38.	1199	38.
1205	34.	1201	37.	1202	37.	1203	35.	1204	35.	1204	35.
1210	29.	1211	28.	1207	32.	1208	31.	1209	30.	1209	30.
1215	26.	1216	26.	1212	28.	1213	27.	1214	27.	1214	27.
1220	26.	1221	26.	1217	27.	1218	26.	1219	26.	1219	26.
1225	27.	1226	26.	1222	26.	1223	26.	1224	26.	1224	26.
1230	26.	1231	26.	1227	26.	1228	26.	1229	27.	1229	27.
1235	26.	1236	26.	1232	26.	1233	26.	1234	25.	1234	25.
1240	25.	1241	25.	1237	25.	1238	25.	1239	25.	1239	25.
1245	25.	1246	25.	1242	25.	1243	25.	1244	25.	1244	25.
1250	25.	1251	25.	1247	25.	1248	25.	1249	25.	1249	25.
1255	25.	1256	25.	1252	25.	1253	25.	1254	25.	1254	25.
1260	25.	1261	25.	1257	25.	1258	25.	1259	25.	1259	25.
1265	22.	1266	22.	1262	24.	1263	23.	1264	23.	1264	23.
				1267	21.	1268	20.	1269	20.	1269	20.

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1270	0.	1271	18.	1272	19.	1273	18.	1274	17.				
1275	1.	1276	17.	1277	17.	1278	17.	1279	16.				
1280	17.	1281	17.	1282	16.	1283	16.	1284	17.				
1285	17.	1286	16.	1287	16.	1288	17.	1289	17.				
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.				
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.				
1300	17.	1310	11.	1320	7.	1330	6.	1340	6.				
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.				
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.				

60ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 HYDROGRAPH AT 4492 2A
 Header place holder
 STORM DAY 4
 REDUCTION FACTOR = 0.897

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	0.	400	0.				
500	1.	600	3.	700	4.	800	5.	900	9.				
1000	19.	1050	31.	1100	37.	1110	58.	1120	58.				
1130	83.	1131	85.	1132	87.	1133	91.	1134	94.				
1135	96.	1136	96.	1137	100.	1138	103.	1139	105.				
1140	109.	1141	115.	1142	119.	1143	123.	1144	129.				
1145	140.	1146	149.	1147	158.	1148	170.	1149	204.				
1150	238.	1151	251.	1152	329.	1153	378.	1154	410.				
1155	436.	1156	446.	1157	444.	1158	412.	1159	376.				
1160	366.	1161	286.	1162	234.	1163	203.	1164	174.				
1165	138.	1166	113.	1167	96.	1168	84.	1169	76.				
1170	68.	1171	63.	1172	59.	1173	52.	1174	50.				
1175	48.	1176	46.	1177	43.	1178	38.	1179	38.				
1180	36.	1181	35.	1182	33.	1183	32.	1184	31.				
1185	30.	1186	30.	1187	30.	1188	29.	1189	29.				
1190	28.	1191	28.	1192	28.	1193	28.	1194	28.				
1195	29.	1196	28.	1197	28.	1198	28.	1199	28.				
1200	28.	1201	28.	1202	27.	1203	26.	1204	25.				
1205	25.	1206	24.	1207	23.	1208	22.	1209	21.				
1210	20.	1211	19.	1212	19.	1213	19.	1214	18.				
1215	18.	1216	18.	1217	18.	1218	18.	1219	18.				
1220	18.	1221	18.	1222	17.	1223	17.	1224	18.				
1225	18.	1226	17.	1227	17.	1228	18.	1229	18.				
1230	17.	1231	17.	1232	18.	1233	18.	1234	17.				
1235	17.	1236	17.	1237	17.	1238	17.	1239	17.				
1240	17.	1241	17.	1242	17.	1243	17.	1244	16.				
1245	16.	1246	16.	1247	16.	1248	16.	1249	16.				
1250	16.	1251	16.	1252	16.	1253	16.	1254	16.				
1255	16.	1256	16.	1257	16.	1258	16.	1259	16.				
1260	16.	1261	16.	1262	15.	1263	15.	1264	15.				
1265	14.	1266	14.	1267	13.	1268	12.	1269	12.				
1270	11.	1271	11.	1272	11.	1273	11.	1274	10.				
1275	10.	1276	10.	1277	10.	1278	9.	1279	9.				
1280	9.	1281	9.	1282	9.	1283	9.	1284	9.				
1285	9.	1286	9.	1287	9.	1288	9.	1289	9.				
1290	9.	1291	9.	1292	9.	1293	9.	1294	9.				
1295	9.	1296	9.	1297	9.	1298	9.	1299	9.				
1300	9.	1310	7.	1320	4.	1330	3.	1340	3.				
1350	3.	1360	1.	1370	1.	1380	0.	1390	0.				
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.				

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 HYDROGRAPH AT 4492 116A
 Header place holder
 STORM DAY 4
 REDUCTION FACTOR = 0.897

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	0.	400	0.				
500	1.	600	3.	700	4.	800	5.	900	9.				
1000	19.	1050	31.	1100	37.	1110	58.	1120	58.				
1130	83.	1131	85.	1132	87.	1133	91.	1134	94.				
1135	96.	1136	96.	1137	100.	1138	103.	1139	105.				
1140	109.	1141	115.	1142	119.	1143	123.	1144	129.				
1145	140.	1146	149.	1147	158.	1148	170.	1149	204.				
1150	238.	1151	251.	1152	329.	1153	378.	1154	410.				
1155	436.	1156	446.	1157	444.	1158	412.	1159	376.				
1160	366.	1161	286.	1162	234.	1163	203.	1164	174.				
1165	138.	1166	113.	1167	96.	1168	84.	1169	76.				
1170	68.	1171	63.	1172	59.	1173	52.	1174	50.				
1175	48.	1176	46.	1177	43.	1178	38.	1179	38.				
1180	36.	1181	35.	1182	33.	1183	32.	1184	31.				
1185	30.	1186	30.	1187	30.	1188	29.	1189	29.				
1190	28.	1191	28.	1192	28.	1193	28.	1194	28.				
1195	29.	1196	28.	1197	28.	1198	28.	1199	28.				
1200	28.	1201	28.	1202	27.	1203	26.	1204	25.				
1205	25.	1206	24.	1207	23.	1208	22.	1209	21.				
1210	20.	1211	19.	1212	19.	1213	19.	1214	18.				
1215	18.	1216	18.	1217	18.	1218	18.	1219	18.				
1220	18.	1221	18.	1222	17.	1223	17.	1224	18.				
1225	18.	1226	17.	1227	17.	1228	18.	1229	18.				
1230	17.	1231	17.	1232	18.	1233	18.	1234	17.				
1235	17.	1236	17.	1237	17.	1238	17.	1239	17.				
1240	17.	1241	17.	1242	17.	1243	17.	1244	16.				
1245	16.	1246	16.	1247	16.	1248	16.	1249	16.				
1250	16.	1251	16.	1252	16.	1253	16.	1254	16.				
1255	16.	1256	16.	1257	16.	1258	16.	1259	16.				
1260	16.	1261	16.	1262	15.	1263	15.	1264	15.				
1265	14.	1266	14.	1267	13.	1268	12.	1269	12.				
1270	11.	1271	11.	1272	11.	1273	11.	1274	10.				
1275	10.	1276	10.	1277	10.	1278	9.	1279	9.				
1280	9.	1281	9.	1282	9.	1283	9.	1284	9.				
1285	9.	1286	9.	1287	9.	1288	9.	1289	9.				
1290	9.	1291	9.	1292	9.	1293	9.	1294	9.				
1295	9.	1296	9.	1297	9.	1298	9.	1299	9.				
1300	9.	1310	7.	1320	4.	1330	3.	1340	3.				
1350	3.	1360	1.	1370	1.	1380	0.	1390	0.				
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.				

0	60ARO.TXT	6.	300	6.	400	6.
500	200	9.	800	16.	900	29.
1000	700	500	1110	569.	1120	650.
1130	1100	776	1133	788.	1134	801.
1135	1137	840.	1138	854.	1139	868.
1140	1142	913.	1143	930.	1144	947.
1145	1147	1003.	1148	1023.	1149	1045.
1150	1149	1117.	1153	1143.	1154	1172.
1155	1152	1270.	1158	1309.	1159	1353.
1160	1157	1522.	1163	1522.	1164	1674.
1165	1162	1996.	1168	2136.	1169	2293.
1170	1167	2833.	1173	3027.	1174	3225.
1175	1172	3794.	1178	3960.	1179	4110.
1180	1177	4486.	1183	4607.	1184	4735.
1185	1182	5172.	1188	5327.	1189	5478.
1190	1187	5847.	1193	5926.	1194	5978.
1195	1192	5968.	1198	5914.	1199	5838.
1200	1197	5511.	1203	5379.	1204	5240.
1205	1202	4798.	1208	4648.	1209	4499.
1210	1207	4064.	1213	3925.	1214	3790.
1215	1212	3410.	1218	3292.	1219	3179.
1220	1217	2863.	1223	2766.	1224	2673.
1225	1222	2415.	1228	2337.	1229	2261.
1230	1232	2052.	1233	1988.	1234	1927.
1235	1237	1759.	1238	1707.	1239	1658.
1240	1242	1521.	1243	1479.	1244	1439.
1245	1247	1328.	1248	1293.	1249	1260.
1250	1252	1169.	1253	1140.	1254	1113.
1255	1257	1037.	1258	1014.	1259	992.
1260	1262	929.	1263	909.	1264	891.
1265	1267	840.	1268	824.	1269	808.
1270	1272	765.	1273	751.	1274	738.
1275	1277	701.	1278	689.	1279	678.
1280	1282	646.	1283	635.	1284	625.
1285	1287	598.	1288	590.	1289	581.
1290	1292	556.	1293	549.	1294	541.
1295	1297	520.	1298	513.	1299	507.
1300	1299	441.	1300	344.	1301	306.
1305	1320	389.	1330	207.	1340	189.
1350	1370	227.	1380	94.	1390	63.
1400	1440	115.	1460		1500	

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Modified Rational Model Results Report

Job: 4492 Project: Adams County VC Rat

Project Description

100 YEAR EVENT

VCRat version: 2.6.2008.11
VCRain version: 200703
DOS EXE version: PC 2.2-200809

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Mode] Results																
ROUTING AFTER ACCUMULATION																
--- ACCUMULATED DATA ---																
Node	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES
VEL	DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
(FT/S)	(FT)															
1A	: Subshed 1A				85	278	85	278	1154	MOUNTAIN	1635	0.17400				
1A	010 K100	10	0	0	85	278	85	278	1154	MOUNTAIN	1635	0.17400				
2A	: Subshed 2A				164	506	164	506	1156	MOUNTAIN	1750	0.07500				
2A	020 K100	9	0	0	79	254	164	506	1156	MOUNTAIN	1750	0.07500				
3A	: Subshed 3A				237	633	237	633	1156							
3A	020 K100	5	0	0	73	332	237	633	1156							
4B	: Subshed 4B				88	303	88	303	1153							
4B	010 K100	9	0	0	88	303	88	303	1153							
5B	: Subshed 5B				142	515	142	515	1153	MOUNTAIN	2148	0.14200				
5B	010 K100	7	0	0	54	212	142	515	1153	MOUNTAIN	2148	0.14200				
6B	: Subshed 6B															

Adams_Cyn_VCRat_basin_114AR.OUT
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results																
ROUTING AFTER ACCUMULATION																
SUBAREA DATA AND RESULTS																
Node	Soil	Rain	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values	
Depth	Type	Zone	(min)	Imp	(ac)	(cfs)	(ac)	(cfs)	(min)	Type	(ft)	(ft/ft)	(ft)	(z)	chnl	sides
(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
28A	Subshed 28A	020	K100	10	0	64	195	3488	1160	VALLEY	1069	0.02600	---	---	---	---
29A	Subshed 29A	020	K100	7	0	46	170	3516	1161	---	---	---	---	---	---	---
30A	Subshed 30A	020	K100	5	0	40	182	3539	1161	VALLEY	1537	0.02900	---	---	---	---
31A	Subshed 31A	020	K100	7	0	53	196	3557	1162	---	---	---	---	---	---	---
32B	Subshed 32B	010	K100	7	0	99	389	389	1153	MOUNTAIN	735	0.11200	---	---	---	---
33B	Subshed 33B	020	K100	7	0	47	174	555	1155	---	---	---	---	---	---	---
34B	Subshed 34B	020	K100	6	0	36	146	687	1154	MOUNTAIN	1710	0.05700	---	---	---	---
35B	Subshed 35B	020	K100	9	0	78	251	844	1157	---	---	---	---	---	---	---
36B	Subshed 36B	020	K100	9	0	100	321	1142	1157	MOUNTAIN	736	0.05200	---	---	---	---
37B	Subshed 37B	020	K100	5	0	13	59	1128	1158	---	---	---	---	---	---	---
38B	Subshed 38B	020	K100	9	0	71	228	1320	1157	VALLEY	1438	0.03500	---	---	---	---
39B	Subshed 39B	020	K100	7	0	49	181	1407	1158	---	---	---	---	---	---	---
40C	Subshed 40C	020	K100	10	0	87	265	265	1154	MOUNTAIN	2063	0.16300	---	---	---	---
41C	Subshed 41C	020	K100	10	0	76	231	460	1157	---	---	---	---	---	---	---
42C	Subshed 42C	010	K100	12	0	107	314	766	1156	MOUNTAIN	1338	0.08100	---	---	---	---

Adams_Cyn_VCRat_basin_114AR.OUT

Node ID	Subshed	TC	Area (AC)	Flow (CFS)	Time (min)	Channel Type	Length (ft)	Slope	Size (ft)	H:V	N Values
43C	Subshed 43C	5	0	23	110	293	780	1156			
43C	010 K100										
44D	Subshed 44D	9	0	80	257	80	257	1153	MOUNTAIN	1840	0.08300
44D	020 K100										
45D	Subshed 45D	5	0	54	246	134	384	1156			
45D	020 K100										
46CD				134	384	427	1165	1156	MOUNTAIN	1426	0.05600
47C	Subshed 47C	7	0	43	159	470	1206	1158			
47C	020 K100										
488C				470	1206	963	2613	1158	VALLEY	768	0.02900
498	Subshed 498	7	0	50	185	1013	2655	1158	VALLEY	1183	0.03500
498	020 K100										
50B	Subshed 50B	7	0	79	292	1092	2726	1159	VALLEY	1240	0.03400
50B	020 K100										
51B	Subshed 51B	5	0	28	127	1120	2731	1160			
51B	020 K100										

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

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Model Results											
ROUTING AFTER ACCUMULATION											
Node ID	Subshed	TC	Area (AC)	Flow (CFS)	Time (min)	Channel Type	Length (ft)	Slope	Size (ft)	H:V	N Values
52E	Subshed 52E	9	0	79	254	79	254	1153	MOUNTAIN	782	0.06000
52E	Clearing Hydrograph Bank: E										
52E	020 K100										
53E	Subshed 53E	5	0	25	107	104	325	1156			
53E	030 K100										
548E				104	325	1224	2947	1160	VALLEY	853	0.04000
558	Subshed 558	5	0	14	64	1238	2937	1160			
558	020 K100										
56F	Subshed 56F	6	0	87	352	87	352	1153	VALLEY	1222	0.04800
56F	020 K100										
57F	Subshed 57F	5	0	30	129	117	426	1155			
57F	030 K100										
588F				117	426	1355	3116	1160	MOUNTAIN	1584	0.06300

NODE DEPTH ID	SOIL TYPE	RAIN ZONE	TC (MIN)	IMP	AREA (AC)	FLOW (CFS)	AREA (AC)	FLOW (CFS)	TIME (MIN)	CHANNEL TYPE	LENGTH (FT)	SLOPE (FT/FT)	SIZE (FT)	H:V (Z)	N VALUES
78A : 78A 030	Subshed K100	78A	7	0	30	104	3983	7218	1166						
79A : 79A 020	Subarea K100	79A	5	0	41	186	4024	7234	1166	VALLEY	2463	0.01700			
80A : 80A 020	Subshed K100	80A	6	0	83	336	4107	7221	1168						
81D : 81D 020	Subshed K100	81D	6	0	51	206	51	206	1153	MOUNTAIN	1093	0.07600			
82D : 82D 020	Subshed K100	82D	6	0	47	190	98	337	1155						
83AD : 83AD 020	Subshed K100	83AD	6	0	98	337	4205	7267	1168	VALLEY	977	0.03300			
84A : 84A 020	Subarea K100	84A	5	0	46	209	4251	7275	1169						
85A : 85A 020	Subarea K100	85A	7	0	67	247	4318	7300	1169	VALLEY	1211	0.00700			
86A : 86A 020	Subarea K100	86A	6	0	33	134	4351	7276	1170						
87A : 87A 020	Subarea K100	87A	5	0	93	423	4444	7302	1170	VALLEY	524	0.01100			
88A : 88A 040	Subarea K100	88A	5	0	5	20	4449	7300	1171						
89A : 89A 020	Subshed K100	89A	5	0	39	177	4449	7300	1171						
90E : 90E 020	Subshed K100	90E	5	0	39	177	39	177	1153	MOUNTAIN	1621	0.05900			
91E : 91E 020	Subshed K100	91E	7	0	59	218	98	305	1155						
92AE : 92AE 020	Subshed K100	92AE	5	0	98	305	4547	7341	1171	VALLEY	926	0.01100			
93A : 93A 030	Subshed K100	93A	5	0	22	94	4569	7333	1172						
94A : 94A 020	Subshed K100	94A	5	0	61	277	4630	7350	1172						
95A : 95A 020	Subshed K100	95A	8	0	75	257	4705	7369	1172	VALLEY	1651	0.01600			

Node	Subshed	Clearing Hydrograph Bank	TC	RAIN	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N VALUES
VEL DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(Z)	CHNL SIDES
96F	Subshed 96F	030	5	0	39	167	167	39	167	1153	MOUNTAIN	1064	0.05300	---	---
97F	Subshed 97F	020	6	0	33	134	134	72	233	1155	---	---	---	---	---
98F	Subshed 98F	020	7	0	50	185	185	122	414	1155	MOUNTAIN	595	0.09400	---	---
99F	Subshed 99F	020	6	0	36	146	146	158	531	1155	VALLEY	1714	0.04600	---	---
100F	Subshed 100F	020	7	0	48	177	177	206	633	1156	---	---	---	---	---
101AF	---	---	---	---	206	633	633	4911	7433	1173	VALLEY	1147	0.01000	---	---
102A	Subshed 102A	020	7	0	42	155	155	4953	7423	1174	VALLEY	1111	0.01800	---	---

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Mode] Results															
ROUTING AFTER ACCUMULATION															
--- SUBAREA DATA AND RESULTS --- ACCUMULATED DATA ---															
Node	Subshed	TC	RAIN	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N VALUES	
VEL DEPTH	ID	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(Z)	CHNL SIDES	
103A	Subshed 103A	020	7	0	65	240	240	5018	7429	1175	---	---	---	---	
104A	Subshed 104A	020	7	0	82	303	303	5100	7450	1175	VALLEY	1606	0.01800	---	
105A	Subshed 105A	030	7	0	60	209	209	5160	7439	1177	---	---	---	---	
106A	Subshed 106A	020	9	0	69	222	222	5229	7455	1177	VALLEY	1408	0.02100	---	
107A	Subshed 107A	030	7	0	58	202	202	5287	7448	1178	---	---	---	---	
108A	Subshed 108A	030	5	0	31	133	133	5318	7451	1178	VALLEY	1467	0.01500	---	
109A	Subshed 109A	030	6	0	42	160	160	5360	7441	1179	VALLEY	2733	0.01400	---	
110A	Subshed 110A	030	9	0	73	221	221	5433	7402	1182	VALLEY	3056	0.01300	---	

Adams_Cyn_VCRat_basin_114AR.OUT

111A :	Subshed 111A	030	K100	21	0	56	101	5489	7354	1185	---	---	---	---
112B :	Subshed 112B	030	K100	12	0	50	127	50	127	1154	VALLEY	2779	0.01700	---
113B :	Subshed 113B	040	K100	21	0	43	72	93	168	1164	---	---	---	---
114AB :	Subshed 114AB	---	---	---	---	93	168	5582	7377	1185	---	---	---	---

```

*****
* INCOMING HYDROGRAPH PEAK (cfs): 7377.02 VOLUME (acre-ft): 890.60 *
* HYDROGRAPH ADJUSTMENT FACTOR: 0.79400 *
* ADJUSTED HYDROGRAPH PEAK (cfs): 5857.35 VOLUME (acre-ft): 707.14 *
* RUNOFF FACTOR(in): 5.51 TOTAL RAIN(in): 10.75 SCS Curve: 60 *
* FATTENED HYDROGRAPH PEAK (cfs): 5857.35 VOLUME (acre-ft): 2561.82 *
*****
    
```

114A	---	---	---	---	---	5582	5857	---	---	---	---	---	---	---
115A	---	---	---	---	---	5582	5857	1185	VALLEY	1726	0.01000	---	---	---
116A :	routing	---	---	---	---	5582	5856	1187	VALLEY	5400	0.01000	---	---	---
117A :	SC RIVER	---	---	---	---	5582	5839	1194	---	---	---	---	---	---
118A	---	---	---	---	---	5582	5839	1194	---	---	---	---	---	---

Issue/warning Messages

Caution Err1008 SUBAREA 88A TC and Area are set to minimum values(5). May be an attempt to run the model on a smaller area

than acceptable to VCRat.
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Page: 7 Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 2A

```

DESCRIPTION: Subshed 2A
TOTAL AREA TO HYDROGRAPH: 164 acres
HYDROGRAPH PEAK: 506 cfs
TIME OF PEAK: 1156 minutes
HYDROGRAPH VOLUME: 35.60 acre-ft
    
```

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	0.40	200	0.40	300	2.61
				400			3.28

	4.21	6.18	7.36	9.81	16.11
1000	27.89	41.57	47.99	71.76	161.82
1100	99.90	102.34	104.66	108.00	111.14
1200	113.66	114.02	118.10	121.17	124.18
1300	128.27	134.61	139.24	144.13	150.62
1400	163.40	172.58	183.42	196.10	234.08
1500	273.65	288.68	376.35	432.08	469.42
1600	496.67	506.39	503.02	466.29	425.71
1700	413.88	322.12	264.78	230.89	196.89
1800	136.93	129.83	110.97	98.12	89.79
1900	80.35	75.74	71.36	63.50	62.13
2000	59.20	57.23	53.66	47.95	48.73
2100	46.61	44.82	43.38	41.39	40.76
2200	40.11	39.53	39.52	39.08	38.72
2300	38.01	38.01	38.03	37.97	37.86
2400	38.22	37.64	37.65	37.65	37.66
2500	37.66	37.13	36.55	35.47	34.81
2600	34.05	32.68	31.71	30.65	29.54
2700	28.97	27.84	27.77	27.21	26.68
2800	26.35	26.17	26.55	25.88	25.83
2900	26.38	26.40	25.84	25.81	26.43
3000	26.50	25.92	25.86	26.47	26.53
3100	25.94	25.88	26.48	26.03	25.44
3200	25.88	25.90	25.34	24.82	24.78
3300	25.10	25.05	24.96	24.82	24.78
3400	24.76	24.67	24.68	24.68	24.62
3500	24.64	24.65	24.60	24.62	24.64
3600	24.59	24.62	24.64	24.59	24.61
3700	24.64	24.58	23.60	23.12	23.06
3800	22.45	21.67	20.82	20.05	19.75
3900	18.82	18.42	18.58	18.20	17.28
4000	16.94	17.30	17.23	16.59	16.44
4100	16.93	16.97	16.39	16.30	16.83
4200	16.90	16.34	16.26	16.80	16.88
4300	16.33	16.25	16.80	16.36	16.32
4400	16.75	16.74	16.76	16.22	16.17
4500	16.74	10.59	7.12	6.46	6.48
4600	5.13	2.43	0.80	0.46	0.41
4700	0.40	0.40	0.40	0.40	0.40

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

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HYDROGRAPH FATTENED AT 114A

```

*****
* INCOMING HYDROGRAPH PEAK (cfs): 7377.02 VOLUME (acre-ft): 890.60 *
* HYDROGRAPH ADJUSTMENT FACTOR: 0.79400 *
* ADJUSTED HYDROGRAPH PEAK (cfs): 5857.35 VOLUME (acre-ft): 707.14 *
* RUNOFF FACTOR(in): 5.51 TOTAL RAIN(in): 10.75 SCS Curve: 60 *
* FATTENED HYDROGRAPH PEAK (cfs): 5857.35 VOLUME (acre-ft): 2561.82 *
*****

```

Adams_Cyn_VCRat_basin_I14AR_OUT						
TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
0	0.00	0.00	0.00	100	6.40	5.08
200	6.40	5.08	123.68	300	6.68	5.30
400	9.01	7.15	184.46	500	16.55	13.14
600	27.62	21.93	314.23	700	38.02	30.19
800	55.52	44.08	610.88	900	129.53	102.85
1000	387.14	307.39	1737.42	1050	660.99	524.83
1100	1016.07	806.76	3378.01	1110	1113.53	884.14
1120	1241.65	985.87	3870.69	1130	1422.03	1129.09
1131	1443.42	1146.07	4178.31	1142	1465.31	1163.46
1133	1488.39	1181.78	4236.68	1152	1512.39	1200.84
1135	1536.93	1220.33	4295.85	1136	1561.27	1239.65
1137	1589.03	1261.69	4355.70	1138	1617.71	1284.46
1139	1647.65	1308.24	4416.86	1140	1679.53	1333.55
1141	1714.29	1361.15	4479.48	1144	1749.30	1388.94
1143	1786.08	1418.15	4542.66	1146	1825.07	1449.11
1145	1868.07	1483.25	4607.35	1150	1913.04	1518.95
1147	1961.30	1557.27	4673.49	1152	2014.22	1599.12
1149	2084.24	1654.89	4744.62	1154	2158.15	1713.57
1151	2222.99	1765.06	4817.11	1156	2333.55	1852.84
1153	2435.15	1933.51	4901.65	1158	2536.80	2014.22
1155	2658.80	2111.09	4984.86	1160	2797.13	2220.92
1157	2953.55	2345.12	5076.89	1162	3133.21	2487.77
1159	3338.09	2650.44	5179.01	1164	3560.05	2826.68
1161	3788.71	3008.24	5285.10	1166	4022.98	3194.25
1163	4248.91	3373.64	5384.91	1168	4463.77	3544.23
1165	4678.64	3714.84	5472.50	1170	4895.26	3886.84
1167	5103.92	4052.51	5552.13	1172	5295.15	4204.35
1169	5462.16	4336.95	5616.07	1174	5584.50	4434.41
1171	5684.56	4513.54	5657.94	1176	5785.34	4593.56
1173	5845.83	4641.59	5689.28	1178	5933.68	4711.34
1175	6055.00	4807.67	5722.72	1180	6204.77	4926.59
1177	6378.68	5064.67	5763.44	1182	6567.41	5214.53
1179	6758.02	5365.86	5803.82	1184	6937.46	5508.35
1181	7094.96	5633.40	5835.04	1186	7223.79	5735.69
1183	7315.71	5888.67	5852.94	1188	7367.77	5850.01
1185	7377.02	5857.35	5857.35	1190	7346.17	5832.86
1187	7275.77	5776.96	5850.10	1192	7170.06	5693.03
1189	7033.12	5584.30	5830.37	1194	6869.65	5454.50
1191	6687.57	5309.93	5798.41	1196	6489.18	5152.41
1193	6280.59	4986.79	5755.74	1198	6204.77	4926.59
1195	5848.11	4643.40	5704.41	1200	6065.78	4816.23
1197	5414.13	4298.82	5646.30	1202	5630.05	4470.26
1199	4993.81	3965.08	5582.99	1204	5201.80	4130.23
1201	4595.42	3648.76	5515.71	1206	4791.51	3804.46
1203	4225.65	3355.16	5445.79	1208	4406.83	3499.02
1205	3885.72	3085.26	5374.01	1210	4052.36	3217.58
1207	3575.02	2838.56	5301.01	1212	3726.33	2958.71
				1214	3430.84	2724.09

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1209	3292.65	2614.37	5227.34	1210	3162.32	2510.89	5190.52
1211	3037.73	2411.96	5153.57	1212	2919.57	2318.14	5116.70
1213	2807.81	2229.40	5079.98	1214	2701.37	2144.89	5043.31
1215	2600.46	2064.77	5006.79	1216	2505.10	1989.05	4970.50
1217	2414.42	1917.05	4934.35	1218	2328.58	1848.89	4898.43
1219	2247.03	1784.15	4862.72	1220	2170.13	1723.08	4827.31
1221	2096.90	1664.94	4792.11	1222	2027.67	1609.97	4757.20
1223	1961.91	1557.76	4722.55	1224	1899.73	1508.38	4688.22
1225	1840.43	1461.30	4654.10	1226	1784.19	1416.65	4620.29
1227	1730.77	1374.23	4586.76	1228	1679.88	1333.83	4553.49
1229	1631.41	1295.34	4520.48	1230	1584.85	1258.37	4487.67
1231	1540.61	1223.25	4455.15	1232	1498.54	1189.84	4422.95
1233	1458.54	1158.08	4391.05	1234	1420.28	1127.70	4359.41
1235	1384.11	1098.98	4328.13	1236	1349.39	1071.42	4297.09
1237	1316.07	1044.96	4266.29	1238	1284.50	1019.90	4235.83
1239	1254.47	996.05	4205.70	1240	1226.59	973.92	4176.07
1241	1200.09	952.87	4146.76	1242	1174.61	932.64	4117.69
1243	1150.43	913.44	4088.95	1244	1127.46	895.21	4060.52
1245	1105.85	878.04	4032.48	1246	1085.18	861.63	4004.72
1247	1065.49	846.00	3977.25	1248	1046.17	830.66	3949.91
1249	1027.17	815.57	3922.68	1250	1009.73	801.73	3895.97
1251	992.62	788.14	3869.39	1252	975.72	774.72	3842.91
1253	959.13	761.55	3816.59	1254	942.93	748.69	3790.43
1255	927.15	736.16	3764.46	1256	911.86	724.01	3738.71
1257	897.07	712.27	3713.18	1258	882.82	700.96	3687.90
1259	869.14	690.10	3662.88	1260	856.04	679.69	3638.13
1261	843.53	669.76	3613.66	1262	831.62	660.31	3589.49
1263	820.32	651.34	3565.61	1264	809.62	642.84	3542.03
1265	799.51	634.81	3518.76	1266	789.97	627.23	3495.79
1267	780.95	620.08	3473.11	1268	772.43	613.31	3450.72
1269	764.35	606.89	3428.60	1270	756.64	600.77	3406.73
1271	749.22	594.88	3385.07	1272	741.99	589.14	3363.61
1273	734.89	583.50	3342.31	1274	727.91	577.96	3321.17
1275	721.07	572.53	3300.20	1276	714.32	567.17	3279.38
1277	707.56	561.81	3258.68	1278	700.74	556.39	3238.06
1279	693.81	550.89	3217.52	1280	686.77	545.30	3197.05
1281	679.63	539.63	3176.66	1282	672.88	534.26	3156.53
1283	666.43	529.15	3136.64	1284	659.79	523.87	3116.78
1285	653.01	518.49	3096.98	1286	646.15	513.05	3077.27
1287	639.26	507.57	3057.64	1288	632.36	502.10	3038.13
1289	625.48	496.63	3018.73	1290	618.63	491.19	2999.45

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1291	611.82	485.78	2980.31	1292	605.08	480.43	2961.29
1293	598.41	475.14	2942.42	1294	591.84	469.92	2923.69
1295	585.37	464.79	2905.12	1296	579.04	459.76	2886.72
1297	572.86	454.85	2868.49	1298	566.85	450.08	2850.43
1299	561.01	445.44	2832.57	1300	555.38	440.97	2814.89
1310	509.61	404.63	2648.87	1320	474.82	377.01	2498.46
1330	440.92	350.09	2358.30	1340	404.72	321.35	2225.92
1350	368.63	292.69	2101.69	1360	326.79	259.47	1981.65
1370	286.02	227.10	1868.74	1380	248.94	197.66	1763.92

Adams_Cyn_VCRat_basin_114AR.OUT
 1390 216.67 172.04 1667.42 1400 189.83 150.72 1579.24
 1420 150.28 119.32 1425.35 1440 121.49 96.46 1294.46
 1460 94.64 75.14 1178.65 1500 59.13 46.95 992.23

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 117A

DESCRIPTION: SC RIVER
 TOTAL AREA TO HYDROGRAPH: 5582 acres
 HYDROGRAPH PEAK: 5839 cfs
 TIME OF PEAK: 1194 minutes
 HYDROGRAPH VOLUME: 2540.66 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	55.08	200	96.55	300	145.72	400	170.91
500	224.36	600	293.76	700	401.27	800	571.68	900	901.22
1000	1615.83	1050	2243.45	1100	3158.13	1110	3370.28	1120	3607.16
1130	3869.90	1131	3897.24	1132	3924.68	1133	3952.20	1134	3979.82
1135	4007.76	1136	4035.83	1137	4064.11	1138	4092.75	1139	4121.85
1140	4151.18	1141	4180.72	1142	4210.46	1143	4240.42	1144	4270.62
1145	4301.09	1146	4331.83	1147	4362.86	1148	4394.16	1149	4425.72
1150	4457.57	1151	4489.72	1152	4522.19	1153	4555.06	1154	4588.48
1155	4622.62	1156	4657.55	1157	4693.42	1158	4730.44	1159	4768.59
1160	4807.78	1161	4848.10	1162	4889.74	1163	4932.96	1164	4977.96
1165	5024.83	1166	5073.40	1167	5123.21	1168	5173.62	1169	5223.86
1170	5273.31	1171	5321.56	1172	5368.26	1173	5413.01	1174	5455.24
1175	5494.33	1176	5529.83	1177	5561.66	1178	5589.97	1179	5615.24
1180	5638.33	1181	5660.14	1182	5681.37	1183	5702.37	1184	5723.14
1185	5743.43	1186	5762.80	1187	5780.76	1188	5796.83	1189	5810.63
1190	5821.89	1191	5830.46	1192	5836.26	1193	5839.21	1194	5839.25
1195	5836.34	1196	5830.47	1197	5821.69	1198	5810.07	1199	5795.75
1200	5778.88	1201	5759.63	1202	5738.19	1203	5714.76	1204	5689.54
1205	5662.69	1206	5634.40	1207	5604.82	1208	5574.14	1209	5542.49
1210	5510.01	1211	5476.81	1212	5443.00	1213	5408.71	1214	5374.00
1215	5338.94	1216	5303.63	1217	5268.14	1218	5232.49	1219	5196.76
1220	5161.02	1221	5125.28	1222	5089.57	1223	5053.97	1224	5018.48
1225	4983.11	1226	4947.90	1227	4912.90	1228	4878.09	1229	4843.49
1230	4809.11	1231	4774.97	1232	4741.08	1233	4707.43	1234	4674.03
1235	4640.88	1236	4607.98	1237	4575.33	1238	4542.93	1239	4510.80
1240	4478.93	1241	4447.33	1242	4416.00	1243	4384.94	1244	4354.16
1245	4323.66	1246	4293.46	1247	4263.58	1248	4234.03	1249	4204.81
1250	4175.89	1251	4147.28	1252	4118.94	1253	4090.89	1254	4063.28
1255	4035.91	1256	4008.69	1257	3981.65	1258	3954.94	1259	3928.44
1260	3902.11	1261	3875.95	1262	3849.94	1263	3824.07	1264	3798.37
1265	3772.83	1266	3747.49	1267	3722.36	1268	3697.64	1269	3673.45
1270	3649.45	1271	3625.67	1272	3602.09	1273	3578.71	1274	3555.55
1275	3523.61	1276	3499.90	1277	3487.43	1278	3465.18	1279	3443.77
1280	3422.65	1281	3401.70	1282	3380.87	1283	3360.12	1284	3339.44
1285	3318.82	1286	3298.26	1287	3277.78	1288	3257.37	1289	3237.44
1290	3218.06	1291	3198.61	1292	3179.12	1293	3159.64	1294	3140.16

1295 3120.72 1296 3101.33 1297 3082.00 1298 3062.74 1299 3043.57
 1300 3024.50 1310 2842.74 1320 2676.88 1330 2524.93 1340 2385.10
 1350 2257.41 1360 2135.72 1370 2016.19 1380 1903.06 1390 1797.49
 1400 1700.65 1420 1537.62 1440 1392.02 1460 1265.95 1500 1061.50

Adams_Cyn_VCRat_basin_114AR.OUT

Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Page: 12 Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 118A

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	55.08	200	96.55	300	145.72	400	170.91	500	224.36
500	224.36	600	293.76	700	401.27	800	571.68	900	901.22	1000	1615.83
1000	1615.83	1050	2243.45	1100	3158.13	1110	3370.28	1120	3607.16	1130	3869.90
1130	3869.90	1131	3897.24	1132	3924.68	1133	3952.20	1134	3979.82	1135	4007.76
1135	4007.76	1136	4035.83	1137	4064.11	1138	4092.75	1139	4121.85	1140	4151.18
1140	4151.18	1141	4180.72	1142	4210.46	1143	4240.42	1144	4270.62	1145	4301.09
1145	4301.09	1146	4331.83	1147	4362.86	1148	4394.16	1149	4425.72	1150	4457.57
1150	4457.57	1151	4489.72	1152	4522.19	1153	4555.06	1154	4588.48	1155	4622.62
1155	4622.62	1156	4657.55	1157	4693.42	1158	4730.44	1159	4768.59	1160	4807.78
1160	4807.78	1161	4848.10	1162	4889.74	1163	4932.96	1164	4977.96	1165	5024.83
1165	5024.83	1166	5073.40	1167	5123.21	1168	5173.62	1169	5223.86	1170	5273.31
1170	5273.31	1171	5321.56	1172	5368.26	1173	5413.01	1174	5455.24	1175	5494.33
1175	5494.33	1176	5529.83	1177	5561.66	1178	5589.97	1179	5615.24	1180	5638.33
1180	5638.33	1181	5660.14	1182	5681.37	1183	5702.37	1184	5723.14	1185	5743.43
1185	5743.43	1186	5762.80	1187	5780.76	1188	5796.83	1189	5810.63	1190	5821.89
1190	5821.89	1191	5830.46	1192	5836.26	1193	5839.21	1194	5839.25	1195	5836.34
1195	5836.34	1196	5830.47	1197	5821.69	1198	5810.07	1199	5795.75	1200	5778.88
1200	5778.88	1201	5759.63	1202	5738.19	1203	5714.76	1204	5689.54	1205	5662.69
1205	5662.69	1206	5634.40	1207	5604.82	1208	5574.14	1209	5542.49	1210	5510.01
1210	5510.01	1211	5476.81	1212	5443.00	1213	5408.71	1214	5374.00	1215	5338.94
1215	5338.94	1216	5303.63	1217	5268.14	1218	5232.49	1219	5196.76	1220	5161.02
1220	5161.02	1221	5125.28	1222	5089.57	1223	5053.97	1224	5018.48	1225	4983.11
1225	4983.11	1226	4947.90	1227	4912.90	1228	4878.09	1229	4843.49	1230	4809.11
1230	4809.11	1231	4774.97	1232	4741.08	1233	4707.43	1234	4674.03	1235	4640.88
1235	4640.88	1236	4607.98	1237	4575.33	1238	4542.93	1239	4510.80	1240	4478.87
1240	4478.87	1241	4447.33	1242	4416.00	1243	4384.94	1244	4354.16	1245	4323.66
1245	4323.66	1246	4293.46	1247	4263.58	1248	4234.03	1249	4204.81	1250	4175.89
1250	4175.89	1251	4147.28	1252	4118.94	1253	4090.89	1254	4063.28	1255	4035.91
1255	4035.91	1256	4008.69	1257	3981.65	1258	3954.94	1259	3928.44	1260	3902.11
1260	3902.11	1261	3875.95	1262	3849.94	1263	3824.07	1264	3798.37	1265	3772.83
1265	3772.83	1266	3747.49	1267	3722.36	1268	3697.64	1269	3673.45	1270	3649.45
1270	3649.45	1271	3625.67	1272	3602.09	1273	3578.71	1274	3555.55	1275	3532.61
1275	3532.61	1276	3509.90	1277	3487.43	1278	3465.18	1279	3443.77	1280	3422.65
1280	3422.65	1281	3401.70	1282	3380.87	1283	3360.12	1284	3339.44	1285	3318.82
1285	3318.82	1286	3298.26	1287	3277.78	1288	3257.37	1289	3237.44	1290	3218.06
1290	3218.06	1291	3198.61	1292	3179.12	1293	3159.64	1294	3140.16	1295	3120.72
1295	3120.72	1296	3101.33	1297	3082.00	1298	3062.74	1299	3043.57		

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

VCRat Model Input

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Model Lines

006	4492	046C0010	A97101426005600
006	4492	047C	020000004307B98
006	4492	048C010	A97200768002900
006	4492	049B	020000005007B98201183003500
006	4492	050B	020000007907B98201240003400
006	4492	051B	020000002805B98
006	4492	052E	020000007909B98100782006000
006	4492	053E	030000002505B98
006	4492	054BE010	A97200853004000
006	4492	055B	020000001405B98
006	4492	056F	020000008706B98201222004800
006	4492	057F	030000003005B98
006	4492	058BF010	A97101584006300
006	4492	059B	020000004005B98
006	4492	060AR010	A97201530002400
006	4492	061A	020000005507B98
006	4492	062A	020000008006B98201254001800
006	4492	063A	010000004106B98
006	4492	064B	020000006605B98101577007600
006	4492	065B	020000004906B98
006	4492	066AR010	A97200885002400
006	4492	067A	010000002405B98
006	4492	068A	030000005706B98201682001400
006	4492	069A	020000005008B98
006	4492	070C	020000005805B98101208005000
006	4492	071C	020000007506B98201403004800
006	4492	072C	020000007407B98
006	4492	073C	020000005406B98200814002700
006	4492	074C	020000002005B98
006	4492	075C	020000004307B98201738003400
006	4492	076C	020000008908B98
006	4492	077AC010	A97201110001900
006	4492	078A	030000003007B98
006	4492	079A	020000004105B98202463001700
006	4492	080A	020000008306B98
006	4492	081D	020000005106B98101093007600
006	4492	082D	020000004706B98
006	4492	083AD010	A97200977003300
006	4492	084A	020000004605B98
006	4492	085A	020000006707B98201211000700
006	4492	086A	020000003306B98
006	4492	087A	02000000305B98200524001100
006	4492	088A	040000000505B98
006	4492	089A	010 099A97
006	4492	090E	020000003905B98101621005900
006	4492	091E	020000005907B98
006	4492	092AE010	A97200926001100
006	4492	093A	030000002205B98
006	4492	094A	020000006105B98

E

C

D

E

Model Lines

006	4492	095A	02000000507B98100595009400		
006	4492	095F	020000003606E98201714004600		
006	4492	100F	020000004807B98		
006	4492	101AF010	A97201147001000		
006	4492	102A	020000004207B98201111001800		
006	4492	103A	020000006507B98		
006	4492	104A	020000008207B98201606001800		
006	4492	105A	030000006007B98		
006	4492	106A	020000006909B98201408002100		
006	4492	107A	030000005807B98		
006	4492	108A	030000003105B98201467001500		
006	4492	109A	030000004206B98202733001400		
006	4492	110A	030000007309B98203056001300		
006	4492	111A	030000005621B98		
006	4492	112B	030000005012B98202779001700		B
006	4492	113B	040000004321B98		
006	4492	114AB010	A97		1
110					
111					
110			0.79400	5.51	
006	4492	115A	010	099A97201726001000	
006	4492	116A	010	099A97205400001000	
006	4492	117A	010	099A97	1
006	4492	118A	010	099A97	1 2
999					

116ARGO.TXT

LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	127.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53E	25.	107.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	B98	0.00
4492 55B	14.	64.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 56F	87.	352.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 57F	30.	129.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 58BF	117.	426.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492 59B	40.	182.	1395.	3105.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 60AB	1395.	3105.	3118.	6657.	2	1530.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 61A	55.	203.	3173.	6660.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 62A	80.	324.	3253.	6699.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492 63A	41.	176.	3294.	6700.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492 64B	66.	300.	66.	300.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492 65B	49.	198.	115.	383.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 66AB	115.	383.	3409.	6798.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 67A	24.	115.	3433.	6785.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 68A	57.	218.	3490.	6809.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492 69A	50.	171.	3540.	6802.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 70C	58.	264.	58.	264.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492 71C	75.	304.	133.	451.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 72C	74.	273.	207.	676.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 73C	54.	219.	261.	863.	0	814.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492 74C	43.	159.	281.	911.	2	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 75C	89.	305.	324.	1044.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492 76C	413.	1243.	413.	1243.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 77AC	30.	104.	3953.	7221.	2	1110.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492 78A	41.	186.	3983.	7218.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 79A	41.	186.	4024.	7234.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492 80A	83.	336.	4107.	7221.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 81D	51.	206.	51.	206.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492 82D	47.	190.	98.	337.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 83AD	98.	337.	4205.	7267.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492 84A	46.	209.	4251.	7275.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 85A	67.	247.	4318.	7300.	2	1211.	0.00700	0.00	0.00	0.	20	7	B98	0.00
4492 86A	33.	134.	4351.	7276.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 87A	93.	423.	4444.	7302.	2	524.	0.01100	0.00	0.00	0.	20	5	B98	0.00
4492 88A	5.	20.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	40	5	B98	0.00
4492 89A	0.	0.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492 90E	39.	177.	39.	177.	1	1621.	0.05900	0.00	0.00	0.	20	5	B98	0.00
4492 91E	59.	218.	98.	305.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 92AE	98.	305.	4547.	7341.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00
4492 93A	22.	94.	4569.	7333.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 94A	61.	277.	4630.	7350.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 95A	75.	257.	4705.	7369.	2	1651.	0.01600	0.00	0.00	0.	20	8	B98	0.00
4492 96F	39.	167.	39.	167.	1	1064.	0.05300	0.00	0.00	0.	30	5	B98	0.00
4492 97F	33.	134.	72.	233.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 98F	50.	185.	122.	414.	1	595.	0.09400	0.00	0.00	0.	20	7	B98	0.00
4492 99F	36.	146.	158.	531.	2	1714.	0.04600	0.00	0.00	0.	20	6	B98	0.00
4492 100F	48.	177.	206.	633.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

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Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 101AF	206.	633.	4911.	7433.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 102A	42.	155.	4953.	7423.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 103A	65.	240.	5018.	7429.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

Header place holder	LOCATTION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LNGLTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	104A	82.	303.	5100.	7450.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	105A	60.	209.	5160.	7439.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	106A	69.	222.	5229.	7455.	2	1408.	0.02100	0.00	0.00	0.	30	9	B98	0.00
4492	107A	58.	202.	5287.	7448.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	108A	31.	133.	5318.	7451.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492	109A	42.	160.	5360.	7441.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	110A	73.	221.	5433.	7402.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00
4492	111A	56.	101.	5489.	7354.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492	112B	50.	127.	50.	127.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492	113B	43.	72.	93.	168.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	93.	168.	5582.	7377.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	115A	0.	0.	5582.	7357.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492	116A	0.	0.	5582.	7193.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

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Header place holder	LOCATTION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LNGLTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	1A	85.	238.	85.	238.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492	2A	79.	216.	164.	430.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492	3A	73.	284.	237.	525.	1	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	4B	88.	260.	88.	260.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492	5B	54.	182.	142.	442.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492	6B	80.	207.	222.	605.	1	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492	7AB	222.	605.	459.	1122.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492	8A	94.	296.	553.	1162.	1	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	9C	79.	273.	79.	273.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492	10C	51.	130.	130.	413.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	11C	73.	269.	203.	654.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492	12C	108.	421.	311.	917.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492	13C	87.	200.	398.	1028.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492	14AC	398.	1028.	951.	2190.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	15A	30.	110.	981.	2162.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	16D	80.	252.	80.	252.	1	830.	0.05800	0.00	0.00	0.	30	7	B98	0.00
4492	17D	12.	44.	92.	274.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	18AD	92.	274.	1073.	2358.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492	19A	66.	195.	1139.	2341.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	20E	71.	276.	110.	276.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492	21E	39.	152.	110.	314.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	22E	68.	265.	178.	622.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492	23E	50.	195.	228.	522.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492	24AE	228.	627.	1367.	2661.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492	25A	18.	66.	1385.	2666.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	26A	56.	176.	1441.	2715.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492	27A	79.	273.	1520.	2758.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492	28A	64.	166.	1584.	2851.	0	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492	29A	46.	145.	1630.	2855.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	30A	40.	156.	1670.	2873.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492	31A	53.	167.	1723.	2885.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	32B	99.	334.	99.	334.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492	33B	47.	148.	146.	475.	1	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	34B	36.	125.	182.	585.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492	35B	78.	213.	260.	710.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492	36B	100.	273.	360.	962.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492	37B	13.	51.	373.	947.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	38B	71.	194.	444.	1102.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492	39B	49.	154.	493.	1170.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	40C	87.	225.	87.	225.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492	41C	76.	197.	163.	388.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492	42C	107.	268.	270.	648.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00

4492	43C	23.	95.	293.	657.	0	116ARO.TXT	0.00000	0.00	0.00	0.00	0.00	10	5	B98	0.00
4492	44D	80.	218.	80.	218.	1	1840.	0.08300	0.00	0.00	0.00	0.00	20	9	B98	0.00
4492	45D	54.	210.	134.	319.	1	0.	0.00000	0.00	0.00	0.00	0.	5	B98	0.00	
4492	46CD	134.	319.	427.	972.	1	1426.	0.05600	0.00	0.00	0.00	10	0	A97	0.00	
4492	47C	43.	135.	470.	999.	0	0.	0.00000	0.00	0.00	0.00	20	7	B98	0.00	
4492	48BC	470.	999.	963.	2169.	2	768.	0.02900	0.00	0.00	0.00	10	0	A97	0.00	
4492	49B	50.	157.	1013.	2191.	2	1183.	0.03500	0.00	0.00	0.00	20	7	B98	0.00	
4492	50B	79.	249.	1092.	2245.	2	1240.	0.03400	0.00	0.00	0.00	20	7	B98	0.00 [†]	

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Header place	holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	STORM RAIN ZONE	DAY PCT
4492	51B	28.	109.	1120.	2246.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	52E	79.	216.	79.	216.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492	53E	25.	92.	104.	274.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	54BE	104.	274.	1224.	2430.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	55B	14.	55.	1238.	2424.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	56F	87.	301.	87.	301.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	57F	30.	110.	117.	361.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	58BF	117.	361.	1355.	2560.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492	59B	40.	156.	1395.	2551.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	60AB	1395.	2551.	3118.	5431.	2	1530.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	61A	55.	173.	3173.	5421.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	62A	80.	277.	3253.	5452.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492	63A	41.	151.	3294.	5453.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492	64B	66.	257.	66.	257.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492	65B	49.	170.	115.	320.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	66AB	115.	320.	3409.	5525.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	67A	24.	99.	3433.	5528.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492	68A	57.	185.	3490.	5542.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	69A	50.	146.	3540.	5527.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	70C	58.	226.	58.	226.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492	71C	75.	260.	133.	380.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	72C	74.	233.	207.	566.	2	814.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492	73C	54.	187.	261.	725.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	74C	20.	78.	281.	765.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	75C	43.	135.	324.	878.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492	76C	89.	259.	413.	1033.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	77AC	413.	1033.	3953.	5852.	2	1110.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492	78A	30.	89.	3983.	5842.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	79A	41.	160.	4024.	5852.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492	80A	83.	287.	4107.	5834.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	81D	51.	176.	51.	176.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492	82D	47.	163.	98.	282.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	83AD	98.	282.	4205.	5869.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492	84A	46.	179.	4251.	5866.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	85A	67.	211.	4318.	5881.	2	1211.	0.00700	0.00	0.00	0.	20	7	B98	0.00
4492	86A	33.	114.	4351.	5866.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	87A	93.	362.	4444.	5884.	2	524.	0.01100	0.00	0.00	0.	20	5	B98	0.00
4492	88A	5.	17.	4449.	5876.	0	0.	0.00000	0.00	0.00	0.	40	5	B98	0.00
4492	89A	0.	0.	4449.	5876.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492	90E	39.	152.	39.	152.	1	1621.	0.05900	0.00	0.00	0.	20	5	B98	0.00
4492	91E	59.	186.	254.	254.	1	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	92AE	98.	254.	4547.	5907.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00
4492	93A	22.	81.	4569.	5895.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	94A	61.	238.	4630.	5905.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	95A	75.	218.	4705.	5919.	2	1651.	0.01600	0.00	0.00	0.	20	8	B98	0.00
4492	96F	39.	143.	39.	143.	1	1064.	0.05300	0.00	0.00	0.	30	5	B98	0.00
4492	97F	33.	114.	72.	195.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00

Header place holder	LOCATION	SUBAREA	AREA	Q	TOTAL Q	CONV TYPE	CONV LNGLTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	IMPV
4492	98F	50.	157.	122.	349.	1	595.	0.09400	0.00	0.00	0.	20	7	B98	0.00
4492	99F	36.	125.	158.	447.	2	1714.	0.04600	0.00	0.00	0.	20	6	B98	0.00
4492	100F	48.	151.	206.	526.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	LOCATION	SUBAREA	AREA	Q	TOTAL Q	CONV TYPE	CONV LNGLTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	IMPV
4492	101AF	206.	4911.	5960.	5960.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	102A	42.	4953.	5951.	5951.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	103A	65.	5018.	5950.	5950.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	104A	82.	5100.	5962.	5962.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	105A	60.	5160.	5946.	5946.	0	0.	0.00000	0.00	0.00	0.	30	9	B98	0.00
4492	106A	69.	5229.	5955.	5955.	2	1408.	0.02100	0.00	0.00	0.	20	9	B98	0.00
4492	107A	58.	5287.	5946.	5946.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	108A	31.	5318.	5946.	5946.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492	109A	42.	5360.	5932.	5932.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	110A	73.	5433.	5894.	5894.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00
4492	111A	56.	5489.	5844.	5844.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492	112B	50.	50.	108.	108.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492	113B	43.	60.	138.	138.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	93.	5582.	5861.	5861.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	115A	0.	5582.	5841.	5841.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492	116A	0.	5582.	5690.	5690.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT Header place holder
Header place holder

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	0	0.	200	0.	0	0.	300	3.	400	3.	400	3.	400	3.
500	4.	100	6.	700	6.	7.	10.	800	10.	900	16.	900	16.	900	16.
1000	28.	1050	42.	1100	48.	1100	72.	1110	72.	1120	72.	1120	72.	1120	72.
1130	100.	1131	102.	1132	105.	1133	108.	1133	108.	1134	111.	1134	111.	1134	111.
1135	114.	1136	114.	1137	118.	1138	121.	1138	121.	1139	124.	1139	124.	1139	124.
1140	128.	1141	135.	1142	139.	1143	144.	1143	144.	1144	151.	1144	151.	1144	151.
1145	163.	1146	173.	1147	183.	1148	196.	1148	196.	1149	234.	1149	234.	1149	234.
1150	274.	1151	289.	1152	376.	1153	432.	1153	432.	1154	469.	1154	469.	1154	469.
1155	497.	1156	506.	1157	503.	1158	466.	1158	466.	1159	426.	1159	426.	1159	426.
1160	414.	1161	322.	1162	265.	1163	231.	1163	231.	1164	197.	1164	197.	1164	197.
1165	157.	1166	130.	1167	111.	1168	98.	1168	98.	1169	90.	1169	90.	1169	90.
1170	80.	1171	76.	1172	71.	1173	64.	1173	64.	1174	62.	1174	62.	1174	62.
1175	59.	1176	57.	1177	54.	1178	48.	1178	48.	1179	49.	1179	49.	1179	49.
1180	47.	1181	45.	1182	43.	1183	41.	1183	41.	1184	41.	1184	41.	1184	41.
1185	40.	1186	40.	1187	40.	1188	39.	1188	39.	1189	39.	1189	39.	1189	39.
1190	38.	1191	38.	1192	38.	1193	38.	1193	38.	1194	38.	1194	38.	1194	38.
1195	38.	1196	38.	1197	38.	1198	38.	1198	38.	1199	38.	1199	38.	1199	38.
1200	38.	1201	37.	1202	37.	1203	35.	1203	35.	1204	35.	1204	35.	1204	35.
1205	34.	1206	33.	1207	32.	1208	31.	1208	31.	1209	30.	1209	30.	1209	30.
1210	29.	1211	28.	1212	28.	1213	27.	1213	27.	1214	26.	1214	26.	1214	26.
1215	26.	1216	26.	1217	26.	1218	26.	1218	26.	1219	26.	1219	26.	1219	26.
1220	26.	1221	26.	1222	26.	1223	26.	1223	26.	1224	26.	1224	26.	1224	26.
1225	27.	1226	26.	1227	26.	1228	26.	1228	26.	1229	26.	1229	26.	1229	26.
1230	26.	1231	26.	1232	26.	1233	26.	1233	26.	1234	25.	1234	25.	1234	25.
1235	26.	1236	26.	1237	25.	1238	25.	1238	25.	1239	25.	1239	25.	1239	25.
1240	25.	1241	25.	1242	25.	1243	25.	1243	25.	1244	25.	1244	25.	1244	25.
1245	25.	1246	25.	1247	25.	1248	25.	1248	25.	1249	25.	1249	25.	1249	25.
1250	25.	1251	25.	1252	25.	1253	25.	1253	25.	1254	25.	1254	25.	1254	25.
1255	25.	1256	25.	1257	25.	1258	25.	1258	25.	1259	25.	1259	25.	1259	25.
1260	25.	1261	25.	1262	24.	1263	23.	1263	23.	1264	23.	1264	23.	1264	23.

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1265	22	1266	22	1267	21	1268	20	1269	20						
1270	19	1271	18	1272	19	1273	18	1274	18						
1275	17	1276	17	1277	17	1278	17	1279	17						
1280	17	1281	16	1282	16	1283	16	1284	16						
1285	17	1286	16	1287	16	1288	17	1289	17						
1290	16	1291	16	1292	17	1293	16	1294	16						
1295	16	1296	17	1297	17	1298	16	1299	16						
1300	17	1310	11	1320	7	1330	6	1340	6						
1350	5	1360	2	1370	1	1380	0	1390	0						
1400	0	1420	0	1440	0	1460	0	1500	0						

HYDROGRAPH AT 4492 116A
 Header place holder
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 STORM DAY 4
 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
500	12	100	6	200	6	300	6	400	6						
1000	315	600	22	700	33	800	48	900	48						
1130	1184	1050	550	1100	894	1110	971	1120	1062						
1135	1258	1131	1198	1132	1213	1133	1228	1134	1243						
1140	1344	1136	1274	1137	1291	1138	1308	1139	1325						
1145	1448	1141	1363	1142	1383	1143	1404	1144	1426						
1150	1581	1146	1472	1147	1497	1148	1524	1149	1552						
1155	1758	1151	1612	1152	1645	1153	1680	1154	1718						
1160	2036	1156	1802	1157	1851	1158	1905	1159	1966						
1165	2555	1161	2115	1162	2204	1164	2305	1164	2421						
1170	3523	1166	2710	1167	2887	1168	3083	1169	3297						
1175	4698	1171	3757	1172	3996	1173	4237	1174	4473						
1180	5549	1176	4906	1177	5094	1178	5261	1179	5410						
1185	6320	1181	5687	1182	5830	1183	5983	1184	6148						
1190	7062	1186	6494	1187	6663	1188	6819	1189	6954						
1195	7113	1191	7140	1192	7183	1193	7193	1194	7169						
1200	6484	1196	7029	1197	6921	1198	6791	1199	6644						
1205	5587	1201	6314	1202	6137	1203	5955	1204	5771						
1210	4699	1206	5404	1207	5222	1208	5044	1209	4869						
1215	3925	1211	4534	1212	4374	1213	4219	1214	4070						
1220	3287	1216	3787	1217	3654	1218	3527	1219	3404						
1225	2771	1221	3174	1222	3067	1223	2964	1224	2866						
1230	2359	1226	2681	1227	2595	1228	2513	1229	2435						
1235	2031	1231	2287	1232	2219	1233	2153	1234	2091						
1240	1767	1236	1973	1237	1918	1238	1866	1239	1815						
1245	1555	1241	1721	1242	1677	1243	1634	1244	1594						
1250	1382	1246	1517	1247	1481	1248	1447	1249	1413						
1255	1243	1251	1352	1252	1323	1253	1295	1254	1269						
1260	1130	1256	1219	1257	1195	1258	1173	1259	1151						
1265	1036	1261	1110	1262	1091	1263	1072	1264	1054						
1270	958	1266	1019	1267	1004	1268	988	1269	973						
1275	891	1271	943	1272	930	1273	917	1274	904						
1280	834	1276	879	1277	867	1278	856	1279	845						
1285	787	1281	824	1282	814	1283	805	1284	796						
1290	746	1286	778	1287	770	1288	762	1289	754						
1295	709	1291	739	1292	731	1293	724	1294	717						
1300	675	1296	702	1297	695	1298	689	1299	682						
1350	444	1310	611	1320	559	1330	516	1340	478						
1400	271	1420	409	1370	374	1380	338	1390	305						
			212	1440	168	1460	135	1500	92						

HYDROGRAPH AT 4492 2A
 Header place holder
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 STORM DAY 4
 REDUCTION FACTOR = 0.869

TIME	Q	TIME	Q	116ARO.TXT	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	0	300	0.	400	0.	400	0.
500	1.	600	2.	3	800	4.	900	4.	900	7.
1000	17.	1050	29.	34.	1110	54.	1120	54.	1120	55.
1130	79.	1131	81.	83.	1133	86.	1134	86.	1134	89.
1135	91.	1136	91.	95.	1138	98.	1139	98.	1139	100.
1140	104.	1141	109.	113.	1143	117.	1144	117.	1144	123.
1145	134.	1146	142.	1142	1148	163.	1149	163.	1149	195.
1150	229.	1151	241.	1152	1153	364.	1154	364.	1154	395.
1155	420.	1156	430.	1157	428.	397.	1159	397.	1159	363.
1160	353.	1161	276.	1162	225.	196.	1164	196.	1164	167.
1165	133.	1166	108.	92.	1168	80.	1169	80.	1169	72.
1170	64.	1171	60.	56.	1173	49.	1174	49.	1174	47.
1175	45.	1176	43.	40.	1178	35.	1179	35.	1179	36.
1180	34.	1181	32.	31.	1183	29.	1184	28.	1184	28.
1185	28.	1186	27.	27.	1188	27.	1189	27.	1189	27.
1190	26.	1191	26.	26.	1193	26.	1194	26.	1194	26.
1195	26.	1196	25.	25.	1198	25.	1199	25.	1199	25.
1200	25.	1201	25.	24.	1202	24.	1204	23.	1204	23.
1205	22.	1206	21.	20.	1207	20.	1208	20.	1209	19.
1210	18.	1211	17.	17.	1212	17.	1214	16.	1214	16.
1215	16.	1216	16.	16.	1217	16.	1218	15.	1219	15.
1220	16.	1221	16.	15.	1222	15.	1224	15.	1224	16.
1225	15.	1226	15.	15.	1227	15.	1229	16.	1229	16.
1230	15.	1231	15.	16.	1232	16.	1234	15.	1234	15.
1235	15.	1236	15.	16.	1237	15.	1239	15.	1239	15.
1240	15.	1241	14.	14.	1242	14.	1244	14.	1244	14.
1245	14.	1246	14.	14.	1247	14.	1249	14.	1249	14.
1250	14.	1251	14.	14.	1252	14.	1254	14.	1254	14.
1255	14.	1256	14.	14.	1257	14.	1259	14.	1259	14.
1260	14.	1261	14.	13.	1262	13.	1264	13.	1264	13.
1265	12.	1266	12.	11.	1267	11.	1269	11.	1269	10.
1270	10.	1271	10.	10.	1272	10.	1274	9.	1274	9.
1275	9.	1276	8.	8.	1277	8.	1278	8.	1279	8.
1280	8.	1281	8.	8.	1282	8.	1283	8.	1284	8.
1285	8.	1286	8.	8.	1287	8.	1288	8.	1289	8.
1290	8.	1291	8.	8.	1292	8.	1293	8.	1294	8.
1295	8.	1296	8.	8.	1297	8.	1298	8.	1299	8.
1300	8.	1310	6.	3.	1320	3.	1330	2.	1340	2.
1350	2.	1360	1.	1.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 HYDROGRAPH AT 4492 place holder 116A
 STORM DAY 4
 REDUCTION FACTOR = 0.869

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	300	6.	400	6.
500	6.	600	7.	800	11.	900	20.
1000	68.	1050	161.	1110	464.	1120	537.
1130	634.	1131	645.	1133	667.	1134	679.
1135	691.	1136	703.	1138	729.	1139	742.
1140	756.	1141	770.	1143	800.	1144	816.
1145	833.	1146	850.	1148	887.	1149	907.
1150	928.	1151	950.	1153	998.	1154	1024.
1155	1052.	1156	1082.	1158	1150.	1159	1189.
1160	1234.	1161	1285.	1163	1405.	1164	1478.
1165	1560.	1166	1655.	1168	1890.	1169	2032.
1170	2187.	1171	2353.	1173	2709.	1174	2895.
1175	3082.	1176	3266.	1177	3443.	1179	3757.
1180	3891.	1181	4014.	1183	4245.	1184	4364.

1185	4492.	1186	4628.	1187	116ARGO, TXT	1188	4923.	1189	5073.
1190	5217.	1191	5349.	1192	4773.	1193	5538.	1194	5628.
1195	5672.	1196	5690.	1197	5464.	1198	5648.	1199	5593.
1200	5518.	1201	5477.	1202	5321.	1203	5205.	1204	5079.
1205	4947.	1206	4810.	1207	4671.	1208	4530.	1209	4389.
1210	4249.	1211	4110.	1212	3974.	1213	3841.	1214	3711.
1215	3584.	1216	3462.	1217	3343.	1218	3228.	1219	3117.
1220	3011.	1221	2908.	1222	2809.	1223	2713.	1224	2622.
1225	2534.	1226	2450.	1227	2368.	1228	2291.	1229	2216.
1230	2144.	1231	2076.	1232	2009.	1233	1947.	1234	1886.
1235	1828.	1236	1772.	1237	1719.	1238	1667.	1239	1618.
1240	1571.	1241	1526.	1242	1483.	1243	1441.	1244	1401.
1245	1362.	1246	1325.	1247	1290.	1248	1256.	1249	1223.
1250	1191.	1251	1161.	1252	1132.	1253	1103.	1254	1076.
1255	1050.	1256	1025.	1257	1001.	1258	977.	1259	955.
1260	933.	1261	912.	1262	892.	1263	872.	1264	853.
1265	835.	1266	817.	1267	800.	1268	784.	1269	769.
1270	754.	1271	739.	1272	725.	1273	711.	1274	698.
1275	686.	1276	673.	1277	661.	1278	650.	1279	638.
1280	627.	1281	616.	1282	606.	1283	596.	1284	586.
1285	576.	1286	567.	1287	558.	1288	549.	1289	540.
1290	531.	1291	523.	1292	515.	1293	508.	1294	500.
1295	493.	1296	486.	1297	479.	1298	471.	1299	465.
1300	458.	1310	400.	1320	351.	1330	309.	1340	272.
1350	241.	1360	216.	1370	193.	1380	178.	1390	163.
1400	149.	1420	125.	1440	104.	1460	85.	1500	60.

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Modified Rational Model Results Report

Job: 4492 Project: Adams County VC Rat

Project Description

100 YEAR EVENT

VCRat version: 2.6.2008.11
VCRain version: 200703
DOS EXE version: PC 2.2-200809

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results																
ROUTING AFTER ACCUMULATION																
ACCUMULATED DATA																
Node	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES
VEL	DEPTH	ID	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES
(FT/S)	(FT)															
1A	:	Subshed 1A														
1A	010	K100	10	0	85	278	85	278	1154	MOUNTAIN	1635	0.17400				
2A	:	Subshed 2A														
2A	020	K100	9	0	79	254	164	506	1156	MOUNTAIN	1750	0.07500				
3A	:	Subshed 3A														
3A	020	K100	5	0	73	332	237	633	1156							
4B	:	Subshed 4B														
4B	010	K100	9	0	88	303	88	303	1153							
5B	:	Subshed 5B														
5B	010	K100	7	0	54	212	142	515	1153	MOUNTAIN	2148	0.14200				
6B	:	Subshed 6B														

Adams_Cyn_VCRat_basin_116AR.OUT
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Model Results															
ROUTING AFTER ACCUMULATION															
SUBAREA DATA AND RESULTS															
Node Depth ID	Soil Type	Rain Zone	TC (min)	Imp	Area (AC)	Flow (CFS)	Area (AC)	Flow (CFS)	Time (min)	Channel Type	Length (ft)	Slope (ft/ft)	Size (ft)	H:V (Z)	N Values CHNL Sides
28A	020	Subshed 28A	10	0	64	195	1584	3488	1160	VALLEY	1069	0.02600			
29A	020	Subshed 29A	7	0	46	170	1630	3516	1161						
30A	020	Subshed 30A	5	0	40	182	1670	3539	1161	VALLEY	1537	0.02900			
31A	020	Subshed 31A	7	0	53	196	1723	3557	1162						
32B	010	Subshed 32B	7	0	99	389	99	389	1153	MOUNTAIN	735	0.11200			
33B	020	Subshed 33B	7	0	47	174	146	555	1155						
34B	020	Subshed 34B	6	0	36	146	182	687	1154	MOUNTAIN	1710	0.05700			
35B	020	Subshed 35B	9	0	78	251	260	844	1157						
36B	020	Subshed 36B	9	0	100	321	360	1142	1157	MOUNTAIN	736	0.05200			
37B	020	Subshed 37B	5	0	13	59	373	1128	1158						
38B	020	Subshed 38B	9	0	71	228	444	1320	1157	VALLEY	1438	0.03500			
39B	020	Subshed 39B	7	0	49	181	493	1407	1158						
40C	020	Subshed 40C	10	0	87	265	87	265	1154	MOUNTAIN	2063	0.16300			
41C	020	Subshed 41C	10	0	76	231	163	460	1157						
42C	010	Subshed 42C	12	0	107	314	270	766	1156	MOUNTAIN	1338	0.08100			

Adams_Cyn_VCRat_basin_116AR.OUT

Node	Subshed	TC	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values
43C	Subshed 43C	5	0	23	110	293	780	1156			
43C	010 K100										
44D	Subshed 44D	9	0	80	257	80	257	1153	MOUNTAIN	1840	0.08300
44D	020 K100										
45D	Subshed 45D	5	0	54	246	134	384	1156			
45D	020 K100										
46CD				134	384	427	1165	1156	MOUNTAIN	1426	0.05600
47C	Subshed 47C	7	0	43	159	470	1206	1158			
47C	020 K100										
488C				470	1206	963	2613	1158	VALLEY	768	0.02900
49B	Subshed 49B	7	0	50	185	1013	2655	1158	VALLEY	1183	0.03500
49B	020 K100										
50B	Subshed 50B	7	0	79	292	1092	2726	1159	VALLEY	1240	0.03400
50B	020 K100										
51B	Subshed 51B	5	0	28	127	1120	2731	1160			
51B	020 K100										

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

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Model Results
ROUTING AFTER ACCUMULATION

Node	Subshed	TC	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values
52E	Subshed 52E	9	0	79	254	79	254	1153	MOUNTAIN	782	0.06000
52E	020 K100										
53E	Subshed 53E	5	0	25	107	104	325	1156			
53E	030 K100										
548E				104	325	1224	2947	1160	VALLEY	853	0.04000
55B	Subshed 55B	5	0	14	64	1238	2937	1160			
55B	020 K100										
56F	Subshed 56F	6	0	87	352	87	352	1153	VALLEY	1222	0.04800
56F	020 K100										
57F	Subshed 57F	5	0	30	129	117	426	1155			
57F	030 K100										
58BF				117	426	1355	3116	1160	MOUNTAIN	1584	0.06300

Adams_Cyn_VCRat_basin_116AR.OUT															
59B	:	Subshed	59B												
59B	020	K100	5	0	40	182	1395	3105	1161	-----	---	---	---	---	
60AB	---	---	---	---	1395	3105	3118	6657	1162	VALLEY	1530	0.02400	---	---	
61A	:	Subshed	61A	-	START OF										
61A	020	K100	7	0	55	203	3173	6660	1163	-----	---	---	---	---	
62A	:	Subshed	62A												
62A	020	K100	6	0	80	324	3253	6699	1163	VALLEY	1254	0.01800	---	---	
63A	:	Subshed	63A												
63A	010	K100	6	0	41	176	3294	6700	1164	-----	---	---	---	---	
64B	:	Subshed	64B												
64B	020	K100	5	0	66	300	66	300	1153	MOUNTAIN	1577	0.07600	---	---	
65B	:	Subshed	65B												
65B	020	K100	6	0	49	198	115	383	1155	-----	---	---	---	---	
66AB	---	---	---	---	115	383	3409	6798	1164	VALLEY	885	0.02400	---	---	
67A	:	Subshed	67A												
67A	010	K100	5	0	24	115	3433	6785	1164	-----	---	---	---	---	
68A	:	Subshed	68A												
68A	030	K100	6	0	57	218	3490	6809	1164	VALLEY	1682	0.01400	---	---	
69A	:	Subshed	69A												
69A	020	K100	8	0	50	171	3540	6802	1166	-----	---	---	---	---	
70C	:	Subshed	70C												
70C	020	K100	5	0	58	264	58	264	1153	MOUNTAIN	1208	0.05000	---	---	
71C	:	Subshed	71C												
71C	020	K100	6	0	75	304	133	451	1154	VALLEY	1403	0.04800	---	---	
72C	:	Subshed	72C												
72C	020	K100	7	0	74	273	207	676	1155	-----	---	---	---	---	
73C	:	Subshed	73C												
73C	020	K100	6	0	54	219	261	863	1155	VALLEY	814	0.02700	---	---	
74C	:	Subshed	74C												
74C	020	K100	5	0	20	91	281	911	1156	-----	---	---	---	---	
75C	:	Subshed	75C												
75C	020	K100	7	0	43	159	324	1044	1156	VALLEY	1738	0.03400	---	---	
76C	:	Subshed	76C												
76C	020	K100	8	0	89	305	413	1243	1157	-----	---	---	---	---	
77AC	---	---	---	---	413	1243	3953	7221	1165	VALLEY	1110	0.01900	---	---	

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

SUBAREA DATA AND RESULTS										ROUTING AFTER ACCUMULATION									
NODE	SOIL	RAIN	TC	%	AREA	FLOW	AREA	FLOW	TIME	CHANNEL	LENGTH	SLOPE	SIZE	H:V	N	VALUES			
DEPTH	TYPE	ZONE	(MIN)	IMP	(AC)	(CFS)	(AC)	(CFS)	(MIN)	TYPE	(FT)	(FT/FT)	(FT)	(Z)	CHNL	SIDES			
(FT/S)	(FT)																		
78A : Subshed 78A	030	K100	7	0	30	104	3983	7218	1166										
79A : Subarea 79A	020	K100	5	0	41	186	4024	7234	1166	VALLEY	2463	0.01700							
80A : Subshed 80A	020	K100	6	0	83	336	4107	7221	1168										
81D : Subshed 81D																			
81D : Clearing Hydrograph Bank: D	020	K100	6	0	51	206	51	206	1153	MOUNTAIN	1093	0.07600							
82D : Subshed 82D	020	K100	6	0	47	190	98	337	1155										
83AD : Subshed 83AD																			
84A : Subarea 84A	020	K100	5	0	46	209	4251	7275	1169										
85A : Subarea 85A	020	K100	7	0	67	247	4318	7300	1169	VALLEY	1211	0.00700							
86A : Subarea 86A	020	K100	6	0	33	134	4351	7276	1170										
87A : Subarea 87A	020	K100	5	0	93	423	4444	7302	1170	VALLEY	524	0.01100							
88A : Subarea 88A	040	K100	5	0	5	20	4449	7300	1171										
89A : Subshed 89A																			
90E : Subshed 90E																			
90E : Clearing Hydrograph Bank: E	020	K100	5	0	39	177	39	177	1153	MOUNTAIN	1621	0.05900							
91E : Subshed 91E	020	K100	7	0	59	218	98	305	1155										
92AE : Subshed 92AE																			
93A : Subshed 93A	030	K100	5	0	22	94	4569	7333	1172										
94A : Subshed 94A	020	K100	5	0	61	277	4630	7350	1172										
95A : Subshed 95A	020	K100	8	0	75	257	4705	7369	1172	VALLEY	1651	0.01600							

Node	Subshed	Clearing	Hydrograph	Bank	F	39	167	39	167	1153	MOUNTAIN	1064	0.05300	---	---	---
96F	Subshed 96F	030	K100	5	0	39	167	39	167	1153	MOUNTAIN	1064	0.05300	---	---	---
97F	Subshed 97F	020	K100	6	0	33	134	72	233	1155	---	---	---	---	---	---
98F	Subshed 98F	020	K100	7	0	50	185	122	414	1155	MOUNTAIN	595	0.09400	---	---	---
99F	Subshed 99F	020	K100	6	0	36	146	158	531	1155	VALLEY	1714	0.04600	---	---	---
100F	Subshed 100F	020	K100	7	0	48	177	206	633	1156	---	---	---	---	---	---
101AF	---	---	---	---	---	206	633	4911	7433	1173	VALLEY	1147	0.01000	---	---	---
102A	Subshed 102A	020	K100	7	0	42	155	4953	7423	1174	VALLEY	1111	0.01800	---	---	---

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Model Results

ROUTING AFTER ACCUMULATION																
--- SUBAREA DATA AND RESULTS --- ACCUMULATED DATA ---																
Node	Soil	Rain	TC	%	Area	Flow	Area	Flow	Time	Channel	Length	Slope	Size	H:V	N Values	
Depth	ID	Type	Zone	(min)	Imp	(AC)	(CFS)	(AC)	(CFS)	(min)	Type	(ft)	(ft/ft)	(ft)	Chnl	Sides
(ft/s)	(ft)	----- -----														
103A	Subshed 103A	020	K100	7	0	65	240	5018	7429	1175	---	---	---	---	---	---
104A	Subshed 104A	020	K100	7	0	82	303	5100	7450	1175	VALLEY	1606	0.01800	---	---	---
105A	Subshed 105A	030	K100	7	0	60	209	5160	7439	1177	---	---	---	---	---	---
106A	Subshed 106A	020	K100	9	0	69	222	5229	7455	1177	VALLEY	1408	0.02100	---	---	---
107A	Subshed 107A	030	K100	7	0	58	202	5287	7448	1178	---	---	---	---	---	---
108A	Subshed 108A	030	K100	5	0	31	133	5318	7451	1178	VALLEY	1467	0.01500	---	---	---
109A	Subshed 109A	030	K100	6	0	42	160	5360	7441	1179	VALLEY	2733	0.01400	---	---	---
110A	Subshed 110A	030	K100	9	0	73	221	5433	7402	1182	VALLEY	3056	0.01300	---	---	---

Adams_Cyn_VCRat_basin_116AR.OUT

TYPE	ERR NO	PROCEDURE	LOCATION	MESSAGE	Issue/warning Messages								
111A	030	K100	21	0	56	101	5489	7354	1185	-----	-----	-----	-----
112B	030	K100	12	0	50	127	50	127	1154	VALLEY	2779	0.01700	-----
113B	040	K100	21	0	43	72	93	168	1164	-----	-----	-----	-----
114AB	---	---	---	---	93	168	5582	7377	1185	VALLEY	1726	0.01000	-----
115A	---	routing	---	---	---	---	5582	7357	1187	VALLEY	5400	0.01000	-----
116A	---	SC RIVER	---	---	---	---	5582	7193	1193	-----	-----	-----	-----
116A	---	---	---	---	---	---	5582	5690	---	-----	-----	-----	-----
117A	---	---	---	---	---	---	5582	5690	1193	-----	-----	-----	-----

```

*****
* INCOMING HYDROGRAPH PEAK (cfs): 7192.92
* HYDROGRAPH ADJUSTMENT FACTOR: 0.79100
* ADJUSTED HYDROGRAPH PEAK (cfs): 5689.60
* RUNOFF FACTOR(1in): 5.43
* FATTENED HYDROGRAPH PEAK (cfs): 5689.60
*****
VOLUME (acre-ft): 890.57
VOLUME (acre-ft): 704.44
TOTAL RAIN(1in): 10.65
SCS Curve: 60
VOLUME (acre-ft): 2524.65
*****

```

Caution smaller area Err1008 SUBAREA 88A TC and Area are set to minimum values(5). May be an attempt to run the model on a smaller area than acceptable to VCRat.
 Ventura County Watershed Protection District
 Modified Rational Method Hydrology Program (VCRat v2.6)

Page: 7 Job: 4492 Project: Adams County VC Rat
 Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 2A

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	0.40	200	0.40	300	2.61	400	3.28
500	4.21	600	6.18	700	7.36	800	9.81	900	16.11
1000	27.89	1050	41.57	1100	47.99	1110	71.76	1120	71.82

DESCRIPTION: Subshed 2A
 TOTAL AREA TO HYDROGRAPH: 164 acres
 HYDROGRAPH PEAK: 506 cfs
 TIME OF PEAK: 1156 minutes
 HYDROGRAPH VOLUME: 35.60 acre-ft

Adams_Cyn_VCRat_basin_116AR_OUT	104.66	1133	108.00	1134	111.14
1130	104.66	1133	108.00	1134	111.14
1135	118.10	1138	144.13	1144	124.18
1140	139.24	1143	196.10	1149	150.62
1145	172.58	1148	432.08	1154	234.08
1150	288.68	1152	466.29	1159	469.42
1155	506.39	1157	230.89	1164	425.71
1160	322.12	1162	98.12	1169	196.89
1165	129.83	1167	63.50	1174	89.79
1170	75.74	1172	47.95	1179	62.13
1175	57.23	1177	41.39	1184	48.73
1180	44.82	1182	39.08	1189	40.76
1185	39.53	1187	37.97	1194	38.72
1190	38.01	1192	37.65	1199	37.86
1195	37.64	1197	35.47	1204	37.66
1200	37.13	1202	30.65	1209	34.81
1205	32.68	1207	27.21	1214	29.54
1210	27.84	1212	25.88	1219	26.68
1215	26.17	1217	25.81	1224	25.83
1220	26.40	1222	26.47	1229	26.43
1225	25.92	1227	26.03	1234	26.53
1230	25.88	1232	25.23	1239	25.44
1235	25.90	1237	24.82	1244	25.15
1240	25.05	1242	24.68	1249	24.78
1245	24.67	1247	24.62	1254	24.62
1250	24.65	1252	24.62	1259	24.64
1255	24.62	1257	23.12	1264	24.61
1260	24.58	1262	20.05	1269	23.06
1265	21.67	1267	18.20	1274	19.75
1270	18.42	1272	18.20	1279	17.28
1275	17.30	1277	16.59	1284	16.44
1280	16.97	1282	16.30	1289	16.83
1285	16.93	1281	16.80	1294	16.88
1290	16.90	1286	16.36	1299	16.32
1295	16.33	1291	16.22	1304	16.17
1300	16.25	1296	6.46	1309	6.48
1305	16.74	1310	0.46	1314	0.41
1310	2.43	1320	0.40	1319	0.40
1315	0.40	1370		1324	
1320		1440		1329	

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

HYDROGRAPH FATTENED AT 116A

*****	INCOMING HYDROGRAPH PEAK (cfs):	7192.92	VOLUME (acre-ft):	890.57
*	HYDROGRAPH ADJUSTMENT FACTOR:	0.79100		
*	ADJUSTED HYDROGRAPH PEAK (cfs):	5689.60	VOLUME (acre-ft):	704.44
*	RUNOFF FACTOR(IN):	5.43	SCS Curve:	60
*	FATTENED HYDROGRAPH PEAK (cfs):	5689.60	VOLUME (acre-ft):	2524.65

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
0.40				1320			
0.40				1370			
0.40				1440			

Adams_Cyn_VCRat_basin_116AR_OUT

0	0.00	0.00	0.00	0.00	100	6.40	5.06	54.47
200	6.40	5.06	122.10	180.36	300	6.50	5.14	146.63
400	7.50	5.94	180.36	303.25	500	11.95	9.45	229.62
600	21.54	17.04	303.25	587.74	700	33.03	26.12	412.84
800	47.75	37.77	587.74	1621.55	900	101.40	80.21	915.52
1000	315.43	249.51	1621.55	3149.08	1050	549.70	434.81	2248.52
1100	893.82	707.01	3149.08	3596.89	1110	970.58	767.73	3364.78
1120	1062.33	840.30	3596.89	3874.09	1130	1183.97	936.52	3847.98
1131	1198.21	947.79	3874.09	3926.79	1132	1212.84	959.36	3900.37
1133	1227.80	971.19	3926.79	3979.95	1134	1243.03	983.24	3953.32
1135	1258.49	995.47	3979.95	4033.70	1136	1274.43	1008.08	4006.73
1137	1290.92	1021.12	4033.70	4088.08	1138	1307.90	1034.55	4060.81
1139	1325.42	1048.41	4088.08	4143.18	1140	1343.59	1062.78	4115.51
1141	1362.67	1077.87	4143.18	4199.20	1142	1382.77	1093.77	4171.09
1143	1403.76	1110.37	4199.20	4255.94	1144	1425.61	1127.66	4227.47
1145	1448.44	1145.72	4255.94	4313.48	1146	1472.36	1164.63	4284.60
1147	1497.47	1184.50	4313.48	4371.88	1148	1523.93	1205.43	4342.56
1149	1551.85	1227.52	4371.88	4431.19	1150	1581.33	1250.83	4401.43
1151	1612.45	1275.45	4431.19	4491.44	1152	1645.40	1301.51	4461.19
1153	1680.41	1329.20	4491.44	4552.88	1154	1717.76	1358.75	4521.99
1155	1757.96	1390.55	4552.88	4616.31	1156	1801.93	1425.33	4584.27
1157	1850.60	1463.83	4616.31	4682.82	1158	1904.89	1506.77	4649.09
1159	1966.24	1555.29	4682.82	4753.59	1160	2035.92	1610.41	4717.64
1161	2114.67	1672.70	4753.59	4829.31	1162	2203.65	1743.09	4790.74
1163	2304.85	1823.13	4829.31	4911.97	1164	2420.99	1915.00	4869.61
1165	2555.20	2021.16	4911.97	5003.33	1166	2710.07	2143.66	4956.57
1167	2886.60	2283.30	5003.33	5101.02	1168	3083.50	2439.05	5051.75
1169	3297.07	2607.98	5101.02	5198.85	1170	3522.81	2786.54	5150.29
1171	3756.97	2971.76	5198.85	5291.58	1172	3996.23	3161.02	5246.14
1173	4236.63	3351.17	5291.58	5373.91	1174	4472.71	3537.91	5334.44
1175	4637.60	3715.80	5373.91	5440.88	1176	4905.57	3880.31	5409.44
1177	5093.69	4029.11	5440.88	5492.52	1178	5260.96	4161.42	5468.38
1179	5410.35	4279.59	5492.52	5534.82	1180	5549.31	4389.51	5514.32
1181	5686.70	4498.18	5534.82	5574.56	1182	5829.95	4611.49	5554.78
1183	5983.48	4732.93	5574.56	5613.10	1184	6147.83	4862.94	5594.12
1185	6320.08	4999.19	5613.10	5647.05	1186	6494.44	5137.10	5630.95
1187	6663.45	5270.79	5647.05	5672.11	1188	6819.19	5393.98	5660.90
1189	6954.23	5500.80	5672.11	5686.07	1190	7062.47	5586.42	5680.49
1191	7139.85	5647.62	5686.07		1192	7183.50	5682.14	5689.00

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat
Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1193	7192.92	5689.60	5689.60	1194	7168.84	5670.55	5688.08
1195	7113.31	5626.63	5684.33	1196	7029.33	5560.20	5678.24
1197	6920.65	5474.23	5669.81	1198	6791.13	5371.78	5659.05
1199	6644.42	5255.74	5646.04	1200	6484.26	5129.05	5630.89
1201	6314.11	4994.46	5613.75	1202	6137.01	4854.38	5594.75
1203	5935.44	4710.75	5574.03	1204	5771.50	4565.25	5551.75
1205	5587.11	4419.40	5528.04	1206	5403.68	4274.31	5503.04
1207	5222.30	4130.84	5476.86	1208	5043.97	3989.78	5449.62
1209	4869.33	3831.64	5421.42	1210	4699.05	3716.95	5392.38
1211	4534.09	3586.47	5362.66	1212	4373.81	3459.68	5332.22

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1213	4218.67	3336.97	5301.19	1214	4069.66	3219.10	5269.75
1215	3925.23	3104.86	5237.76	1216	3787.29	2995.74	5205.54
1217	3653.89	2890.22	5172.88	1218	3576.66	2789.59	5140.10
1219	3403.87	2692.46	5106.98	1220	3287.05	2600.05	5073.84
1221	3174.33	2510.90	5040.44	1222	3067.21	2426.16	5007.08
1223	2963.92	2344.46	4973.54	1224	2865.74	2266.80	4940.08
1225	2771.40	2192.18	4906.56	1226	2681.45	2121.03	4873.11
1227	2595.42	2052.98	4839.71	1228	2512.93	1987.72	4806.34
1229	2434.54	1925.72	4773.16	1230	2359.38	1866.27	4740.04
1231	2287.45	1809.38	4707.04	1232	2218.98	1755.21	4674.25
1233	2153.35	1703.30	4641.58	1234	2090.58	1653.65	4609.07
1235	2030.58	1606.19	4576.75	1236	1973.25	1560.84	4544.63
1237	1918.38	1517.44	4512.70	1238	1865.82	1475.86	4480.97
1239	1815.49	1436.06	4449.44	1240	1767.27	1397.91	4418.11
1241	1721.04	1361.34	4387.00	1242	1676.71	1326.28	4356.09
1243	1634.21	1292.66	4325.41	1244	1593.53	1260.48	4294.98
1245	1554.51	1229.62	4264.78	1246	1517.07	1200.00	4234.81
1247	1481.12	1171.57	4205.07	1248	1446.60	1144.26	4175.56
1249	1413.49	1118.07	4146.31	1250	1381.75	1092.96	4117.31
1251	1351.51	1069.05	4088.63	1252	1322.86	1046.38	4060.30
1253	1295.22	1024.52	4032.18	1254	1268.53	1003.41	4004.27
1255	1243.20	983.37	3976.70	1256	1218.83	964.09	3949.37
1257	1195.32	945.50	3922.28	1258	1172.64	927.56	3895.40
1259	1150.74	910.24	3868.74	1260	1129.59	893.50	3842.31
1261	1109.68	877.76	3816.26	1262	1090.59	862.66	3790.48
1263	1072.06	848.00	3764.89	1264	1054.02	833.73	3739.48
1265	1036.43	819.82	3714.25	1266	1019.46	806.39	3689.25
1267	1003.67	793.90	3664.67	1268	988.14	781.62	3640.23
1269	972.91	769.57	3615.93	1270	958.00	757.78	3591.79
1271	943.44	746.26	3567.84	1272	929.96	735.60	3544.31
1273	916.76	725.16	3520.94	1274	903.87	714.96	3497.75
1275	891.33	705.04	3474.75	1276	879.14	695.40	3451.95
1277	867.35	686.07	3429.36	1278	855.94	677.05	3407.00
1279	844.94	668.35	3384.86	1280	834.34	659.97	3362.96
1281	824.14	651.89	3341.28	1282	814.31	644.12	3319.83
1283	804.83	636.62	3298.61	1284	795.69	629.39	3277.60
1285	786.85	622.40	3256.81	1286	778.30	615.64	3236.22
1287	770.00	609.07	3215.82	1288	761.92	602.68	3195.60
1289	754.03	596.44	3175.57	1290	746.30	590.32	3155.69

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)	TIME (min)	PRE-ADJ (cfs)	PRE-FAT (cfs)	FATTENED (cfs)
1291	738.70	584.31	3135.96	1292	731.22	578.40	3116.39
1293	723.87	572.58	3096.96	1294	716.63	566.85	3077.68
1295	709.48	561.20	3058.55	1296	702.42	555.61	3039.54
1297	695.42	550.08	3020.67	1298	688.53	544.63	3001.94
1299	681.77	539.28	2983.36	1300	675.08	533.99	2964.92
1310	611.23	483.49	2787.27	1320	559.29	442.40	2624.70
1330	515.84	408.03	2475.58	1340	478.43	378.44	2338.40
1350	443.62	350.90	2210.92	1360	408.92	323.45	2091.18
1370	373.74	295.63	1978.20	1380	338.46	267.73	1871.53
1390	305.08	241.32	1771.73	1400	270.54	214.00	1676.56
1420	211.51	167.31	1506.26	1440	167.78	132.71	1361.75

Ventura County Watershed Protection District
Modified Rational Method Hydrology Program (VCRat v2.6)

Job: 4492 Project: Adams County VC Rat

Hydrograph Printouts

HYDROGRAPH PRINTOUT AT: 117A

TOTAL AREA TO HYDROGRAPH: 5582 acres
HYDROGRAPH PEAK: 5690 cfs
TIME OF PEAK: 1193 minutes
HYDROGRAPH VOLUME: 2524.65 acre-ft

TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)	TIME (min)	FLOW (cfs)
0	0.00	100	54.47	200	122.10	300	146.63	400	180.36		
500	229.62	600	303.25	700	412.84	800	587.74	900	915.52		
1000	1621.55	1050	2248.52	1100	3149.08	1110	3364.78	1120	3596.89		
1130	3847.98	1131	3874.09	1132	3900.37	1133	3926.79	1134	3953.32		
1135	3979.95	1136	4006.73	1137	4033.70	1138	4060.81	1139	4088.08		
1140	4115.51	1141	4143.18	1142	4171.09	1143	4199.20	1144	4227.47		
1145	4255.94	1146	4284.60	1147	4313.48	1148	4342.56	1149	4371.88		
1150	4401.43	1151	4431.19	1152	4461.19	1153	4491.44	1154	4521.99		
1155	4552.88	1156	4584.27	1157	4616.31	1158	4649.09	1159	4682.82		
1160	4717.64	1161	4753.59	1162	4790.74	1163	4829.31	1164	4869.61		
1165	4911.97	1166	4956.57	1167	5003.33	1168	5051.75	1169	5101.02		
1170	5150.29	1171	5198.85	1172	5246.14	1173	5291.58	1174	5334.44		
1175	5373.91	1176	5409.44	1177	5440.88	1178	5468.38	1179	5492.52		
1180	5514.32	1181	5534.82	1182	5554.78	1183	5574.56	1184	5594.12		
1185	5613.10	1186	5630.95	1187	5647.05	1188	5660.90	1189	5672.11		
1190	5680.49	1191	5686.07	1192	5689.00	1193	5689.60	1194	5688.08		
1195	5684.33	1196	5678.24	1197	5669.81	1198	5659.05	1199	5646.04		
1200	5630.89	1201	5613.75	1202	5594.75	1203	5574.03	1204	5551.75		
1205	5528.04	1206	5503.04	1207	5476.86	1208	5449.62	1209	5421.42		
1210	5392.38	1211	5362.66	1212	5332.22	1213	5301.19	1214	5269.75		
1215	5237.76	1216	5205.54	1217	5172.88	1218	5140.10	1219	5106.98		
1220	5073.84	1221	5040.44	1222	5007.08	1223	4973.54	1224	4940.08		
1225	4906.56	1226	4873.11	1227	4839.71	1228	4806.34	1229	4773.16		
1230	4740.04	1231	4707.04	1232	4674.25	1233	4641.58	1234	4609.07		
1235	4576.75	1236	4544.63	1237	4512.70	1238	4480.97	1239	4449.44		
1240	4418.11	1241	4387.00	1242	4356.09	1243	4325.41	1244	4294.98		
1245	4264.78	1246	4234.81	1247	4205.07	1248	4175.56	1249	4146.31		
1250	4117.31	1251	4088.63	1252	4060.30	1253	4032.18	1254	4004.27		
1255	3976.70	1256	3949.37	1257	3922.28	1258	3895.40	1259	3868.74		
1260	3842.31	1261	3816.26	1262	3790.48	1263	3764.89	1264	3739.48		
1265	3714.25	1266	3689.25	1267	3664.67	1268	3640.23	1269	3615.93		
1270	3591.79	1271	3567.84	1272	3544.31	1273	3520.94	1274	3497.75		
1275	3451.75	1276	3428.28	1277	3405.36	1278	3382.61	1279	3360.86		
1280	3362.96	1281	3341.28	1282	3319.83	1283	3298.61	1284	3277.60		
1285	3256.81	1286	3236.22	1287	3215.82	1288	3195.60	1289	3175.57		
1290	3155.69	1291	3135.96	1292	3116.39	1293	3096.96	1294	3077.68		
1295	3058.55	1296	3039.54	1297	3020.67	1298	3001.94	1299	2983.36		
1300	2964.92	1310	2787.27	1320	2624.70	1330	2475.58	1340	2338.40		
1350	2210.92	1360	2091.18	1370	1978.20	1380	1871.53	1390	1771.73		

006 4492 045D 020000005405B98
006 4492 046CD010 A97101426005600

Model Lines

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006 4492 096F 030000003905B98101064005300
006 4492 097F 020000003306B98

E

C

D

E

F

Job: 4492 Project: Adams County VC Rat
 VCRat Model Input

006 4492 098F 020000005007B98100595009400

Page: 14

Model Lines

006	4492	099F	020000003606B98201714004600
006	4492	100F	020000004807B98
006	4492	101AF	010 A97201147001000
006	4492	102A	020000004207B98201111001800
006	4492	103A	020000006507B98
006	4492	104A	020000008207B98201606001800
006	4492	105A	030000006007B98
006	4492	106A	020000006909B98201408002100
006	4492	107A	030000005807B98
006	4492	108A	030000003105B98201467001500
006	4492	109A	030000004206B98202733001400
006	4492	110A	030000007309B98203056001300
006	4492	111A	030000005621B98
006	4492	112B	030000005012B98202779001700
006	4492	113B	040000004321B98
006	4492	114AB	010 A97201726001000
006	4492	115A	010 099A97205400001000
006	4492	116A	010 099A97
110			
111		0.79100	5.43
110			
006	4492	117A	010 099A97
999			

B

1

1 2

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA	AREA	SUBAREA	Q	TOTAL	Q	CONV	TYPE	CONV	LENGTH	CONV	SLOPE	CONV	SIZE	CONV	Z	CONTROL	SOIL	TC	RAIN	STORM DAY 4
LOCATION	AREA	Q	Q	Q	Q	Q	TYPE	TYPE	LENGTH	CONV	SLOPE	CONV	SIZE	CONV	Z	Q	NAME	TC	ZONE	PCT	
4492 1A	85.	278.	278.	85.	278.	278.	1	1	1635.	0.17400	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 2A	79.	254.	254.	164.	506.	506.	1	1	1750.	0.07500	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 3A	73.	332.	332.	237.	633.	633.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 4B	88.	303.	303.	88.	303.	303.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 5B	54.	212.	212.	142.	515.	515.	1	1	2148.	0.14200	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 6B	80.	244.	244.	222.	711.	711.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 7AB	222.	711.	711.	459.	1339.	1339.	1	1	2215.	0.05500	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 8A	94.	347.	347.	553.	1411.	1411.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 9C	79.	320.	320.	79.	320.	320.	1	1	2067.	0.40700	0.00	0.00	0.00	0.00	0.00	0.	0.	6	B98	0.00	
4492 10C	51.	188.	188.	130.	487.	487.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	20	B98	0.00	
4492 11C	73.	313.	313.	203.	771.	771.	1	1	1977.	0.17500	0.00	0.00	0.00	0.00	0.00	0.	0.	6	B98	0.00	
4492 12C	108.	491.	491.	311.	1088.	1088.	1	1	1913.	0.08800	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 13C	87.	236.	236.	398.	1226.	1226.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	12	B98	0.00	
4492 14AC	398.	1226.	1226.	951.	2637.	2637.	2	2	1101.	0.04000	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 15A	30.	129.	129.	981.	2603.	2603.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 16D	80.	295.	295.	80.	295.	295.	1	1	830.	0.05800	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 17D	12.	51.	51.	92.	324.	324.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 18AD	92.	324.	324.	1073.	2832.	2832.	2	2	2430.	0.03600	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 19A	66.	229.	229.	1139.	2833.	2833.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 20E	71.	323.	323.	71.	323.	323.	1	1	1615.	0.06100	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 21E	39.	177.	177.	110.	376.	376.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 22E	68.	309.	309.	178.	619.	619.	2	2	1242.	0.04700	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 23E	50.	227.	227.	228.	747.	747.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 24AE	228.	747.	747.	1367.	3265.	3265.	2	2	818.	0.02600	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 25A	18.	77.	77.	185.	3252.	3252.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 26A	56.	207.	207.	1441.	3331.	3331.	2	2	790.	0.02700	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 27A	79.	320.	320.	1520.	3378.	3378.	2	2	950.	0.02400	0.00	0.00	0.00	0.00	0.00	0.	0.	6	B98	0.00	
4492 28A	64.	195.	195.	1584.	3488.	3488.	2	2	1069.	0.02600	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 29A	46.	170.	170.	1630.	3516.	3516.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 30A	40.	182.	182.	1670.	3539.	3539.	2	2	1537.	0.02900	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 31A	53.	196.	196.	1723.	3557.	3557.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 32B	99.	389.	389.	99.	389.	389.	1	1	735.	0.11200	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 33B	47.	174.	174.	146.	555.	555.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 34B	36.	146.	146.	182.	687.	687.	1	1	1710.	0.05700	0.00	0.00	0.00	0.00	0.00	0.	0.	6	B98	0.00	
4492 35B	78.	251.	251.	260.	844.	844.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 36B	100.	321.	321.	360.	1142.	1142.	1	1	736.	0.05200	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 37B	13.	59.	59.	373.	1128.	1128.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 38B	71.	228.	228.	444.	1320.	1320.	2	2	1438.	0.03500	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 39B	49.	181.	181.	493.	1407.	1407.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 40C	87.	265.	265.	87.	265.	265.	1	1	2063.	0.16300	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 41C	76.	231.	231.	163.	460.	460.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	10	B98	0.00	
4492 42C	107.	314.	314.	270.	766.	766.	1	1	1338.	0.08100	0.00	0.00	0.00	0.00	0.00	0.	0.	12	B98	0.00	
4492 43C	23.	110.	110.	293.	780.	780.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 44D	80.	257.	257.	80.	257.	257.	1	1	1840.	0.08300	0.00	0.00	0.00	0.00	0.00	0.	0.	9	B98	0.00	
4492 45D	54.	246.	246.	134.	384.	384.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	5	B98	0.00	
4492 46CD	134.	384.	384.	427.	1165.	1165.	1	1	1426.	0.05600	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 47C	43.	159.	159.	1206.	1206.	1206.	0	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 48BC	470.	1206.	1206.	963.	2613.	2613.	2	2	768.	0.02900	0.00	0.00	0.00	0.00	0.00	0.	0.	0	A97	0.00	
4492 49B	50.	185.	185.	1013.	2655.	2655.	2	2	1183.	0.03500	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00	
4492 50B	79.	292.	292.	1092.	2726.	2726.	2	2	1240.	0.03400	0.00	0.00	0.00	0.00	0.00	0.	0.	7	B98	0.00 [†]	

VENTURA COUNTY FLOOD CONTROL DISTRICT
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LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	127.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	104.	325.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53E	25.	107.	1224.	2947.	2	853.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1238.	2937.	0	0.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 55B	14.	64.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 56F	87.	352.	117.	426.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 57F	30.	129.	1395.	3105.	1	1584.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 58BF	117.	426.	1395.	3105.	0	0.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492 59B	40.	182.	3118.	6637.	2	1530.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 60AB	1395.	3105.	3173.	6660.	2	1254.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 61A	55.	203.	3253.	6699.	2	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 62A	80.	324.	3294.	6700.	0	0.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492 63A	41.	176.	300.	300.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492 64B	66.	300.	115.	383.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492 65B	49.	383.	115.	383.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 66AB	115.	383.	3409.	6798.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 67A	24.	115.	3433.	6785.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 68A	57.	218.	3490.	6809.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492 69A	50.	171.	3540.	6802.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 70C	58.	264.	58.	264.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492 71C	75.	304.	133.	451.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 72C	74.	207.	207.	676.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 73C	54.	219.	261.	863.	2	814.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492 74C	20.	91.	281.	911.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 75C	43.	159.	324.	1044.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492 76C	89.	305.	413.	1243.	2	1110.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 77AC	413.	1243.	3953.	7221.	2	0.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492 78A	30.	104.	3983.	7218.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 79A	41.	186.	4024.	7234.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492 80A	83.	336.	4107.	7221.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 81D	51.	206.	51.	206.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492 82D	47.	190.	98.	337.	0	0.	0.00000	0.00	0.00	0.	20	0	A97	0.00
4492 83AD	98.	337.	4205.	7267.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492 84A	46.	209.	4251.	7275.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 85A	67.	247.	4318.	7300.	2	1211.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 86A	33.	134.	4351.	7276.	0	0.	0.00700	0.00	0.00	0.	20	6	B98	0.00
4492 87A	93.	423.	4444.	7302.	2	524.	0.01100	0.00	0.00	0.	20	5	B98	0.00
4492 88A	5.	20.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	40	5	B98	0.00
4492 89A	0.	0.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492 90E	39.	177.	39.	177.	1	1621.	0.05900	0.00	0.00	0.	20	5	B98	0.00
4492 91E	59.	218.	98.	305.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 92AE	98.	305.	4547.	7341.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00
4492 93A	22.	94.	4569.	7333.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 94A	61.	277.	4630.	7350.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 95A	75.	257.	4705.	7369.	2	1651.	0.01600	0.00	0.00	0.	20	8	B98	0.00
4492 96F	39.	167.	39.	167.	1	1064.	0.05300	0.00	0.00	0.	30	5	B98	0.00
4492 97F	33.	134.	72.	233.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 98F	50.	185.	122.	414.	1	595.	0.09400	0.00	0.00	0.	20	7	B98	0.00
4492 99F	36.	146.	158.	531.	2	1714.	0.04600	0.00	0.00	0.	20	6	B98	0.00
4492 100F	48.	177.	206.	633.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

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VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 101AF	206.	633.	4911.	7433.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 102A	42.	155.	4953.	7423.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 103A	65.	240.	5018.	7429.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

Header place holder	LOCATTION	SUBAREA	AREA	SUBAREA	Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492	104A	82.	303.	5100.	7450.	2	1606.	0.01800	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	105A	60.	209.	5160.	7439.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	7	B98	0.00
4492	106A	69.	222.	5229.	7455.	2	1408.	0.02100	0.00	0.00	0.00	0.00	0.	30	9	B98	0.00
4492	107A	58.	202.	5287.	7448.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	7	B98	0.00
4492	108A	31.	133.	5318.	7451.	2	1467.	0.01500	0.00	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	109A	42.	160.	5360.	7441.	2	2733.	0.01400	0.00	0.00	0.00	0.00	0.	30	6	B98	0.00
4492	110A	73.	221.	5433.	7402.	2	3056.	0.01300	0.00	0.00	0.00	0.00	0.	30	9	B98	0.00
4492	111A	56.	101.	5489.	7354.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	21	B98	0.00
4492	112B	50.	127.	50.	2779.	2	2779.	0.01700	0.00	0.00	0.00	0.00	0.	30	12	B98	0.00
4492	113B	43.	72.	93.	168.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	93.	168.	5582.	7377.	2	1726.	0.01000	0.00	0.00	0.00	0.00	0.	10	0	A97	0.00

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Header place holder	LOCATTION	SUBAREA	AREA	SUBAREA	Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492	1A	85.	238.	85.	238.	1	1635.	1	1750.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492	2A	79.	216.	164.	430.	1	1750.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492	3A	73.	284.	237.	525.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	4B	88.	260.	88.	260.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	10	9	B98	0.00
4492	5B	54.	182.	142.	442.	1	2148.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492	6B	80.	207.	222.	605.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	10	B98	0.00
4492	7AB	222.	605.	459.	1122.	1	2215.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492	8A	94.	296.	553.	1162.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	9C	79.	273.	79.	273.	1	2067.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492	10C	51.	160.	130.	413.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	11C	73.	269.	203.	654.	1	1977.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492	12C	108.	421.	311.	917.	1	1913.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492	13C	87.	200.	398.	1028.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	12	B98	0.00
4492	14AC	398.	1028.	951.	2190.	2	1101.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	15A	30.	110.	981.	2162.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	16D	80.	252.	80.	252.	1	830.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492	17D	12.	44.	92.	274.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	18AD	92.	274.	1073.	2358.	2	2430.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492	19A	66.	195.	1139.	2341.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	7	B98	0.00
4492	20E	71.	276.	71.	276.	1	1615.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492	21E	39.	152.	110.	314.	2	1242.	2	1242.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	22E	68.	265.	178.	522.	2	1242.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492	23E	50.	195.	228.	627.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	24AE	228.	627.	1367.	2661.	2	818.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492	25A	18.	66.	1385.	2666.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	26A	56.	176.	1441.	2715.	2	790.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492	27A	79.	273.	1520.	2758.	2	950.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492	28A	64.	166.	1584.	2851.	2	1069.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492	29A	46.	145.	1630.	2855.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	30A	40.	156.	1670.	2873.	2	1537.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492	31A	53.	167.	1723.	2885.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	32B	99.	334.	99.	334.	1	735.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492	33B	47.	148.	146.	475.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	34B	36.	125.	182.	585.	1	1710.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492	35B	78.	213.	260.	710.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	9	B98	0.00
4492	36B	100.	273.	360.	962.	1	736.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492	37B	13.	51.	373.	947.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	38B	71.	194.	444.	1102.	2	1438.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492	39B	49.	154.	493.	1170.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	40C	87.	225.	87.	225.	1	2063.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492	41C	76.	197.	163.	388.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	20	10	B98	0.00
4492	42C	107.	268.	270.	648.	1	1338.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492	43C	23.	95.	293.	657.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.	10	5	B98	0.00
4492	44D	80.	218.	80.	218.	1	1840.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00

4492 45D 54. 210. 134. 319. 0. 0. 0.0000 0.00 0.00 0.00 0.00 20 5 B98 0.00
 4492 46CD 134. 427. 972. 1 1426. 0.05600 0.00 0.00 0.00 0.00 20 0 A97 0.00
 4492 47C 43. 135. 999. 0 0.00000 0.00 0.00 0.00 0.00 20 7 B98 0.00
 4492 488C 470. 999. 2169. 2 768. 0.02900 0.00 0.00 0.00 20 0 A97 0.00
 4492 498 50. 157. 2191. 2 1183. 0.03500 0.00 0.00 0.00 20 7 B98 0.00
 4492 508 79. 249. 2245. 2 1240. 0.03400 0.00 0.00 0.00 20 7 B98 0.00^g

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place	holder	LOCATTION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	51B	28.	109.	1120.	2246.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	52E	79.	216.	79.	216.	0	0.	0.00000	0.00	0.00	0.00	0.	20	9	B98	0.00
4492	53E	25.	92.	104.	274.	0	0.	0.00000	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	548E	104.	274.	1224.	2430.	2	853.	0.04000	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	558	14.	55.	1238.	2424.	2	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	56F	87.	301.	87.	301.	0	0.	0.00000	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	57F	30.	110.	117.	361.	0	0.	0.00000	0.00	0.00	0.00	0.	20	0	A97	0.00
4492	58BF	117.	361.	1355.	2560.	1	1584.	0.06300	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	598	40.	156.	1395.	2551.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	60AB	1395.	2551.	3118.	5431.	2	1530.	0.02400	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	61A	55.	173.	3173.	5421.	0	0.	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	62A	80.	277.	3253.	5452.	2	1254.	0.01800	0.00	0.00	0.00	0.	10	6	B98	0.00
4492	63A	41.	151.	3294.	5453.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	64B	66.	257.	66.	257.	1	1577.	0.07600	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	65B	49.	170.	115.	320.	0	0.	0.00000	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	66AB	115.	320.	3409.	5525.	2	885.	0.02400	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	67A	24.	99.	3433.	5528.	0	0.	0.00000	0.00	0.00	0.00	0.	10	5	B98	0.00
4492	68A	57.	185.	3490.	5542.	2	1682.	0.01400	0.00	0.00	0.00	0.	30	6	B98	0.00
4492	69A	50.	146.	3540.	5527.	0	0.	0.00000	0.00	0.00	0.00	0.	20	8	B98	0.00
4492	70C	58.	226.	58.	226.	1	1208.	0.05000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	71C	75.	260.	133.	380.	2	1403.	0.04800	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	72C	74.	233.	207.	566.	0	0.	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	73C	54.	187.	261.	725.	2	814.	0.02700	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	74C	20.	78.	281.	765.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	75C	43.	135.	324.	765.	2	1738.	0.03400	0.00	0.00	0.00	0.	20	8	B98	0.00
4492	76C	89.	259.	413.	1033.	0	0.	0.00000	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	77AC	413.	1033.	3953.	5852.	2	1110.	0.01900	0.00	0.00	0.00	0.	30	7	B98	0.00
4492	78A	30.	89.	3983.	5842.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	79A	41.	160.	4024.	5852.	2	2463.	0.01700	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	80A	83.	287.	4107.	5834.	0	0.	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	81D	51.	176.	51.	176.	1	1093.	0.07600	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	82D	47.	163.	98.	282.	0	0.	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	83AD	98.	282.	4205.	5869.	2	977.	0.03300	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	84A	46.	179.	4251.	5866.	0	0.	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	85A	67.	211.	4318.	5881.	2	1211.	0.00700	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	86A	33.	114.	4351.	5866.	0	0.	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	87A	93.	362.	4444.	5884.	2	524.	0.01100	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	88A	5.	17.	4449.	5876.	0	0.	0.00000	0.00	0.00	0.00	0.	40	5	B98	0.00
4492	89A	0.	0.	4449.	5876.	0	0.	0.00000	0.00	0.00	0.00	0.	10	99	A97	0.00
4492	90E	39.	152.	39.	152.	1	1621.	0.05900	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	91E	59.	186.	98.	254.	0	0.	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	92AE	98.	254.	4547.	5907.	2	926.	0.01100	0.00	0.00	0.00	0.	10	0	A97	0.00
4492	93A	22.	81.	4569.	5895.	0	0.	0.00000	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	94A	61.	238.	4630.	5905.	0	0.	0.00000	0.00	0.00	0.00	0.	20	8	B98	0.00
4492	95A	75.	218.	4705.	5919.	2	1651.	0.01600	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	96F	39.	143.	39.	143.	1	1064.	0.05300	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	97F	33.	114.	72.	195.	0	0.	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	98F	50.	157.	122.	349.	1	595.	0.09400	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	99F	36.	125.	158.	447.	2	1714.	0.04600	0.00	0.00	0.00	0.	20	6	B98	0.00

4492 100F 48. 151. 206. 526. 0 0.00000 0.00 0.00 0.00 0.00 0.00 7 B98 0.00²

1114ARO.TXT
 VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	LOCATON	SUBAREA	SUBAREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492	101AF	206	526	4911	5960	2	1147	0.01000	0.00	0.00	0	0	A97	0.00
4492	102A	42	132	4953	5951	2	1111	0.01800	0.00	0.00	10	7	B98	0.00
4492	103A	65	204	5018	5950	0	0	0.00000	0.00	0.00	20	7	B98	0.00
4492	104A	82	258	5100	5962	2	1606	0.01800	0.00	0.00	20	7	B98	0.00
4492	105A	60	178	5160	5946	0	0	0.00000	0.00	0.00	30	9	B98	0.00
4492	106A	69	188	5229	5955	2	1408	0.02100	0.00	0.00	20	7	B98	0.00
4492	107A	58	172	5287	5946	0	0	0.00000	0.00	0.00	30	5	B98	0.00
4492	108A	31	114	5318	5946	2	1467	0.01500	0.00	0.00	30	6	B98	0.00
4492	109A	42	137	5360	5932	2	2733	0.01400	0.00	0.00	30	9	B98	0.00
4492	110A	73	187	5433	5894	2	3056	0.01300	0.00	0.00	30	21	B98	0.00
4492	111A	56	84	5489	5844	0	0	0.00000	0.00	0.00	30	12	B98	0.00
4492	112B	50	108	50	108	2	2779	0.01700	0.00	0.00	40	21	B98	0.00
4492	113B	43	60	93	138	0	0	0.00000	0.00	0.00	10	0	A97	0.00
4492	114AB	93	138	5582	5861	2	1726	0.01000	0.00	0.00	10	99	A97	0.00
4492	115A	0	0	5841	5841	2	5400	0.01000	0.00	0.00	10	99	A97	0.00
4492	116A	0	0	5882	5690	0	0	0.00000	0.00	0.00	10	99	A97	0.00

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MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
 HYDROGRAPH AT 4492 2A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0	0	0	0	0	0	0
500	4	100	6	300	3	400	3
1000	28	600	42	800	10	900	16
1130	100	1050	102	1110	72	1120	72
1135	114	1136	114	1138	108	1134	111
1140	128	1141	135	1139	121	1139	124
1145	163	1146	173	1143	144	1144	151
1150	274	1151	289	1148	196	1149	151
1155	497	1156	506	1153	432	1154	234
1160	414	1161	322	1158	466	1159	469
1165	157	1166	130	1163	231	1164	426
1170	80	1171	76	1168	98	1169	197
1175	59	1176	57	1173	64	1174	62
1180	47	1181	45	1178	48	1179	49
1185	40	1186	40	1183	41	1184	41
1190	38	1191	38	1188	39	1189	39
1195	38	1196	38	1193	38	1194	38
1200	38	1199	38	1198	38	1199	38
1205	34	1201	37	1203	35	1204	35
1210	29	1206	33	1208	31	1209	30
1215	26	1211	28	1214	27	1215	27
1220	26	1216	26	1218	26	1219	26
1225	27	1221	26	1222	26	1223	26
1230	26	1226	26	1228	26	1229	26
1235	26	1231	26	1233	26	1234	25
1240	25	1241	25	1238	25	1239	25
1245	25	1246	25	1243	25	1244	25
1250	25	1251	25	1248	25	1249	25
1255	25	1256	25	1252	25	1253	25
1260	25	1261	25	1257	25	1258	25
1265	22	1266	22	1263	23	1264	23
1270	19	1271	18	1268	20	1269	20
				1272	17	1273	17

TIME	Q	TIME	Q	114ARO.TXI	TIME	Q	TIME	Q	
1275	17.	1276	17.	1277	17.	1278	17.	1279	16.
1280	17.	1281	17.	1282	16.	1283	16.	1284	17.
1285	17.	1286	16.	1287	16.	1288	17.	1289	17.
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.
1300	17.	1310	11.	1320	7.	1330	6.	1340	6.
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 HYDROGRAPH AT 4492 ZA STORM DAY 4 REDUCTION FACTOR = 0.869

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	0.	400	0.
500	1.	600	2.	700	3.	800	4.	900	7.
1000	17.	1050	29.	1100	34.	1110	54.	1120	55.
1130	79.	1131	81.	1132	83.	1133	86.	1134	89.
1135	91.	1136	91.	1137	95.	1138	98.	1139	100.
1140	104.	1141	109.	1142	113.	1143	117.	1144	123.
1145	134.	1146	142.	1147	152.	1148	163.	1149	195.
1150	229.	1151	241.	1152	316.	1153	364.	1154	395.
1155	420.	1156	430.	1157	428.	1158	397.	1159	363.
1160	353.	1161	276.	1162	225.	1163	196.	1164	167.
1165	133.	1166	108.	1167	92.	1168	80.	1169	72.
1170	64.	1171	60.	1172	56.	1173	49.	1174	47.
1175	45.	1176	43.	1177	40.	1178	35.	1179	36.
1180	34.	1181	32.	1182	31.	1183	29.	1184	28.
1185	28.	1186	27.	1187	27.	1188	27.	1189	27.
1190	26.	1191	26.	1192	26.	1193	26.	1194	26.
1195	26.	1196	25.	1197	25.	1198	25.	1199	25.
1200	25.	1201	25.	1202	24.	1203	24.	1204	23.
1205	22.	1206	21.	1207	20.	1208	20.	1209	19.
1210	18.	1211	17.	1212	17.	1213	17.	1214	16.
1215	16.	1216	16.	1217	16.	1218	15.	1219	15.
1220	16.	1221	16.	1222	15.	1223	15.	1224	16.
1225	16.	1226	15.	1227	15.	1228	16.	1229	16.
1230	15.	1231	15.	1232	16.	1233	15.	1234	15.
1235	15.	1236	15.	1237	15.	1238	15.	1239	15.
1240	15.	1241	14.	1242	14.	1243	14.	1244	14.
1245	14.	1246	14.	1247	14.	1248	14.	1249	14.
1250	14.	1251	14.	1252	14.	1253	14.	1254	14.
1255	14.	1256	14.	1257	14.	1258	14.	1259	14.
1260	14.	1261	14.	1262	13.	1263	13.	1264	13.
1265	12.	1266	12.	1267	11.	1268	11.	1269	10.
1270	10.	1271	10.	1272	10.	1273	9.	1274	9.
1275	9.	1276	8.	1277	8.	1278	8.	1279	8.
1280	8.	1281	8.	1282	8.	1283	8.	1284	8.
1285	8.	1286	8.	1287	8.	1288	8.	1289	8.
1290	8.	1291	8.	1292	8.	1293	8.	1294	8.
1295	8.	1296	8.	1297	8.	1298	8.	1299	8.
1300	8.	1310	6.	1320	3.	1330	2.	1340	2.
1350	2.	1360	1.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.869

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	6.

1000	600	700	800	900	11.
1130	1050	1100	1110	1120	464.
1135	1131	1132	1133	1134	667.
1140	1136	1137	1138	1139	729.
1145	1141	1142	1143	1144	800.
1150	1146	1147	1148	1149	887.
1155	1151	1152	1153	1154	998.
1160	1052	1157	1158	1159	1150.
1165	1234.	1162	1163	1164	1405.
1170	1560.	1167	1168	1169	1890.
1175	2187.	1172	1173	1174	2709.
1180	3082.	1177	1178	1179	3607.
1185	3891.	1182	1183	1184	4245.
1190	4492.	1187	1188	1189	4923.
1195	5217.	1192	1193	1194	5558.
1200	5518.	1197	1198	1199	5648.
1205	4947.	1202	1203	1204	5205.
1210	4249.	1207	1208	1209	4530.
1215	3584.	1212	1213	1214	3841.
1220	3011.	1217	1218	1219	3117.
1225	2534.	1222	1223	1224	3228.
1230	2144.	1227	1228	1229	2713.
1235	1828.	1232	1229	1230	2291.
1240	1571.	1237	1233	1234	1947.
1245	1362.	1242	1238	1239	1667.
1250	1191.	1247	1243	1244	1441.
1255	1050.	1252	1248	1249	1256.
1260	933.	1257	1253	1254	1103.
1265	835.	1262	1258	1259	977.
1270	734.	1267	1263	1264	872.
1275	686.	1272	1268	1269	784.
1280	627.	1277	1273	1274	711.
1285	576.	1282	1278	1279	650.
1290	531.	1287	1283	1284	596.
1295	493.	1292	1288	1289	549.
1300	458.	1297	1293	1294	508.
1350	241.	1302	1298	1299	471.
1400	149.	1307	1300	1301	309.
		1310	1330	1340	272.
		1320	1380	1350	178.
		1370	1460	1500	85.
		1440			
		1425.			
		125.			
		161.			
		645.			
		703.			
		770.			
		850.			
		950.			
		1082.			
		1285.			
		1655.			
		2353.			
		1172.			
		3443.			
		4130.			
		4773.			
		5464.			
		5681.			
		5321.			
		4671.			
		3974.			
		3343.			
		2809.			
		2368.			
		2009.			
		1719.			
		1483.			
		1290.			
		1132.			
		1001.			
		892.			
		800.			
		725.			
		661.			
		606.			
		558.			
		515.			
		479.			
		351.			
		193.			
		104.			

APPENDIX G

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492 1A	85	278.	85	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79	254.	164.	506.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73	332.	237.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88	303.	88.	303.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54	212.	142.	515.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80	244.	222.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	459.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94	347.	553.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79	320.	320.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51	188.	130.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73	313.	203.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108	491.	311.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87	236.	398.	1226.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1226.	951.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30	129.	981.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80	295.	80.	295.	1	830.	0.05800	0.00	0.00	0.	7	7	B98	0.00
4492 17D	12	51.	92.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	1073.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00 ^g

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492 1A	85	259.	85	259.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79	236.	164.	470.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73	309.	237.	582.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88	282.	88.	282.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54	198.	142.	480.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80	226.	222.	661.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	661.	459.	1236.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94	323.	553.	1293.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79	298.	320.	298.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51	175.	130.	452.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73	292.	203.	716.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108	458.	311.	1008.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87	219.	398.	1133.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1133.	951.	2426.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30	120.	981.	2395.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80	275.	80.	275.	1	830.	0.05800	0.00	0.00	0.	7	7	B98	0.00
4492 17D	12	48.	92.	300.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	300.	1073.	2609.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	213.	1139.	2595.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	301.	71.	301.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39	165.	110.	347.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	288.	178.	573.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	212.	228.	690.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	690.	1367.	2979.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	72.	1385.	2975.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	192.	1441.	3040.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79	298.	1520.	3084.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	181.	1584.	3187.	2	1069.	0.02600	0.00	0.00	0.	10	7	B98	0.00
4492 29A	46.	158.	1630.	3204.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	170.	1670.	3225.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00

LOCATON	HEADER PLACE HOLDER	AREA	Q	18ARO.TXT	CONV	SLOPE	CONV	CONV	CONV	SOIL	TC	RAIN	PCT
4492	86A	33.	124.	6613.	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	87A	93.	394.	6634.	2	0.01100	0.00	0.00	0.00	40	5	B98	0.00
4492	88A	5.	19.	6621.	0	0.00000	0.00	0.00	0.00	40	5	B98	0.00
4492	89A	0.	0.	6621.	0	0.00000	0.00	0.00	0.00	10	99	A97	0.00
4492	90E	39.	165.	1621.	1	0.05900	0.00	0.00	0.00	20	5	B98	0.00
4492	91E	59.	203.	281.	0	0.00000	0.00	0.00	0.00	20	7	B98	0.00
4492	92AE	98.	4547.	6657.	2	0.01100	0.00	0.00	0.00	10	0	A97	0.00
4492	93A	22.	88.	6647.	0	0.00000	0.00	0.00	0.00	30	5	B98	0.00
4492	94A	61.	259.	6660.	0	0.00000	0.00	0.00	0.00	20	5	B98	0.00
4492	95A	75.	239.	6677.	2	0.01600	0.00	0.00	0.00	20	8	B98	0.00
4492	96F	39.	156.	156.	1	0.05300	0.00	0.00	0.00	30	5	B98	0.00
4492	97F	33.	124.	72.	0	0.00000	0.00	0.00	0.00	20	6	B98	0.00
4492	98F	50.	172.	384.	1	0.09400	0.00	0.00	0.00	20	7	B98	0.00
4492	99F	36.	136.	492.	2	0.04600	0.00	0.00	0.00	20	6	B98	0.00
4492	100F	48.	165.	582.	0	0.00000	0.00	0.00	0.00	20	7	B98	0.00 ^g

LOCATON	HEADER PLACE HOLDER	AREA	Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN	PCT
4492	101AF	206.	582.	6735.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	102A	42.	144.	6727.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	103A	65.	223.	6726.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	104A	82.	282.	6739.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	105A	60.	194.	6727.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	106A	69.	206.	6740.	2	1408.	0.02100	0.00	0.00	0.	20	9	B98	0.00
4492	107A	58.	187.	6732.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	108A	31.	124.	6734.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492	109A	42.	149.	6724.	2	2733.	0.01400	0.00	0.00	0.	6	6	B98	0.00
4492	110A	73.	205.	6685.	2	3056.	0.01300	0.00	0.00	0.	9	9	B98	0.00
4492	111A	56.	193.	6639.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492	112B	50.	118.	118.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492	113B	43.	66.	154.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	93.	154.	6659.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	115A	0.	0.	6639.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492	116A	0.	0.	6479.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

TIME	Q	HYDROGRAPH AT 4492	Header place holder	STORM DAY 4	REDUCTION FACTOR = 1.000	TIME	Q	TIME	Q	TIME
0	0.	0.	Q 0.	Q 0.	Q 3.	400	16.	3.	3.	400
500	4.	600	6.	700	10.	900	72.	7.	10.	900
1000	28.	1050	42.	1100	72.	1170	111.	48.	108.	1170
1130	100.	1131	102.	1132	108.	1134	111.	105.	121.	1134
1135	114.	1136	114.	1137	118.	1139	124.	118.	144.	1139
1140	128.	1141	135.	1142	139.	1143	151.	139.	196.	1144
1145	163.	1146	173.	1147	183.	1148	234.	183.	432.	1149
1150	274.	1151	289.	1152	376.	1154	469.	376.	466.	1154
1155	497.	1156	506.	1157	503.	1158	197.	503.	197.	1159
1160	414.	1161	322.	1162	265.	1163	90.	265.	62.	1164
1165	157.	1166	130.	1167	111.	1168	98.	111.	64.	1169
1170	80.	1171	76.	1172	71.	1173	64.	71.	48.	1174
1175	59.	1176	57.	1177	54.	1178	49.	54.	41.	1179
1180	47.	1181	45.	1182	43.	1183	39.	43.	38.	1184
1185	40.	1186	40.	1187	40.	1188	38.	40.	38.	1189
1190	38.	1191	38.	1192	38.	1193	38.	38.	38.	1194
1195	38.	1196	38.	1197	38.	1199	38.	38.	38.	1199
1200	38.	1201	37.	1202	37.	1203	35.	37.	35.	1204

TIME	Q	1206	1207	1208	1209	30.
1205	34.	1206	1207	1208	1209	30.
1210	29.	1211	1212	1213	1214	27.
1215	26.	1216	1217	1218	1219	26.
1220	26.	1221	1222	1223	1224	26.
1225	27.	1226	1227	1228	1229	27.
1230	26.	1231	1232	1233	1234	25.
1235	26.	1236	1237	1238	1239	25.
1240	25.	1241	1242	1243	1244	25.
1245	25.	1246	1247	1248	1249	25.
1250	25.	1251	1252	1253	1254	25.
1255	25.	1256	1257	1258	1259	25.
1260	25.	1261	1262	1263	1264	23.
1265	22.	1266	1267	1268	1269	20.
1270	19.	1271	1272	1273	1274	17.
1275	17.	1276	1277	1278	1279	16.
1280	17.	1281	1282	1283	1284	17.
1285	17.	1286	1287	1288	1289	17.
1290	16.	1291	1292	1293	1294	16.
1295	16.	1296	1297	1298	1299	16.
1300	17.	1310	1320	1330	1340	6.
1350	5.	1360	1370	1380	1390	0.
1400	0.	1420	1440	1460	1500	0.

18ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT place holder
Header AT 4492 2A

STORM DAY 4

REDUCTION FACTOR = 0.938

TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	300	1.
500	2.	600	4.	800	7.
1000	23.	1050	36.	1110	63.
1130	90.	1131	92.	1132	98.
1135	103.	1136	103.	1137	107.
1140	117.	1141	123.	1142	127.
1145	150.	1146	158.	1147	169.
1150	252.	1151	266.	1152	348.
1155	460.	1156	470.	1157	400.
1160	385.	1161	300.	1162	434.
1165	145.	1166	120.	1167	215.
1170	73.	1171	68.	1172	89.
1175	52.	1176	51.	1177	57.
1180	40.	1181	39.	1182	42.
1185	34.	1186	34.	1187	36.
1190	32.	1191	32.	1192	33.
1195	32.	1196	32.	1197	32.
1200	32.	1201	31.	1202	32.
1205	29.	1206	27.	1207	30.
1210	24.	1211	23.	1212	25.
1215	21.	1216	21.	1217	22.
1220	21.	1221	21.	1222	21.
1225	21.	1226	21.	1227	21.
1230	21.	1231	21.	1232	21.
1235	21.	1236	21.	1237	21.
1240	20.	1241	20.	1242	20.
1245	20.	1246	20.	1247	20.
1250	20.	1251	20.	1252	20.
1255	20.	1256	20.	1257	20.
1260	20.	1261	20.	1262	18.
1265	18.	1266	17.	1267	15.
1270	14.	1271	14.	1272	14.
1275	13.	1276	13.	1277	12.

1280	12.	1281	12.	1282	12.	1283	12.	1284	12.
1285	12.	1286	12.	1287	12.	1288	12.	1289	12.
1290	12.	1291	12.	1292	12.	1293	12.	1294	12.
1295	12.	1296	12.	1297	12.	1298	12.	1299	12.
1300	12.	1310	9.	1320	5.	1330	4.	1340	5.
1350	4.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

18ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.938

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	7.
500	8.	111	11.	700	18.	800	28.	900	51.
1000	171.	1050	347.	1100	662.	1110	735.	1120	820.
1130	929.	1131	942.	1132	955.	1133	968.	1134	981.
1135	995.	1136	1009.	1137	1024.	1138	1039.	1139	1054.
1140	1070.	1141	1087.	1142	1104.	1143	1122.	1144	1141.
1145	1161.	1146	1182.	1147	1204.	1148	1227.	1149	1251.
1150	1276.	1151	1303.	1152	1331.	1153	1361.	1154	1393.
1155	1427.	1156	1464.	1157	1504.	1158	1550.	1159	1600.
1160	1657.	1161	1722.	1162	1795.	1163	1878.	1164	1973.
1165	2082.	1166	2207.	1167	2351.	1168	2514.	1169	2694.
1170	2886.	1171	3089.	1172	3298.	1173	3512.	1174	3727.
1175	3937.	1176	4137.	1177	4322.	1178	4488.	1179	4637.
1180	4771.	1181	4898.	1182	5025.	1183	5157.	1184	5299.
1185	5451.	1186	5611.	1187	5773.	1188	5932.	1189	6081.
1190	6212.	1191	6321.	1192	6404.	1193	6456.	1194	6479.
1195	6471.	1196	6435.	1197	6373.	1198	6287.	1199	6182.
1200	6060.	1201	5924.	1202	5778.	1203	5624.	1204	5466.
1205	5304.	1206	5140.	1207	4977.	1208	4815.	1209	4655.
1210	4497.	1211	4343.	1212	4193.	1213	4047.	1214	3906.
1215	3769.	1216	3637.	1217	3510.	1218	3388.	1219	3270.
1220	3158.	1221	3049.	1222	2945.	1223	2845.	1224	2750.
1225	2658.	1226	2571.	1227	2487.	1228	2406.	1229	2329.
1230	2256.	1231	2185.	1232	2118.	1233	2053.	1234	1991.
1235	1932.	1236	1875.	1237	1821.	1238	1769.	1239	1719.
1240	1671.	1241	1625.	1242	1581.	1243	1539.	1244	1499.
1245	1460.	1246	1422.	1247	1387.	1248	1352.	1249	1319.
1250	1287.	1251	1257.	1252	1227.	1253	1199.	1254	1172.
1255	1146.	1256	1120.	1257	1096.	1258	1074.	1259	1052.
1260	1031.	1261	1010.	1262	991.	1263	972.	1264	954.
1265	936.	1266	919.	1267	902.	1268	886.	1269	871.
1270	856.	1271	842.	1272	828.	1273	815.	1274	801.
1275	788.	1276	776.	1277	765.	1278	753.	1279	742.
1280	731.	1281	720.	1282	710.	1283	700.	1284	690.
1285	681.	1286	672.	1287	663.	1288	654.	1289	646.
1290	638.	1291	630.	1292	622.	1293	615.	1294	608.
1295	600.	1296	593.	1297	587.	1298	580.	1299	573.
1300	567.	1310	506.	1320	453.	1330	407.	1340	371.
1350	340.	1360	312.	1370	286.	1380	261.	1390	237.
1400	215.	1420	174.	1440	139.	1460	110.	1500	74.

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	278.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	254.	506.	1	1750.	0.07500	0.00	0.00	0.	9	9	B98	0.00
4492 3A	73.	332.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	303.	303.	0	0.	0.00000	0.00	0.00	0.	9	7	B98	0.00
4492 5B	54.	212.	142.	1	2148.	0.14200	0.00	0.00	0.	10	9	B98	0.00
4492 6B	80.	244.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	347.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	320.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	188.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	313.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	236.	1226.	0	0.	0.00000	0.00	0.00	0.	12	0	B98	0.00
4492 14AC	398.	1226.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	129.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	295.	295.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	51.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	229.	2833.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	323.	323.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	177.	376.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	309.	619.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	227.	747.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	747.	3265.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	257.	257.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	234.	466.	1	1750.	0.07500	0.00	0.00	0.	9	9	B98	0.00
4492 3A	73.	307.	576.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	280.	280.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	196.	142.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	224.	655.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	459.	1224.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	320.	1279.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	295.	295.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	174.	448.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	290.	710.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	454.	998.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	217.	1122.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1122.	2401.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	119.	2370.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	272.	272.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	48.	297.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	297.	2582.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	211.	2568.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	298.	298.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	164.	343.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	286.	568.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	228.	683.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	683.	2945.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00

Header place	holder	83.	310.	4107.	6490.	0	0	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	80A	83.	310.	4107.	6490.	0	0	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	81D	51.	191.	51.	191.	1	1	0.07600	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	82D	47.	176.	98.	308.	2	2	0.03300	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	83AD	98.	308.	4205.	6529.	0	0	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	84A	46.	193.	4251.	6524.	2	2	0.00700	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	85A	67.	228.	4318.	6546.	0	0	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	86A	33.	123.	4351.	6533.	2	2	0.01100	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	87A	93.	391.	4444.	6554.	0	0	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	88A	5.	19.	4449.	6543.	0	0	0.00000	0.00	0.00	0.00	0.	20	99	A97	0.00
4492	89A	0.	0.	4449.	6543.	1	1	0.05900	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	90E	39.	164.	39.	164.	0	0	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	91E	59.	201.	98.	278.	2	2	0.11100	0.00	0.00	0.00	0.	20	0	A97	0.00
4492	92AE	98.	278.	4547.	6578.	0	0	0.00000	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	93A	22.	87.	4569.	6568.	0	0	0.00000	0.00	0.00	0.00	0.	20	5	B98	0.00
4492	94A	61.	256.	4630.	6581.	0	0	0.01600	0.00	0.00	0.00	0.	20	8	B98	0.00
4492	95A	75.	236.	4705.	6597.	2	2	0.05300	0.00	0.00	0.00	0.	30	5	B98	0.00
4492	96F	39.	155.	39.	155.	1	1	0.00000	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	97F	33.	123.	72.	213.	0	0	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	98F	50.	170.	122.	380.	1	1	0.09400	0.00	0.00	0.00	0.	20	6	B98	0.00
4492	99F	36.	135.	158.	487.	2	2	0.04600	0.00	0.00	0.00	0.	20	7	B98	0.00
4492	100F	48.	163.	206.	576.	0	0	0.00000	0.00	0.00	0.00	0.	20	7	B98	0.00

24ARO.TXT

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place	holder	SUBAREA	SUBAREA	TOTAL	TOTAL	CONV	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	TC	RAIN	STORM	DAY
LOCATTION	AREA	Q	Q	AREA	Q	TYPE	LNTH	SLOPE	SIZE	Z	Q	NAME			ZONE	PCT	
4492	101AF	206.	576.	4911.	6652.	2	1147.	0.01000	0.00	0.00	0.	10	0	0	A97	0.00	
4492	102A	42.	143.	4953.	6643.	2	1111.	0.01800	0.00	0.00	0.	20	7	7	B98	0.00	
4492	103A	65.	221.	5018.	6642.	0	0.	0.00000	0.00	0.00	0.	20	7	7	B98	0.00	
4492	104A	82.	279.	5100.	6655.	2	1606.	0.01800	0.00	0.00	0.	30	7	7	B98	0.00	
4492	105A	60.	192.	5160.	6645.	0	0.	0.00000	0.00	0.00	0.	20	9	9	B98	0.00	
4492	106A	69.	204.	5229.	6654.	2	1408.	0.02100	0.00	0.00	0.	30	7	7	B98	0.00	
4492	107A	58.	186.	5287.	6649.	0	0.	0.00000	0.00	0.00	0.	30	5	5	B98	0.00	
4492	108A	31.	123.	5318.	6650.	2	1467.	0.01500	0.00	0.00	0.	30	6	6	B98	0.00	
4492	109A	42.	148.	5360.	6639.	2	2733.	0.01400	0.00	0.00	0.	30	9	9	B98	0.00	
4492	110A	73.	203.	5433.	6601.	2	3056.	0.01300	0.00	0.00	0.	30	21	21	B98	0.00	
4492	111A	56.	92.	5489.	6354.	0	0.	0.00000	0.00	0.00	0.	30	12	12	B98	0.00	
4492	112B	50.	117.	50.	117.	2	2779.	0.01700	0.00	0.00	0.	40	21	21	A97	0.00	
4492	113B	43.	65.	93.	152.	0	0.	0.00000	0.00	0.00	0.	10	0	0	A97	0.00	
4492	114AB	93.	152.	5382.	6374.	2	1726.	0.01000	0.00	0.00	0.	10	99	99	A97	0.00	
4492	115A	0.	0.	5582.	6554.	2	5400.	0.01000	0.00	0.00	0.	10	99	99	A97	0.00	
4492	116A	0.	0.	5582.	6393.	0	0.	0.00000	0.00	0.00	0.	10	99	99	A97	0.00	

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
HYDROGRAPH AT Header place holder 4492 ZA
STORM DAY 4
REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	3.
500	4.	600	6.	700	7.	800	10.
1000	28.	1050	42.	1100	48.	1130	72.
1130	100.	1131	102.	1132	105.	1133	108.
1135	114.	1136	114.	1137	118.	1138	121.
1140	128.	1141	135.	1142	139.	1143	144.
1145	163.	1146	173.	1147	183.	1148	196.
1150	274.	1151	289.	1152	376.	1153	432.
1155	497.	1156	506.	1157	503.	1158	466.
1160	414.	1161	322.	1162	265.	1163	231.
1165	157.	1166	130.	1167	111.	1168	98.
1170	80.	1171	76.	1172	71.	1173	64.

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1175	59.
1180	47.
1185	40.
1190	38.
1195	38.
1200	38.
1205	34.
1210	29.
1215	26.
1220	26.
1225	27.
1230	26.
1235	26.
1240	25.
1245	25.
1250	25.
1255	25.
1260	25.
1265	22.
1270	19.
1275	17.
1280	17.
1285	17.
1290	16.
1295	16.
1300	17.
1350	5.
1400	0.
1176	57.
1181	45.
1186	40.
1191	38.
1196	38.
1201	37.
1206	33.
1211	28.
1216	26.
1221	26.
1226	26.
1231	26.
1236	26.
1241	25.
1246	25.
1251	25.
1256	25.
1261	25.
1266	22.
1271	18.
1276	17.
1281	17.
1286	16.
1291	16.
1296	16.
1310	11.
1360	2.
1420	0.
1177	54.
1182	43.
1187	40.
1192	38.
1197	38.
1202	37.
1207	32.
1212	28.
1217	27.
1222	26.
1227	26.
1232	26.
1237	25.
1242	25.
1247	25.
1252	25.
1257	25.
1262	24.
1267	21.
1272	19.
1277	17.
1282	16.
1287	16.
1292	17.
1297	17.
1320	7.
1370	1.
1440	0.
1178	48.
1183	41.
1188	39.
1193	38.
1198	38.
1203	35.
1208	31.
1213	27.
1218	26.
1223	26.
1228	26.
1233	26.
1238	25.
1243	25.
1248	25.
1253	25.
1258	25.
1263	23.
1268	20.
1273	18.
1278	17.
1283	16.
1288	17.
1293	16.
1298	16.
1330	6.
1380	0.
1460	0.
1179	48.
1184	41.
1189	39.
1194	38.
1199	38.
1204	35.
1209	30.
1214	27.
1219	26.
1224	26.
1229	27.
1234	25.
1239	25.
1244	25.
1249	25.
1254	25.
1259	25.
1264	23.
1269	20.
1274	17.
1279	16.
1284	17.
1289	17.
1294	16.
1299	16.
1340	6.
1390	0.
1500	0.

of

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
HYDROGRAPH AT 4492 2A

STORM DAY 4 REDUCTION FACTOR = 0.931

TIME	Q	TIME	Q	TIME	Q
0	0.	200	0.	300	1.
500	2.	700	5.	800	11.
1000	22.	1100	41.	1110	63.
1130	89.	1132	93.	1134	99.
1135	102.	1137	106.	1139	112.
1140	115.	1142	126.	1144	136.
1145	148.	1147	167.	1148	179.
1150	250.	1152	345.	1154	214.
1155	456.	1157	464.	1158	392.
1160	382.	1162	244.	1164	181.
1165	144.	1167	101.	1169	81.
1170	72.	1171	63.	1174	54.
1175	52.	1172	46.	1179	42.
1180	40.	1177	37.	1184	34.
1185	34.	1181	33.	1188	32.
1190	32.	1187	33.	1189	31.
1195	32.	1192	32.	1194	29.
1200	31.	1197	31.	1199	24.
1205	28.	1201	30.	1204	21.
1210	23.	1207	26.	1209	20.
1215	21.	1212	22.	1214	20.
1220	21.	1217	21.	1219	21.
1225	21.	1222	20.	1224	21.
1230	20.	1227	20.	1229	20.
1235	20.	1232	20.	1234	20.
1240	20.	1237	20.	1239	20.
1245	19.	1242	19.	1244	19.
		1247	19.	1249	19.

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1250	0	1251	19.	1252	19.	1253	19.	1254	19.	1255	19.	1256	19.
500	8.	1256	19.	1257	19.	1258	19.	1259	19.	1260	19.	1261	18.
1000	157.	1261	19.	1262	18.	1263	18.	1264	18.	1265	18.	1266	15.
1130	898.	1266	17.	1267	16.	1268	16.	1269	15.	1270	14.	1271	14.
1135	964.	1271	14.	1272	14.	1273	13.	1274	13.	1275	12.	1276	12.
1140	1037.	1276	12.	1277	12.	1278	12.	1279	11.	1280	12.	1281	11.
1145	1127.	1281	12.	1282	11.	1283	11.	1284	11.	1285	12.	1286	11.
1150	1239.	1286	11.	1287	11.	1288	12.	1289	12.	1290	11.	1291	11.
1155	1387.	1291	11.	1292	12.	1293	11.	1294	11.	1295	11.	1296	11.
1160	1612.	1296	12.	1297	12.	1298	11.	1299	11.	1300	12.	1310	5.
1165	2026.	1310	8.	1320	5.	1330	4.	1340	4.	1350	3.	1370	1.
1170	2811.	1360	2.	1370	1.	1380	0.	1390	0.	1400	0.	1420	0.
1175	3846.	1420	0.	1440	0.	1460	0.	1500	0.				

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.931

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1200	6006.	1201	5874.	1202	5732.	1203	5583.	1204	5427.	1205	5268.	1206	5107.
1205	5268.	1207	5107.	1208	4946.	1209	4786.	1210	4628.	1211	4472.	1212	4320.
1210	4472.	1211	4320.	1212	4171.	1213	4026.	1214	3886.	1215	3750.	1216	3619.
1215	3750.	1217	3619.	1218	3493.	1219	3371.	1220	3254.	1221	3142.	1222	3034.
1220	3142.	1222	3034.	1223	2930.	1224	2831.	1225	2736.	1226	2645.	1227	2557.
1225	2645.	1229	2557.	1230	2474.	1231	2394.	1232	2317.	1233	2244.	1234	2174.
1230	2244.	1232	2174.	1233	2106.	1234	2042.	1235	1980.	1236	1921.	1237	1864.
1235	1921.	1237	1864.	1238	1810.	1239	1758.	1240	1708.	1241	1660.	1242	1615.
1240	1660.	1242	1615.	1243	1571.	1244	1528.	1245	1488.	1246	1449.	1247	1412.
1245	1449.	1249	1412.	1250	1376.	1251	1341.	1252	1308.	1253	1277.	1254	1253.
1250	1277.	1252	1253.	1253	1217.	1254	1188.	1255	1161.	1256	1135.	1257	1110.
1255	1135.	1255	1110.	1256	1086.	1258	1062.	1259	1041.	1260	1019.	1261	999.
1260	1019.	1262	979.	1263	960.	1264	942.	1265	925.	1266	908.	1267	891.
1265	925.	1267	891.	1268	875.	1269	859.	1270	845.	1271	831.	1272	817.
1270	845.	1272	817.	1273	803.	1274	790.	1275	777.	1276	764.	1277	753.
1275	777.	1277	753.	1278	742.	1279	730.	1280	719.	1281	709.	1282	700.
1280	719.	1282	700.	1283	688.	1284	678.	1285	669.	1286	660.	1287	651.
1285	669.	1288	651.	1289	643.	1290	634.	1291	626.	1292	618.	1293	610.
1290	626.	1292	610.	1293	603.	1294	595.	1295	588.	1296	581.	1297	574.
1295	588.	1297	574.	1298	568.	1299	561.	1300	555.	1310	550.	1320	544.
1300	555.	1320	544.	1330	539.	1340	534.	1350	529.	1370	525.	1380	521.
1350	529.	1370	525.	1380	517.	1390	510.	1400	504.				
1400	504.	1440	494.	1460	488.	1500	482.						

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492 1A	85	278	85	278	1	1635	0.17400	0.00	0.00	0	10	10	B98	0.00
4492 2A	79	506	164	506	1	1750	0.07500	0.00	0.00	0	20	9	B98	0.00
4492 3A	73	332	237	633	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492 4B	88	303	332	303	0	0	0.00000	0.00	0.00	0	10	9	B98	0.00
4492 5B	54	212	142	515	1	2148	0.14200	0.00	0.00	0	10	7	B98	0.00
4492 6B	80	244	222	711	0	0	0.00000	0.00	0.00	0	20	10	B98	0.00
4492 7AB	222	711	459	1339	1	2215	0.05000	0.00	0.00	0	0	0	A97	0.00
4492 8A	94	347	553	1411	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492 9C	79	320	79	320	1	2067	0.40700	0.00	0.00	0	20	6	B98	0.00
4492 10C	51	188	130	487	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492 11C	73	313	203	771	1	1977	0.17500	0.00	0.00	0	10	6	B98	0.00
4492 12C	108	491	311	1088	1	1913	0.08800	0.00	0.00	0	20	5	B98	0.00
4492 13C	87	236	398	1226	0	0	0.00000	0.00	0.00	0	20	12	B98	0.00
4492 14AC	398	1226	951	2637	2	1101	0.04000	0.00	0.00	0	10	0	A97	0.00
4492 15A	30	129	981	2603	0	0	0.00000	0.00	0.00	0	30	5	B98	0.00
4492 16D	80	295	80	295	1	830	0.05800	0.00	0.00	0	20	7	B98	0.00
4492 17D	12	51	92	324	0	0	0.00000	0.00	0.00	0	30	5	B98	0.00
4492 18AD	92	324	1073	2832	2	2430	0.03600	0.00	0.00	0	10	0	A97	0.00
4492 19A	66	229	1139	2833	0	0	0.00000	0.00	0.00	0	30	7	B98	0.00
4492 20E	71	323	71	323	1	1615	0.06100	0.00	0.00	0	20	5	B98	0.00
4492 21E	39	177	110	376	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492 22E	68	309	178	619	2	1242	0.04700	0.00	0.00	0	20	5	B98	0.00
4492 23E	50	227	228	747	0	0	0.00000	0.00	0.00	0	10	0	A97	0.00
4492 24AE	228	747	1367	3265	2	818	0.02600	0.00	0.00	0	30	5	B98	0.00
4492 25A	18	77	1385	3252	0	0	0.00000	0.00	0.00	0	30	5	B98	0.00
4492 26A	56	207	1441	3331	2	790	0.02700	0.00	0.00	0	20	7	B98	0.00
4492 27A	79	320	1520	3378	2	950	0.02400	0.00	0.00	0	20	6	B98	0.00
4492 28A	64	195	1584	3488	2	1069	0.02600	0.00	0.00	0	10	7	B98	0.00
4492 29A	46	170	1630	3516	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492 30A	40	182	1670	3539	2	1537	0.02900	0.00	0.00	0	20	7	B98	0.00
4492 31A	53	196	1723	3557	0	0	0.00000	0.00	0.00	0	10	7	B98	0.00
4492 32B	99	389	99	389	1	735	0.11200	0.00	0.00	0	20	7	B98	0.00
4492 33B	47	174	146	555	0	0	0.00000	0.00	0.00	0	20	6	B98	0.00
4492 34B	36	146	182	687	1	1710	0.05700	0.00	0.00	0	20	9	B98	0.00
4492 35B	78	251	260	844	0	0	0.00000	0.00	0.00	0	20	9	B98	0.00
4492 36B	100	321	360	1142	1	736	0.05200	0.00	0.00	0	20	5	B98	0.00
4492 37B	13	59	373	1128	0	0	0.00000	0.00	0.00	0	20	9	B98	0.00
4492 38B	71	228	444	1320	2	1438	0.03500	0.00	0.00	0	20	7	B98	0.00
4492 39B	49	181	493	1407	0	0	0.00000	0.00	0.00	0	20	10	B98	0.00
4492 40C	87	265	87	265	1	2063	0.16300	0.00	0.00	0	20	10	B98	0.00
4492 41C	76	231	163	460	0	0	0.00000	0.00	0.00	0	20	10	B98	0.00
4492 42C	107	314	270	766	1	1338	0.08100	0.00	0.00	0	10	12	B98	0.00
4492 43C	23	110	293	780	0	0	0.00000	0.00	0.00	0	20	9	B98	0.00
4492 44D	80	257	80	257	1	1840	0.08300	0.00	0.00	0	20	5	B98	0.00
4492 45D	54	246	134	384	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492 46CD	134	384	427	1165	1	1426	0.05600	0.00	0.00	0	10	0	A97	0.00
4492 47C	43	159	470	1206	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492 48BC	470	963	963	2613	2	768	0.02900	0.00	0.00	0	10	0	A97	0.00
4492 49B	50	185	1013	2655	2	1183	0.03500	0.00	0.00	0	20	7	B98	0.00
4492 50B	79	292	1092	2726	2	1240	0.03400	0.00	0.00	0	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	28.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53E	25.	107.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00 ^g

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 VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	258.	85.	258.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	235.	164.	468.	1	1750.	0.07500	0.00	0.00	0.	20	5	B98	0.00
4492 3A	73.	308.	237.	579.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 4B	88.	281.	142.	281.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	197.	142.	478.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	225.	222.	658.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	658.	459.	1230.	1	2215.	0.05500	0.00	0.00	0.	10	10	A97	0.00
4492 8A	94.	322.	553.	1286.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	297.	79.	297.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	174.	130.	450.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	291.	203.	713.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	456.	311.	1003.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	218.	398.	1127.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1127.	951.	2413.	2	1101.	0.04000	0.00	0.00	0.	10	10	A97	0.00
4492 15A	30.	119.	981.	2382.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	274.	80.	274.	1	830.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	48.	92.	299.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	299.	1073.	2595.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	212.	1139.	2581.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	300.	71.	300.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	165.	110.	345.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	287.	178.	571.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	211.	228.	687.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 24AE	228.	687.	1367.	2962.	2	818.	0.02600	0.00	0.00	0.	30	5	B98	0.00
4492 25A	18.	72.	1385.	2958.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 26A	56.	192.	1441.	3022.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	297.	1520.	3066.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	180.	1584.	3169.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	157.	1630.	3185.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	169.	1670.	3205.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	181.	1723.	3217.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	361.	99.	361.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	161.	146.	515.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	135.	182.	636.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	232.	260.	777.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	297.	360.	1052.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	55.	373.	1037.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 38B	71.	211.	444.	1211.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492 39B	49.	168.	493.	1288.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 40C	87.	245.	87.	245.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492 41C	76.	214.	163.	474.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	291.	270.	706.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	103.	293.	718.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 44D	80.	238.	80.	238.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	228.	134.	352.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 46CD	134.	352.	477.	1068.	1	1426.	0.05600	0.00	0.00	0.	10	0	A97	0.00
4492 47C	43.	147.	470.	1102.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 48BC	470.	1102.	963.	2390.	2	768.	0.02900	0.00	0.00	0.	10	0	A97	0.00
4492 49B	50.	171.	1013.	2471.	2	1183.	0.03500	0.00	0.00	0.	20	7	B98	0.00

4492 50B 79 270 1092 2484 2 1240 0.03400 0.00 0.00 0.00 20 7 B98 0.00⁸

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder	SUBAREA	holder	SUBAREA	holder	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	51B	28	118	1120	2487	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	52E	79	235	79	235	1	782	0.06000	0.00	0.00	0.00	0	20	9	B98	0.00
4492	53E	25	100	104	299	0	0	0.00000	0.00	0.00	0.00	0	30	5	B98	0.00
4492	54BE	104	299	1224	2688	2	853	0.04000	0.00	0.00	0.00	0	10	0	A97	0.00
4492	55B	14	59	1238	2677	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	56F	87	327	87	327	2	1222	0.04800	0.00	0.00	0.00	0	20	6	B98	0.00
4492	57F	30	119	117	394	0	0	0.00000	0.00	0.00	0.00	0	30	5	B98	0.00
4492	58BF	117	394	1355	2837	1	1584	0.06300	0.00	0.00	0.00	0	10	0	A97	0.00
4492	59B	40	169	1395	2826	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	60AB	1395	2826	3118	6043	2	1530	0.02400	0.00	0.00	0.00	0	10	0	A97	0.00
4492	61A	55	188	3173	6040	0	0	0.00000	0.00	0.00	0.00	0	20	7	B98	0.00
4492	62A	80	300	3253	6074	2	1254	0.01800	0.00	0.00	0.00	0	20	6	B98	0.00
4492	63A	41	164	3294	6072	0	0	0.00000	0.00	0.00	0.00	0	10	6	B98	0.00
4492	64B	66	279	66	279	1	1577	0.07600	0.00	0.00	0.00	0	20	5	B98	0.00
4492	65B	49	184	115	351	0	0	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	66AB	115	351	3409	6162	2	885	0.02400	0.00	0.00	0.00	0	10	0	A97	0.00
4492	67A	24	107	3433	6154	0	0	0.00000	0.00	0.00	0.00	0	10	5	B98	0.00
4492	68A	57	201	3490	6171	2	1682	0.01400	0.00	0.00	0.00	0	30	6	B98	0.00
4492	69A	50	158	3540	6150	0	0	0.00000	0.00	0.00	0.00	0	20	8	B98	0.00
4492	70C	58	245	58	245	1	1208	0.05000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	71C	75	282	133	416	2	1403	0.04800	0.00	0.00	0.00	0	20	6	B98	0.00
4492	72C	74	253	207	621	0	814	0.00000	0.00	0.00	0.00	0	20	7	B98	0.00
4492	73C	54	203	261	794	2	1738	0.02700	0.00	0.00	0.00	0	20	6	B98	0.00
4492	74C	20	84	281	838	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	75C	43	147	324	961	2	1738	0.03400	0.00	0.00	0.00	0	20	7	B98	0.00
4492	76C	89	282	413	1138	0	0	0.00000	0.00	0.00	0.00	0	20	8	B98	0.00
4492	77AC	413	1138	3953	6534	2	1110	0.01900	0.00	0.00	0.00	0	10	0	A97	0.00
4492	78A	30	96	3983	6523	0	0	0.00000	0.00	0.00	0.00	0	30	7	B98	0.00
4492	79A	41	173	4024	6536	2	2463	0.01700	0.00	0.00	0.00	0	20	5	B98	0.00
4492	80A	83	312	4107	6528	0	0	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	81D	51	191	51	191	1	1093	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	82D	47	176	98	309	0	0	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	83AD	98	309	4205	6568	2	977	0.03300	0.00	0.00	0.00	0	10	0	A97	0.00
4492	84A	46	194	4251	6564	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	85A	67	229	4318	6585	2	1211	0.00700	0.00	0.00	0.00	0	20	7	B98	0.00
4492	86A	33	124	4351	6572	0	0	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	87A	93	393	4444	6593	2	524	0.01100	0.00	0.00	0.00	0	20	5	B98	0.00
4492	88A	5	19	4449	6581	0	0	0.00000	0.00	0.00	0.00	0	40	3	B98	0.00
4492	89A	0	0	4449	6581	0	0	0.00000	0.00	0.00	0.00	0	10	99	A97	0.00
4492	90E	39	165	98	165	1	1621	0.05900	0.00	0.00	0.00	0	20	5	B98	0.00
4492	91E	59	202	279	279	0	0	0.00000	0.00	0.00	0.00	0	20	7	B98	0.00
4492	92AE	98	279	4547	6617	2	926	0.01100	0.00	0.00	0.00	0	10	0	A97	0.00
4492	93A	22	88	4569	6606	0	0	0.00000	0.00	0.00	0.00	0	30	5	B98	0.00
4492	94A	61	257	4630	6620	0	0	0.00000	0.00	0.00	0.00	0	20	5	B98	0.00
4492	95A	75	238	4705	6636	2	1651	0.01600	0.00	0.00	0.00	0	20	8	B98	0.00
4492	96F	39	155	39	155	1	1064	0.05300	0.00	0.00	0.00	0	30	5	B98	0.00
4492	97F	33	124	72	214	0	0	0.00000	0.00	0.00	0.00	0	20	6	B98	0.00
4492	98F	50	171	122	382	1	595	0.09400	0.00	0.00	0.00	0	20	7	B98	0.00
4492	99F	36	135	158	489	2	1714	0.04600	0.00	0.00	0.00	0	20	6	B98	0.00
4492	100F	48	164	206	579	0	0	0.00000	0.00	0.00	0.00	0	20	7	B98	0.00 ⁸

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder 270 1092 2484 2 1240 0.03400 0.00 0.00 0.00 20 7 B98 0.00⁸

LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LNGLTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 101AF	206.	579.	4911.	6693.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 102A	42.	144.	4953.	6684.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 103A	65.	222.	5018.	6683.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 104A	82.	281.	5100.	6696.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492 105A	60.	193.	5160.	6685.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 106A	69.	205.	5229.	6695.	2	1408.	0.02100	0.00	0.00	0.	30	9	B98	0.00
4492 107A	58.	187.	5287.	6690.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 108A	31.	123.	5318.	6691.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492 109A	42.	148.	5360.	6681.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492 110A	73.	204.	5433.	6642.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00
4492 111A	56.	92.	5489.	6596.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492 112B	50.	117.	50.	117.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492 113B	43.	66.	93.	153.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492 114AB	93.	153.	5582.	6615.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492 115A	0.	0.	5582.	6595.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492 116A	0.	0.	5582.	6435.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

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HYDROGRAPH AT 4492 ZA Header place holder STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	0	0.	0	0.	0	0.
500	4.	100	6.	200	7.	300	3.
1000	28.	1050	42.	700	48.	800	10.
1130	100.	1131	102.	1100	105.	1110	72.
1135	114.	1136	114.	1132	118.	1133	108.
1140	128.	1141	135.	1137	139.	1138	121.
1145	163.	1146	173.	1142	144.	1143	144.
1150	274.	1151	289.	1147	183.	1148	196.
1155	497.	1156	506.	1152	376.	1153	432.
1160	414.	1161	322.	1157	503.	1158	466.
1165	157.	1166	130.	1162	265.	1159	426.
1170	80.	1171	76.	1167	111.	1164	197.
1175	59.	1176	57.	1172	71.	1169	90.
1180	47.	1181	45.	1177	54.	1174	62.
1185	40.	1186	40.	1182	43.	1179	49.
1190	38.	1191	38.	1187	40.	1184	41.
1195	38.	1196	38.	1192	38.	1189	39.
1200	38.	1201	37.	1197	38.	1194	38.
1205	34.	1206	37.	1202	37.	1199	38.
1210	29.	1211	33.	1207	32.	1204	35.
1215	26.	1216	28.	1212	28.	1209	30.
1220	26.	1221	26.	1217	27.	1214	27.
1225	27.	1226	26.	1222	26.	1219	26.
1230	26.	1231	26.	1227	26.	1224	26.
1235	26.	1236	26.	1232	26.	1229	27.
1240	25.	1241	25.	1237	26.	1234	25.
1245	25.	1246	25.	1242	25.	1239	25.
1250	25.	1251	25.	1247	25.	1244	25.
1255	25.	1256	25.	1252	25.	1249	25.
1260	25.	1261	25.	1257	25.	1254	25.
1265	22.	1266	22.	1262	24.	1259	25.
1270	19.	1271	18.	1267	21.	1264	23.
1275	17.	1276	17.	1272	19.	1269	20.
1280	17.	1281	17.	1277	17.	1274	17.
1285	17.	1286	16.	1282	16.	1279	16.
1290	16.	1291	16.	1287	16.	1284	17.
1295	16.	1296	16.	1292	17.	1289	17.
				1297	17.	1294	16.
				1298	16.	1299	16.

1300 17. 1310 11. 1320 7. 1330 6. 1340 6.
 1350 5. 1360 2. 1370 1. 1380 0. 1390 0.
 1400 0. 1420 0. 1440 0. 1460 0. 1500 0.

54ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 2A Header place holder
 STORM DAY 4 REDUCTION FACTOR = 0.934

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	1.	400	1.
500	2.	600	4.	700	5.	800	7.	900	11.
1000	22.	1050	35.	1100	41.	1110	63.	1120	63.
1130	89.	1131	92.	1132	94.	1133	97.	1134	100.
1135	102.	1136	103.	1137	107.	1138	109.	1139	112.
1140	116.	1141	122.	1142	126.	1143	131.	1144	137.
1145	149.	1146	158.	1147	168.	1148	179.	1149	215.
1150	251.	1151	265.	1152	346.	1153	398.	1154	432.
1155	458.	1156	468.	1157	466.	1158	432.	1159	394.
1160	384.	1161	299.	1162	245.	1163	214.	1164	182.
1165	145.	1166	119.	1167	101.	1168	89.	1169	81.
1170	72.	1171	68.	1172	64.	1173	56.	1174	55.
1175	52.	1176	50.	1177	47.	1178	41.	1179	42.
1180	40.	1181	38.	1182	37.	1183	35.	1184	35.
1185	34.	1186	33.	1187	33.	1188	33.	1189	33.
1190	32.	1191	32.	1192	32.	1193	32.	1194	32.
1195	32.	1196	32.	1197	32.	1198	32.	1199	32.
1200	32.	1201	31.	1202	30.	1203	29.	1204	29.
1205	28.	1206	27.	1207	26.	1208	25.	1209	24.
1210	24.	1211	23.	1212	22.	1213	22.	1214	21.
1215	21.	1216	21.	1217	21.	1218	21.	1219	21.
1220	21.	1221	21.	1222	21.	1223	20.	1224	21.
1225	21.	1226	21.	1227	21.	1228	21.	1229	21.
1230	21.	1231	21.	1232	21.	1233	21.	1234	20.
1235	21.	1236	21.	1237	20.	1238	20.	1239	20.
1240	20.	1241	20.	1242	20.	1243	20.	1244	20.
1245	19.	1246	19.	1247	19.	1248	19.	1249	19.
1250	19.	1251	19.	1252	19.	1253	19.	1254	19.
1255	19.	1256	19.	1257	19.	1258	19.	1259	19.
1260	19.	1261	19.	1262	18.	1263	18.	1264	18.
1265	17.	1266	17.	1267	16.	1268	15.	1269	15.
1270	14.	1271	14.	1272	14.	1273	13.	1274	13.
1275	12.	1276	13.	1277	12.	1278	12.	1279	12.
1280	12.	1281	12.	1282	12.	1283	12.	1284	12.
1285	12.	1286	12.	1287	12.	1288	12.	1289	12.
1290	12.	1291	12.	1292	12.	1293	12.	1294	12.
1295	12.	1296	12.	1297	12.	1298	12.	1299	11.
1300	12.	1310	8.	1320	5.	1330	4.	1340	4.
1350	4.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 116A Header place holder
 STORM DAY 4 REDUCTION FACTOR = 0.934

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	7.
500	8.	600	11.	700	17.	800	27.	900	49.
1000	163.	1050	336.	1100	648.	1110	720.	1120	805.
1130	913.	1131	926.	1132	939.	1133	952.	1134	965.
1135	979.	1136	993.	1137	1007.	1138	1022.	1139	1038.
1140	1053.	1141	1070.	1142	1087.	1143	1105.	1144	1124.

1145	1144.	1146	1164.	1147	54ARO.TXT	1148	1208.	1149	1232.
1150	1257.	1151	1284.	1152	1186.	1153	1341.	1154	1373.
1155	1407.	1156	1443.	1157	1312.	1158	1528.	1159	1578.
1160	1634.	1161	1698.	1162	1483.	1163	1852.	1164	1946.
1165	2053.	1166	2177.	1167	1771.	1168	2480.	1169	2657.
1170	2848.	1171	3048.	1172	3256.	1173	3468.	1174	3681.
1175	3890.	1176	4090.	1177	4274.	1178	4441.	1179	4589.
1180	4724.	1181	4850.	1182	4976.	1183	5107.	1184	5248.
1185	5399.	1186	5557.	1187	5719.	1188	5877.	1189	6026.
1190	6159.	1191	6269.	1192	6354.	1193	6409.	1194	6435.
1195	6430.	1196	6397.	1197	6337.	1198	6254.	1199	6152.
1200	6032.	1201	5899.	1202	5755.	1203	5603.	1204	5446.
1205	5285.	1206	5123.	1207	4961.	1208	4800.	1209	4641.
1210	4484.	1211	4331.	1212	4182.	1213	4037.	1214	3895.
1215	3759.	1216	3628.	1217	3501.	1218	3379.	1219	3262.
1220	3150.	1221	3041.	1222	2938.	1223	2838.	1224	2743.
1225	2651.	1226	2564.	1227	2480.	1228	2400.	1229	2323.
1230	2250.	1231	2179.	1232	2112.	1233	2047.	1234	1985.
1235	1926.	1236	1869.	1237	1815.	1238	1763.	1239	1713.
1240	1666.	1241	1620.	1242	1576.	1243	1534.	1244	1493.
1245	1454.	1246	1417.	1247	1381.	1248	1347.	1249	1313.
1250	1282.	1251	1251.	1252	1222.	1253	1193.	1254	1166.
1255	1140.	1256	1115.	1257	1091.	1258	1068.	1259	1046.
1260	1025.	1261	1004.	1262	985.	1263	966.	1264	948.
1265	930.	1266	913.	1267	896.	1268	880.	1269	865.
1270	850.	1271	836.	1272	822.	1273	809.	1274	796.
1275	783.	1276	770.	1277	759.	1278	747.	1279	736.
1280	725.	1281	714.	1282	704.	1283	694.	1284	684.
1285	675.	1286	666.	1287	657.	1288	648.	1289	640.
1290	632.	1291	624.	1292	616.	1293	609.	1294	601.
1295	594.	1296	587.	1297	580.	1298	574.	1299	567.
1300	560.	1310	500.	1320	447.	1330	401.	1340	364.
1350	334.	1360	306.	1370	280.	1380	256.	1390	233.
1400	211.	1420	171.	1440	137.	1460	109.	1500	73.

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA	AREA	SUBAREA Q	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	1A	85	278	278	1	1635	0.17400	0.00	0.00	0	10	10	B98	0.00
4492	2A	79	254	506	1	1750	0.07500	0.00	0.00	0	20	9	B98	0.00
4492	3A	73	332	633	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492	4B	88	303	303	0	0	0.00000	0.00	0.00	0	10	9	B98	0.00
4492	5B	54	212	515	1	2148	0.14200	0.00	0.00	0	10	7	B98	0.00
4492	6B	80	244	711	0	0	0.00000	0.00	0.00	0	20	10	B98	0.00
4492	7AB	222	711	1339	1	2215	0.05500	0.00	0.00	0	10	0	A97	0.00
4492	8A	94	347	1411	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	9C	79	320	320	1	2067	0.40700	0.00	0.00	0	20	6	B98	0.00
4492	10C	51	188	487	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	11C	73	313	771	1	1977	0.17500	0.00	0.00	0	10	6	B98	0.00
4492	12C	108	491	1088	1	1913	0.08800	0.00	0.00	0	20	5	B98	0.00
4492	13C	87	236	1226	0	0	0.00000	0.00	0.00	0	20	12	B98	0.00
4492	14AC	398	1276	2637	2	1101	0.04000	0.00	0.00	0	10	0	A97	0.00
4492	15A	30	129	2603	0	0	0.00000	0.00	0.00	0	30	5	B98	0.00
4492	16D	80	295	295	1	830	0.05800	0.00	0.00	0	20	7	B98	0.00
4492	17D	12	51	324	0	0	0.00000	0.00	0.00	0	30	5	B98	0.00
4492	18AD	92	324	2832	2	2430	0.03600	0.00	0.00	0	10	0	A97	0.00
4492	19A	66	229	2833	0	0	0.00000	0.00	0.00	0	30	7	B98	0.00
4492	20E	71	323	323	1	1615	0.06100	0.00	0.00	0	20	5	B98	0.00
4492	21E	39	177	376	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492	22E	68	309	619	2	1242	0.04700	0.00	0.00	0	20	5	B98	0.00
4492	23E	50	227	747	0	0	0.00000	0.00	0.00	0	10	0	A97	0.00
4492	24AE	228	747	3255	2	818	0.02600	0.00	0.00	0	30	5	B98	0.00
4492	25A	18	77	3252	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	26A	56	207	3331	2	790	0.02700	0.00	0.00	0	20	7	B98	0.00
4492	27A	79	320	3378	2	950	0.02400	0.00	0.00	0	20	6	B98	0.00
4492	28A	64	195	3488	2	1069	0.02600	0.00	0.00	0	10	7	B98	0.00
4492	29A	46	170	3516	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492	30A	40	182	3539	2	1537	0.02900	0.00	0.00	0	20	7	B98	0.00
4492	31A	53	196	3557	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	32B	99	389	389	1	735	0.11200	0.00	0.00	0	10	7	B98	0.00
4492	33B	47	174	555	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	34B	36	182	687	1	1710	0.05700	0.00	0.00	0	20	6	B98	0.00
4492	35B	78	251	844	0	0	0.00000	0.00	0.00	0	20	9	B98	0.00
4492	36B	100	321	1142	1	736	0.05200	0.00	0.00	0	20	9	B98	0.00
4492	37B	13	59	1128	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492	38B	71	228	1320	2	1438	0.03500	0.00	0.00	0	20	9	B98	0.00
4492	39B	49	181	1407	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	40C	87	265	265	1	2063	0.16300	0.00	0.00	0	10	10	B98	0.00
4492	41C	76	231	460	0	0	0.00000	0.00	0.00	0	20	10	B98	0.00
4492	42C	107	314	766	1	1338	0.08100	0.00	0.00	0	10	12	B98	0.00
4492	43C	23	293	780	0	0	0.00000	0.00	0.00	0	10	5	B98	0.00
4492	44D	80	257	257	1	1840	0.08300	0.00	0.00	0	20	9	B98	0.00
4492	45D	54	246	384	0	0	0.00000	0.00	0.00	0	20	5	B98	0.00
4492	46CD	134	427	1163	1	1426	0.05600	0.00	0.00	0	10	0	A97	0.00
4492	47C	43	159	1206	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	48BC	470	1206	2613	2	768	0.02900	0.00	0.00	0	10	0	A97	0.00
4492	49B	50	185	2655	2	1183	0.03500	0.00	0.00	0	20	7	B98	0.00
4492	50B	79	292	2726	2	1240	0.03400	0.00	0.00	0	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	28.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53E	25.	107.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 55B	14.	64.	1238.	2937.	2	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 56F	87.	352.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 57F	30.	129.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 58BF	117.	426.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00 ⁸

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	257.	85.	257.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	234.	164.	466.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73.	307.	237.	576.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	280.	88.	280.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	196.	142.	476.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	224.	222.	655.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	655.	459.	1224.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	320.	553.	1280.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	295.	79.	295.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	174.	130.	448.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	290.	203.	710.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	454.	311.	999.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	217.	398.	1122.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1122.	951.	2402.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	119.	981.	2371.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	273.	80.	273.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	48.	92.	298.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	298.	1073.	2583.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	211.	1139.	2569.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	299.	71.	299.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	164.	110.	344.	2	1242.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	286.	178.	568.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	210.	228.	684.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	684.	1367.	2947.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	71.	1385.	2943.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	191.	1441.	3007.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	295.	1520.	3050.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	179.	1584.	3153.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	157.	1630.	3168.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	168.	1670.	3189.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	181.	1723.	3200.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	360.	99.	360.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	160.	146.	513.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	135.	182.	633.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	296.	260.	773.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	296.	360.	1047.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	55.	373.	1033.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 38B	71.	210.	444.	1205.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492 39B	49.	167.	493.	1282.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 40C	87.	244.	87.	244.	1	2063.	0.16300	0.00	0.00	0.	20	7	B98	0.00
4492 41C	76.	213.	163.	422.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	290.	290.	703.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	102.	293.	715.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 44D	80.	237.	80.	237.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	227.	134.	350.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00

4492 46CD 134. 350. 427. 1063. 1 1426. 0.05600 0.00 0.00 0.00 10 0 A97 0.00
 4492 47C 43. 147. 470. 1097. 0 0.00000 0.00 0.00 0.00 20 7 B98 0.00
 4492 48BC 470. 1097. 963. 2379. 2 768. 0.02900 0.00 0.00 0.00 10 0 A97 0.00
 4492 49B 50. 170. 1013. 2410. 2 1183. 0.03500 0.00 0.00 0.00 20 7 B98 0.00
 4492 50B 79. 269. 1092. 2472. 2 1240. 0.03400 0.00 0.00 0.00 20 7 B98 0.00^F

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 VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492	51B	28.	118.	1120.	2475.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	52E	79.	234.	79.	234.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492	53E	25.	99.	104.	298.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	54BE	104.	298.	1224.	2675.	2	853.	0.04000	0.00	0.00	0.	10	5	A97	0.00
4492	55B	14.	59.	1238.	2665.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	56F	87.	325.	87.	325.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	57F	30.	119.	117.	392.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	58BF	117.	392.	1355.	2823.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492	59B	40.	168.	1395.	2812.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	60AB	1395.	2812.	3118.	6012.	2	1530.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	61A	55.	187.	3173.	6009.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	62A	80.	299.	3253.	6043.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492	63A	41.	163.	3294.	6040.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492	64B	66.	277.	66.	277.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492	65B	183.	649.	115.	350.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	66AB	115.	350.	3409.	6130.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	67A	24.	107.	3433.	6122.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492	68A	57.	201.	3490.	6138.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	69A	50.	158.	3540.	6119.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	70C	58.	244.	58.	244.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492	71C	75.	280.	133.	414.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	72C	74.	252.	207.	619.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	73C	54.	202.	261.	791.	2	814.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492	74C	20.	84.	281.	835.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	75C	43.	147.	324.	957.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492	76C	89.	281.	413.	957.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	77AC	413.	1133.	3953.	1133.	2	1110.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492	78A	30.	96.	3983.	6489.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	79A	41.	172.	4024.	6501.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492	80A	83.	310.	4107.	6494.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	81D	51.	191.	51.	191.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492	82D	47.	176.	98.	308.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	83AD	98.	308.	4205.	6533.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492	84A	46.	193.	4251.	6528.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	85A	67.	228.	4318.	6549.	2	1211.	0.00700	0.00	0.00	0.	20	7	B98	0.00
4492	86A	33.	123.	4351.	6536.	2	524.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	87A	93.	391.	4444.	6557.	0	0.	0.01100	0.00	0.00	0.	20	5	B98	0.00
4492	88A	5.	19.	4449.	6546.	0	0.	0.00000	0.00	0.00	0.	40	5	B98	0.00
4492	89A	0.	0.	4449.	6546.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492	90E	39.	164.	39.	164.	1	1621.	0.05900	0.00	0.00	0.	20	5	B98	0.00
4492	91E	59.	201.	98.	278.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	92AE	98.	278.	4547.	6581.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00
4492	93A	22.	87.	4569.	6571.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	94A	61.	256.	4630.	6584.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	95A	75.	237.	4705.	6601.	2	1651.	0.01600	0.00	0.00	0.	20	8	B98	0.00
4492	96F	39.	155.	39.	155.	1	1064.	0.03300	0.00	0.00	0.	30	5	B98	0.00
4492	97F	33.	123.	72.	213.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	98F	50.	170.	122.	380.	1	595.	0.09400	0.00	0.00	0.	20	7	B98	0.00
4492	99F	36.	135.	158.	487.	2	1714.	0.04600	0.00	0.00	0.	20	6	B98	0.00
4492	100F	48.	164.	206.	576.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00 ^F

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	LOCATTION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	DAY 4 PCT
4492	101AF	206	576	4911	6656	2	1147	0.01000	0.00	0.00	0	10	0	A97	0.00
4492	102A	42	143	4953	6646	2	1111	0.01800	0.00	0.00	0	20	7	B98	0.00
4492	103A	65	221	5018	6645	0	0	0.00000	0.00	0.00	0	20	7	B98	0.00
4492	104A	82	279	5100	6658	2	1606	0.01800	0.00	0.00	0	20	7	B98	0.00
4492	105A	60	192	5160	6648	0	0	0.00000	0.00	0.00	0	30	7	B98	0.00
4492	106A	69	204	5229	6658	2	1408	0.02100	0.00	0.00	0	20	9	B98	0.00
4492	107A	58	186	5287	6653	0	0	0.00000	0.00	0.00	0	30	7	B98	0.00
4492	108A	31	123	5318	6654	2	1467	0.01500	0.00	0.00	0	30	5	B98	0.00
4492	109A	42	148	5360	6643	2	2733	0.01400	0.00	0.00	0	30	6	B98	0.00
4492	110A	73	203	5433	6605	2	3056	0.01300	0.00	0.00	0	30	9	B98	0.00
4492	111A	56	92	5489	6558	0	0	0.00000	0.00	0.00	0	30	21	B98	0.00
4492	112B	50	117	50	117	2	2779	0.01700	0.00	0.00	0	30	12	B98	0.00
4492	113B	43	65	93	153	0	0	0.00000	0.00	0.00	0	40	21	B98	0.00
4492	114AB	93	153	5582	6577	2	1726	0.01000	0.00	0.00	0	10	0	A97	0.00
4492	115A	0	0	5582	6557	2	5400	0.01000	0.00	0.00	0	10	99	A97	0.00
4492	116A	0	0	5582	6396	0	0	0.00000	0.00	0.00	0	10	99	A97	0.00

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

REDUCTION FACTOR = 1.000

STORM DAY 4
HYDROGRAPH AT 4492

Header place holder	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
500	0	0	200	0	300	3	400	3	900	16
1000	4	6	700	7	800	10	900	10	1120	72
1130	28	42	1100	48	1110	72	1120	72	1134	111
1135	100	102	1132	105	1133	108	1134	108	1139	124
1140	114	114	1137	118	1138	121	1139	121	1144	151
1145	128	135	1142	139	1143	144	1144	144	1149	234
1150	163	173	1147	183	1148	196	1149	196	1154	469
1155	274	289	1152	376	1153	432	1154	432	1159	426
1160	497	506	1157	503	1158	466	1159	466	1164	197
1165	414	322	1162	265	1163	231	1164	231	1169	90
1170	157	130	1167	111	1168	98	1169	98	1174	62
1175	80	76	1172	71	1173	64	1174	64	1179	49
1180	59	57	1177	54	1178	48	1179	48	1184	41
1185	47	45	1182	43	1183	41	1184	41	1189	39
1190	40	40	1187	40	1188	39	1189	39	1194	38
1195	38	38	1192	38	1193	38	1194	38	1199	38
1200	38	38	1197	38	1198	38	1199	38	1204	35
1205	38	37	1202	37	1203	35	1204	35	1209	30
1210	34	33	1207	32	1208	31	1209	31	1214	27
1215	29	28	1212	28	1213	27	1214	27	1219	26
1220	26	26	1217	27	1218	26	1219	26	1224	26
1225	26	26	1222	26	1223	26	1224	26	1229	27
1230	26	26	1227	26	1228	26	1229	26	1234	25
1235	26	26	1232	26	1233	26	1234	26	1239	25
1240	25	25	1237	25	1238	25	1239	25	1244	25
1245	25	25	1242	25	1243	25	1244	25	1249	25
1250	25	25	1247	25	1248	25	1249	25	1254	25
1255	25	25	1252	25	1253	25	1254	25	1259	25
1260	25	25	1257	25	1258	25	1259	25	1264	23
1265	22	22	1262	24	1263	23	1264	23	1269	20
1270	19	18	1267	21	1268	20	1269	20	1274	17
1275	17	17	1272	19	1273	18	1274	18	1279	16

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
1280	0.	1281	17.	1282	16.	1283	16.	1284	17.	1285	17.
1285	2.	1286	16.	1287	16.	1288	16.	1289	17.	1290	16.
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.	1295	16.
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.	1300	6.
1300	17.	1310	11.	1320	7.	1330	6.	1340	0.	1350	0.
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.	1400	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.		

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MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 2A STORM DAY 4 REDUCTION FACTOR = 0.931

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	1.	400	1.	500	1.
500	2.	600	4.	700	5.	800	7.	900	11.	1000	63.
1000	22.	1050	35.	1100	41.	1110	63.	1120	100.	1130	100.
1130	89.	1131	91.	1132	93.	1133	96.	1134	100.	1135	112.
1135	102.	1136	102.	1137	106.	1138	109.	1139	112.	1140	136.
1140	115.	1141	121.	1142	126.	1143	130.	1144	136.	1145	214.
1145	148.	1146	157.	1147	167.	1148	179.	1149	214.	1150	430.
1150	250.	1151	263.	1152	345.	1153	396.	1154	430.	1155	393.
1155	456.	1156	466.	1157	464.	1158	430.	1159	393.	1160	181.
1160	382.	1161	298.	1162	244.	1163	213.	1164	181.	1165	81.
1165	144.	1166	118.	1167	101.	1168	89.	1169	54.	1170	54.
1170	72.	1171	67.	1172	63.	1173	56.	1174	42.	1175	42.
1175	52.	1176	50.	1177	46.	1178	41.	1179	35.	1180	34.
1180	40.	1181	38.	1182	37.	1183	35.	1184	34.	1185	32.
1185	34.	1186	33.	1187	33.	1188	33.	1189	32.	1190	31.
1190	32.	1191	32.	1192	32.	1193	32.	1194	31.	1195	29.
1195	32.	1196	31.	1197	31.	1198	31.	1199	29.	1200	24.
1200	31.	1201	31.	1202	30.	1203	29.	1204	24.	1205	24.
1205	28.	1206	27.	1207	26.	1208	25.	1209	24.	1210	21.
1210	23.	1211	22.	1212	22.	1213	22.	1214	21.	1215	20.
1215	21.	1216	21.	1217	21.	1218	20.	1219	20.	1220	21.
1220	21.	1221	21.	1222	20.	1223	20.	1224	21.	1225	21.
1225	21.	1226	20.	1227	20.	1228	20.	1229	21.	1230	20.
1230	20.	1231	20.	1232	21.	1233	20.	1234	20.	1235	20.
1235	20.	1236	20.	1237	20.	1238	20.	1239	20.	1240	19.
1240	20.	1241	19.	1242	19.	1243	19.	1244	19.	1245	19.
1245	19.	1246	19.	1247	19.	1248	19.	1249	19.	1250	19.
1250	19.	1251	19.	1252	19.	1253	19.	1254	19.	1255	18.
1255	19.	1256	19.	1257	18.	1258	18.	1259	18.	1260	15.
1260	19.	1261	19.	1262	18.	1263	18.	1264	15.	1265	15.
1265	17.	1266	16.	1267	16.	1268	15.	1269	15.	1270	12.
1270	14.	1271	13.	1272	14.	1273	13.	1274	12.	1275	12.
1275	12.	1276	12.	1277	12.	1278	12.	1279	12.	1280	12.
1280	12.	1281	12.	1282	11.	1283	11.	1284	12.	1285	12.
1285	12.	1286	11.	1287	11.	1288	12.	1289	12.	1290	11.
1290	11.	1291	11.	1292	12.	1293	11.	1294	11.	1295	11.
1295	11.	1296	12.	1297	12.	1298	11.	1299	11.	1300	4.
1300	12.	1310	8.	1320	5.	1330	4.	1340	0.	1350	0.
1350	3.	1360	2.	1370	1.	1380	0.	1390	0.	1400	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.		

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.931

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	6.	300	6.	400	7.	500	7.
500	8.	600	10.	700	16.	800	26.	900	47.		

1000	157.	1050	325.	1100	58ARO.TXT	635.	1110	708.	1120	791.
1130	900.	1131	912.	1132		925.	1133	938.	1134	951.
1135	965.	1136	979.	1137		993.	1138	1008.	1139	1023.
1140	1039.	1141	1055.	1142		1072.	1143	1090.	1144	1109.
1145	1128.	1146	1149.	1147		1170.	1148	1192.	1149	1216.
1150	1241.	1151	1267.	1152		1295.	1153	1324.	1154	1355.
1155	1389.	1156	1425.	1157		1465.	1158	1509.	1159	1558.
1160	1614.	1161	1678.	1162		1749.	1163	1830.	1164	1922.
1165	2028.	1166	2150.	1167		2291.	1168	2450.	1169	2626.
1170	2814.	1171	3013.	1172		3219.	1173	3430.	1174	3642.
1175	3850.	1176	4049.	1177		4233.	1178	4400.	1179	4548.
1180	4682.	1181	4809.	1182		4934.	1183	5064.	1184	5204.
1185	5353.	1186	5510.	1187		5671.	1188	5830.	1189	5979.
1190	6113.	1191	6225.	1192		6311.	1193	6368.	1194	6396.
1195	6394.	1196	6363.	1197		6306.	1198	6226.	1199	6125.
1200	6008.	1201	5876.	1202		5734.	1203	5584.	1204	5429.
1205	5269.	1206	5109.	1207		4947.	1208	4787.	1209	4629.
1210	4473.	1211	4321.	1212		4172.	1213	4027.	1214	3886.
1215	3751.	1216	3620.	1217		3493.	1218	3372.	1219	3255.
1220	3143.	1221	3035.	1222		2931.	1223	2832.	1224	2737.
1225	2646.	1226	2558.	1227		2475.	1228	2394.	1229	2318.
1230	2244.	1231	2174.	1232		2107.	1233	2042.	1234	1980.
1235	1921.	1236	1865.	1237		1810.	1238	1758.	1239	1709.
1240	1661.	1241	1615.	1242		1571.	1243	1529.	1244	1488.
1245	1450.	1246	1412.	1247		1376.	1248	1342.	1249	1309.
1250	1277.	1251	1246.	1252		1217.	1253	1189.	1254	1162.
1255	1135.	1256	1110.	1257		1086.	1258	1063.	1259	1041.
1260	1020.	1261	999.	1262		980.	1263	961.	1264	943.
1265	925.	1266	908.	1267		892.	1268	876.	1269	860.
1270	845.	1271	831.	1272		817.	1273	804.	1274	791.
1275	778.	1276	765.	1277		753.	1278	742.	1279	731.
1280	720.	1281	709.	1282		699.	1283	688.	1284	679.
1285	670.	1286	661.	1287		652.	1288	643.	1289	635.
1290	627.	1291	619.	1292		611.	1293	603.	1294	596.
1295	589.	1296	582.	1297		575.	1298	568.	1299	562.
1300	555.	1310	494.	1320		441.	1330	396.	1340	358.
1350	328.	1360	301.	1370		275.	1380	252.	1390	229.
1400	208.	1420	169.	1440		136.	1460	107.	1500	72.

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Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT
4492 1A	85.	278.	85.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	254.	164.	506.	1	1750.	0.07500	0.00	0.00	0.	0	9	B98	0.00
4492 3A	73.	332.	237.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	303.	303.	303.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492 5B	54.	212.	142.	515.	1	2148.	0.14200	0.00	0.00	0.	10	9	B98	0.00
4492 6B	80.	244.	222.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	459.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	347.	553.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	320.	79.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	188.	130.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	313.	203.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	311.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	12	B98	0.00
4492 13C	87.	236.	398.	1226.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 14AC	398.	1226.	951.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	129.	981.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	295.	80.	295.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	51.	92.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	1073.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	229.	1139.	2833.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	323.	71.	323.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	177.	110.	376.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	309.	178.	619.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	227.	228.	747.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	747.	1367.	3265.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	77.	1441.	3252.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	207.	1441.	3331.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	320.	1520.	3378.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	195.	1584.	3488.	2	1069.	0.02600	0.00	0.00	0.	10	7	B98	0.00
4492 29A	46.	170.	1630.	3516.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 30A	40.	182.	1670.	3539.	2	1537.	0.02900	0.00	0.00	0.	20	7	B98	0.00
4492 31A	53.	196.	1723.	3557.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 32B	99.	389.	99.	389.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	174.	146.	555.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	146.	182.	687.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	251.	260.	844.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	321.	360.	1142.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	59.	373.	1128.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 38B	71.	228.	444.	1320.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492 39B	49.	181.	493.	1407.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 40C	87.	265.	63.	265.	1	2063.	0.16300	0.00	0.00	0.	10	12	B98	0.00
4492 41C	76.	231.	163.	460.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	314.	270.	766.	1	1338.	0.08100	0.00	0.00	0.	20	10	B98	0.00
4492 43C	23.	293.	293.	780.	1	1840.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 44D	80.	257.	80.	257.	1	1840.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	246.	134.	384.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 46CD	134.	384.	427.	1165.	1	1426.	0.05600	0.00	0.00	0.	10	0	A97	0.00
4492 47C	43.	159.	470.	1206.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 48BC	470.	1206.	963.	2613.	2	768.	0.02900	0.00	0.00	0.	10	0	A97	0.00
4492 49B	50.	185.	1013.	2655.	2	1183.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 50B	79.	292.	1092.	2726.	2	1240.	0.03400	0.00	0.00	0.	20	7	B98	0.00 ^g

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LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	28.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53F	25.	107.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 55B	14.	64.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 56F	87.	352.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 57F	30.	129.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 58BF	117.	426.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492 59B	40.	182.	1395.	3105.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 60AB	1395.	3105.	3118.	6657.	2	1530.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 61A	55.	203.	3173.	6660.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 62A	80.	324.	3253.	6699.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492 63A	41.	176.	3294.	6700.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492 64B	66.	300.	66.	300.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492 65B	49.	198.	115.	383.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 66AB	115.	383.	3409.	6798.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00#

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Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	245.	85.	245.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	223.	164.	444.	1	1750.	0.07500	0.00	0.00	0.	20	19	B98	0.00
4492 3A	73.	293.	237.	545.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	267.	88.	267.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	188.	142.	455.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	214.	222.	624.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	624.	455.	1161.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	305.	553.	1207.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	282.	130.	426.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	166.	203.	676.	1	1977.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	277.	311.	948.	1	1913.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	433.	398.	1064.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	206.	398.	1064.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1064.	951.	2271.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	113.	981.	2242.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	260.	80.	260.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	43.	92.	283.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	283.	1073.	2444.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	201.	1139.	2429.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	285.	71.	285.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	156.	110.	325.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	273.	178.	540.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	201.	228.	649.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	649.	1367.	2770.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	68.	1385.	2772.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	182.	1441.	2826.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	282.	1520.	2869.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	171.	1584.	2966.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	149.	1630.	2975.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	161.	1670.	2994.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	172.	1723.	3004.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	344.	99.	344.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	153.	146.	489.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	128.	604.	604.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	220.	260.	734.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	282.	360.	995.	1	736.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	52.	373.	980.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00

4492	93A	22.	83.	4569.	6156.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	94A	61.	245.	4630.	6168.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	95A	75.	225.	4705.	6182.	2	1651.	0.01600	0.00	0.00	0.	20	8	B98	0.00
4492	96F	39.	147.	39.	147.	1	1064.	0.05300	0.00	0.00	0.	30	5	B98	0.00
4492	97F	33.	118.	72.	202.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	98F	50.	162.	122.	361.	1	595.	0.09400	0.00	0.00	0.	20	7	B98	0.00
4492	99F	36.	128.	158.	463.	2	1714.	0.04600	0.00	0.00	0.	20	6	B98	0.00
4492	100F	48.	156.	206.	544.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00

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Header place holder	LOCATION	SUBAREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LNGETH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY	PCT IMPV
4492	101AF	206.	4911.	6221.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00	0.00
4492	102A	42.	4953.	6216.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00	0.00
4492	103A	65.	5018.	6217.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00	0.00
4492	104A	82.	5100.	6229.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00	0.00
4492	105A	60.	5160.	6215.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00	0.00
4492	106A	69.	5229.	6223.	2	1408.	0.02100	0.00	0.00	0.	20	9	B98	0.00	0.00
4492	107A	58.	5287.	6213.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00	0.00
4492	108A	31.	5318.	6213.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00	0.00
4492	109A	42.	5360.	6203.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00	0.00
4492	110A	73.	5433.	6163.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00	0.00
4492	111A	56.	5489.	6118.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00	0.00
4492	112B	50.	50.	111.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00	0.00
4492	113B	43.	93.	144.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00	0.00
4492	114AB	93.	5582.	6116.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00	0.00
4492	115A	0.	5582.	6116.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00	0.00
4492	116A	0.	5582.	5957.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00	0.00

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Header place holder	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
500	100	0.	100	0.	200	0.	300	3.	400	3.	400	3.	400	3.	400	3.
1000	28.	4.	1050	42.	700	6.	1100	7.	800	10.	900	16.	1120	16.	1120	16.
1130	100.	100.	1131	102.	1132	102.	1133	105.	1134	108.	1139	111.	1144	111.	1144	111.
1135	114.	114.	1136	114.	1137	114.	1138	118.	1139	121.	1144	124.	1144	124.	1144	124.
1140	128.	128.	1141	135.	1142	135.	1143	139.	1144	144.	1144	151.	1144	151.	1144	151.
1145	163.	163.	1146	173.	1147	173.	1148	183.	1149	196.	1149	234.	1149	234.	1149	234.
1150	274.	274.	1151	289.	1152	289.	1153	376.	1153	432.	1154	469.	1154	469.	1154	469.
1155	497.	497.	1156	506.	1157	506.	1158	503.	1158	466.	1159	426.	1159	426.	1159	426.
1160	414.	414.	1161	322.	1162	322.	1163	265.	1163	231.	1164	197.	1164	197.	1164	197.
1165	157.	157.	1166	130.	1167	130.	1168	98.	1168	98.	1169	90.	1169	90.	1169	90.
1170	80.	80.	1171	76.	1172	76.	1173	64.	1174	64.	1174	62.	1174	62.	1174	62.
1175	59.	59.	1176	57.	1177	57.	1178	48.	1179	48.	1179	49.	1179	49.	1179	49.
1180	47.	47.	1181	45.	1182	45.	1184	41.	1184	41.	1184	41.	1184	41.	1184	41.
1185	40.	40.	1186	40.	1187	40.	1188	39.	1189	39.	1189	39.	1189	39.	1189	39.
1190	38.	38.	1191	38.	1192	38.	1193	38.	1193	38.	1194	38.	1194	38.	1194	38.
1195	38.	38.	1196	38.	1197	38.	1198	38.	1199	38.	1199	38.	1199	38.	1199	38.
1200	38.	38.	1201	37.	1202	37.	1203	35.	1204	35.	1204	35.	1204	35.	1204	35.
1205	34.	34.	1206	33.	1207	33.	1208	31.	1209	31.	1209	30.	1209	30.	1209	30.
1210	29.	29.	1211	28.	1212	28.	1213	27.	1214	27.	1214	27.	1214	27.	1214	27.
1215	26.	26.	1216	26.	1217	26.	1218	26.	1219	26.	1219	26.	1219	26.	1219	26.
1220	26.	26.	1221	26.	1222	26.	1223	26.	1224	26.	1224	26.	1224	26.	1224	26.
1225	27.	27.	1226	26.	1227	26.	1228	26.	1229	26.	1229	26.	1229	26.	1229	26.
1230	26.	26.	1231	26.	1232	26.	1233	26.	1234	26.	1234	26.	1234	26.	1234	26.
1235	26.	26.	1236	26.	1237	26.	1238	25.	1239	25.	1239	25.	1239	25.	1239	25.

HYDROGRAPH AT 4492 ZA

STORM DAY 4

REDUCTION FACTOR = 1.000

1240	25.	1241	25.	1242	66ARO.TXT	1243	25.	1244	25.
1245	25.	1246	25.	1247	25.	1248	25.	1249	25.
1250	25.	1251	25.	1252	25.	1253	25.	1254	25.
1255	25.	1256	25.	1257	25.	1258	25.	1259	25.
1260	25.	1261	25.	1262	24.	1263	23.	1264	23.
1265	22.	1266	22.	1267	21.	1268	20.	1269	20.
1270	19.	1271	18.	1272	19.	1273	18.	1274	17.
1275	17.	1276	17.	1277	17.	1278	17.	1279	16.
1280	17.	1281	17.	1282	16.	1283	16.	1284	17.
1285	17.	1286	16.	1287	16.	1288	17.	1289	17.
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.
1300	17.	1310	11.	1320	7.	1330	6.	1340	6.
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

HYDROGRAPH AT 4492 Header place holder
 492 2A
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 STORM DAY 4
 REDUCTION FACTOR = 0.893

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	0.	400	0.
500	1.	600	3.	700	4.	800	5.	900	8.
1000	19.	1050	31.	1100	37.	1110	57.	1120	58.
1130	83.	1131	85.	1132	87.	1133	90.	1134	93.
1135	95.	1136	95.	1137	99.	1138	102.	1139	105.
1140	108.	1141	114.	1142	118.	1143	122.	1144	128.
1145	140.	1146	148.	1147	158.	1148	169.	1149	202.
1150	237.	1151	249.	1152	327.	1153	376.	1154	408.
1155	433.	1156	444.	1157	442.	1158	410.	1159	374.
1160	364.	1161	284.	1162	232.	1163	202.	1164	173.
1165	137.	1166	112.	1167	95.	1168	83.	1169	76.
1170	67.	1171	63.	1172	59.	1173	52.	1174	50.
1175	47.	1176	46.	1177	43.	1178	37.	1179	38.
1180	36.	1181	34.	1182	33.	1183	31.	1184	31.
1185	30.	1186	30.	1187	29.	1188	29.	1189	29.
1190	28.	1191	28.	1192	28.	1193	28.	1194	28.
1195	28.	1196	28.	1197	28.	1198	28.	1199	28.
1200	28.	1201	27.	1202	27.	1203	26.	1204	25.
1205	24.	1206	23.	1207	22.	1208	22.	1209	21.
1210	20.	1211	19.	1212	19.	1213	19.	1214	18.
1215	18.	1216	18.	1217	18.	1218	17.	1219	17.
1220	18.	1221	18.	1222	17.	1223	17.	1224	18.
1225	18.	1226	17.	1227	17.	1228	18.	1229	18.
1230	17.	1231	17.	1232	18.	1233	17.	1234	17.
1235	17.	1236	17.	1237	17.	1238	17.	1239	16.
1240	16.	1241	16.	1242	16.	1243	16.	1244	16.
1245	16.	1246	16.	1247	16.	1248	16.	1249	16.
1250	16.	1251	16.	1252	16.	1253	16.	1254	16.
1255	16.	1256	16.	1257	16.	1258	16.	1259	16.
1260	16.	1261	16.	1262	15.	1263	15.	1264	15.
1265	14.	1266	13.	1267	13.	1268	12.	1269	12.
1270	11.	1271	11.	1272	11.	1273	10.	1274	10.
1275	9.	1276	10.	1277	9.	1278	9.	1279	9.
1280	9.	1281	9.	1282	9.	1283	9.	1284	9.
1285	9.	1286	9.	1287	9.	1288	9.	1289	9.
1290	9.	1291	9.	1292	9.	1293	9.	1294	9.
1295	9.	1296	9.	1297	9.	1298	9.	1299	9.
1300	9.	1310	7.	1320	4.	1330	3.	1340	3.
1350	3.	1360	1.	1370	1.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
HYDROGRAPH AT 4492 116A

STORM DAY 4
REDUCTION FACTOR = 0.893

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	6.	200	9.	300	6.	400	6.
500	6.	600	7.	700	9.	800	15.	900	28.
1000	89.	1050	208.	1100	485.	1110	554.	1120	634.
1130	736.	1131	747.	1132	759.	1133	771.	1134	784.
1135	797.	1136	809.	1137	823.	1138	837.	1139	851.
1140	865.	1141	880.	1142	895.	1143	912.	1144	929.
1145	946.	1146	965.	1147	984.	1148	1005.	1149	1026.
1150	1048.	1151	1072.	1152	1097.	1153	1123.	1154	1151.
1155	1181.	1156	1213.	1157	1248.	1158	1287.	1159	1330.
1160	1379.	1161	1434.	1162	1497.	1163	1567.	1164	1646.
1165	1737.	1166	1842.	1167	1964.	1168	2102.	1169	2256.
1170	2425.	1171	2603.	1172	2790.	1173	2983.	1174	3179.
1175	3375.	1176	3565.	1177	3746.	1178	3912.	1179	4061.
1180	4195.	1181	4318.	1182	4437.	1183	4557.	1184	4684.
1185	4819.	1186	4964.	1187	5116.	1188	5271.	1189	5422.
1190	5563.	1191	5689.	1192	5795.	1193	5876.	1194	5930.
1195	5957.	1196	5956.	1197	5929.	1198	5878.	1199	5805.
1200	5713.	1201	5606.	1202	5486.	1203	5356.	1204	5218.
1205	5075.	1206	4929.	1207	4780.	1208	4632.	1209	4484.
1210	4337.	1211	4193.	1212	4052.	1213	3914.	1214	3779.
1215	3649.	1216	3523.	1217	3401.	1218	3284.	1219	3170.
1220	3061.	1221	2956.	1222	2856.	1223	2759.	1224	2666.
1225	2576.	1226	2491.	1227	2408.	1228	2330.	1229	2254.
1230	2182.	1231	2113.	1232	2046.	1233	1983.	1234	1922.
1235	1863.	1236	1807.	1237	1753.	1238	1702.	1239	1652.
1240	1605.	1241	1559.	1242	1516.	1243	1474.	1244	1434.
1245	1395.	1246	1358.	1247	1322.	1248	1288.	1249	1255.
1250	1223.	1251	1193.	1252	1163.	1253	1135.	1254	1108.
1255	1082.	1256	1057.	1257	1032.	1258	1009.	1259	986.
1260	965.	1261	944.	1262	923.	1263	904.	1264	886.
1265	868.	1266	851.	1267	834.	1268	818.	1269	803.
1270	788.	1271	773.	1272	759.	1273	746.	1274	733.
1275	720.	1276	707.	1277	695.	1278	684.	1279	672.
1280	662.	1281	651.	1282	640.	1283	630.	1284	620.
1285	610.	1286	601.	1287	593.	1288	584.	1289	575.
1290	567.	1291	559.	1292	551.	1293	543.	1294	535.
1295	528.	1296	521.	1297	514.	1298	508.	1299	501.
1300	494.	1310	435.	1320	384.	1330	339.	1340	301.
1350	269.	1360	242.	1370	222.	1380	203.	1390	185.
1400	169.	1420	139.	1440	113.	1460	93.	1500	62.

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGHT	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY PCT
4492 1A	85.	278.	85.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	254.	164.	506.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73.	332.	237.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	303.	88.	303.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	212.	142.	515.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	244.	222.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	459.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	347.	553.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	320.	79.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	188.	130.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	313.	203.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	311.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	236.	398.	1226.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1226.	951.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	129.	981.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	295.	80.	295.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	51.	92.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	1073.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	229.	1139.	2833.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	323.	1139.	323.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	177.	110.	376.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	309.	178.	619.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	227.	228.	747.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	747.	1367.	3265.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	77.	1385.	3252.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	207.	1441.	3331.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	320.	1520.	3378.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	195.	1584.	3488.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	170.	1630.	3516.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	182.	1670.	3539.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	196.	1723.	3557.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	389.	99.	389.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	174.	146.	555.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	146.	182.	687.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	251.	260.	844.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	321.	360.	1142.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	59.	373.	1128.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 38B	71.	228.	444.	1320.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492 39B	49.	181.	493.	1407.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 40C	87.	265.	87.	265.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492 41C	76.	231.	163.	460.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	314.	270.	766.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	110.	293.	780.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 44D	80.	257.	80.	257.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	246.	134.	384.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 46CD	134.	384.	427.	1165.	1	1426.	0.05600	0.00	0.00	0.	10	0	A97	0.00
4492 47C	43.	159.	470.	1206.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 48BC	470.	1206.	963.	2613.	2	768.	0.02900	0.00	0.00	0.	10	0	A97	0.00
4492 49B	50.	185.	1013.	2655.	2	1183.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 50B	79.	292.	1092.	2726.	2	1240.	0.03400	0.00	0.00	0.	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

77ARO.TXT												
LOCATION	SUBAREA	SUBAREA	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	RAIN	PCT
	AREA	Q	AREA	TYPE	LNGLTH	SLOPE	SIZE	Z	Q	NAME	ZONE	IMPV
4492	51B	127.	1120.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	52E	254.	79.	1	782.	0.06000	0.00	0.00	0.	20	B98	0.00
4492	53E	107.	104.	2	0.	0.00000	0.00	0.00	0.	30	B98	0.00
4492	54BE	325.	1224.	2	853.	0.04000	0.00	0.00	0.	10	A97	0.00
4492	55B	64.	1238.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	56F	87.	87.	2	1222.	0.04800	0.00	0.00	0.	20	B98	0.00
4492	57F	129.	117.	0	0.	0.00000	0.00	0.00	0.	30	B98	0.00
4492	58BF	426.	1355.	1	1584.	0.06300	0.00	0.00	0.	10	A97	0.00
4492	59R	182.	1395.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	60AB	3105.	3118.	2	1530.	0.02400	0.00	0.00	0.	10	A97	0.00
4492	61A	203.	3173.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	62A	80.	3253.	2	1254.	0.01800	0.00	0.00	0.	6	B98	0.00
4492	63A	176.	3294.	0	0.	0.00000	0.00	0.00	0.	10	B98	0.00
4492	64B	300.	66.	1	1577.	0.07600	0.00	0.00	0.	20	B98	0.00
4492	65B	198.	115.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	66AB	383.	3409.	2	885.	0.02400	0.00	0.00	0.	10	A97	0.00
4492	67A	24.	3433.	0	0.	0.00000	0.00	0.00	0.	10	B98	0.00
4492	68A	57.	3490.	2	1682.	0.01400	0.00	0.00	0.	30	B98	0.00
4492	69A	50.	3540.	2	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	70C	58.	58.	1	1208.	0.05000	0.00	0.00	0.	20	B98	0.00
4492	71C	304.	133.	2	1403.	0.04800	0.00	0.00	0.	7	B98	0.00
4492	72C	74.	207.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	73C	54.	261.	2	814.	0.02700	0.00	0.00	0.	6	B98	0.00
4492	74C	20.	281.	0	0.	0.00000	0.00	0.00	0.	20	B98	0.00
4492	75C	43.	324.	2	1738.	0.03400	0.00	0.00	0.	7	B98	0.00
4492	76C	89.	413.	0	0.	0.00000	0.00	0.00	0.	8	B98	0.00
4492	77AC	413.	3953.	2	1110.	0.01900	0.00	0.00	0.	10	A97	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder												
LOCATION	SUBAREA	SUBAREA	TOTAL	CONV	CONV	CONV	CONV	CONV	CONTROL	SOIL	STORM	PCT
	AREA	Q	AREA	TYPE	LNGLTH	SLOPE	SIZE	Z	Q	NAME	RAIN	DAY 4
4492	1A	85.	85.	1	1635.	0.17400	0.00	0.00	0.	10	B98	0.00
4492	2A	79.	164.	0	1750.	0.07500	0.00	0.00	0.	9	B98	0.00
4492	3A	73.	237.	0	0.	0.00000	0.00	0.00	0.	5	B98	0.00
4492	4B	88.	265.	0	0.	0.00000	0.00	0.00	0.	9	B98	0.00
4492	5B	54.	142.	1	2148.	0.14200	0.00	0.00	0.	7	B98	0.00
4492	6B	80.	222.	0	0.	0.00000	0.00	0.00	0.	10	B98	0.00
4492	7AB	222.	459.	1	2215.	0.05500	0.00	0.00	0.	7	A97	0.00
4492	8A	94.	553.	0	0.	0.00000	0.00	0.00	0.	10	B98	0.00
4492	9C	79.	79.	1	2067.	0.40700	0.00	0.00	0.	6	B98	0.00
4492	10C	51.	130.	0	0.	0.00000	0.00	0.00	0.	7	B98	0.00
4492	11C	73.	203.	1	1977.	0.17500	0.00	0.00	0.	6	B98	0.00
4492	12C	108.	311.	1	1913.	0.08800	0.00	0.00	0.	5	B98	0.00
4492	13C	87.	398.	0	0.	0.00000	0.00	0.00	0.	12	B98	0.00
4492	14AC	398.	951.	2	1101.	0.04000	0.00	0.00	0.	5	A97	0.00
4492	15A	30.	981.	0	0.	0.00000	0.00	0.00	0.	30	B98	0.00
4492	16D	80.	80.	1	830.	0.05800	0.00	0.00	0.	7	B98	0.00
4492	17D	12.	92.	0	0.	0.00000	0.00	0.00	0.	5	B98	0.00
4492	18AD	92.	1073.	2	2430.	0.03600	0.00	0.00	0.	10	A97	0.00
4492	19A	66.	1139.	0	0.	0.00000	0.00	0.00	0.	30	B98	0.00
4492	20E	71.	283.	1	1615.	0.06100	0.00	0.00	0.	20	B98	0.00
4492	21E	39.	110.	0	0.	0.00000	0.00	0.00	0.	5	B98	0.00
4492	22E	68.	178.	2	1242.	0.04700	0.00	0.00	0.	5	B98	0.00
4492	23E	50.	228.	0	0.	0.00000	0.00	0.00	0.	5	B98	0.00
4492	24AE	228.	1367.	2	818.	0.02600	0.00	0.00	0.	10	A97	0.00
4492	25A	18.	1385.	0	0.	0.00000	0.00	0.00	0.	30	B98	0.00
4492	26A	56.	1441.	2	790.	0.02700	0.00	0.00	0.	7	B98	0.00

TIME	Q	1186	1187	1188	1189	39.	1189	39.
1185	40.	1186	1187	1188	1189	39.	1189	39.
1190	38.	1191	1192	1193	1194	38.	1194	38.
1195	38.	1196	1197	1198	1199	38.	1199	38.
1200	38.	1201	1202	1203	1204	35.	1204	35.
1205	34.	1206	1207	1208	1209	31.	1209	30.
1210	29.	1211	1212	1213	1214	27.	1214	27.
1215	26.	1216	1217	1218	1219	26.	1219	26.
1220	26.	1221	1222	1223	1224	26.	1224	26.
1225	27.	1226	1227	1228	1229	26.	1229	27.
1230	26.	1231	1232	1233	1234	26.	1234	25.
1235	26.	1236	1237	1238	1239	26.	1239	25.
1240	25.	1241	1242	1243	1244	25.	1244	25.
1245	25.	1246	1247	1248	1249	25.	1249	25.
1250	25.	1251	1252	1253	1254	25.	1254	25.
1255	25.	1256	1257	1258	1259	25.	1259	25.
1260	25.	1261	1262	1263	1264	23.	1264	23.
1265	22.	1266	1267	1268	1269	20.	1269	20.
1270	19.	1271	1272	1273	1274	18.	1274	17.
1275	17.	1276	1277	1278	1279	17.	1279	16.
1280	17.	1281	1282	1283	1284	16.	1284	17.
1285	17.	1286	1287	1288	1289	17.	1289	17.
1290	16.	1291	1292	1293	1294	16.	1294	16.
1295	16.	1296	1297	1298	1299	16.	1299	16.
1300	17.	1310	1320	1330	1340	6.	1340	6.
1350	5.	1360	1370	1380	1390	0.	1390	0.
1400	0.	1420	1440	1460	1500	0.	1500	0.

77ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
HYDROGRAPH AT 4492 2A

STORM DAY 4

REDUCTION FACTOR = 0.887

TIME	Q	TIME	Q	TIME	Q
0	0.	300	0.	400	0.
500	1.	800	5.	900	8.
1000	18.	1100	36.	1120	57.
1130	82.	1131	86.	1134	92.
1135	94.	1137	98.	1139	104.
1140	107.	1141	113.	1144	127.
1145	138.	1146	146.	1148	149.
1150	235.	1151	247.	1154	201.
1155	430.	1157	440.	1158	405.
1160	362.	1161	282.	1163	371.
1165	136.	1166	111.	1164	171.
1170	66.	1171	62.	1169	75.
1175	47.	1176	45.	1174	49.
1180	35.	1181	34.	1179	37.
1185	30.	1186	29.	1183	30.
1190	27.	1191	27.	1189	28.
1195	28.	1196	27.	1194	27.
1200	27.	1197	27.	1199	27.
1205	24.	1201	27.	1204	25.
1210	20.	1206	23.	1209	20.
1215	17.	1211	19.	1214	18.
1220	17.	1216	17.	1219	17.
1225	17.	1221	17.	1224	17.
1230	17.	1226	17.	1229	17.
1235	17.	1231	17.	1234	16.
1240	16.	1236	17.	1239	16.
1245	16.	1241	16.	1244	16.
1250	16.	1246	16.	1249	16.
1255	15.	1251	16.	1254	16.
		1257	15.	1259	15.

TIME	Q	TIME	Q	77ARO.TXT	TIME	Q	TIME	Q	
1260	0.	1261	15.	1262	15.	1263	14.	1264	14.
1265	14.	1266	13.	1267	12.	1268	12.	1269	11.
1270	11.	1271	10.	1272	10.	1273	10.	1274	10.
1275	9.	1276	9.	1277	9.	1278	9.	1279	9.
1280	9.	1281	9.	1282	9.	1283	8.	1284	9.
1285	9.	1286	8.	1287	8.	1288	9.	1289	9.
1290	8.	1291	8.	1292	9.	1293	8.	1294	8.
1295	8.	1296	9.	1297	9.	1298	8.	1299	8.
1300	8.	1310	7.	1320	4.	1330	3.	1340	3.
1350	2.	1360	1.	1370	0.	1380	0.	1390	0.
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.887

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
500	6.	100	6.	200	6.	300	6.	400	6.
1000	82.	600	7.	700	8.	800	14.	900	25.
1130	710.	1050	194.	1100	462.	1110	531.	1120	609.
1135	770.	1131	722.	1132	733.	1133	745.	1134	758.
1140	838.	1136	783.	1137	796.	1138	810.	1139	824.
1145	918.	1141	853.	1142	868.	1143	884.	1144	901.
1150	1018.	1146	936.	1147	955.	1148	975.	1149	996.
1155	1149.	1151	1041.	1152	1066.	1153	1092.	1154	1119.
1160	1343.	1156	1180.	1157	1215.	1158	1253.	1159	1295.
1165	1693.	1161	1397.	1162	1458.	1163	1526.	1164	1604.
1170	2365.	1166	1795.	1167	1914.	1168	2049.	1169	2200.
1175	3302.	1171	2541.	1172	2724.	1173	2914.	1174	3108.
1180	4119.	1176	3491.	1177	3670.	1178	3836.	1179	3985.
1185	4737.	1181	4242.	1182	4360.	1183	4479.	1184	4603.
1190	5477.	1186	4880.	1187	5030.	1188	5184.	1189	5335.
1195	5887.	1191	5605.	1192	5713.	1193	5797.	1194	5856.
1200	5665.	1196	5891.	1197	5868.	1198	5821.	1199	5753.
1205	5044.	1201	5562.	1202	5445.	1203	5319.	1204	5184.
1210	4316.	1206	4900.	1207	4754.	1208	4607.	1209	4460.
1215	3633.	1211	4173.	1212	4033.	1213	3896.	1214	3762.
1220	3049.	1216	3508.	1217	3387.	1218	3270.	1219	3157.
1225	2566.	1221	2944.	1222	2844.	1223	2747.	1224	2655.
1230	2172.	1226	2481.	1227	2399.	1228	2320.	1229	2245.
1235	1854.	1231	2104.	1232	2037.	1233	1974.	1234	1912.
1240	1596.	1236	1798.	1237	1745.	1238	1693.	1239	1644.
1245	1387.	1241	1551.	1242	1507.	1243	1465.	1244	1425.
1250	1215.	1246	1350.	1247	1314.	1248	1280.	1249	1247.
1255	1074.	1251	1185.	1252	1155.	1253	1127.	1254	1100.
1260	956.	1256	1048.	1257	1024.	1258	1001.	1259	978.
1265	859.	1261	935.	1262	915.	1263	896.	1264	877.
1270	779.	1266	842.	1267	826.	1268	809.	1269	794.
1275	711.	1271	765.	1272	751.	1273	737.	1274	724.
1280	653.	1276	699.	1277	687.	1278	675.	1279	664.
1285	602.	1281	642.	1282	632.	1283	621.	1284	611.
1290	558.	1286	592.	1287	583.	1288	575.	1289	566.
1295	519.	1291	550.	1292	542.	1293	534.	1294	526.
1300	485.	1296	512.	1297	505.	1298	498.	1299	492.
1350	282.	1310	426.	1320	376.	1330	331.	1340	294.
1400	164.	1360	235.	1370	215.	1380	196.	1390	179.
		1420	136.	1440	111.	1460	90.	1500	62.

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT
4492 1A	85	278.	85.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79	254.	164.	506.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73	332.	237.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88	303.	88.	303.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492 5B	54	212.	142.	515.	1	2148.	0.14200	0.00	0.00	0.	10	9	B98	0.00
4492 6B	80	244.	222.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	459.	1339.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94	347.	553.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79	320.	79.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51	188.	130.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73	313.	203.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	311.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87	236.	398.	1226.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1226.	951.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	129.	981.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	295.	80.	295.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12	51.	92.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	1073.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	229.	1139.	2833.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71	323.	71.	323.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	177.	110.	376.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	309.	178.	619.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	227.	228.	747.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 24AE	228.	747.	1367.	3265.	2	818.	0.02600	0.00	0.00	0.	30	5	B98	0.00
4492 25A	18.	77.	1385.	3252.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 26A	56.	207.	1441.	3331.	2	790.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492 27A	79.	320.	1520.	3378.	2	950.	0.02400	0.00	0.00	0.	20	10	B98	0.00
4492 28A	64.	195.	1584.	3488.	2	1069.	0.02600	0.00	0.00	0.	20	7	B98	0.00
4492 29A	46.	170.	1630.	3516.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 30A	40.	182.	1670.	3539.	2	1537.	0.02900	0.00	0.00	0.	20	7	B98	0.00
4492 31A	53.	196.	1723.	3557.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492 32B	99.	389.	99.	389.	1	735.	0.11200	0.00	0.00	0.	20	7	B98	0.00
4492 33B	47.	174.	146.	555.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 34B	36.	146.	182.	687.	1	1710.	0.05700	0.00	0.00	0.	20	9	B98	0.00
4492 35B	78.	251.	260.	844.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	321.	360.	1142.	1	736.	0.05200	0.00	0.00	0.	20	5	B98	0.00
4492 37B	13.	59.	373.	1128.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 38B	71.	228.	444.	1320.	2	1438.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 39B	49.	181.	493.	1407.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 40C	87.	265.	87.	265.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492 41C	76.	231.	163.	460.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	314.	270.	766.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	110.	293.	780.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 44D	80.	257.	80.	257.	1	1840.	0.08300	0.00	0.00	0.	20	5	B98	0.00
4492 45D	54.	246.	134.	384.	0	0.	0.00000	0.00	0.00	0.	20	0	A97	0.00
4492 46CD	134.	384.	427.	1165.	1	1426.	0.05600	0.00	0.00	0.	20	7	B98	0.00
4492 47C	43.	159.	470.	1206.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 48BC	470.	1206.	963.	2613.	2	768.	0.02900	0.00	0.00	0.	20	7	B98	0.00
4492 49B	50.	185.	1013.	2655.	2	1183.	0.03500	0.00	0.00	0.	10	0	A97	0.00
4492 50B	79.	292.	1092.	2726.	2	1240.	0.03400	0.00	0.00	0.	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

LOCATION	SUBAREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492	51B	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	52E	79.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492	53E	25.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	54BE	104.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	55B	14.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	56F	87.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	57F	30.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	58BF	117.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492	59B	40.	1395.	3105.	2	1530.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	60AB	1395.	3118.	6657.	0	0.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	61A	55.	3173.	6660.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	62A	80.	3253.	6699.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492	63A	41.	3294.	6700.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492	64B	66.	66.	300.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492	65B	49.	115.	383.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	66AB	115.	3409.	6798.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492	67A	24.	3433.	6785.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492	68A	57.	3490.	6809.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	69A	50.	3540.	6802.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	70C	58.	264.	264.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492	71C	75.	133.	451.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492	72C	74.	207.	676.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	73C	54.	261.	863.	2	814.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492	74C	20.	281.	911.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	75C	43.	324.	1044.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492	76C	89.	413.	1243.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492	77AC	413.	3953.	7221.	2	1110.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492	78A	30.	3983.	7218.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	79A	41.	4024.	7234.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492	80A	83.	4107.	7221.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	81D	51.	51.	206.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492	82D	47.	98.	337.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492	83AD	98.	4205.	7267.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00

83ARO.TXT

VENTURA COUNTY FLOOD CONTROL DISTRICT
MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492	1A	85.	85.	243.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492	2A	79.	164.	438.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492	3A	73.	237.	538.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492	4B	88.	88.	265.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492	5B	54.	142.	450.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492	6B	80.	222.	617.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492	7AB	222.	459.	1147.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492	8A	94.	553.	1191.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	9C	79.	79.	279.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492	10C	51.	130.	422.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	11C	73.	203.	668.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492	12C	108.	311.	937.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492	13C	87.	398.	1051.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492	14AC	398.	951.	2242.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492	15A	30.	981.	2212.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	16D	80.	257.	257.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492	17D	12.	92.	279.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492	18AD	92.	1073.	2413.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492	19A	66.	1139.	2397.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	20E	71.	71.	282.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00

Header place holder	83ARO.TXT	0	1058.	413.	264.	89.	76C	4492
77AC	0	0	1058.	413.	264.	89.	76C	4492
78A	2	2	6009.	3953.	1058.	413.	77AC	4492
79A	2	2	6000.	3983.	91.	30.	78A	4492
80A	2	2	6010.	4024.	163.	41.	79A	4492
81D	1	1	5995.	4107.	293.	83.	80A	4492
82D	2	2	180.	51.	180.	51.	81D	4492
83AD	2	2	289.	98.	166.	47.	82D	4492
84A	2	2	6031.	4205.	289.	98.	83AD	4492
85A	2	2	6026.	4251.	183.	46.	84A	4492
86A	2	2	6042.	4318.	215.	67.	85A	4492
87A	2	2	6024.	4351.	116.	33.	86A	4492
88A	2	2	6043.	4444.	369.	93.	87A	4492
89A	0	0	6040.	4449.	18.	5.	88A	4492
90E	1	1	6040.	4449.	0.	0.	89A	4492
91E	2	2	155.	39.	155.	39.	90E	4492
92AE	2	2	259.	98.	189.	59.	91E	4492
93A	2	2	6072.	4547.	259.	98.	92AE	4492
94A	2	2	6060.	4569.	82.	22.	93A	4492
95A	2	2	6072.	4630.	242.	61.	94A	4492
96F	1	1	6086.	4705.	223.	75.	95A	4492
97F	2	2	146.	39.	146.	39.	96F	4492
98F	2	2	200.	72.	116.	33.	97F	4492
99F	1	1	357.	158.	160.	50.	98F	4492
100F	2	2	457.	158.	127.	36.	99F	4492
	0	0	537.	206.	154.	48.	100F	4492

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder	SUBAREA	Q	TOTAL AREA	TOTAL Q	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
101AF	206.	537.	4911.	6125.	2	0.01000	0.00	0.00	0.	10	0	A97	0.00
102A	42.	135.	4953.	6119.	2	0.01800	0.00	0.00	0.	20	7	B98	0.00
103A	65.	209.	5100.	6119.	0	0.00000	0.00	0.00	0.	20	7	B98	0.00
104A	82.	263.	5100.	6131.	2	0.01800	0.00	0.00	0.	20	7	B98	0.00
105A	60.	181.	5160.	6115.	0	0.00000	0.00	0.00	0.	30	7	B98	0.00
106A	69.	192.	5229.	6122.	2	0.02100	0.00	0.00	0.	20	9	B98	0.00
107A	58.	175.	5287.	6113.	0	0.00000	0.00	0.00	0.	30	7	B98	0.00
108A	31.	136.	5318.	6113.	2	0.01500	0.00	0.00	0.	30	5	B98	0.00
109A	42.	139.	5360.	6104.	2	0.01400	0.00	0.00	0.	30	6	B98	0.00
110A	73.	191.	5433.	6065.	2	0.01300	0.00	0.00	0.	30	9	B98	0.00
111A	56.	86.	5489.	6019.	0	0.00000	0.00	0.00	0.	30	21	B98	0.00
112B	50.	110.	50.	110.	2	0.01700	0.00	0.00	0.	30	12	B98	0.00
113B	43.	61.	93.	142.	0	0.00000	0.00	0.00	0.	40	21	B98	0.00
114AB	93.	142.	5582.	6035.	2	0.01000	0.00	0.00	0.	10	0	A97	0.00
115A	0.	0.	5582.	6015.	2	0.01000	0.00	0.00	0.	10	99	A97	0.00
116A	0.	0.	5582.	5860.	0	0.00000	0.00	0.00	0.	10	99	A97	0.00

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
HYDROGRAPH AT Header place holder 4492 2A

Header place holder	TIME	Q	TIME	Q	TIME	Q	REDUCTION FACTOR = 1.000
0	0.	0.	200	0.	300	3.	400
500	4.	6.	700	7.	800	10.	900
1000	28.	42.	1100	48.	1110	72.	1120
1130	100.	102.	1132	105.	1133	108.	1134
1135	114.	114.	1136	118.	1138	121.	1139
1140	128.	135.	1137	118.	1139	124.	1144
1145	163.	173.	1142	139.	1143	144.	1144
1150	274.	289.	1147	183.	1148	196.	1149
			1152	376.	1153	432.	1154

TIME	497.	1156	506.	83ARO.TXT	1158	466.	1159	426.
1155	497.	1156	506.	1157	1158	466.	1159	426.
1160	414.	1161	322.	1162	1163	231.	1164	197.
1165	157.	1166	130.	1167	1168	98.	1169	90.
1170	80.	1171	76.	1172	1173	64.	1174	62.
1175	59.	1176	57.	1177	1178	48.	1179	49.
1180	47.	1181	45.	1182	1183	41.	1184	41.
1185	40.	1186	40.	1187	1188	39.	1189	39.
1190	38.	1191	38.	1192	1193	38.	1194	38.
1195	38.	1196	38.	1197	1198	38.	1199	38.
1200	38.	1201	37.	1202	1203	35.	1204	35.
1205	34.	1206	33.	1207	1208	31.	1209	30.
1210	29.	1211	28.	1212	1213	27.	1214	27.
1215	26.	1216	26.	1217	1218	26.	1219	26.
1220	26.	1221	26.	1222	1223	26.	1224	26.
1225	27.	1226	26.	1227	1228	26.	1229	27.
1230	26.	1231	26.	1232	1233	26.	1234	25.
1235	26.	1236	26.	1237	1238	25.	1239	25.
1240	25.	1241	25.	1242	1243	25.	1244	25.
1245	25.	1246	25.	1247	1248	25.	1249	25.
1250	25.	1251	25.	1252	1253	25.	1254	25.
1255	25.	1256	25.	1257	1258	25.	1259	25.
1260	25.	1261	25.	1262	1263	23.	1264	23.
1265	22.	1266	22.	1267	1268	20.	1269	20.
1270	19.	1271	18.	1272	1273	18.	1274	17.
1275	17.	1276	17.	1277	1278	17.	1279	16.
1280	17.	1281	17.	1282	1283	16.	1284	17.
1285	17.	1286	16.	1287	1288	16.	1289	17.
1290	16.	1291	16.	1292	1293	16.	1294	16.
1295	16.	1296	17.	1297	1298	16.	1299	16.
1300	17.	1310	11.	1320	1330	6.	1340	6.
1350	5.	1360	2.	1370	1380	0.	1390	0.
1400	0.	1420	0.	1440	1460	0.	1500	0.

HYDROGRAPH AT	Header	place holder	4492	2A	STORM DAY	4	REDUCTION FACTOR =	0.884
TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME
0	0.	100	0.	200	0.	300	0.	400
500	1.	600	2.	700	4.	800	5.	900
1000	18.	1050	30.	1100	36.	1110	56.	1120
1130	81.	1131	83.	1132	85.	1133	88.	1134
1135	94.	1136	94.	1137	98.	1138	101.	1139
1140	107.	1141	112.	1142	116.	1143	120.	1144
1145	138.	1146	146.	1147	155.	1148	167.	1149
1150	234.	1151	246.	1152	323.	1153	372.	1154
1155	428.	1156	438.	1157	437.	1158	405.	1159
1160	360.	1161	281.	1162	230.	1163	200.	1164
1165	135.	1166	111.	1167	94.	1168	82.	1169
1170	66.	1171	62.	1172	58.	1173	51.	1174
1175	47.	1176	45.	1177	42.	1178	36.	1179
1180	35.	1181	34.	1182	32.	1183	30.	1184
1185	29.	1186	29.	1187	29.	1188	28.	1189
1190	27.	1191	27.	1192	27.	1193	27.	1194
1195	27.	1196	27.	1197	27.	1198	27.	1199
1200	27.	1201	26.	1202	26.	1203	25.	1204
1205	24.	1206	23.	1207	22.	1208	21.	1209
1210	19.	1211	18.	1212	18.	1213	18.	1214
1215	17.	1216	17.	1217	17.	1218	17.	1219
1220	17.	1221	17.	1222	16.	1223	16.	1224
1225	17.	1226	16.	1227	16.	1228	17.	1229

TIME	Q	1231	1232	1233	1234	1235
0	0	16	17	1733	1734	16
500	6	16	1737	1238	1239	16
1000	80	16	1241	1243	1244	15
1130	698	15	1247	1248	1249	15
1135	758	15	1251	1252	1254	15
1140	825	15	1256	1257	1258	15
1145	905	15	1261	1262	1264	14
1150	1004	13	1266	1267	1268	14
1155	1134	11	1271	1272	1269	11
1160	1326	9	1276	1277	1274	9
1165	1672	9	1281	1278	1279	9
1170	2337	8	1286	1283	1284	8
1175	3268	8	1291	1287	1288	8
1180	4084	8	1296	1292	1289	8
1185	4699	8	1300	1297	1298	8
1190	5437	8	1310	1298	1299	8
1195	5854	7	1320	1300	1300	8
1200	5643	2	1330	1330	1340	3
1205	5029	0	1360	1370	1390	0
1210	4305	0	1420	1440	1500	0
1215	3626					
1220	3043					
1225	2561					
1230	2168					
1235	1850					
1240	1592					
1245	1383					
1250	1211					
1255	1070					
1260	953					
1265	855					
1270	775					
1275	707					
1280	649					
1285	598					
1290	554					
1295	515					
1300	481					

83ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 116A
 Header place holder
 STORM DAY 4
 REDUCTION FACTOR = 0.884

TIME	Q	TIME	Q	TIME	Q
0	0	200	6	300	6
500	6	700	8	800	14
1000	80	1100	453	1110	520
1130	698	1132	721	1133	733
1135	758	1137	784	1139	797
1140	825	1141	855	1143	871
1145	905	1147	942	1148	982
1150	1004	1152	1052	1153	1077
1155	1134	1157	1199	1158	1237
1160	1326	1162	1440	1163	1507
1165	1672	1167	1891	1168	2024
1170	2337	1172	2694	1173	2883
1175	3268	1177	3635	1178	3800
1180	4084	1182	4325	1183	4443
1185	4699	1187	4841	1188	5143
1190	5437	1192	5674	1189	5294
1195	5854	1197	5840	1193	5761
1200	5643	1202	5427	1198	5795
1205	5029	1207	5471	1203	5301
1210	4305	1212	4741	1208	4450
1215	3626	1217	4024	1213	3887
1220	3043	1222	3380	1218	3263
1225	2561	1227	2839	1223	2742
1230	2168	1232	2394	1228	2315
1235	1850	1237	2033	1233	1969
1240	1592	1242	1741	1238	1640
1245	1383	1247	1503	1243	1462
1250	1211	1252	1310	1248	1276
1255	1070	1257	1152	1253	1123
1260	953	1262	1020	1258	997
1265	855	1267	911	1263	892
1270	775	1272	822	1268	806
1275	707	1277	747	1273	733
1280	649	1282	683	1278	671
1285	598	1287	628	1283	617
1290	554	1292	579	1288	570
1295	515	1297	538	1293	530
1300	481	1302	501	1298	494
		1320	372	1303	328

83ARO.TXT
1350 1360 231. 1370 1380 193. 1390 177.
1400 1420 134. 1440 1460 89. 1500 61.

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492 1A	85.	278.	85.	278.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	506.	164.	506.	1	1750.	0.07500	0.00	0.00	0.	20	9	B98	0.00
4492 3A	73.	332.	237.	633.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	303.	303.	303.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	212.	142.	515.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	244.	222.	711.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	711.	459.	1339.	1	2215.	0.05500	0.00	0.00	0.	0	0	A97	0.00
4492 8A	94.	347.	553.	1411.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	320.	79.	320.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	188.	130.	487.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	313.	203.	771.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	491.	311.	1088.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	236.	398.	1226.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1226.	951.	2637.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	129.	981.	2603.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	295.	80.	295.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	51.	92.	324.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	324.	1073.	2832.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	229.	1139.	2833.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	323.	71.	323.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	177.	110.	376.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	309.	178.	619.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	227.	228.	747.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 24AE	228.	747.	1367.	3265.	2	818.	0.02600	0.00	0.00	0.	30	5	B98	0.00
4492 25A	18.	77.	1385.	3252.	0	0.	0.00000	0.00	0.00	0.	0	0	B98	0.00
4492 26A	56.	207.	1441.	3331.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	320.	1520.	3378.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	195.	1584.	3488.	2	1069.	0.02600	0.00	0.00	0.	20	7	B98	0.00
4492 29A	46.	170.	1630.	3516.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 30A	40.	182.	1670.	3539.	2	1537.	0.02900	0.00	0.00	0.	20	7	B98	0.00
4492 31A	53.	196.	1723.	3557.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492 32B	99.	389.	99.	389.	1	735.	0.11200	0.00	0.00	0.	20	7	B98	0.00
4492 33B	47.	174.	146.	555.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 34B	36.	146.	182.	687.	1	1710.	0.05700	0.00	0.00	0.	20	9	B98	0.00
4492 35B	78.	251.	260.	844.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	321.	360.	1142.	1	736.	0.05200	0.00	0.00	0.	20	5	B98	0.00
4492 37B	13.	59.	373.	1128.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 38B	71.	228.	444.	1320.	2	1438.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 39B	49.	181.	493.	1407.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 40C	87.	265.	637.	265.	1	2063.	0.16300	0.00	0.00	0.	20	7	B98	0.00
4492 41C	76.	231.	163.	460.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	314.	270.	766.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	110.	293.	780.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 44D	80.	257.	80.	257.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	246.	134.	384.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 46CD	134.	427.	427.	1165.	1	1426.	0.05600	0.00	0.00	0.	10	0	A97	0.00
4492 47C	43.	159.	470.	1206.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 48BC	470.	1206.	963.	2613.	2	768.	0.02900	0.00	0.00	0.	10	0	A97	0.00
4492 49B	50.	185.	1013.	2655.	2	1183.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 50B	79.	292.	1092.	2726.	2	1240.	0.03400	0.00	0.00	0.	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
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LOCATION	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 51B	28.	127.	1120.	2731.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 52E	79.	254.	79.	254.	1	782.	0.06000	0.00	0.00	0.	20	9	B98	0.00
4492 53E	25.	107.	104.	325.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 54BE	104.	325.	1224.	2947.	2	853.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 55B	14.	64.	1238.	2937.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 56F	87.	352.	87.	352.	2	1222.	0.04800	0.00	0.00	0.	20	5	B98	0.00
4492 57F	30.	129.	117.	426.	0	0.	0.00000	0.00	0.00	0.	30	6	B98	0.00
4492 58BF	117.	426.	1355.	3116.	1	1584.	0.06300	0.00	0.00	0.	10	0	A97	0.00
4492 59B	40.	182.	1395.	3105.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 60AB	1395.	3105.	3118.	6657.	2	1530.	0.02400	0.00	0.00	0.	20	0	A97	0.00
4492 61A	55.	203.	3173.	6660.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 62A	80.	324.	3253.	6699.	2	1254.	0.01800	0.00	0.00	0.	20	6	B98	0.00
4492 63A	41.	176.	3294.	6700.	0	0.	0.00000	0.00	0.00	0.	10	6	B98	0.00
4492 64B	66.	300.	66.	300.	1	1577.	0.07600	0.00	0.00	0.	20	5	B98	0.00
4492 65B	49.	198.	115.	383.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 66AB	115.	383.	3409.	6798.	2	885.	0.02400	0.00	0.00	0.	10	0	A97	0.00
4492 67A	24.	115.	3433.	6785.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 68A	57.	218.	3490.	6809.	2	1682.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492 69A	50.	171.	3540.	6802.	0	0.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 70C	58.	264.	58.	264.	1	1208.	0.05000	0.00	0.00	0.	20	5	B98	0.00
4492 71C	75.	304.	133.	451.	2	1403.	0.04800	0.00	0.00	0.	20	6	B98	0.00
4492 72C	74.	273.	207.	676.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 73C	54.	219.	261.	863.	2	814.	0.02700	0.00	0.00	0.	20	6	B98	0.00
4492 74C	20.	91.	281.	911.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 75C	43.	159.	324.	1044.	2	1738.	0.03400	0.00	0.00	0.	20	7	B98	0.00
4492 76C	89.	305.	413.	1243.	2	1110.	0.00000	0.00	0.00	0.	20	8	B98	0.00
4492 77AC	413.	1243.	3953.	7221.	2	2463.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492 78A	30.	104.	3983.	7218.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 79A	41.	186.	4024.	7234.	2	2463.	0.01700	0.00	0.00	0.	20	5	B98	0.00
4492 80A	83.	336.	4107.	7221.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 81D	51.	206.	51.	206.	1	1093.	0.07600	0.00	0.00	0.	20	6	B98	0.00
4492 82D	47.	190.	98.	337.	0	0.	0.00000	0.00	0.00	0.	20	0	A97	0.00
4492 83AD	98.	337.	4205.	7267.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492 84A	46.	209.	4251.	7275.	2	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 85A	67.	247.	4318.	7300.	2	1211.	0.00700	0.00	0.00	0.	20	7	B98	0.00
4492 86A	33.	134.	4351.	7276.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 87A	93.	423.	4444.	7302.	2	524.	0.01100	0.00	0.00	0.	20	5	B98	0.00
4492 88A	5.	20.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	40	5	B98	0.00
4492 89A	0.	0.	4449.	7300.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492 90E	39.	177.	39.	177.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 91E	59.	218.	98.	305.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 92AE	98.	305.	4547.	7341.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00

92ARO.TXT

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	PCT IMPV
4492 1A	85.	242.	85.	242.	1	1635.	0.07500	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	219.	164.	436.	1	1750.	0.07500	0.00	0.00	0.	20	5	B98	0.00
4492 3A	73.	288.	237.	535.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 4B	88.	263.	88.	263.	0	0.	0.00000	0.00	0.00	0.	10	7	B98	0.00
4492 5B	54.	185.	142.	448.	1	2148.	0.14200	0.00	0.00	0.	20	10	B98	0.00
4492 6B	80.	210.	222.	614.	0	0.	0.00000	0.00	0.00	0.	10	0	A97	0.00
4492 7AB	222.	614.	459.	1141.	1	2215.	0.05500	0.00	0.00	0.	20	7	B98	0.00
4492 8A	94.	300.	553.	1184.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 9C	79.	277.	79.	277.	1	2067.	0.40700	0.00	0.00	0.	20	7	B98	0.00
4492 10C	51.	163.	130.	419.	0	0.	0.00000	0.00	0.00	0.	20	6	B98	0.00
4492 11C	73.	273.	203.	664.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00

92ARO.TXT															
4492	67A	24.	101.	3433.	5637.	0	0.	0.00000	0.00	0.00	0.	10	5	898	0.00
4492	68A	57.	188.	3490.	5651.	2	1682.	0.01400	0.00	0.00	0.	30	6	898	0.00
4492	69A	50.	148.	3540.	5635.	0	0.	0.00000	0.00	0.00	0.	20	8	898	0.00
4492	70C	58.	229.	58.	1208.	1	1208.	0.05000	0.00	0.00	0.	20	5	898	0.00
4492	71C	75.	263.	133.	386.	2	1403.	0.04800	0.00	0.00	0.	20	6	898	0.00
4492	72C	74.	236.	207.	576.	0	0.	0.00000	0.00	0.00	0.	20	7	898	0.00
4492	73C	54.	190.	261.	737.	2	814.	0.02700	0.00	0.00	0.	20	6	898	0.00
4492	74C	20.	79.	281.	778.	0	0.	0.00000	0.00	0.00	0.	20	5	898	0.00
4492	75C	43.	137.	324.	892.	2	1738.	0.03400	0.00	0.00	0.	20	7	898	0.00
4492	76C	89.	263.	413.	1052.	0	0.	0.00000	0.00	0.00	0.	20	8	898	0.00
4492	77AC	413.	1052.	3953.	5970.	2	1110.	0.01900	0.00	0.00	0.	10	0	A97	0.00
4492	78A	30.	90.	3983.	5961.	0	0.	0.00000	0.00	0.00	0.	30	7	898	0.00
4492	79A	41.	162.	4024.	5971.	2	2463.	0.01700	0.00	0.00	0.	20	5	898	0.00
4492	80A	83.	291.	4107.	5955.	0	0.	0.00000	0.00	0.00	0.	20	6	898	0.00
4492	81D	51.	179.	51.	179.	1	1093.	0.07600	0.00	0.00	0.	20	6	898	0.00
4492	82D	47.	165.	98.	287.	0	0.	0.00000	0.00	0.00	0.	20	6	898	0.00
4492	83AD	98.	287.	4205.	5991.	2	977.	0.03300	0.00	0.00	0.	10	0	A97	0.00
4492	84A	46.	182.	4251.	5985.	0	0.	0.00000	0.00	0.00	0.	20	5	898	0.00
4492	85A	67.	214.	4318.	6001.	2	1211.	0.00700	0.00	0.00	0.	20	7	898	0.00
4492	86A	33.	116.	4351.	5984.	0	0.	0.00000	0.00	0.00	0.	20	6	898	0.00
4492	87A	93.	367.	4444.	6003.	2	524.	0.01100	0.00	0.00	0.	20	5	898	0.00
4492	88A	5.	18.	4449.	5999.	0	0.	0.00000	0.00	0.00	0.	40	5	898	0.00
4492	89A	0.	0.	4449.	5999.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00
4492	90E	39.	154.	39.	154.	1	1621.	0.05900	0.00	0.00	0.	20	5	898	0.00
4492	91E	59.	188.	98.	258.	0	0.	0.00000	0.00	0.00	0.	20	7	898	0.00
4492	92AE	98.	258.	4547.	6030.	2	926.	0.01100	0.00	0.00	0.	10	0	A97	0.00
4492	93A	22.	82.	4569.	6019.	0	0.	0.00000	0.00	0.00	0.	30	5	898	0.00
4492	94A	61.	241.	4630.	6030.	0	0.	0.00000	0.00	0.00	0.	20	5	898	0.00
4492	95A	75.	222.	4705.	6044.	2	1651.	0.01600	0.00	0.00	0.	20	8	898	0.00
4492	96F	39.	145.	39.	145.	1	1064.	0.05300	0.00	0.00	0.	30	5	898	0.00
4492	97F	33.	116.	72.	198.	0	0.	0.00000	0.00	0.00	0.	20	6	898	0.00
4492	98F	50.	160.	122.	355.	1	595.	0.09400	0.00	0.00	0.	20	7	898	0.00
4492	99F	36.	126.	158.	455.	2	1714.	0.04600	0.00	0.00	0.	20	6	898	0.00
4492	100F	48.	153.	206.	534.	0	0.	0.00000	0.00	0.00	0.	20	7	898	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
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Header place holder	LOCATIION	SUBAREA	AREA	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	STORM DAY 4 PCT IMPV
4492	101AF	206.	534.	4911.	6084.	2	1147.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	102A	42.	134.	4953.	6077.	2	1111.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	103A	65.	208.	5018.	6077.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492	104A	82.	262.	5100.	6089.	2	1606.	0.01800	0.00	0.00	0.	20	7	B98	0.00
4492	105A	60.	180.	5160.	6071.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	106A	69.	191.	5229.	6079.	2	1408.	0.02100	0.00	0.00	0.	20	9	B98	0.00
4492	107A	58.	174.	5287.	6071.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492	108A	31.	115.	5318.	6072.	2	1467.	0.01500	0.00	0.00	0.	30	5	B98	0.00
4492	109A	42.	139.	5360.	6062.	2	2733.	0.01400	0.00	0.00	0.	30	6	B98	0.00
4492	110A	73.	190.	5433.	6023.	2	3056.	0.01300	0.00	0.00	0.	30	9	B98	0.00
4492	111A	56.	86.	5489.	5976.	0	0.	0.00000	0.00	0.00	0.	30	21	B98	0.00
4492	112B	50.	109.	50.	109.	2	2779.	0.01700	0.00	0.00	0.	30	12	B98	0.00
4492	113B	43.	61.	93.	141.	0	0.	0.00000	0.00	0.00	0.	40	21	B98	0.00
4492	114AB	93.	141.	5582.	5992.	2	1726.	0.01000	0.00	0.00	0.	10	0	A97	0.00
4492	115A	0.	0.	5582.	5972.	2	5400.	0.01000	0.00	0.00	0.	10	99	A97	0.00
4492	116A	0.	0.	5582.	5818.	0	0.	0.00000	0.00	0.00	0.	10	99	A97	0.00

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
Header place holder
HYDROGRAPH AT 4492 ZA STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	92ARO.TXT	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	3.	400	3.	
500	4.	600	6.	700	7.	800	10.	900	16.	
1000	28.	1050	42.	1100	48.	1110	72.	1120	72.	
1130	100.	1131	102.	1132	105.	1133	108.	1134	111.	
1135	114.	1136	114.	1137	118.	1138	121.	1139	124.	
1140	128.	1141	135.	1142	139.	1143	144.	1144	151.	
1145	163.	1146	173.	1147	183.	1148	196.	1149	234.	
1150	274.	1151	289.	1152	376.	1153	432.	1154	469.	
1155	497.	1156	506.	1157	503.	1158	466.	1159	426.	
1160	414.	1161	322.	1162	265.	1163	231.	1164	197.	
1165	157.	1166	130.	1167	111.	1168	98.	1169	90.	
1170	80.	1171	76.	1172	71.	1173	64.	1174	62.	
1175	59.	1176	57.	1177	54.	1178	48.	1179	49.	
1180	47.	1181	45.	1182	43.	1183	41.	1184	41.	
1185	40.	1186	40.	1187	40.	1188	39.	1189	39.	
1190	38.	1191	38.	1192	38.	1193	38.	1194	38.	
1195	38.	1196	38.	1197	38.	1198	38.	1199	38.	
1200	38.	1201	37.	1202	37.	1203	35.	1204	35.	
1205	34.	1206	33.	1207	32.	1208	31.	1209	30.	
1210	29.	1211	28.	1212	28.	1213	27.	1214	27.	
1215	26.	1216	26.	1217	27.	1218	26.	1219	26.	
1220	26.	1221	26.	1222	26.	1223	26.	1224	26.	
1225	27.	1226	26.	1227	26.	1228	26.	1229	27.	
1230	26.	1231	26.	1232	26.	1233	26.	1234	25.	
1235	26.	1236	26.	1237	25.	1238	25.	1239	25.	
1240	25.	1241	25.	1242	25.	1243	25.	1244	25.	
1245	25.	1246	25.	1247	25.	1248	25.	1249	25.	
1250	25.	1251	25.	1252	25.	1253	25.	1254	25.	
1255	25.	1256	25.	1257	25.	1258	25.	1259	25.	
1260	25.	1261	25.	1262	24.	1263	23.	1264	23.	
1265	22.	1266	22.	1267	21.	1268	20.	1269	20.	
1270	19.	1271	18.	1272	19.	1273	18.	1274	17.	
1275	17.	1276	17.	1277	17.	1278	17.	1279	16.	
1280	17.	1281	17.	1282	16.	1283	16.	1284	17.	
1285	17.	1286	16.	1287	16.	1288	17.	1289	17.	
1290	16.	1291	16.	1292	17.	1293	16.	1294	16.	
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.	
1300	17.	1310	11.	1320	7.	1330	6.	1340	6.	
1350	5.	1360	2.	1370	1.	1380	0.	1390	0.	
1400	0.	1420	0.	1440	0.	1460	0.	1500	0.	

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
 Header place holder
 HYDROGRAPH AT 4492 2A

TIME	Q	TIME	Q	STORM DAY 4	TIME	Q	REDUCTION FACTOR = 0.880
0	0.	100	0.	200	0.	300	0.
500	1.	600	2.	700	4.	800	5.
1000	18.	1050	30.	1100	35.	1110	56.
1130	81.	1131	83.	1132	85.	1133	88.
1135	93.	1136	93.	1137	97.	1138	100.
1140	106.	1141	111.	1142	115.	1143	120.
1145	137.	1146	145.	1147	155.	1148	166.
1150	233.	1151	245.	1152	321.	1153	370.
1155	426.	1156	436.	1157	435.	1158	403.
1160	359.	1161	280.	1162	229.	1163	199.
1165	135.	1166	110.	1167	93.	1168	82.
1170	66.	1171	61.	1172	57.	1173	50.
1175	46.	1176	44.	1177	41.	1178	36.
1180	35.	1181	33.	1182	32.	1183	30.

TIME	Q	1185	1186	1187	1188	1189	28.
0	0.						
500	6.	1190	1191	1192	1193	1194	27.
1000	77.	1195	1196	1197	1198	1199	26.
1130	682.	1200	1201	1202	1203	1204	25.
1135	742.	1205	1206	1207	1208	1209	24.
1140	808.	1210	1211	1212	1213	1214	20.
1145	887.	1215	1216	1217	1218	1219	17.
1150	985.	1220	1221	1222	1223	1224	16.
1155	1113.	1225	1226	1227	1228	1229	17.
1160	1303.	1230	1231	1232	1233	1234	16.
1165	1645.	1235	1236	1237	1238	1239	15.
1170	2300.	1240	1241	1242	1243	1244	15.
1175	3222.	1245	1246	1247	1248	1249	15.
1180	4036.	1250	1251	1252	1253	1254	15.
1185	4648.	1255	1256	1257	1258	1259	15.
1190	5382.	1260	1261	1262	1263	1264	14.
1195	5809.	1265	1266	1267	1268	1269	14.
1200	5612.	1270	1271	1272	1273	1274	11.
1205	5009.	1275	1276	1277	1278	1279	9.
1210	4291.	1280	1281	1282	1283	1284	8.
1215	3615.	1285	1286	1287	1288	1289	8.
1220	3035.	1290	1291	1292	1293	1294	8.
1225	2554.	1295	1296	1297	1298	1299	8.
1230	2162.	1300	1310	1320	1330	1340	3.
1235	1844.	1305	1360	1370	1380	1390	3.
1240	1587.	1310	1420	1440	1460	1500	0.
1245	1378.	1315					0.
1250	1206.	1320					0.
1255	1065.	1325					0.

92ARO.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder
HYDROGRAPH AT 4492 116A

STORM DAY 4

REDUCTION FACTOR = 0.880

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	300	6.	400	6.	500	6.
500	6.	800	8.	900	24.	1000	24.
1000	77.	1100	440.	1110	583.	1120	583.
1130	682.	1132	705.	1134	717.	1139	729.
1135	742.	1137	767.	1138	780.	1144	794.
1140	808.	1141	838.	1143	853.	1148	870.
1145	887.	1147	924.	1148	943.	1149	964.
1150	985.	1152	1032.	1153	1058.	1154	1085.
1155	1113.	1157	1178.	1158	1215.	1159	1257.
1160	1303.	1162	1415.	1163	1482.	1164	1558.
1165	1645.	1167	1859.	1168	1991.	1169	2139.
1170	2300.	1172	2653.	1173	2840.	1174	3030.
1175	3222.	1177	3587.	1178	3753.	1179	3902.
1180	4036.	1182	4276.	1183	4394.	1184	4516.
1185	4648.	1187	4937.	1188	5089.	1189	5239.
1190	5382.	1192	5622.	1193	5711.	1194	5773.
1195	5809.	1197	5801.	1198	5759.	1199	5695.
1200	5612.	1202	5401.	1203	5278.	1204	5146.
1205	5009.	1207	4724.	1208	4579.	1209	4435.
1210	4291.	1212	4011.	1213	3876.	1214	3744.
1215	3615.	1217	3371.	1218	3254.	1219	3143.
1220	3035.	1221	2931.	1222	2735.	1224	2643.
1225	2554.	1227	2388.	1228	2309.	1229	2234.
1230	2162.	1232	2027.	1233	1964.	1234	1903.
1235	1844.	1236	1789.	1238	1684.	1239	1634.
1240	1587.	1242	1542.	1243	1456.	1244	1416.
1245	1378.	1247	1341.	1248	1271.	1249	1238.
1250	1206.	1251	1176.	1252	1118.	1254	1091.
1255	1065.	1257	1040.	1258	992.	1259	970.

1260	1261	927.	1262	92ARO, TXT	1263	887.	1264	868.
1265	1266	833.	1267	906.	1268	800.	1269	785.
1270	1271	755.	1272	741.	1273	728.	1274	715.
1275	1276	689.	1277	677.	1278	666.	1279	654.
1280	1281	632.	1282	622.	1283	612.	1284	602.
1285	1286	583.	1287	574.	1288	564.	1289	556.
1290	1291	540.	1292	532.	1293	525.	1294	517.
1295	1296	502.	1297	495.	1298	488.	1299	482.
1300	1310	416.	1320	366.	1330	323.	1340	285.
1350	1360	227.	1370	206.	1380	189.	1390	173.
1400	1420	131.	1440	108.	1460	88.	1500	61.

101IARO.TXT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	IMPV PCT
4492 1A	85.	240.	85.	240.	1	1635.	0.17400	0.00	0.00	0.	10	10	B98	0.00
4492 2A	79.	218.	164.	434.	1	1750.	0.07500	0.00	0.00	0.	10	9	B98	0.00
4492 3A	73.	287.	237.	531.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 4B	88.	262.	88.	262.	0	0.	0.00000	0.00	0.00	0.	10	9	B98	0.00
4492 5B	54.	184.	142.	446.	1	2148.	0.14200	0.00	0.00	0.	10	7	B98	0.00
4492 6B	80.	209.	222.	611.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 7AB	222.	611.	459.	1134.	1	2215.	0.05500	0.00	0.00	0.	10	0	A97	0.00
4492 8A	94.	299.	553.	1176.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 9C	79.	276.	79.	276.	1	2067.	0.40700	0.00	0.00	0.	20	6	B98	0.00
4492 10C	51.	162.	130.	417.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 11C	73.	272.	203.	661.	1	1977.	0.17500	0.00	0.00	0.	10	6	B98	0.00
4492 12C	108.	425.	311.	927.	1	1913.	0.08800	0.00	0.00	0.	20	5	B98	0.00
4492 13C	87.	202.	398.	1039.	0	0.	0.00000	0.00	0.00	0.	20	12	B98	0.00
4492 14AC	398.	1039.	951.	2215.	2	1101.	0.04000	0.00	0.00	0.	10	0	A97	0.00
4492 15A	30.	111.	981.	2186.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 16D	80.	254.	80.	254.	1	830.	0.05800	0.00	0.00	0.	20	7	B98	0.00
4492 17D	12.	44.	92.	277.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 18AD	92.	277.	1073.	2385.	2	2430.	0.03600	0.00	0.00	0.	10	0	A97	0.00
4492 19A	66.	197.	1139.	2368.	0	0.	0.00000	0.00	0.00	0.	30	7	B98	0.00
4492 20E	71.	279.	71.	279.	1	1615.	0.06100	0.00	0.00	0.	20	5	B98	0.00
4492 21E	39.	153.	110.	318.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 22E	68.	267.	178.	528.	2	1242.	0.04700	0.00	0.00	0.	20	5	B98	0.00
4492 23E	50.	197.	228.	634.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 24AE	228.	634.	1367.	2695.	2	818.	0.02600	0.00	0.00	0.	10	0	A97	0.00
4492 25A	18.	67.	1385.	2699.	0	0.	0.00000	0.00	0.00	0.	30	5	B98	0.00
4492 26A	56.	178.	1441.	2749.	2	790.	0.02700	0.00	0.00	0.	20	7	B98	0.00
4492 27A	79.	276.	1520.	2792.	2	950.	0.02400	0.00	0.00	0.	20	6	B98	0.00
4492 28A	64.	167.	1584.	2887.	2	1069.	0.02600	0.00	0.00	0.	20	10	B98	0.00
4492 29A	46.	146.	1630.	2892.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 30A	40.	157.	1670.	2911.	2	1537.	0.02900	0.00	0.00	0.	20	5	B98	0.00
4492 31A	53.	168.	1723.	2922.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 32B	99.	337.	99.	337.	1	735.	0.11200	0.00	0.00	0.	10	7	B98	0.00
4492 33B	47.	149.	146.	479.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 34B	36.	126.	182.	591.	1	1710.	0.05700	0.00	0.00	0.	20	6	B98	0.00
4492 35B	78.	215.	260.	717.	0	0.	0.00000	0.00	0.00	0.	20	9	B98	0.00
4492 36B	100.	276.	360.	972.	1	736.	0.05200	0.00	0.00	0.	20	9	B98	0.00
4492 37B	13.	51.	373.	957.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 38B	71.	196.	444.	1114.	2	1438.	0.03500	0.00	0.00	0.	20	9	B98	0.00
4492 39B	49.	156.	493.	1183.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 40C	87.	227.	87.	227.	1	2063.	0.16300	0.00	0.00	0.	20	10	B98	0.00
4492 41C	76.	199.	163.	392.	0	0.	0.00000	0.00	0.00	0.	20	10	B98	0.00
4492 42C	107.	271.	270.	654.	1	1338.	0.08100	0.00	0.00	0.	10	12	B98	0.00
4492 43C	23.	96.	293.	664.	0	0.	0.00000	0.00	0.00	0.	10	5	B98	0.00
4492 44D	80.	221.	80.	221.	1	1840.	0.08300	0.00	0.00	0.	20	9	B98	0.00
4492 45D	54.	212.	134.	323.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00
4492 46CD	134.	427.	427.	983.	1	1426.	0.05600	0.00	0.00	0.	10	0	A97	0.00
4492 47C	43.	137.	470.	1010.	0	0.	0.00000	0.00	0.00	0.	20	7	B98	0.00
4492 48BC	470.	1010.	963.	2193.	2	768.	0.02900	0.00	0.00	0.	10	0	A97	0.00
4492 49B	50.	159.	1013.	2216.	2	1183.	0.03500	0.00	0.00	0.	20	7	B98	0.00
4492 50B	79.	251.	1092.	2272.	2	1240.	0.03400	0.00	0.00	0.	20	7	B98	0.00

VENTURA COUNTY FLOOD CONTROL DISTRICT
 MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

Header place holder	SUBAREA AREA	SUBAREA Q	TOTAL AREA	TOTAL Q	CONV TYPE	CONV LENGTH	CONV SLOPE	CONV SIZE	CONV Z	CONTROL Q	SOIL NAME	TC	RAIN ZONE	IMPV PCT
4492 51B	28.	110.	1120.	2273.	0	0.	0.00000	0.00	0.00	0.	20	5	B98	0.00

4492	107A	173.	5287.	6027.	0	101ARO.TXT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	108A	115.	5318.	6027.	2	1467.	0.01500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	109A	138.	5360.	6016.	2	2733.	0.01400	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	110A	189.	5433.	5878.	2	3056.	0.01300	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	111A	85.	5489.	5930.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	112B	109.	50.	109.	2	2779.	0.01700	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	113B	60.	93.	140.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	114AB	140.	5582.	5946.	2	1726.	0.01000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	115A	0.	5582.	5925.	2	5400.	0.01000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4492	116A	0.	5582.	5773.	0	0.	0.00000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Header place holder
HYDROGRAPH AT 4492 ZA

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
STORM DAY 4
REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	0.	200	0.	300	0.	400	0.	500	0.	600	0.	700	0.	800	0.
500	4.	600	6.	700	7.	800	10.	900	16.	1000	28.	1100	48.	1200	72.	1300	111.
1000	28.	1050	42.	1100	48.	1110	72.	1120	111.	1130	100.	1132	105.	1138	121.	1139	124.
1130	100.	1131	102.	1137	118.	1138	108.	1144	151.	1140	128.	1141	135.	1142	144.	1149	234.
1135	114.	1136	114.	1142	139.	1143	144.	1144	196.	1145	163.	1146	173.	1147	196.	1154	469.
1140	128.	1141	135.	1142	144.	1143	144.	1144	234.	1150	274.	1151	289.	1152	376.	1159	426.
1145	163.	1146	173.	1147	183.	1148	196.	1149	234.	1155	497.	1156	506.	1157	503.	1164	197.
1150	274.	1151	289.	1152	376.	1153	432.	1154	469.	1160	414.	1161	322.	1162	265.	1169	90.
1155	497.	1156	506.	1157	503.	1158	466.	1159	426.	1170	80.	1171	76.	1172	71.	1179	49.
1160	414.	1161	322.	1162	265.	1163	231.	1164	197.	1175	59.	1176	57.	1177	54.	1184	41.
1165	157.	1166	130.	1167	111.	1168	98.	1169	62.	1180	47.	1181	45.	1182	43.	1189	39.
1170	80.	1171	76.	1172	71.	1173	64.	1174	62.	1185	40.	1186	40.	1187	40.	1199	38.
1175	59.	1176	57.	1177	54.	1178	48.	1179	49.	1190	38.	1191	38.	1192	38.	1201	35.
1180	47.	1181	45.	1182	43.	1183	41.	1184	41.	1205	34.	1206	33.	1207	32.	1209	30.
1185	40.	1186	40.	1187	40.	1188	39.	1189	39.	1210	29.	1211	28.	1212	28.	1214	27.
1190	38.	1191	38.	1192	38.	1193	38.	1194	38.	1215	26.	1216	26.	1217	26.	1219	26.
1195	38.	1196	38.	1197	38.	1198	38.	1199	38.	1220	26.	1221	26.	1222	26.	1224	26.
1200	38.	1201	37.	1202	37.	1203	35.	1204	35.	1225	27.	1226	27.	1227	26.	1229	25.
1205	34.	1206	33.	1207	32.	1208	31.	1209	30.	1230	26.	1231	26.	1232	26.	1234	25.
1210	29.	1211	28.	1212	28.	1213	27.	1214	27.	1235	26.	1236	26.	1237	25.	1244	25.
1215	26.	1216	26.	1217	26.	1218	26.	1219	26.	1245	25.	1246	25.	1247	25.	1249	25.
1220	26.	1221	26.	1222	26.	1223	26.	1224	26.	1250	25.	1251	25.	1252	25.	1254	25.
1225	27.	1226	26.	1227	26.	1228	26.	1229	25.	1255	25.	1256	25.	1257	25.	1259	25.
1230	26.	1231	26.	1232	26.	1233	26.	1234	25.	1260	25.	1261	25.	1262	24.	1264	23.
1235	26.	1236	26.	1237	25.	1238	25.	1239	25.	1265	22.	1266	22.	1267	21.	1269	20.
1240	25.	1241	25.	1242	25.	1243	25.	1244	25.	1270	19.	1271	18.	1272	18.	1274	17.
1245	25.	1246	25.	1247	25.	1248	25.	1249	25.	1275	17.	1276	17.	1277	17.	1279	16.
1250	25.	1251	25.	1252	25.	1253	25.	1254	25.	1280	17.	1281	17.	1282	16.	1284	17.
1255	25.	1256	25.	1257	25.	1258	25.	1259	25.	1285	17.	1286	17.	1287	16.	1289	17.
1260	25.	1261	25.	1262	24.	1263	23.	1264	23.	1290	16.	1291	16.	1292	16.	1294	16.
1265	22.	1266	22.	1267	21.	1268	20.	1269	20.	1295	16.	1296	16.	1297	16.	1299	16.
1270	19.	1271	18.	1272	18.	1273	18.	1274	17.	1300	17.	1301	17.	1302	17.	1304	16.
1275	17.	1276	17.	1277	17.	1278	16.	1279	16.	1305	17.	1306	17.	1307	17.	1309	16.
1280	17.	1281	17.	1282	16.	1283	16.	1284	16.	1350	5.	1351	5.	1352	5.	1354	6.
1285	17.	1286	16.	1287	16.	1288	16.	1289	16.	1400	0.	1401	0.	1402	0.	1404	0.
1290	16.	1291	16.	1292	16.	1293	16.	1294	16.								
1295	16.	1296	17.	1297	17.	1298	16.	1299	16.								
1300	17.	1301	11.	1302	11.	1303	6.	1304	6.								
1305	5.	1306	2.	1307	1.	1308	0.	1309	0.								
1400	0.	1401	0.	1402	0.	1460	0.	1461	0.								

Header place holder
HYDROGRAPH AT 4492 ZA

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950
STORM DAY 4
REDUCTION FACTOR = 0.876

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
500	0	200	0	300	0	400	0	500	0
1000	1	700	2	800	3	900	5	1000	8
1130	17	1100	35	1110	35	1120	55	1130	56
1135	80	1132	84	1133	84	1134	87	1139	90
1140	92	1137	96	1138	96	1139	99	1144	102
1145	105	1141	111	1143	115	1144	119	1149	125
1150	136	1147	144	1148	154	1149	165	1154	198
1155	231	1151	243	1152	320	1153	368	1159	399
1160	424	1156	434	1157	432	1158	401	1164	366
1165	357	1161	278	1162	228	1163	198	1169	169
1170	134	1166	109	1167	93	1168	81	1174	73
1175	65	1171	61	1172	57	1173	50	1179	48
1180	46	1176	44	1177	41	1178	36	1184	36
1185	34	1181	33	1182	32	1183	30	1189	29
1190	29	1186	28	1187	28	1188	28	1194	27
1195	27	1191	26	1192	26	1193	26	1199	26
1200	27	1196	26	1197	26	1198	26	1204	26
1205	26	1201	26	1202	26	1203	24	1209	24
1210	23	1206	22	1207	21	1208	20	1214	19
1215	19	1211	18	1212	18	1213	17	1219	17
1220	16	1216	16	1217	16	1218	16	1224	16
1225	16	1221	16	1222	16	1223	16	1229	16
1230	16	1226	16	1227	16	1228	16	1234	16
1235	16	1231	16	1232	16	1233	16	1239	15
1240	15	1236	16	1237	15	1238	15	1244	15
1245	15	1241	15	1242	15	1243	15	1249	15
1250	15	1246	15	1247	15	1248	15	1254	15
1255	15	1251	15	1252	15	1253	15	1259	15
1260	15	1256	15	1257	15	1258	15	1264	13
1265	13	1261	15	1262	14	1263	13	1269	11
1270	10	1266	12	1267	12	1268	11	1274	9
1275	9	1271	10	1272	10	1273	10	1279	8
1280	8	1276	9	1277	9	1278	8	1284	8
1285	8	1281	8	1282	8	1283	8	1289	8
1290	8	1286	8	1287	8	1288	8	1294	8
1295	8	1291	8	1292	8	1293	8	1299	8
1300	8	1296	8	1297	8	1298	8	1300	3
1350	2	1310	6	1320	4	1330	3	1340	0
1400	0	1370	1	1380	0	1390	0	1500	0
		1420	0	1440	0	1460	0		

101AR0.TXT

MODIFIED RATIONAL METHOD HYDROLOGY / PC 2.21-950

HYDROGRAPH AT 4492 116A STORM DAY 4 REDUCTION FACTOR = 0.876

TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0	200	6	300	6	400	6
500	6	700	8	800	8	900	12
1000	74	1100	426	1110	491	1120	567
1130	665	1132	688	1133	700	1134	712
1135	724	1137	749	1138	762	1139	776
1140	790	1142	819	1143	835	1144	851
1145	868	1147	904	1148	924	1149	944
1150	965	1152	1012	1153	1037	1154	1063
1155	1092	1157	1156	1158	1192	1159	1233
1160	1279	1162	1390	1163	1455	1164	1530
1165	1615	1167	1826	1168	1956	1169	2101
1170	2260	1172	2609	1173	2794	1174	2983
1175	3173	1177	3537	1178	3702	1179	3851
1180	3985	1182	4225	1183	4341	1184	4463

1185	4593.	1186	4732.	1187	101ARO.TXT	1188	5031.	1189	5181.
1190	5324.	1191	5455.	1192	4879.	1193	5657.	1194	5723.
1195	5761.	1196	5773.	1197	5567.	1198	5720.	1199	5659.
1200	5579.	1201	5483.	1202	5759.	1203	5252.	1204	5123.
1205	5799.	1206	4848.	1207	5373.	1208	4562.	1209	4419.
1210	4987.	1211	4136.	1212	4705.	1213	3864.	1214	3732.
1215	4277.	1216	3481.	1217	3998.	1218	3245.	1219	3134.
1220	3604.	1221	2923.	1222	3361.	1223	2728.	1224	2635.
1225	2547.	1226	2462.	1227	2823.	1228	2303.	1229	2228.
1230	2156.	1231	2087.	1232	2021.	1233	1957.	1234	1897.
1235	1839.	1236	1783.	1237	1729.	1238	1678.	1239	1629.
1240	1582.	1241	1536.	1242	1493.	1243	1451.	1244	1411.
1245	1372.	1246	1335.	1247	1300.	1248	1266.	1249	1233.
1250	1201.	1251	1171.	1252	1141.	1253	1113.	1254	1086.
1255	1060.	1256	1034.	1257	1010.	1258	987.	1259	964.
1260	943.	1261	921.	1262	901.	1263	882.	1264	863.
1265	845.	1266	827.	1267	811.	1268	795.	1269	779.
1270	764.	1271	749.	1272	735.	1273	722.	1274	709.
1275	696.	1276	684.	1277	672.	1278	660.	1279	648.
1280	637.	1281	626.	1282	616.	1283	606.	1284	596.
1285	587.	1286	577.	1287	568.	1288	559.	1289	550.
1290	542.	1291	534.	1292	526.	1293	519.	1294	511.
1295	504.	1296	496.	1297	489.	1298	482.	1299	475.
1300	469.	1310	411.	1320	361.	1330	318.	1340	280.
1350	249.	1360	223.	1370	202.	1380	185.	1390	169.
1400	155.	1420	129.	1440	106.	1460	87.	1500	61.

APPENDIX H

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Adams

Name	Zone	Storm	Soil	Area (acres)	TC (min)
1a	K	100	1.30	85.0 / 85	9.892 / 10
3a	K	100	2.00	72.0 / 72	5.199 / 5
5B	K	100	1.10	54.1 / 54	6.543 / 7
10c	K	100	1.10	73.6 / 74	6.821 / 7
12c	K	100	2.10	109.0 / 109	6.990 / 7
22E	K	100	2.00	38.8 / 39	5.058 / 5
27A	K	100	2.20	79.0 / 79	5.742 / 6
30a	K	100	2.10	40.0 / 40	5.066 / 5
35B	K	100	2.40	35.5 / 36	8.761 / 9
36B	K	100	2.10	78.0 / 78	5.531 / 6
42C	K	100	1.40	107.0 / 107	11.717 / 12
45D	K	100	2.20	54.4 / 54	5.146 / 5
50B	K	100	2.50	78.7 / 79	6.560 / 7
56f	K	100	2.00	86.0 / 86	5.836 / 6
59B	K	100	2.00	39.6 / 40	5.149 / 5
64B	K	100	1.70	65.7 / 66	5.095 / 5
69A	K	100	2.10	50.1 / 50	7.759 / 8
70C	K	100	2.20	58.5 / 59	10.045 / 10
74c	K	100	2.00	20.0 / 20	5.294 / 5
80A	K	100	2.40	82.9 / 83	6.361 / 6
87A	K	100	2.00	92.9 / 93	6.657 / 7
90E	K	100	2.00	39.0 / 39	5.239 / 5
94A	K	100	2.50	61.0 / 61	5.336 / 5
104A	K	100	2.10	82.2 / 82	6.910 / 7
111a	K	100	2.90	55.0 / 55	21.096 / 21

♀

Watershed Name: Adams

Sub-Area Name: 1a
 Tc: 9.892 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 9.892 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: 1a
 Total Area (ac): 85
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 1.30
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 3.570
 C Total: 0.896
 Sum Q Segments (cfs): 271.81
 Q Total (cfs): 271.81
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 593.54
 Time of Concentration (min): 9.892

DATA FOR FLOW PATH 1

Flow Path Name: Overland
 FLOW PATH TRAVEL TIME (min): 6.2944
 Flow Type: Overland
 Length (ft): 632
 Top Elevation (ft): 2600
 Bottom Elevation (ft): 2480
 Contributing Area (acres): 4.3

Percent of Sub-Area (%): 5.1
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.1899
 Effective Slope: 0.1543
 Q for Flow Path (cfs): 13.75
 Avg Velocity (ft/s): 1.67
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 5.16

 DATA FOR FLOW PATH 2

Flow Path Name: Channel
 FLOW PATH TRAVEL TIME (min): 3.5979
 Flow Type: Natural Channel
 Length (ft): 3517
 Top Elevation (ft): 2480
 Bottom Elevation (ft): 1480
 Contributing Area (acres): 80.7
 Percent of Sub-Area (%): 94.9
 Overland Type: Mountain
 Map Slope: 0.2843
 Effective Slope: 0.1917
 Q for Flow Path (cfs): 258.06
 Q Top (cfs): 13.75
 Q Bottom (cfs): 271.81
 Velocity Top (ft/s): 5.87
 Velocity Bottom (ft/s): 15.85
 Avg Velocity (ft/s): 10.86
 Wave Velocity (ft/s): 16.29

Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

Sub-Area Name: 3a
 Tc: 5.199 Minutes
 DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 5.199 min. = 5 min.

 SUB AREA INPUT DATA

Sub Area Name: 3a
 Total Area (ac): 72
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.891
 Sum Q Segments (cfs): 327.29
 Q Total (cfs): 327.29
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 311.96
 Time of Concentration (min): 5.199

 DATA FOR FLOW PATH 1

Flow Path Name: Overland
 FLOW PATH TRAVEL TIME (min): 2.2719
 Flow Type: Overland
 Length (ft): 300
 Top Elevation (ft): 1560
 Bottom Elevation (ft): 1440
 Contributing Area (acres): 1.2
 Percent of Sub-Area (%): 1.7
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.4000
 Effective Slope: 0.2142
 Q for Flow Path (cfs): 5.45
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES

Scour Velocity (ft/sec): 4.39

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.9275
 Flow Type: Natural Channel
 Length (ft): 2335
 Top Elevation (ft): 1440
 Bottom Elevation (ft): 1080
 Contributing Area (acres): 70.8
 Percent of Sub-Area (%): 98.3
 Overland Type: Mountain
 Map Slope: 0.1542
 Effective Slope: 0.1343
 Q for Flow Path (cfs): 321.83
 Q Top (cfs): 5.45
 Q Bottom (cfs): 327.29
 Velocity Top (ft/s): 3.61
 Velocity Bottom (ft/s): 14.11
 Avg Velocity (ft/s): 8.86
 Wave Velocity (ft/s): 13.29

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 Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

 Sub-Area Name: 5B
 Tc: 6.543 Minutes
 DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 6.543 min. = 7 min.

 SUB AREA INPUT DATA

Sub Area Name: 5B
 Total Area (ac): 54.1
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 1.10
 Percent Impervious: 0
 SUB AREA OUTPUT

 Intensity (in/hr): 4.226
 C Total: 0.923
 Sum Q Segments (cfs): 210.97
 Q Total (cfs): 210.97
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 392.56
 Time of Concentration (min): 6.543

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.2629
 Flow Type: Overland
 Length (ft): 300
 Top Elevation (ft): 2550
 Bottom Elevation (ft): 2500
 Contributing Area (acres): 1.2
 Percent of Sub-Area (%): 2.2
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.1667
 Effective Slope: 0.1417
 Q for Flow Path (cfs): 4.68
 Avg Velocity (ft/s): 1.53
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.44

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.2798
 Flow Type: Natural Channel
 Length (ft): 2900

Top Elevation (ft): 2500
 Bottom Elevation (ft): 1384
 Contributing Area (acres): 52.9
 Percent of Sub-Area (%): 97.8
 Overland Type: Mountain
 Map Slope: 0.3848
 Effective Slope: 0.2124
 Q for Flow Path (cfs): 206.29
 Q Top (cfs): 4.68
 Q Bottom (cfs): 210.97
 Velocity Top (ft/s): 4.31
 Velocity Bottom (ft/s): 15.33
 Avg Velocity (ft/s): 9.82
 Wave Velocity (ft/s): 14.74
 ♀
 Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

 Sub-Area Name: 10c
 Tc: 6.821 Minutes
 DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 6.821 min. = 7 min.

SUB AREA INPUT DATA

 Sub Area Name: 10c
 Total Area (ac): 73.6
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 1.10
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 4.226
 C Total: 0.923
 Sum Q Segments (cfs): 287.02
 Q Total (cfs): 287.02
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 409.28
 Time of Concentration (min): 6.821

DATA FOR FLOW PATH 1

 Flow Path Name: Overland
 FLOW PATH TRAVEL TIME (min): 2.8471
 Flow Type: Overland
 Length (ft): 376
 Top Elevation (ft): 2480
 Bottom Elevation (ft): 2360
 Contributing Area (acres): 0.8
 Percent of Sub-Area (%): 1.1
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.3191
 Effective Slope: 0.2007
 Q for Flow Path (cfs): 3.12
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.58

DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.9743
 Flow Type: Natural Channel
 Length (ft): 3442
 Top Elevation (ft): 2360
 Bottom Elevation (ft): 1480
 Contributing Area (acres): 72.8
 Percent of Sub-Area (%): 98.9
 Overland Type: Mountain
 Map Slope: 0.2557
 Effective Slope: 0.1825
 Q for Flow Path (cfs): 283.90

Q Top (cfs): 3.12
Q Bottom (cfs): 287.02
Velocity Top (ft/s): 3.49
Velocity Bottom (ft/s): 15.75
Avg Velocity (ft/s): 9.62
Wave Velocity (ft/s): 14.43

♀
Project: Adams Barranca
Date: 11/14/2011 4:04:17 PM
Engineer: Kinsey Hensley
Consultant: Jensen

Sub-Area Name: 12c
Tc: 6.990 Minutes
DATA FOR SUB AREA 5

SUB AREA TIME OF CONCENTRATION: 6.990 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: 12c
Total Area (ac): 109
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 2.10
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 4.226
C Total: 0.868
Sum Q Segments (cfs): 399.72
Q Total (cfs): 399.72
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 419.39
Time of Concentration (min): 6.990

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.9000
Flow Type: Overland
Length (ft): 515
Top Elevation (ft): 2440
Bottom Elevation (ft): 2160
Contributing Area (acres): 1.2
Percent of Sub-Area (%): 1.1
Overland Type: Mountain
Development Type: Undeveloped
Map Slope: 0.5437
Effective Slope: 0.2232
Q for Flow Path (cfs): 4.40
Avg Velocity (ft/s): 2.20
Passed Scour Check: YES
Scour velocity (ft/sec): 4.23

DATA FOR FLOW PATH 2

Flow Path Name: Channel
FLOW PATH TRAVEL TIME (min): 3.0898
Flow Type: Natural Channel
Length (ft): 3154
Top Elevation (ft): 2160
Bottom Elevation (ft): 1120
Contributing Area (acres): 107.8
Percent of Sub-Area (%): 98.9
Overland Type: Mountain
Map Slope: 0.3297
Effective Slope: 0.2030
Q for Flow Path (cfs): 395.32
Q Top (cfs): 4.40
Q Bottom (cfs): 399.72
Velocity Top (ft/s): 4.13
Velocity Bottom (ft/s): 18.55
Avg Velocity (ft/s): 11.34
Wave Velocity (ft/s): 17.01

♀
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Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

Sub-Area Name: 22E
 Tc: 5.058 Minutes
 DATA FOR SUB AREA 6

SUB AREA TIME OF CONCENTRATION: 5.058 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: 22E
 Total Area (ac): 38.8
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.891
 Sum Q Segments (cfs): 176.37
 Q Total (cfs): 176.37
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 303.46
 Time of Concentration (min): 5.058

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.0178
 Flow Type: Overland
 Length (ft): 400
 Top Elevation (ft): 1365
 Bottom Elevation (ft): 1230
 Contributing Area (acres): 1.8
 Percent of Sub-Area (%): 4.6
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.3375
 Effective Slope: 0.2046
 Q for Flow Path (cfs): 8.18
 Avg Velocity (ft/s): 2.21
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 4.91

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.0399
 Flow Type: Natural Channel
 Length (ft): 1610
 Top Elevation (ft): 1230
 Bottom Elevation (ft): 873
 Contributing Area (acres): 37
 Percent of Sub-Area (%): 95.4
 Overland Type: Mountain
 Map Slope: 0.2217
 Effective Slope: 0.1693
 Q for Flow Path (cfs): 168.19
 Q Top (cfs): 8.18
 Q Bottom (cfs): 176.37
 Velocity Top (ft/s): 4.64
 Velocity Bottom (ft/s): 12.90
 Avg Velocity (ft/s): 8.77
 Wave Velocity (ft/s): 13.15

Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

Sub-Area Name: 27A
 Tc: 5.742 Minutes
 DATA FOR SUB AREA 7

SUB AREA TIME OF CONCENTRATION: 5.742 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: 27A
Total Area (ac): 79
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 2.20
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 4.590
C Total: 0.871
Sum Q Segments (cfs): 315.77
Q Total (cfs): 315.77
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 344.51
Time of Concentration (min): 5.742

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.8501
Flow Type: Overland
Length (ft): 245
Top Elevation (ft): 1270
Bottom Elevation (ft): 1190
Contributing Area (acres): 1
Percent of Sub-Area (%): 1.3
Overland Type: Mountain
Development Type: Undeveloped
Map Slope: 0.3265
Effective Slope: 0.2024
Q for Flow Path (cfs): 4.00
Avg Velocity (ft/s): 2.21
Passed Scour Check: YES
Scour Velocity (ft/sec): 3.88

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.8918
Flow Type: Natural Channel
Length (ft): 2915
Top Elevation (ft): 1190
Bottom Elevation (ft): 780
Contributing Area (acres): 78
Percent of Sub-Area (%): 98.7
Overland Type: Mountain
Map Slope: 0.1407
Effective Slope: 0.1257
Q for Flow Path (cfs): 311.77
Q Top (cfs): 4.00
Q Bottom (cfs): 315.77
Velocity Top (ft/s): 3.15
Velocity Bottom (ft/s): 13.50
Avg Velocity (ft/s): 8.32
Wave Velocity (ft/s): 12.48

♀
Project: Adams Barranca
Date: 11/14/2011 4:04:17 PM
Engineer: Kinsey Hensley
Consultant: Jensen

Sub-Area Name: 30a
Tc: 5.066 Minutes
DATA FOR SUB AREA 8

SUB AREA TIME OF CONCENTRATION: 5.066 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: 30a
Total Area (ac): 40
Flood Zone: 2
Rainfall Zone: K

Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.10
 Percent Impervious: 0
 SUB AREA OUTPUT

 Intensity (in/hr): 5.100
 C Total: 0.886
 Sum Q Segments (cfs): 180.80
 Q Total (cfs): 180.80
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 303.97
 Time of Concentration (min): 5.066

DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.4616
 Flow Type: Overland
 Length (ft): 193
 Top Elevation (ft): 1140
 Bottom Elevation (ft): 1040
 Contributing Area (acres): 0.5
 Percent of Sub-Area (%): 1.3
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5181
 Effective slope: 0.2222
 Q for Flow Path (cfs): 2.26
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.33

DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.6047
 Flow Type: Natural Channel
 Length (ft): 2170
 Top Elevation (ft): 1040
 Bottom Elevation (ft): 760
 Contributing Area (acres): 39.5
 Percent of Sub-Area (%): 98.8
 Overland Type: Mountain
 Map Slope: 0.1290
 Effective Slope: 0.1179
 Q for Flow Path (cfs): 178.54
 Q Top (cfs): 2.26
 Q Bottom (cfs): 180.80
 Velocity Top (ft/s): 2.52
 Velocity Bottom (ft/s): 10.85
 Avg Velocity (ft/s): 6.69
 wave velocity (ft/s): 10.03

Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

Sub-Area Name: 35B
 Tc: 8.761 Minutes
 DATA FOR SUB AREA 9

SUB AREA TIME OF CONCENTRATION: 8.761 min. = 9 min.

SUB AREA INPUT DATA

 Sub Area Name: 35B
 Total Area (ac): 35.5
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.40
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 3.740
 C Total: 0.838

Sum Q Segments (cfs): 111.30
 Q Total (cfs): 111.30
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 525.64
 Time of Concentration (min): 8.761

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.0722
 Flow Type: Overland
 Length (ft): 485
 Top Elevation (ft): 2000
 Bottom Elevation (ft): 1880
 Contributing Area (acres): 2
 Percent of Sub-Area (%): 5.6
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.2474
 Effective Slope: 0.1795
 Q for Flow Path (cfs): 6.27
 Avg Velocity (ft/s): 1.99
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 4.30

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.6885
 Flow Type: Natural Channel
 Length (ft): 3400
 Top Elevation (ft): 1880
 Bottom Elevation (ft): 960
 Contributing Area (acres): 33.5
 Percent of Sub-Area (%): 94.4
 Overland Type: Mountain
 Map Slope: 0.2706
 Effective Slope: 0.1875
 Q for Flow Path (cfs): 105.03
 Q Top (cfs): 6.27
 Q Bottom (cfs): 111.30
 Velocity Top (ft/s): 4.47
 Velocity Bottom (ft/s): 11.65
 Avg Velocity (ft/s): 8.06
 wave Velocity (ft/s): 12.09

♀
 Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

Sub-Area Name: 36B
 Tc: 5.531 Minutes
 DATA FOR SUB AREA 10

SUB AREA TIME OF CONCENTRATION: 5.531 min. = 6 min.

 SUB AREA INPUT DATA

Sub Area Name: 36B
 Total Area (ac): 78
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.10
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 4.590
 C Total: 0.876
 Sum Q Segments (cfs): 313.59
 Q Total (cfs): 313.59
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 331.88
 Time of Concentration (min): 5.531

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.4612
 Flow Type: Overland
 Length (ft): 325
 Top Elevation (ft): 1495
 Bottom Elevation (ft): 1350
 Contributing Area (acres): 1.25
 Percent of Sub-Area (%): 1.6
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.4462
 Effective Slope: 0.2185
 Q for Flow Path (cfs): 5.03
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 4.35

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.0701
 Flow Type: Natural Channel
 Length (ft): 2470
 Top Elevation (ft): 1350
 Bottom Elevation (ft): 940
 Contributing Area (acres): 76.75
 Percent of Sub-Area (%): 98.4
 Overland Type: Mountain
 Map Slope: 0.1660
 Effective Slope: 0.1413
 Q for Flow Path (cfs): 308.56
 Q Top (cfs): 5.03
 Q Bottom (cfs): 313.59
 Velocity Top (ft/s): 3.60
 Velocity Bottom (ft/s): 14.27
 Avg Velocity (ft/s): 8.94
 Wave Velocity (ft/s): 13.41

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Sub-Area Name: 42C
 Tc: 11.717 Minutes
 DATA FOR SUB AREA 11

SUB AREA TIME OF CONCENTRATION: 11.717 min. = 12 min.

 SUB AREA INPUT DATA

Sub Area Name: 42C
 Total Area (ac): 107
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 1.40
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 3.230
 C Total: 0.879
 Sum Q Segments (cfs): 303.76
 Q Total (cfs): 303.76
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 703.01
 Time of Concentration (min): 11.717

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 5.9007
 Flow Type: Overland
 Length (ft): 628
 Top Elevation (ft): 2370
 Bottom Elevation (ft): 2240
 Contributing Area (acres): 1.4
 Percent of Sub-Area (%): 1.3

Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.2070
 Effective Slope: 0.1627
 Q for Flow Path (cfs): 3.97
 Avg Velocity (ft/s): 1.77
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.52

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 5.8160
 Flow Type: Natural Channel
 Length (ft): 5050
 Top Elevation (ft): 2240
 Bottom Elevation (ft): 1080
 Contributing Area (acres): 105.6
 Percent of Sub-Area (%): 98.7
 Overland Type: Mountain
 Map Slope: 0.2297
 Effective Slope: 0.1726
 Q for Flow Path (cfs): 299.79
 Q Top (cfs): 3.97
 Q Bottom (cfs): 303.76
 Velocity Top (ft/s): 3.68
 Velocity Bottom (ft/s): 15.61
 Avg Velocity (ft/s): 9.65
 Wave Velocity (ft/s): 14.47
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Sub-Area Name: 45D
 Tc: 5.146 Minutes
 DATA FOR SUB AREA 12

SUB AREA TIME OF CONCENTRATION: 5.146 min. = 5 min.

 SUB AREA INPUT DATA

Sub Area Name: 45D
 Total Area (ac): 54.4
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.20
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.881
 Sum Q Segments (cfs): 244.48
 Q Total (cfs): 244.48
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 308.75
 Time of Concentration (min): 5.146

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.0893
 Flow Type: Overland
 Length (ft): 540
 Top Elevation (ft): 1330
 Bottom Elevation (ft): 1120
 Contributing Area (acres): 2.2
 Percent of Sub-Area (%): 4.0
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.3889
 Effective Slope: 0.2129
 Q for Flow Path (cfs): 9.89
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 5.33

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.0566
Flow Type: Natural Channel
Length (ft): 870
Top Elevation (ft): 1120
Bottom Elevation (ft): 959
Contributing Area (acres): 52.2
Percent of Sub-Area (%): 96.0
Overland Type: Mountain
Map Slope: 0.1851
Effective Slope: 0.1518
Q for Flow Path (cfs): 234.59
Q Top (cfs): 9.89
Q Bottom (cfs): 244.48
Velocity Top (ft/s): 4.68
Velocity Bottom (ft/s): 13.62
Avg Velocity (ft/s): 9.15
Wave Velocity (ft/s): 13.72

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Sub-Area Name: 50B
Tc: 6.560 Minutes
DATA FOR SUB AREA 13

SUB AREA TIME OF CONCENTRATION: 6.560 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: 50B
Total Area (ac): 78.7
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 2.50
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 4.226
C Total: 0.847
Sum Q Segments (cfs): 281.75
Q Total (cfs): 281.75
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 393.61
Time of Concentration (min): 6.560

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3724
Flow Type: Overland
Length (ft): 440
Top Elevation (ft): 1363
Bottom Elevation (ft): 1230
Contributing Area (acres): 1.1
Percent of Sub-Area (%): 1.4
Overland Type: Mountain
Development Type: Undeveloped
Map Slope: 0.3023
Effective Slope: 0.1966
Q for Flow Path (cfs): 3.94
Avg Velocity (ft/s): 2.17
Passed Scour Check: YES
Scour Velocity (ft/sec): 3.82

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.1877
Flow Type: Natural Channel
Length (ft): 2460
Top Elevation (ft): 1230

Bottom Elevation (ft): 818
 Contributing Area (acres): 77.6
 Percent of Sub-Area (%): 98.6
 Overland Type: Mountain
 Map Slope: 0.1675
 Effective Slope: 0.1422
 Q for Flow Path (cfs): 277.81
 Q Top (cfs): 3.94
 Q Bottom (cfs): 281.75
 Velocity Top (ft/s): 3.33
 Velocity Bottom (ft/s): 13.82
 Avg Velocity (ft/s): 8.57
 wave Velocity (ft/s): 12.86

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 Sub-Area Name: 56f
 Tc: 5.836 Minutes
 DATA FOR SUB AREA 14

 SUB AREA TIME OF CONCENTRATION: 5.836 min. = 6 min.

 SUB AREA INPUT DATA

 Sub Area Name: 56f
 Total Area (ac): 86
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

 Intensity (in/hr): 4.590
 C Total: 0.881
 Sum Q Segments (cfs): 347.76
 Q Total (cfs): 347.76
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 350.15
 Time of Concentration (min): 5.836

 DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.6732
 Flow Type: Overland
 Length (ft): 353
 Top Elevation (ft): 1240
 Bottom Elevation (ft): 1040
 Contributing Area (acres): 0.6
 Percent of Sub-Area (%): 0.7
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5666
 Effective Slope: 0.2240
 Q for Flow Path (cfs): 2.43
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.45

 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.1626
 Flow Type: Natural Channel
 Length (ft): 2160
 Top Elevation (ft): 1040
 Bottom Elevation (ft): 800
 Contributing Area (acres): 85.4
 Percent of Sub-Area (%): 99.3
 Overland Type: Mountain
 Map Slope: 0.1111
 Effective Slope: 0.1051
 Q for Flow Path (cfs): 345.33
 Q Top (cfs): 2.43

Q Bottom (cfs): 347.76
 Velocity Top (ft/s): 2.44
 Velocity Bottom (ft/s): 12.74
 Avg Velocity (ft/s): 7.59
 Wave Velocity (ft/s): 11.38

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 Sub-Area Name: 59B
 Tc: 5.149 Minutes
 DATA FOR SUB AREA 15

 SUB AREA TIME OF CONCENTRATION: 5.149 min. = 5 min.

 SUB AREA INPUT DATA

 Sub Area Name: 59B
 Total Area (ac): 39.6
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

 Intensity (in/hr): 5.100
 C Total: 0.891
 Sum Q Segments (cfs): 180.01
 Q Total (cfs): 180.01
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 308.94
 Time of Concentration (min): 5.149

 DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.1806
 Flow Type: Overland
 Length (ft): 420
 Top Elevation (ft): 1090
 Bottom Elevation (ft): 870
 Contributing Area (acres): 2
 Percent of Sub-Area (%): 5.1
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5238
 Effective Slope: 0.2224
 Q for Flow Path (cfs): 9.09
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour velocity (ft/sec): 5.30

 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.9684
 Flow Type: Natural Channel
 Length (ft): 1360
 Top Elevation (ft): 870
 Bottom Elevation (ft): 678
 Contributing Area (acres): 37.6
 Percent of Sub-Area (%): 94.9
 Overland Type: Mountain
 Map Slope: 0.1412
 Effective slope: 0.1261
 Q for Flow Path (cfs): 170.92
 Q Top (cfs): 9.09
 Q Bottom (cfs): 180.01
 Velocity Top (ft/s): 4.15
 Velocity Bottom (ft/s): 11.21
 Avg Velocity (ft/s): 7.68
 Wave Velocity (ft/s): 11.52

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Sub-Area Name: 64B
 Tc: 5.095 Minutes
 DATA FOR SUB AREA 16

SUB AREA TIME OF CONCENTRATION: 5.095 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: 64B
 Total Area (ac): 65.7
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 1.70
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.906
 Sum Q Segments (cfs): 303.64
 Q Total (cfs): 303.64
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 305.71
 Time of Concentration (min): 5.095

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.4612
 Flow Type: Overland
 Length (ft): 325
 Top Elevation (ft): 1171
 Bottom Elevation (ft): 990
 Contributing Area (acres): 1.4
 Percent of Sub-Area (%): 2.1
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5569
 Effective Slope: 0.2237
 Q for Flow Path (cfs): 6.47
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour velocity (ft/sec): 4.75

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.6339
 Flow Type: Natural Channel
 Length (ft): 2010
 Top Elevation (ft): 990
 Bottom Elevation (ft): 710
 Contributing Area (acres): 64.3
 Percent of Sub-Area (%): 97.9
 Overland Type: Mountain
 Map Slope: 0.1393
 Effective Slope: 0.1248
 Q for Flow Path (cfs): 297.17
 Q Top (cfs): 6.47
 Q Bottom (cfs): 303.64
 Velocity Top (ft/s): 3.68
 Velocity Bottom (ft/s): 13.27
 Avg Velocity (ft/s): 8.48
 Wave Velocity (ft/s): 12.72

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Sub-Area Name: 69A
 Tc: 7.759 Minutes
 DATA FOR SUB AREA 17

SUB AREA TIME OF CONCENTRATION: 7.759 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: 69A
 Total Area (ac): 50.05
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.10
 Percent Impervious: 0

SUB AREA OUTPUT

 Intensity (in/hr): 3.953
 C Total: 0.861
 Sum Q Segments (cfs): 170.35
 Q Total (cfs): 170.35
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 465.54
 Time of Concentration (min): 7.759

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.9421
 Flow Type: Overland
 Length (ft): 390
 Top Elevation (ft): 1100
 Bottom Elevation (ft): 970
 Contributing Area (acres): 1.15
 Percent of Sub-Area (%): 2.3
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.3333
 Effective Slope: 0.2038
 Q for Flow Path (cfs): 3.91
 Avg Velocity (ft/s): 2.21
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.90

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.8169
 Flow Type: Natural Channel
 Length (ft): 3000
 Top Elevation (ft): 970
 Bottom Elevation (ft): 570
 Contributing Area (acres): 48.9
 Percent of Sub-Area (%): 97.7
 Overland Type: Mountain
 Map Slope: 0.1333
 Effective Slope: 0.1209
 Q for Flow Path (cfs): 166.43
 Q Top (cfs): 3.91
 Q Bottom (cfs): 170.35
 Velocity Top (ft/s): 3.07
 Velocity Bottom (ft/s): 10.77
 Avg Velocity (ft/s): 6.92
 Wave Velocity (ft/s): 10.38
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Sub-Area Name: 70C
 Tc: 10.045 Minutes
 DATA FOR SUB AREA 18

 SUB AREA TIME OF CONCENTRATION: 10.045 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: 70C
 Total Area (ac): 58.52
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100

Development Type: Undeveloped
 Soil Type: 2.20
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 3.570
 C Total: 0.842
 Sum Q Segments (cfs): 176.00
 Q Total (cfs): 176.00
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 602.68
 Time of Concentration (min): 10.045

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 6.2737
 Flow Type: Overland
 Length (ft): 620
 Top Elevation (ft): 1350
 Bottom Elevation (ft): 1235
 Contributing Area (acres): 2.12
 Percent of Sub-Area (%): 3.6
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.1855
 Effective Slope: 0.1520
 Q for Flow Path (cfs): 6.38
 Avg Velocity (ft/s): 1.65
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.96

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.7710
 Flow Type: Natural Channel
 Length (ft): 2688
 Top Elevation (ft): 1235
 Bottom Elevation (ft): 775
 Contributing Area (acres): 56.4
 Percent of Sub-Area (%): 96.4
 Overland Type: Mountain
 Map Slope: 0.1711
 Effective Slope: 0.1442
 Q for Flow Path (cfs): 169.63
 Q Top (cfs): 6.38
 Q Bottom (cfs): 176.00
 Velocity Top (ft/s): 3.94
 Velocity Bottom (ft/s): 11.90
 Avg Velocity (ft/s): 7.92
 wave velocity (ft/s): 11.88
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Sub-Area Name: 74c
 Tc: 5.294 Minutes
 DATA FOR SUB AREA 19

SUB AREA TIME OF CONCENTRATION: 5.294 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: 74c
 Total Area (ac): 20
 Flood Zone: 3
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.891
 Sum Q Segments (cfs): 90.91

Q Total (cfs): 90.91
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 317.64
 Time of Concentration (min): 5.294

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.5838
 Flow Type: Overland
 Length (ft): 261
 Top Elevation (ft): 930
 Bottom Elevation (ft): 880
 Contributing Area (acres): 0.4
 Percent of Sub-Area (%): 2.0
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.1916
 Effective Slope: 0.1552
 Q for Flow Path (cfs): 1.82
 Avg Velocity (ft/s): 1.68
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 2.59

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.7102
 Flow Type: Natural Channel
 Length (ft): 1476
 Top Elevation (ft): 880
 Bottom Elevation (ft): 630
 Contributing Area (acres): 19.6
 Percent of Sub-Area (%): 98.0
 Overland Type: Mountain
 Map Slope: 0.1694
 Effective Slope: 0.1433
 Q for Flow Path (cfs): 89.09
 Q Top (cfs): 1.82
 Q Bottom (cfs): 90.91
 Velocity Top (ft/s): 2.59
 Velocity Bottom (ft/s): 9.52
 Avg Velocity (ft/s): 6.05
 Wave Velocity (ft/s): 9.08

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Sub-Area Name: 80A
 Tc: 6.361 Minutes
 DATA FOR SUB AREA 20

SUB AREA TIME OF CONCENTRATION: 6.361 min. = 6 min.

 SUB AREA INPUT DATA

Sub Area Name: 80A
 Total Area (ac): 82.85
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.40
 Percent Impervious: 0

SUB AREA OUTPUT

Intensity (in/hr): 4.590
 C Total: 0.861
 Sum Q Segments (cfs): 327.29
 Q Total (cfs): 327.29
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 381.64
 Time of Concentration (min): 6.361

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 3.0291
 Flow Type: Overland
 Length (ft): 400
 Top Elevation (ft): 1030
 Bottom Elevation (ft): 820
 Contributing Area (acres): 2.1
 Percent of Sub-Area (%): 2.5
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5250
 Effective Slope: 0.2225
 Q for Flow Path (cfs): 8.30
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 5.18

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3316
 Flow Type: Natural Channel
 Length (ft): 2520
 Top Elevation (ft): 820
 Bottom Elevation (ft): 510
 Contributing Area (acres): 80.75
 Percent of Sub-Area (%): 97.5
 Overland Type: Mountain
 Map Slope: 0.1230
 Effective Slope: 0.1137
 Q for Flow Path (cfs): 318.99
 Q Top (cfs): 8.30
 Q Bottom (cfs): 327.29
 Velocity Top (ft/s): 3.82
 Velocity Bottom (ft/s): 12.99
 Avg Velocity (ft/s): 8.40
 Wave Velocity (ft/s): 12.61
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Sub-Area Name: 87A
 Tc: 6.657 Minutes
 DATA FOR SUB AREA 21

SUB AREA TIME OF CONCENTRATION: 6.657 min. = 7 min.

 SUB AREA INPUT DATA

Sub Area Name: 87A
 Total Area (ac): 92.9
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0

SUB AREA OUTPUT
 Intensity (in/hr): 4.226
 C Total: 0.873
 Sum Q Segments (cfs): 342.70
 Q Total (cfs): 342.70
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 399.42
 Time of Concentration (min): 6.657

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.1204
 Flow Type: Overland
 Length (ft): 280
 Top Elevation (ft): 1110
 Bottom Elevation (ft): 950
 Contributing Area (acres): 1.2
 Percent of Sub-Area (%): 1.3
 Overland Type: Mountain

Development Type: Undeveloped
 Map Slope: 0.5714
 Effective Slope: 0.2242
 Q for Flow Path (cfs): 4.43
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 4.25

 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.5366
 Flow Type: Natural Channel
 Length (ft): 3434
 Top Elevation (ft): 950
 Bottom Elevation (ft): 490
 Contributing Area (acres): 91.7
 Percent of Sub-Area (%): 98.7
 Overland Type: Mountain
 Map Slope: 0.1340
 Effective Slope: 0.1213
 Q for Flow Path (cfs): 338.27
 Q Top (cfs): 4.43
 Q Bottom (cfs): 342.70
 Velocity Top (ft/s): 3.20
 Velocity Bottom (ft/s): 13.62
 Avg Velocity (ft/s): 8.41
 Wave Velocity (ft/s): 12.62
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Sub-Area Name: 90E
 Tc: 5.239 Minutes
 DATA FOR SUB AREA 22

SUB AREA TIME OF CONCENTRATION: 5.239 min. = 5 min.

 SUB AREA INPUT DATA

Sub Area Name: 90E
 Total Area (ac): 39
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.891
 Sum Q Segments (cfs): 177.28
 Q Total (cfs): 177.28
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 314.33
 Time of Concentration (min): 5.239

 DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.2563
 Flow Type: Overland
 Length (ft): 430
 Top Elevation (ft): 983
 Bottom Elevation (ft): 810
 Contributing Area (acres): 1.7
 Percent of Sub-Area (%): 4.4
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.4023
 Effective Slope: 0.2145
 Q for Flow Path (cfs): 7.73
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 4.93

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.9824
 Flow Type: Natural Channel
 Length (ft): 1440
 Top Elevation (ft): 810
 Bottom Elevation (ft): 563
 Contributing Area (acres): 37.3
 Percent of Sub-Area (%): 95.6
 Overland Type: Mountain
 Map Slope: 0.1715
 Effective Slope: 0.1445
 Q for Flow Path (cfs): 169.55
 Q Top (cfs): 7.73
 Q Bottom (cfs): 177.28
 Velocity Top (ft/s): 4.21
 Velocity Bottom (ft/s): 11.94
 Avg Velocity (ft/s): 8.07
 Wave Velocity (ft/s): 12.11
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Sub-Area Name: 94A
 Tc: 5.336 Minutes
 DATA FOR SUB AREA 23

SUB AREA TIME OF CONCENTRATION: 5.336 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: 94A
 Total Area (ac): 61
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.50
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.866
 Sum Q Segments (cfs): 269.43
 Q Total (cfs): 269.43
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 320.18
 Time of Concentration (min): 5.336

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.3476
 Flow Type: Overland
 Length (ft): 310
 Top Elevation (ft): 1010
 Bottom Elevation (ft): 830
 Contributing Area (acres): 0.6
 Percent of Sub-Area (%): 1.0
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5806
 Effective Slope: 0.2246
 Q for Flow Path (cfs): 2.65
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.53

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.9888
 Flow Type: Natural Channel
 Length (ft): 2220
 Top Elevation (ft): 830
 Bottom Elevation (ft): 460

Contributing Area (acres): 60.4
 Percent of Sub-Area (%): 99.0
 Overland Type: Mountain
 Map Slope: 0.1667
 Effective Slope: 0.1417
 Q for Flow Path (cfs): 266.78
 Q Top (cfs): 2.65
 Q Bottom (cfs): 269.43
 Velocity Top (ft/s): 2.92
 Velocity Bottom (ft/s): 13.59
 Avg Velocity (ft/s): 8.25
 Wave Velocity (ft/s): 12.38

Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

 Sub-Area Name: 104A
 Tc: 6.910 Minutes
 DATA FOR SUB AREA 24

SUB AREA TIME OF CONCENTRATION: 6.910 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: 104A
 Total Area (ac): 82.2
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.10
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 4.226
 C Total: 0.868
 Sum Q Segments (cfs): 301.44
 Q Total (cfs): 301.44
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 414.59
 Time of Concentration (min): 6.910

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.3854
 Flow Type: Overland
 Length (ft): 315
 Top Elevation (ft): 980
 Bottom Elevation (ft): 810
 Contributing Area (acres): 1.1
 Percent of Sub-Area (%): 1.3
 Overland Type: Mountain
 Development Type: Undeveloped
 Map Slope: 0.5397
 Effective Slope: 0.2230
 Q for Flow Path (cfs): 4.03
 Avg Velocity (ft/s): 2.20
 Passed Scour Check: YES
 Scour velocity (ft/sec): 4.10

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.5244
 Flow Type: Natural Channel
 Length (ft): 3225
 Top Elevation (ft): 810
 Bottom Elevation (ft): 400
 Contributing Area (acres): 81.1
 Percent of Sub-Area (%): 98.7
 Overland Type: Mountain
 Map Slope: 0.1271
 Effective Slope: 0.1166
 Q for Flow Path (cfs): 297.40
 Q Top (cfs): 4.03
 Q Bottom (cfs): 301.44

Velocity Top (ft/s): 3.04
 Velocity Bottom (ft/s): 12.80
 Avg Velocity (ft/s): 7.92
 Wave Velocity (ft/s): 11.88

‡
 Project: Adams Barranca
 Date: 11/14/2011 4:04:17 PM
 Engineer: Kinsey Hensley
 Consultant: Jensen

 Sub-Area Name: 111a
 Tc: 21.096 Minutes
 DATA FOR SUB AREA 25

SUB AREA TIME OF CONCENTRATION: 21.096 min. = 21 min.

SUB AREA INPUT DATA

Sub Area Name: 111a
 Total Area (ac): 55
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 2.90
 Percent Impervious: 10
 SUB AREA OUTPUT

Intensity (in/hr): 2.426
 C Total: 0.766
 Sum Q Segments (cfs): 102.15
 Q Total (cfs): 102.15
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,265.78
 Time of Concentration (min): 21.096

DATA FOR FLOW PATH 1

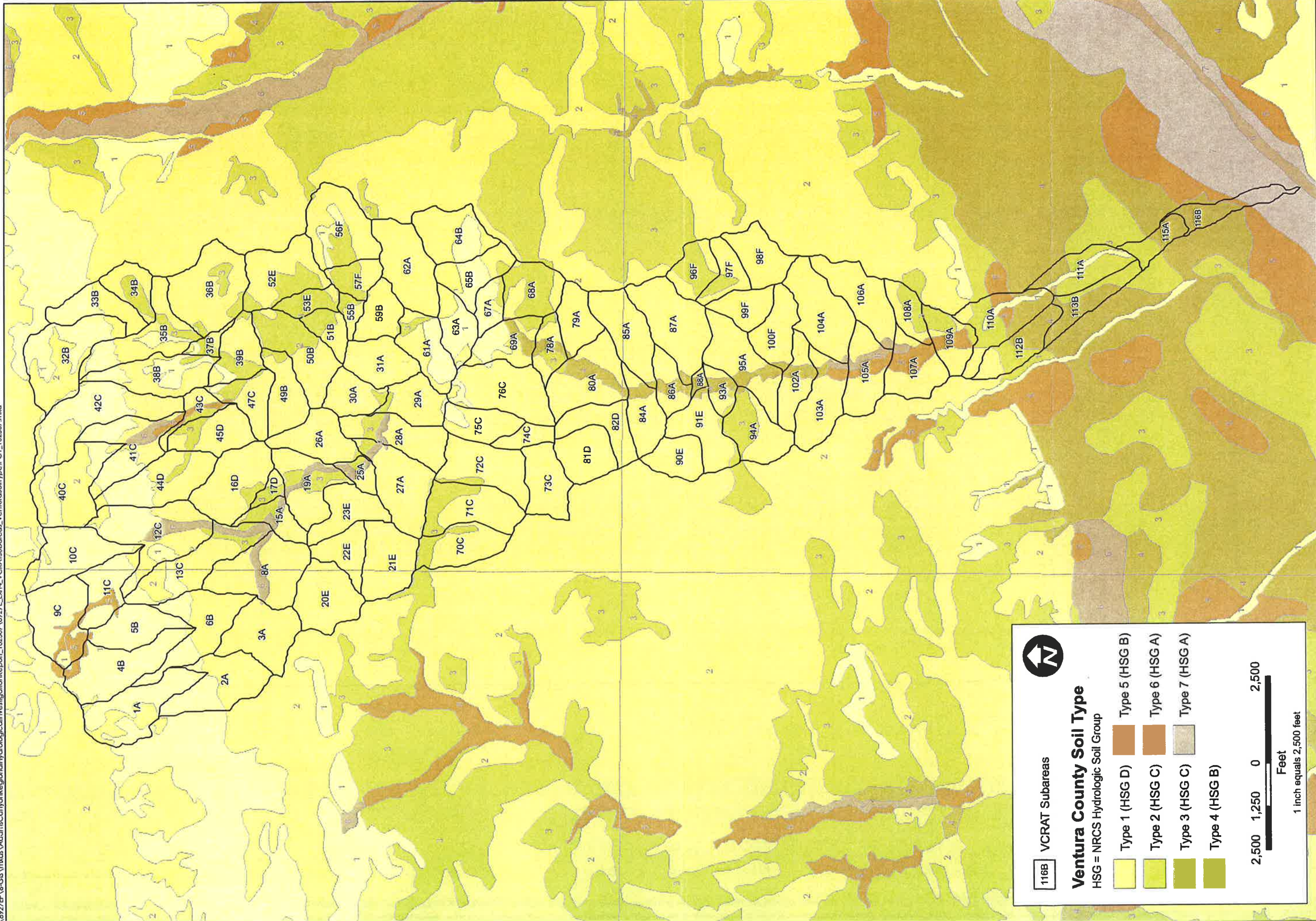
Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 10.1584
 Flow Type: Overland
 Length (ft): 500
 Top Elevation (ft): 290
 Bottom Elevation (ft): 280
 Contributing Area (acres): 1.2
 Percent of Sub-Area (%): 2.2
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0200
 Effective Slope: 0.0200
 Q for Flow Path (cfs): 2.23
 Avg Velocity (ft/s): 0.82
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 2.51

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 10.9380
 Flow Type: Natural Channel
 Length (ft): 3460
 Top Elevation (ft): 280
 Bottom Elevation (ft): 240
 Contributing Area (acres): 53.8
 Percent of Sub-Area (%): 97.8
 Overland Type: Valley
 Map Slope: 0.0116
 Effective Slope: 0.0116
 Q for Flow Path (cfs): 99.93
 Q Top (cfs): 2.23
 Q Bottom (cfs): 102.15
 Velocity Top (ft/s): 1.89
 Velocity Bottom (ft/s): 5.14
 Avg Velocity (ft/s): 3.51
 Wave Velocity (ft/s): 5.27

APPENDIX I

8927E\6-GS\mxd\Acad\nt\CanyonRegionalHydrologicalInvestigation\Report_102507\8927E_Ext4_VCRATSubareas_VenturaSoilType-rCl_102507.mxd



VCRAT Subareas

Ventura County Soil Type
HSG = NRCS Hydrologic Soil Group

- Type 1 (HSG D) Type 5 (HSG B)
- Type 2 (HSG C) Type 6 (HSG A)
- Type 3 (HSG C) Type 7 (HSG A)
- Type 4 (HSG B)

SCALE 1" = 2500'

DESIGNED PC
DRAWING PC
CHECKED AH
DATE 10/25/07
JOB NO. 8627-E

2,500 1,250 0 2,500
Feet
1 inch equals 2,500 feet

FIGURE 4

PACE
PACIFIC ADVANCED
CIVIL ENGINEERING
17530 NEWHOPE STREET, SUITE 200
FOUNTAINE VALLEY, CA 92708
PH: (714) 941-2300 FAX: (714) 941-2309

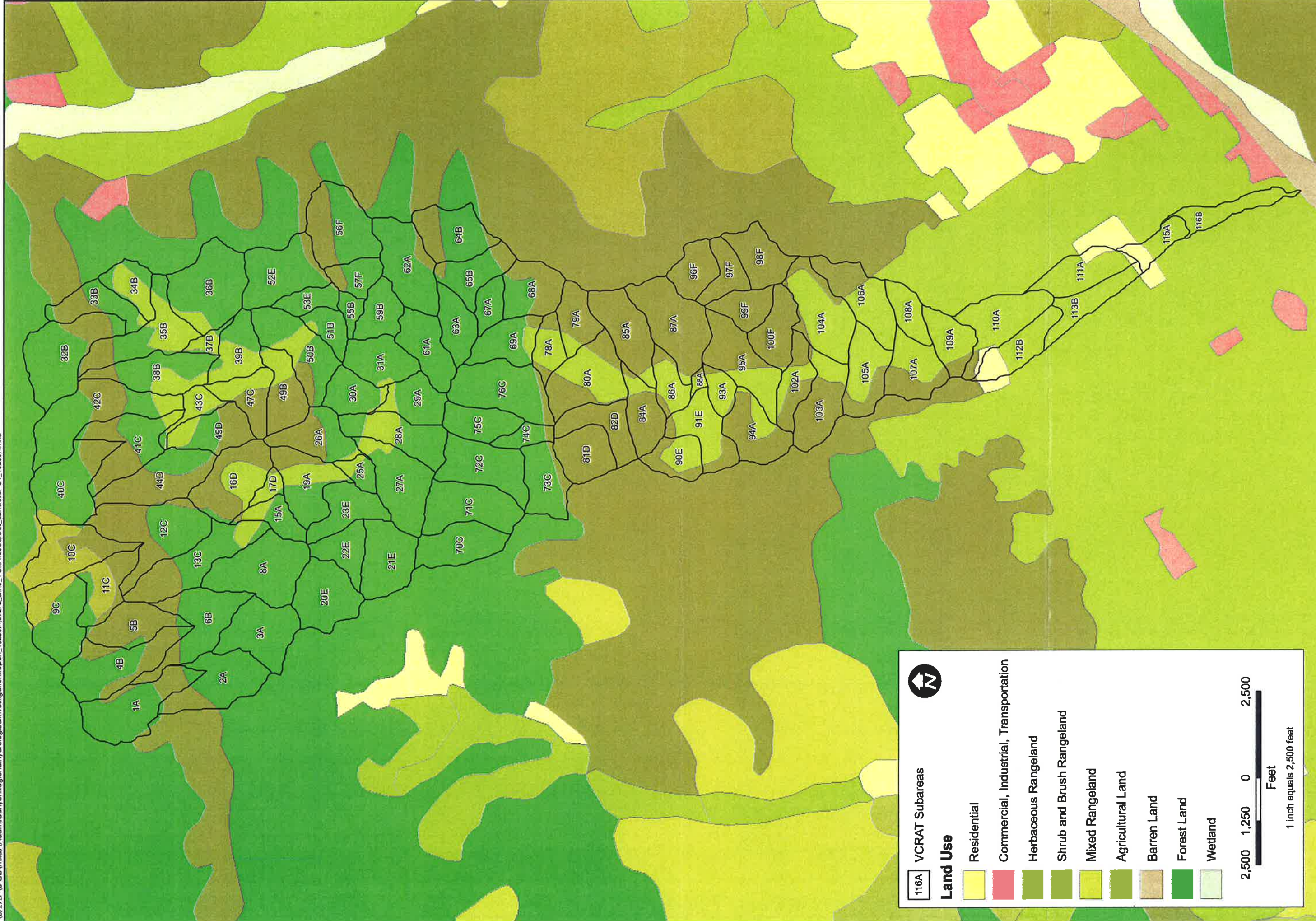
JOB NO. 8627-E
DATE 10/25/07
CHECKED AH
DRAWING PC
DESIGNED PC
SCALE 1" = 2500'

ADAMS CANYON RANCH

TITLE
**VENTURA COUNTY SOIL TYPES
WITH VCRAT SUBAREAS**

SANTA PAULA CA

\\8927EP\6-GIS\mxd\Acadms\CanyonRegion\HydrologicalInvestigation\Report_102507\8927E_Ext5_VCRATSubareas_LandUsePCL_10_307.mxd



VCRAT Subareas

Land Use

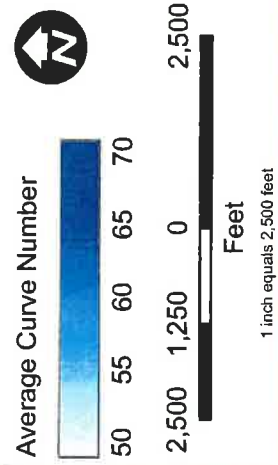
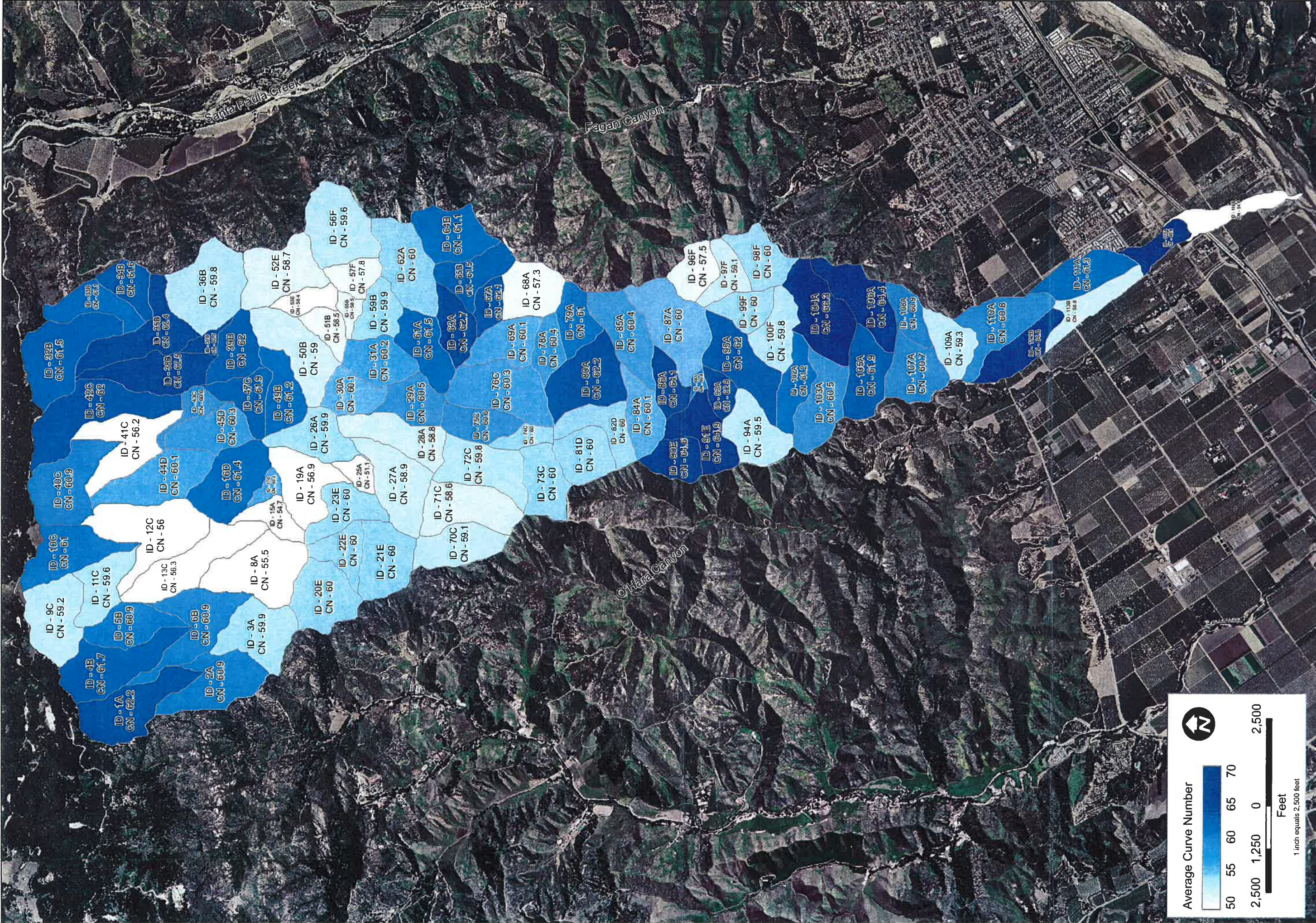
- Residential
- Commercial, Industrial, Transportation
- Herbaceous Rangeland
- Shrub and Brush Rangeland
- Mixed Rangeland
- Agricultural Land
- Barren Land
- Forest Land
- Wetland

2,500 1,250 0 2,500

Feet

1 inch equals 2,500 feet

\\snp27p1\GIS\mxd\AcornisCanyonRegionalHydrologicInvestigationReport_102507\8927E_Enh_VCRATSubareas_CurveNumbers\1_102507.mxd



PACE
PACIFIC ADVANCED
CIVIL ENGINEERING
 17520 NEWHIDE STREET, SUITE 200
 FOUNTAIN VALLEY, CA 92708
 PH 714.951.7300 FAX 714.951.7299

SCALE 1" = 2500'
 DESIGNED PC
 DRAWING PC
 CHECKED AM
 DATE 10/25/07
 JOB NO 8927-E

ADAMS CANYON RANCH

VCRAT SUBAREAS WITH AVERAGE CURVE NUMBER

SANTA PAULA CA

TITLE

A. Node 16 Calculations

Subarea ID	Area (acres)	Curve Number	CN x A
1A	85.4	62.18	5312.7
2A	78.9	60.91	4803.9
3A	72.9	59.87	4361.8
4B	87.8	61.75	5419.1
5B	54.0	60.91	3291.4
6B	80.2	60.89	4881.1
8A	94.5	55.48	5244.8
9C	78.8	59.24	4666.2
10C	73.1	61.00	4456.6
11C	51.0	59.58	3036.3
12C	108.1	55.97	6049.2
13C	86.5	56.35	4876.1
Composite CN =			59.3
S =			6.9
100-yr, 24-hr Precipitation, P(in.) =			12.07
Fattening factor			6.5

B. Node 48 Calculations

Subarea ID	Area (acres)	Curve Number	CN x A
32B	99.3	61.50	6107.0
33B	47.1	61.07	2876.7
34B	35.5	61.64	2190.0
35B	77.5	62.43	4841.4
36B	99.6	59.83	5961.7
37B	13.1	62.52	818.2
38B	70.9	62.55	4435.3
39B	48.8	61.97	3026.0
40C	86.7	60.89	5280.8
41C	75.8	56.20	4258.0
42C	107.2	62.03	6652.7
43C	22.5	60.56	1364.0
44D	79.9	60.11	4801.9
45D	54.4	60.30	3280.7
47C	42.6	61.86	2632.5
Composite CN =			60.9
S =			6.42
100-yr, 24-hr Precipitation, P(in.) =			11.66
Fattening factor			6.4

C. Node 60 Calculations

Subarea ID	Area (acres)	Curve Number	CN x A
1A	85.4	62.18	5312.7
2A	78.9	60.91	4803.9
3A	72.9	59.87	4361.8
4B	87.8	61.75	5419.1
5B	54.0	60.91	3291.4
6B	80.2	60.89	4881.1
8A	94.5	55.48	5244.8
9C	78.8	59.24	4666.2
10C	73.1	61.00	4456.6
11C	51.0	59.58	3036.3
12C	108.1	55.97	6049.2
13C	86.5	56.35	4876.1
15A	30.0	54.69	1639.9
16D	80.4	61.37	4936.9
17D	12.2	60.19	731.8
19A	66.4	56.86	3775.0
20E	70.8	60.00	4245.4
21E	67.5	59.97	4050.5
22E	38.8	60.00	2329.1
23E	49.6	60.00	2973.4
25A	18.0	51.06	921.2
26A	55.8	59.93	3346.8
27A	79.2	58.87	4664.9
28A	64.0	58.80	3761.1
29A	46.4	60.54	2808.4
30A	40.3	60.07	2419.2
31A	52.8	60.16	3176.8
32B	99.3	61.50	6107.0
33B	47.1	61.07	2876.7
34B	35.5	61.64	2190.0
35B	77.5	62.43	4841.4
36B	99.6	59.83	5961.7
37B	13.1	62.52	818.2
38B	70.9	62.55	4435.3
39B	48.8	61.97	3026.0
40C	86.7	60.89	5280.8
41C	75.8	56.20	4258.0
42C	107.2	62.03	6652.7
43C	22.5	60.56	1364.0
44D	79.9	60.11	4801.9
45D	54.4	60.30	3280.7
47C	42.6	61.86	2632.5
49B	50.1	61.16	3062.9
50B	78.8	58.99	4645.6
51B	27.5	58.48	1606.1
52E	78.6	58.68	4612.2
53E	25.3	56.41	1424.6
55B	13.7	58.50	802.4
56F	87.5	59.59	5213.4
57F	30.0	57.80	1736.4
59B	39.7	59.93	2377.1
Composite CN =			59.8
S =			6.73
100-yr, 24-hr Precipitation, P(in.) =			11.53
Fattening factor			6.1

D. Basin 109 calculations

Subarea ID	Area (acres)	Curve Number	CN x A
1A	85.4	62.18	5312.7
2A	78.9	60.91	4803.9
3A	72.9	59.87	4361.8
4B	87.8	61.75	5419.1
5B	54.0	60.91	3291.4
6B	80.2	60.89	4881.1
8A	94.5	55.48	5244.8
9C	78.8	59.24	4666.2
10C	73.1	61.00	4456.6
11C	51.0	59.58	3036.3
12C	108.1	55.97	6049.2
13C	86.5	56.35	4876.1
15A	30.0	54.69	1639.9
16D	80.4	61.37	4936.9
17D	12.2	60.19	731.8
19A	66.4	56.86	3775.0
20E	70.8	60.00	4245.4
21E	67.5	59.97	4050.5
22E	38.8	60.00	2329.1
23E	49.6	60.00	2973.4
25A	18.0	51.06	921.2
26A	55.8	59.93	3346.8
27A	79.2	58.87	4664.9
28A	64.0	58.80	3761.1
29A	46.4	60.54	2808.4
30A	40.3	60.07	2419.2
31A	52.8	60.16	3176.8
32B	99.3	61.50	6107.0
33B	47.1	61.07	2876.7
34B	35.5	61.64	2190.0
35B	77.5	62.43	4841.4
36B	99.6	59.83	5961.7
37B	13.1	62.52	818.2
38B	70.9	62.55	4435.3
39B	48.8	61.97	3026.0
40C	86.7	60.89	5280.8
41C	75.8	56.20	4258.0
42C	107.2	62.03	6652.7
43C	22.5	60.56	1364.0
44D	79.9	60.11	4801.9
45D	54.4	60.30	3280.7
47C	42.6	61.86	2632.5
49B	50.1	61.16	3062.9
50B	78.8	58.99	4645.6
51B	27.5	58.48	1606.1
52E	78.6	58.68	4612.2
53E	25.3	56.41	1424.6
55B	13.7	58.50	802.4
56F	87.5	59.59	5213.4
57F	30.0	57.80	1736.4
59B	39.7	59.93	2377.1
61A	54.92	61.47	3375.9
62A	79.85	60.00	4791.0
63A	41.33	62.74	2592.9
64B	65.79	61.09	4019.0
65B	48.97	61.55	3013.7
67A	24.33	62.13	1511.4
68A	56.79	57.30	3253.6
69A	50.07	60.10	3008.8
70C	58.51	59.08	3457.0
71C	75.32	58.65	4417.5
72C	73.63	59.77	4400.3
73C	54.01	60.00	3240.6
74C	19.96	60.00	1197.9
75C	42.62	60.61	2583.4
76C	89.31	60.27	5382.6
78A	29.76	60.44	1798.8
79A	41.21	61.02	2514.8
80A	82.91	62.24	5160.2
81D	51.31	60.00	3078.3
82D	47.34	60.00	2840.6
84A	46.26	60.08	2779.1
85A	67.30	60.41	4065.4
86A	32.68	64.12	2095.3
87A	92.86	60.00	5571.9
88A	5.49	60.91	334.4
90E	39.00	64.57	2518.1
91E	58.74	64.92	3813.5
93A	21.77	62.94	1370.3
94A	61.03	59.48	3629.9
95A	74.71	62.00	4631.5
96F	39.36	57.55	2264.7
97F	33.16	59.06	1958.5
98F	49.59	60.00	2975.5
99F	35.96	60.00	2157.6
100F	48.28	59.83	2888.7
102A	42.05	61.15	2571.8
103A	64.87	60.47	3923.0
104A	82.19	66.35	5453.5
105A	60.30	61.88	3731.5
106A	69.42	64.44	4473.3
107A	57.79	60.70	3508.0
108A	31.00	60.86	1886.9
109A	41.88	59.31	2484.1
Composite CN =			60.3
S =			6.60

100-yr, 24-hr Precipitation, P(in.) = 10.77
Fattening factor = 5.6

E. Basin 116 calculations

Subarea ID	Area (acres)	Curve Number	CN x A
1A	85.4	62.18	5312.7
2A	78.9	60.91	4803.9
3A	72.9	59.87	4361.8
4B	87.8	61.75	5419.1
5B	54.0	60.91	3291.4
6B	80.2	60.89	4881.1
8A	94.5	55.48	5244.8
9C	78.8	59.24	4666.2
10C	73.1	61.00	4456.6
11C	51.0	59.58	3036.3
12C	108.1	55.97	6049.2
13C	86.5	56.35	4876.1
15A	30.0	54.69	1639.9
16D	80.4	61.37	4936.9
17D	12.2	60.19	731.8
19A	66.4	56.86	3775.0
20E	70.8	60.00	4245.4
21E	67.5	59.97	4050.5
22E	38.8	60.00	2329.1
23E	49.6	60.00	2973.4
25A	18.0	51.06	921.2
26A	55.8	59.93	3346.8
27A	79.2	58.87	4664.9
28A	64.0	58.80	3761.1
29A	46.4	60.54	2808.4
30A	40.3	60.07	2419.2
31A	52.8	60.16	3176.8
32B	99.3	61.50	6107.0
33B	47.1	61.07	2876.7
34B	35.5	61.64	2190.0
35B	77.5	62.43	4841.4
36B	99.6	59.83	5961.7
37B	13.1	62.52	818.2
38B	70.9	62.55	4435.3
39B	48.8	61.97	3026.0
40C	86.7	60.89	5280.8
41C	75.8	56.20	4258.0
42C	107.2	62.03	6652.7
43C	22.5	60.56	1364.0
44D	79.9	60.11	4801.9
45D	54.4	60.30	3280.7
47C	42.6	61.86	2632.5
49B	50.1	61.16	3062.9
50B	78.8	58.99	4645.6
51B	27.5	58.48	1606.1
52E	78.6	58.68	4612.2
53E	25.3	56.41	1424.6
55B	13.7	58.50	802.4
56F	87.5	59.59	5213.4
57F	30.0	57.80	1736.4
59B	39.7	59.93	2377.1
61A	54.92	61.47	3375.9
62A	79.85	60.00	4791.0
63A	41.33	62.74	2592.9
64B	65.79	61.09	4019.0
65B	48.97	61.55	3013.7
67A	24.33	62.13	1511.4
68A	56.79	57.30	3253.6
69A	50.07	60.10	3008.8
70C	58.51	59.08	3457.0
71C	75.32	58.65	4417.5
72C	73.63	59.77	4400.3
73C	54.01	60.00	3240.6
74C	19.96	60.00	1197.9
75C	42.62	60.61	2583.4
76C	89.31	60.27	5382.6
78A	29.76	60.44	1798.8
79A	41.21	61.02	2514.8
80A	82.91	62.24	5160.2
81D	51.31	60.00	3078.3
82D	47.34	60.00	2840.6
84A	46.26	60.08	2779.1
85A	67.30	60.41	4065.4
86A	32.68	64.12	2095.3
87A	92.86	60.00	5571.9
88A	5.49	60.91	334.4
90E	39.00	64.57	2518.1
91E	58.74	64.92	3813.5
93A	21.77	62.94	1370.3
94A	61.03	59.48	3629.9
95A	74.71	62.00	4631.5
96F	39.36	57.55	2264.7
97F	33.16	59.06	1958.5
98F	49.59	60.00	2975.5
99F	35.96	60.00	2157.6
100F	48.28	59.83	2888.7
102A	42.05	61.15	2571.8
103A	64.87	60.47	3923.0
104A	82.19	66.35	5453.5
105A	60.30	61.88	3731.5
106A	69.42	64.44	4473.3
107A	57.79	60.70	3508.0
108A	31.00	60.86	1886.9
110A	72.63	60.78	4414.2
111A	55.74	61.27	3415.3
112B	49.87	64.85	3233.8
113B	43.17	58.84	2540.4
115A	27.36	65.61	1800.4
116B	37.42	54.58	2042.3
Composite CN =			60.3
S =			6.59

100-yr, 24-hr Precipitation, P(in.) = 10.65
Fattening factor = 5.5



Santa Paula West Business Park Santa Paula, CA

February 3, 2011

Prepared by:



***Santa Paula West Business Park
Preliminary Drainage Report***

Santa Paula, CA

Prepared for:

***McGaelic Group
&
Bender Realty Ltd***

*June 2009
Updated February 2011*

Prepared by:

**Jensen Design & Survey, Inc
1672 Donlon Street
Ventura, CA 93003**

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APPENDIX

- A: Existing Hydrology Calculations
- B: Existing Hydrology Exhibit A
- C: Proposed Hydrology Calculations
- D: Proposed Hydrology Exhibit B
- E: Existing FIRM & Soils Maps
- F: HEC-RAS Analysis Maps and Calculations

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

Introduction

The Santa Paula West project is a planned commercial and industrial development containing a mixture of industrial, research and development, retail, office and commercial uses. The Specific Plan project site is located just outside the limits, but within the sphere of influence, of the City of Santa Paula. The land use is currently agricultural. The property is bounded by industrial development on the east, Adams Barranca on the west, Telegraph Road to the north, and Highway 126 to the south. Splitting the property east/west is the railroad operated by the Ventura County Transportation Commission Railroad (VCTC). The property ranges in elevation from approximately 250 to 222 feet above mean sea level and generally slopes from the north to the south. The Regional Location Map is shown below as Figure 1.

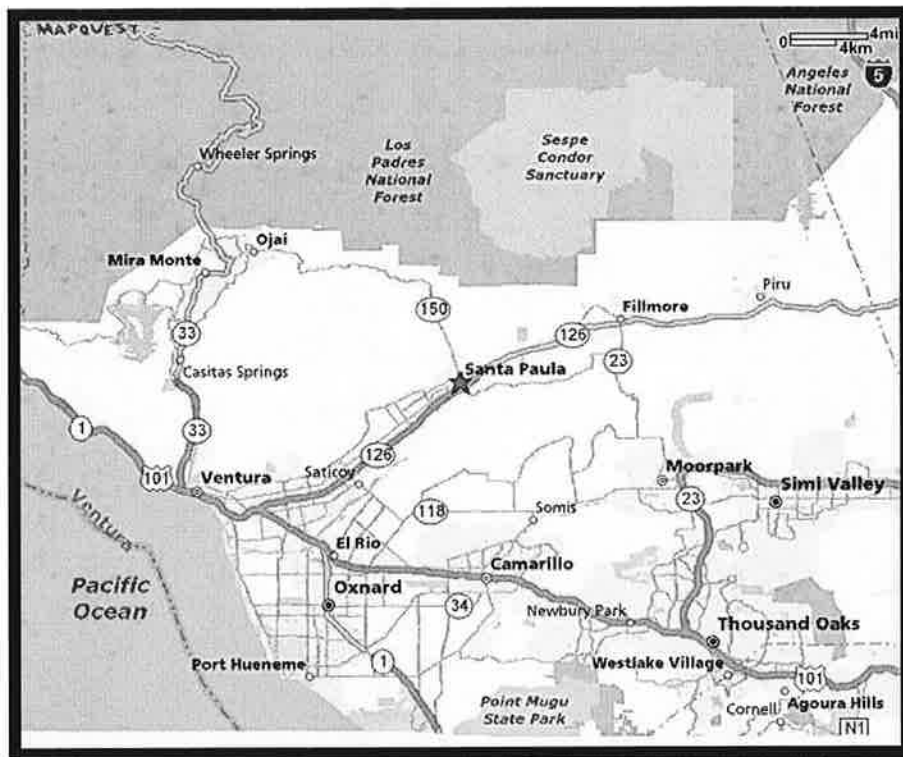


FIGURE 1 - REGIONAL LOCATION MAP

Project Description

The Santa Paula West Business Park Specific Plan encompasses approximately 58 acres of land in unincorporated Ventura County west of the City of Santa Paula. The proposed Specific Plan would permit the development of a variety of clean office, industrial and retail buildings ranging in size.

Access to the site is provided by Beckwith Road, Telegraph Road, and Faulkner Road. Secondary access is provided by Todd Lane (a private road). Figure 2 shows the project location.

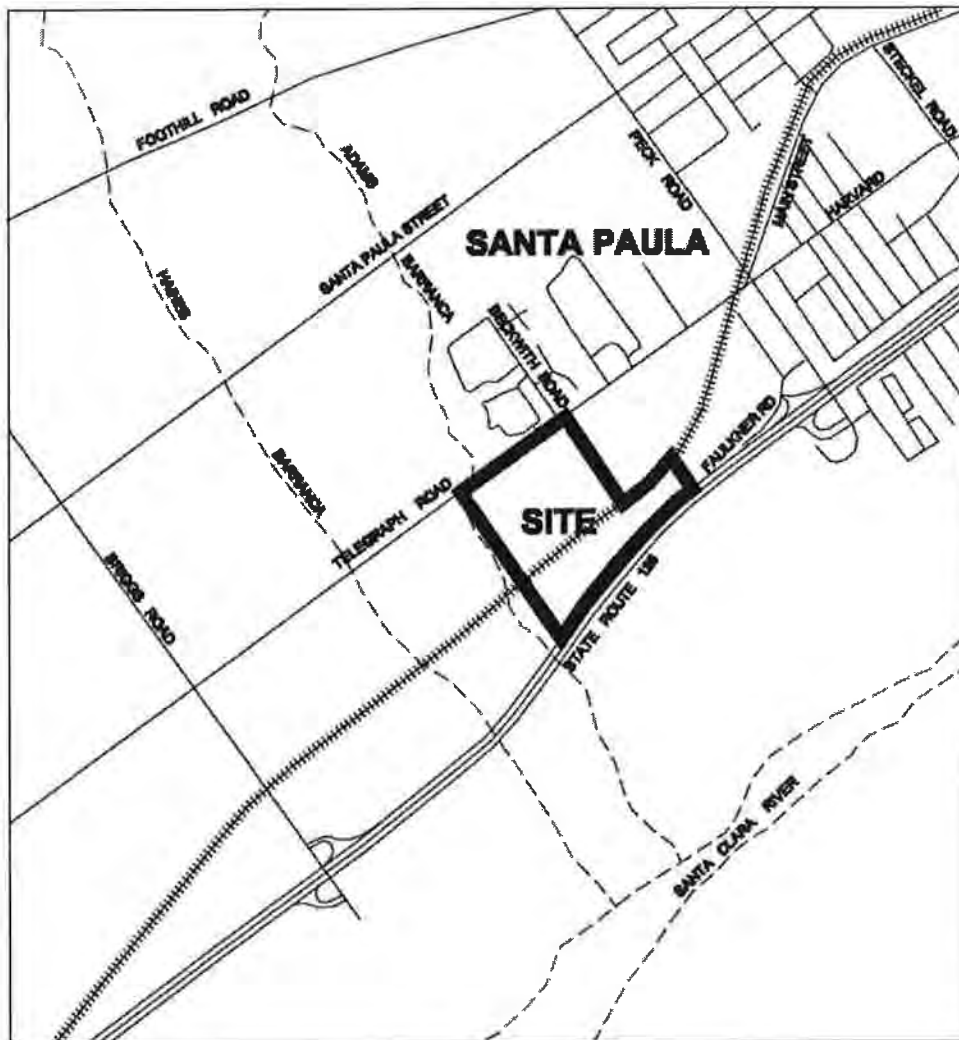


FIGURE 2 – PROJECT LOCATION MAP

Purpose

This study provides an evaluation of the existing drainage conditions and the design of a preliminary storm drain system within the Santa Paula West Business Park Specific Plan project. The general approach of the proposed condition is to maintain the existing drainage pattern without having adverse affects offsite.

Existing site conditions show that the project site is located in a floodplain, Zone A. Based on our analysis of Adams Canyon Barranca using flows generated by an Existing Condition study by Jensen Design & Survey currently being reviewed by the County of Ventura Watershed Protection District, the floodplain limits currently shown by FEMA are inaccurate. This report will summarize the flow information used in Adams Barranca for a HEC-RAS analysis and a CLOMR/LOMR will be filed at a later date to modify the current FIRM maps.

Future site runoff will be conveyed through the project via surface drainage and underground structures connecting into Adams Canyon Barranca and the existing culverts under Highway 126. This report includes hydrologic analysis and supporting calculations to demonstrate how the project's contributions to stormwater runoff resulting from development will be controlled and match existing conditions at major outlet points.

Hydrology Methodology

The existing conditions of the Santa Paula West Business Park Specific Plan were determined according to the Ventura County Watershed Protection District 2006 Hydrology Manual, the City of Santa Paula Master Plan for Drainage, the County's Time of Concentration Calculator, and Hec-Ras.

- Soil Group Types 3 & 4 are used for drainage areas in this study
- Existing condition coefficients were obtained from Appendix A, Exhibit 6A of the 'VCWPD Hydrology Manual'.
- Proposed condition coefficients were obtained from Appendix A, Exhibit 6A of the 'VCWPD Hydrology Manual'.
- Time of Concentration (Tc) values were calculated with the Tc Calculator program for each drainage area.

- Water quality treatment will either be flow based, volume based, or a combination of the two according to current SQUIMP guidelines at the time of Tentative Map submittal. Appendix D, Exhibit B shows various areas used for treatment, infiltration, and detention that will meet or exceed the County's SQUIMP requirements according to the Ventura County Technical Manual.

Existing Drainage Conditions

The Santa Paula West Business Park site is located within the greater Santa Clara River watershed. The onsite drainage is a tributary to the Santa Clara River, and has been divided into four drainage areas: Adams Canyon Barranca (Area A), Todd Lane Drain (Area D), Highway 126 West culverts (Area B), and Highway 126 east culverts (Area C). The limits of the drainage subareas were determined by a flown aerial topo (NGVD 1929 datum) and a site visit. In performing the hydrology analysis for the existing condition, all of the drainage areas within the property limits were analyzed for a ten through a hundred year storm events. The subarea properties and the calculated runoff are shown in **Table 1 and in Appendix A**.

The 58 acre project site is currently used for agriculture and varies in land gradient sloping north to south with the railroad and the Highway being higher than adjacent grade and acting as dams. The railroad has two culverts (2-12" CMP and 1-24" CMP) to transport the onsite water from the north to the south, not including the crossing for Adams Barranca. These culverts are about 50% blocked with sediment and currently do not function at capacity. There are also four existing culverts of various sizes under Highway 126 that are blocked with sediment and do not function at capacity, causing ponding north of the Highway during storm events. The outlets of the culverts are on the south side of Highway 126 and drain through historic agricultural drainage channels ending in the Santa Clara River and do not connect to Adams Barranca.

A small portion of the property drains west into Adams Barranca (**Area A on Exhibit A**). Adams Barranca is a raised channel with the top of the channel being an average 2.0' higher than the adjacent grade on the property. This property is subject to flooding during a 100 year storm event from Adams Barranca, according to the current FIRM maps (Map Numbers 06111C0778E and 06111C0779E – **Appendix E**). A HEC-RAS analysis was completed using flow information from a VcRAT analysis completed by Jensen Design & Survey to support a change in the floodplain limits. A more detailed analysis will be completed at the Tentative Map level of review and will be coordinated with the County and City. The existing condition report for the

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

flow rates used in the HEC-RAS analysis is currently being reviewed by the County Watershed Protection District.

The Highway 126 westerly culverts (1-24” CMP, and 1-48”x24” Arch CMP), drainage area B, handle the flows from approximately 27 acres. Overflow from pipe inlet blockage travels easterly to two other culverts under Highway 126 or farther east to the inlet at the end of Faulkner Road into a 72” RCP leading to Todd Lane Drain.

The Highway 126 easterly culverts (2-52”x30” Arch CMP), drainage areas C and D, handle the flows from approximately 31 acres. Overflow from pipe inlet blockage travels easterly to the inlet at the end of Faulkner Road into a 72” RCP leading to Todd Lane Drain.

The time of concentration for each overall drainage area within the property boundaries was calculated using VcRAT Time of Concentration calculator from Ventura County to obtain a time of concentration and a peak flow rate. That peak flow rate was used to calculate a cfs/acre which was then applied to each drainage subarea, respectively as shown in **Appendix A**.

The Santa Paula Master Storm Drain Plan shows 75% of the specific plan area to be draining to Todd Lane Drain. Todd Lane Drain has a maximum design capacity of 393 cfs in a 100 year storm. After an analysis of the onsite drainage patterns, Todd Lane Drain receives flows from the project site only in the event of blockage at the Highway 126 culverts.

The existing flow areas and peak flows for the existing condition are shown in Appendix A and Table 1.

Table 1 – Santa Paula West Business Park Specific Plan Existing Runoffs

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA	A	2.82	2.8	4.8	6.5
WEST 126 CULVERTS (2,8)	B1	16.28	11.2	21.6	28.4
	B2	10.88	7.4	14.4	18.8
	TOTAL	27.16	18.6	35.9	46.9
EAST 126 CULVERTS (5,6)	C1a	10.7	5.0	14.4	18.9
	C1b	4	1.9	5.5	7.3
	C1c	0.9	0.4	1.2	1.6
	C2	7.6	3.6	10.3	13.5
	D	7.3	7.9	14.0	19.6
	TOTAL	30.5	18.8	45.5	61.0

Proposed Drainage Conditions

The proposed grading and drainage (see **Appendix D, Exhibit B**) shows the site maintaining the north to south flow pattern. The northern part of the project has a steeper slope of 3%, while the south end of the project slopes an average of 1%. The site will be mostly fill in order to raise the buildings above any flooding potential. Various catch basin locations and a local storm drain system, designed to current City of Santa Paula Standards will convey the stormwater to five different outlet points, as shown on **Exhibit B**. The storm drain system is a network of local storm drain pipes routed within the project site and flows by gravity. A parallel channel and a debris basin are incorporated into plans to improve the Adams Barranca, and that is further explained later in this report, but no onsite stormwater will be directed to Adams Barranca.

The project will take advantage of planter areas throughout to allow for infiltration and treatment of rain water to comply with the County of Ventura MS4 permit. Before the stormwater leaves the site it will be detained in small localized landscaped basins and three larger basins onsite to allow for infiltration and peak flow control per current MS4 standards at the time of Tentative Map submittal. Storm drain sizes and slopes will be determined once site layout is finalized at the Tentative Map level.

The five outlet points for site water discharge are Todd Lane Drain (Pipe 9), three existing culvert locations under Highway 126 (pipes 2,5,8). Proposed condition stormwater discharge at each outlet point will not increase from the existing peak outflow (**Appendix C**), due to the implementation of detention basins. Preliminary calculations have been done to size the proposed detention basins, however a more detailed analysis will be required at the Tentative Map level, once the site layout is completed. There are two surface detention basins located on site and one subsurface detention basin located on the east end of the development (see **Appendix D, Exhibit B**).

Most of the existing condition drainage issues onsite are due to sediment build up in the existing storm drain pipes under Highway 126. By developing the site, undergrounding existing open inlet pipes at Highway 126, and providing a system for treatment and flow control, the site will not be exposed to sediment and the usual culvert blockage that can cause ponding north of Highway 126 will be eliminated.

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

The time of concentration for each overall drainage area within the property boundaries was calculated using VcRAT Time of Concentration calculator from Ventura County to obtain a time of concentration and a peak flow rate for the developed condition. The peak flow rate was used to calculate a cfs/acre, which was then applied to each drainage subarea, respectively as shown in Appendix C and Table 2.

Table 2A – Santa Paula West Business Park Specific Plan Proposed Runoffs

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA	A	1.7	1.5	2.1	2.3
	B1 a	5.9	16.4	22.0	27.6
	B1b	8.2	24.8	33.6	37.8
WEST 126 CULVERTS (2)	B1c	3.75	9.6	14.0	15.7
	B2	1.97	4.1	6.6	7.5
	TOTAL UNDETAINED	19.82	54.9	76.2	88.6
EAST 126 CULVERTS (5)	C1	15.65	32.7	52.7	59.8
	C2	9.24	19.3	31.1	35.3
	TOTAL	24.9	52.0	84.0	95.0
TODD LANE DRAIN	D	5.59	10.6	16.6	18.7
WEST 126 CULVERTS (8)	E	8.25	19.4	33.8	38.0

Table 2B – Santa Paula West Business Park Specific Plan Proposed Runoffs

(Includes Detention)

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA	A	1.7	1.5	2.1	2.3
WEST 126 CULVERTS (2)	B1	17.85	7.7	9.0	9.2
	B2	1.97	4.1	6.6	7.5
	B TOTAL	19.82	11.8	15.6	16.7
EAST 126 CULVERTS (5)	C TOTAL	24.9	26.8	41.7	46.0
TODD LANE DRAIN	D	5.59	10.6	16.6	18.7
WEST 126 CULVERTS (8)	E	8.25	9.0	12.8	13.0

Water Quality

Water quality measures for the Santa Paula West Business Park development will consist of Best Management Practices (BMPs) that are listed in the Ventura County Stormwater Quality Urban Impact Mitigation Plan (SQUIMP). This plan was devised to address storm water pollution for any new development and redevelopment. Stormwater treatment occurs onsite and prior to stormwater leaving the site to existing drainage facilities. Water quality treatment will either be flow based, volume based, or a combination of the two according to SQUIMP guidelines. The following are some of the BMPs that may be utilized on the project.

Bio-swales will be designed into various parking landscape areas to convey and treat paved areas and allow stormwater capture for infiltration and evapotranspiration. These swales that generally have low velocities are used to mitigate concentration of nutrients by its contact with vegetation. Bio-swales could occur within each planter area designed within the project, providing cleansing of storm runoff prior to discharge into Adams Barranca and Santa Clara River.

Bio-filter inserts will be used in curb inlets to capture oil and grease, suspended solids, metals, gasoline, pesticides and pathogens. Also, storm drain inlets and catch basins will have proper signage and stenciling to discourage illegal dumping. Filters and signage will be checked and/or replaced annually.

Two surface detention basins are located onsite north of the railroad at the center of the development and north of the highway at the center of the development in addition to one underground basin located east of Beckwith Drive just north of the highway. Localized detention basins will also be used throughout the site, such as landscape areas that are used to lag the discharge of stormwater. These areas will settle out and filter pollutants that are within the runoff on-site. The final sizing of the detention basins and landscape areas will be provided with the Tentative Map design.

The following table shows the volume required for each drainage area according to the SQUIMP guidelines and the Tentative Stormwater Permit for Ventura County as of the date of this report for water quality treatment. The Railroad Right of Way area is not included in the treatment volume requirements.

Table 3 – Santa Paula West Business Park Specific Plan Water Quality

Subarea	Drainage Area (acres)	Railroad Right of Way Area (acres)	Total Required Treatment Area (acres)	Volume Based Water Quality Required (ft ³)**
A	1.7	0.09	0.00	0.0
B1a	5.9	0.00	5.90	16062.1
B1b	8.2	0.17	8.03	21848.4
B1c	3.75	0.58	3.17	8634.2
B2	1.97	0.40	1.57	4285.9
C1	15.65	0.69	14.96	40740.3
C2	9.24	0.67	8.57	23325.0
D	5.59	0.65	4.94	13456.0
E	8.25	0.32	7.93	21594.8
			Total Volume	149946.7

** Calculated using a 75% impervious area average. Used method in SQUIMP manual page 5-5 for calculations

(same value as a 0.75 in storm event as stated in new permit)

Adams Canyon Barranca Floodplain Analysis

Current FIRM maps dated January 20, 2010 show the westerly portion of the property within flood Zone A (See **Appendix E**). After a review of historic flooding, existing contours, and site features, the Flood Zone limits shown on the current FIRM maps are inaccurate. Using flows generated by a VcRAT study completed by Jensen Design & Survey currently under review by the County of Ventura Watershed Protection District, a preliminary HEC-RAS River study of Adams Canyon Barranca was completed.

Adams Canyon Barranca’s current banks are earthen dikes created by past farm land owners in order to prevent flooding their crops. These dikes are about 2.0 feet above adjacent grade on both the east and west sides of the channel. The Adams Barranca and the undercrossings at Highway 126, the Railroad, and Telegraph road are undersized for the 4,810 cfs flow.

Table 4 – Adams Barranca Existing Structures

	Type of Undercrossing	Approximate Capacity (cfs)
Telegraph Road	10’ H x 24’ W RCB	3,200
Railroad Crossing	8’ H x 28’ W Crossing	2,400
Highway 126	Double 12’ H x 10’ W	2,200

Multiple HEC-RAS analysis were completed to develop our findings. A summary of the HEC-RAS plans and geometry files are in the **Appendix F**. The existing condition where the channel geometry is overtopped was modeled using lateral structures as weirs at the top of the existing bank to analyze the flow that has left the channel. Existing condition topography reflects that if water overtops the channel, it will leave the channel forever and head either east or west to Todd Barranca or Clow Road undercrossing, respectively. The flow rates that overtopped the bank on the west side of the Adams Barranca were removed from the total design Q for the proposed condition analysis at each respective cross section. The summary of the flow rates that have overtopped the existing banks at certain locations is shown below and in **Appendix F**.

Table 5 – Adams Barranca Existing Overflow Values

Main Channel Station	Overtop Flow West (ROB) (cfs)	Overtop Flow East (LOB) (cfs)
52+53 - 46+45.2	1218	0
45+39.6 – 42+39.6	757	0
42+39.6 – 38+21.2	1552	0
38+21.2 – 36+89.1	0	88

The breakout begins upstream of Telegraph Road, due to the lack of capacity in the Telegraph Road culvert. Therefore, the flows pond and overtop Telegraph Road as a sheet flow with a depth of approximately 1.5 feet. The northwest frontage of the proposed project extending from the main project entry west to the Barranca has been designed to handle 300 cfs within the parking lot between Telegraph Road and the proposed building. This overflow will be directed into the proposed channel along the west property line, with a total of 1,218 cfs, which totals the overflow from upstream of Telegraph Road on the east side of the Barranca.

The proposed condition will only occur if the property is developed. An 800 foot long parallel channel to Adams Canyon Barranca has been designed with a bottom width of 6.0' and a varying depth with 2:1 side slopes. The west side of the proposed channel adjacent to Adams Canyon Barranca will match the existing elevations until Adams Barranca reaches the west property boundary of the Specific Plan area and the two channels merge into one. This channel is only for the purposes of flood water routing.

At the merge location, we are proposing a wider channel section for debris storage. In discussions with Fillmore & Western railroad, they believe the railroad crossing gets clogged with debris. In order to accommodate the debris and enlarge the crossing capacity, we are proposing a wider channel section and a double 12’W x 6’H culvert to the east of the existing crossing.

Downstream of the railroad crossing, we are proposing to widen the channel by removing the existing easterly bank of the Barranca, making the bottom width 60’. However, the undersized Highway 126 12’Hx10’W double box culvert is causing the water to overtop the new channel configuration banks. The new easterly channel top of bank elevation will not exceed the elevation of the westerly top of bank of the Adams Barranca. The east side of the new channel will also have a lower weir cut at elevation 125 for a length of 75 feet between stations 28+39.2 and 27+08.7, just upstream of the Highway 126 undercrossing. This will allow the water to overtop the weir and head west to the natural low point in Highway 126, maintaining the existing condition flow path during a storm event. Therefore the proposed condition will not have an adverse impact on floodwaters heading to the west because the design is not increasing the peak flows or changing the overtopping location from the existing condition. The buildings are proposed at a minimum of 1.0’ above the water surface elevation determined for the new channel to protect from flooding (See Exhibit B).

Table 6 – Adams Barranca Proposed Overflow Values

Main Channel Station	Overtop Flow West (ROB) (cfs)	Overtop Flow East (LOB) (cfs)
52+53 – 46+45.2	1218	0
45+39.6 – 42+39.6	737	0
42+39 - 38+21	1290	0
28+39 – 27+55.9	0	1000
24+24 – 18+18	45	147

Conclusions

Based on the hydrology calculations done in accordance with the Ventura County Hydrology Manual and reflected in **Appendix C**, the proposed project improves existing drainage conditions and does not allow an increase in peak flow leaving the site. **Table 3** shows a comparison of the

flows at the five outlet points that does not include detention calculations. The increase in flow is anticipated due to the proposed development. To improve existing conditions dramatically, the project drainage design includes an overflow channel, smaller localized detention basins, and surface treatment swales. Existing flow patterns will generally remain the same after the proposed condition. The existing downstream storm drain facilities are currently not operating at their design capacity for a 10-year storm event. The proposed improvements will alleviate this situation.

References

- Ventura County Watershed Protection District, December 2006, “Ventura County Hydrology Manual”
- FEMA Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix H, April 2003
- FEMA National Flood Insurance Program Section 65.10, November 2008

APPENDIX A

Existing Hydrology Calculations

PAR01.4492
4/21/2010

APPENDIX A EXISTING CONDITION CALCULATIONS

Flood Zone 2
Rainfall Zone K

Subarea	Area (acres)	Soil Type	10 yr Time of Concentration	50 yr Time of Concentration	100 yr Time of Concentration	q10 (cfs/lac)	q50 (cfs/lac)	q100 (cfs/lac)	Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	Storm Drain
A Total	2.82	3	27 min	19 min	14 min	0.99	1.72	2.31	2.8	4.8	6.5	Adams
B1	16.4	3,4	-	-	-	-	-	-	11.2	21.6	28.4	1
B2	10.88	4	-	-	-	-	-	-	7.4	14.4	18.8	2
B Total	27.28	3,4	30 min	25 min	20 min	0.68	1.32	1.73	18.6	35.9	46.9	2
C1a	10.7	3	-	-	-	-	-	-	5.0	14.4	18.9	7,4
C1b	4.1	4	-	-	-	-	-	-	1.9	5.5	7.3	3
C1c	0.91	4	-	-	-	-	-	-	0.4	1.2	1.6	4
C2	7.6	4	-	-	-	-	-	-	3.6	10.3	13.5	5
C Total	23.31	4	30 min	24 min	19 min	0.73	1.35	1.77	16.9	31.5	41.4	5
D Total	7.26	4	20 min	14 min	10 min	1.08	1.92	2.69	7.9	14.0	19.6	6
TOTAL PEAK FLOW (cfs)									46.1	86.2	114.3	
AVERAGE (cfs/lac)						0.87	1.58	2.13				
cfs/lac from Peck Road Drain Hydrology Report*									1.1	1.7	2	

*Peck Road Drain Hydrology Report (Septmeber 6, 2007). Ventura County Watershed Protection District

VENTURA COUNTY WATERSHED PROTECTION DISTRICT

TIME OF CONCENTRATION

TC Program Version: 2.6.2008.11

Project: Santa Paula West 2

Date: 12:00:00 AM

Engineer: Kinsey Hensley

Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed A

Name	Zone	Storm	Soil	Area (acres)	TC (min)
A	K	10	3.00	2.8 / 3	27.495 / 27
A	K	25	3.00	2.8 / 3	21.857 / 22
A	K	50	3.00	2.8 / 3	18.766 / 19
A	K	100	3.00	2.8 / 3	14.378 / 14

♀

Watershed Name: Watershed A

Sub-Area Name: A

Computing Tc for all rainfall frequencies for sub-area A...

Tc for frequency = 10.00: 27.495 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 27.495 min. = 27 min.

SUB AREA INPUT DATA

Sub Area Name: A

Total Area (ac): 2.81

Flood Zone: 2

Rainfall Zone: K

Storm Frequency (years): 10

Development Type: Undeveloped

Soil Type: 3.00

Percent Impervious: 0

SUB AREA OUTPUT

Intensity (in/hr): 1.529

C Total: 0.649

Sum Q Segments (cfs): 2.79

Q Total (cfs): 2.79

Sum Percent Area (%): 100.0

Sum of Flow Path Travel Times (sec): 1,649.69

Time of Concentration (min): 27.495

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 26.0075

Flow Type: Overland

Length (ft): 650

Top Elevation (ft): 250.5

Bottom Elevation (ft): 238

Contributing Area (acres): 2.53

Percent of Sub-Area (%): 90.0

Overland Type: Valley

Development Type: Undeveloped

Map slope: 0.0192
Effective slope: 0.0192
Q for Flow Path (cfs): 2.51
Avg velocity (ft/s): 0.42
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.52
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.4873
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230

Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.28
Q Top (cfs): 2.51
Q Bottom (cfs): 2.79
Velocity Top (ft/s): 1.96
Velocity Bottom (ft/s): 2.04
Avg Velocity (ft/s): 2.00
wave Velocity (ft/s): 3.25

♀
Tc for frequency = 25.00: 21.857 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 21.857 min. = 22 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.868
C Total: 0.690
Sum Q Segments (cfs): 3.62
Q Total (cfs): 3.62
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,311.40
Time of Concentration (min): 21.857

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.4867
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238
Contributing Area (acres): 2.53
Percent of Sub-Area (%): 90.0

Overland Type: valley
Development Type: Undeveloped
Map Slope: 0.0192
Effective Slope: 0.0192
Q for Flow Path (cfs): 3.26
Avg Velocity (ft/s): 0.53
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.67
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.3701
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.36
Q Top (cfs): 3.26
Q Bottom (cfs): 3.62
Velocity Top (ft/s): 2.14
Velocity Bottom (ft/s): 2.21
Avg velocity (ft/s): 2.18
wave velocity (ft/s): 3.53

‡
Tc for frequency = 50.00: 18.766 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 18.766 min. = 19 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.349
C Total: 0.733
Sum Q Segments (cfs): 4.84
Q Total (cfs): 4.84
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,125.94
Time of Concentration (min): 18.766

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 17.5137
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238

Contributing Area (acres): 2.53
 Percent of Sub-Area (%): 90.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0192
 Effective Slope: 0.0192
 Q for Flow Path (cfs): 4.36
 Avg Velocity (ft/s): 0.62
 Passed Scour Check: YES
 Scour velocity (ft/sec): 2.85
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.2519
 Flow Type: Channel
 Length (ft): 290
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 0.28
 Percent of Sub-Area (%): 10.0
 Bottom width (ft): 5
 Side Slope (H:V): 5
 Manning's N: 0.04
 Map Slope: 0.0276
 Q for Flow Path (cfs): 0.48
 Q Top (cfs): 4.36
 Q Bottom (cfs): 4.84
 Velocity Top (ft/s): 2.35
 Velocity Bottom (ft/s): 2.43
 Avg Velocity (ft/s): 2.39
 wave Velocity (ft/s): 3.86

♀
 Tc for frequency = 100.00: 14.378 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 14.378 min. = 14 min.

SUB AREA INPUT DATA

Sub Area Name: A
 Total Area (ac): 2.81
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 3.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 2.987
 C Total: 0.776
 Sum Q Segments (cfs): 6.52
 Q Total (cfs): 6.52
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 862.65
 Time of Concentration (min): 14.378

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 13.2318
 Flow Type: Overland
 Length (ft): 650

Top Elevation (ft): 250.5
 Bottom Elevation (ft): 238
 Contributing Area (acres): 2.53
 Percent of Sub-Area (%): 90.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0192
 Effective slope: 0.0192
 Q for Flow Path (cfs): 5.87
 Avg Velocity (ft/s): 0.82
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.01
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.1457
 Flow Type: Channel
 Length (ft): 290
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 0.28
 Percent of Sub-Area (%): 10.0
 Bottom width (ft): 5
 Side Slope (H:V): 5
 Manning's N: 0.04
 Map Slope: 0.0276
 Q for Flow Path (cfs): 0.65
 Q Top (cfs): 5.87
 Q Bottom (cfs): 6.52
 Velocity Top (ft/s): 2.57
 Velocity Bottom (ft/s): 2.67
 Avg Velocity (ft/s): 2.62
 wave velocity (ft/s): 4.22

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project: Santa Paula West 2
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed B

Name	Zone	Storm	Soil	Area (acres)	TC (min)
B1	K	10	4.00	27.3 / 27	TC ERROR
B1	K	25	4.00	27.3 / 27	28.668 / 29
B1	K	50	4.00	27.3 / 27	25.025 / 25
B1	K	100	4.00	27.3 / 27	20.170 / 20

♀

Watershed Name: Watershed B

Sub-Area Name: B1
 Computing Tc for all rainfall frequencies for sub-area B1...

Tc for frequency = 10.00: 35.081 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 35.081 min. = 35 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B1
 Total Area (ac): 27.28
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 1.346
 C Total: 0.505
 Sum Q Segments (cfs): 18.55
 Q Total (cfs): 18.55
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 2,104.88
 Time of Concentration (min): 35.081

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 26.4327
 Flow Type: Overland
 Length (ft): 670
 Top Elevation (ft): 250.5
 Bottom Elevation (ft): 235
 Contributing Area (acres): 2.1
 Percent of Sub-Area (%): 7.7
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0231
 Effective Slope: 0.0231
 Q for Flow Path (cfs): 1.43
 Avg Velocity (ft/s): 0.42
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 2.46
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 5.9062
 Flow Type: Channel
 Length (ft): 920
 Top Elevation (ft): 235
 Bottom Elevation (ft): 226.5
 Contributing Area (acres): 14.2
 Percent of Sub-Area (%): 52.1
 Bottom Width (ft): 5
 Side Slope (H:V): 5
 Manning's N: 0.04
 Map Slope: 0.0092
 Q for Flow Path (cfs): 9.65
 Q Top (cfs): 1.43
 Q Bottom (cfs): 11.08
 Velocity Top (ft/s): 1.13
 Velocity Bottom (ft/s): 2.12
 Avg Velocity (ft/s): 1.62
 Wave Velocity (ft/s): 2.60
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0520
 Flow Type: Pipe
 Length (ft): 20
 Top Elevation (ft): 226.5
 Bottom Elevation (ft): 226.3
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 0.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 24
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0100
 Q for Flow Path (cfs): 0.07
 Q Top (cfs): 11.08
 Q Bottom (cfs): 11.15
 Avg Velocity (ft/s): 5.15
 Wave Velocity (ft/s): 6.41
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.6904
 Flow Type: Natural Channel
 Length (ft): 640
 Top Elevation (ft): 226.3
 Bottom Elevation (ft): 220.4
 Contributing Area (acres): 10.88
 Percent of Sub-Area (%): 39.9
 Overland Type: Valley
 Map Slope: 0.0092
 Effective Slope: 0.0092
 Q for Flow Path (cfs): 7.40
 Q Top (cfs): 11.15
 Q Bottom (cfs): 18.55
 Velocity Top (ft/s): 2.47
 Velocity Bottom (ft/s): 2.82
 Avg Velocity (ft/s): 2.64
 Wave Velocity (ft/s): 3.96
 ♀
 Tc for frequency = 25.00: 28.668 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 28.668 min. = 29 min.

SUB AREA INPUT DATA

Sub Area Name: B1
 Total Area (ac): 27.28
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 1.639
 C Total: 0.591
 Sum Q Segments (cfs): 26.44
 Q Total (cfs): 26.44
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,720.09
 Time of Concentration (min): 28.668

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.8434
Flow Type: Overland
Length (ft): 670
Top Elevation (ft): 250.5
Bottom Elevation (ft): 235
Contributing Area (acres): 2.1
Percent of Sub-Area (%): 7.7
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0231
Effective Slope: 0.0231
Q for Flow Path (cfs): 2.04
Avg Velocity (ft/s): 0.54
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.64
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 5.3290
Flow Type: Channel
Length (ft): 920
Top Elevation (ft): 235
Bottom Elevation (ft): 226.5
Contributing Area (acres): 14.2
Percent of Sub-Area (%): 52.1
Bottom width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0092
Q for Flow Path (cfs): 13.76
Q Top (cfs): 2.04
Q Bottom (cfs): 15.80
Velocity Top (ft/s): 1.27
Velocity Bottom (ft/s): 2.34
Avg Velocity (ft/s): 1.80
Wave Velocity (ft/s): 2.88
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0481
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 226.5
Bottom Elevation (ft): 226.3
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 27
Used Pipe Diameter (in): 27
Manning's N: 0.02
Map Slope: 0.0100
Q for Flow Path (cfs): 0.10
Q Top (cfs): 15.80
Q Bottom (cfs): 15.90
Avg Velocity (ft/s): 5.62
Wave Velocity (ft/s): 6.93
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 2.4476

Flow Type: Natural Channel

Length (ft): 640

Top Elevation (ft): 226.3

Bottom Elevation (ft): 220.4

Contributing Area (acres): 10.88

Percent of Sub-Area (%): 39.9

Overland Type: Valley

Map Slope: 0.0092

Effective Slope: 0.0092

Q for Flow Path (cfs): 10.55

Q Top (cfs): 15.90

Q Bottom (cfs): 26.44

Velocity Top (ft/s): 2.71

Velocity Bottom (ft/s): 3.10

Avg Velocity (ft/s): 2.91

Wave Velocity (ft/s): 4.36

♀

Tc for frequency = 50.00: 25.025 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 25.025 min. = 25 min.

SUB AREA INPUT DATA

Sub Area Name: B1

Total Area (ac): 27.28

Flood Zone: 2

Rainfall Zone: K

Storm Frequency (years): 50

Development Type: Undeveloped

Soil Type: 4.00

Percent Impervious: 0

SUB AREA OUTPUT

Intensity (in/hr): 2.026

C Total: 0.649

Sum Q Segments (cfs): 35.88

Q Total (cfs): 35.88

Sum Percent Area (%): 100.0

Sum of Flow Path Travel Times (sec): 1,501.49

Time of Concentration (min): 25.025

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 17.8288

Flow Type: Overland

Length (ft): 670

Top Elevation (ft): 250.5

Bottom Elevation (ft): 235

Contributing Area (acres): 2.1

Percent of Sub-Area (%): 7.7

Overland Type: Valley

Development Type: Undeveloped

Map Slope: 0.0231

Effective Slope: 0.0231

Q for Flow Path (cfs): 2.76

Avg Velocity (ft/s): 0.63

Passed Scour Check: YES

Scour Velocity (ft/sec): 2.82

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.8998
 Flow Type: Channel
 Length (ft): 920
 Top Elevation (ft): 235
 Bottom Elevation (ft): 226.5
 Contributing Area (acres): 14.2
 Percent of Sub-Area (%): 52.1
 Bottom width (ft): 5
 Side Slope (H:V): 5
 Manning's N: 0.04
 Map Slope: 0.0092
 Q for Flow Path (cfs): 18.68
 Q Top (cfs): 2.76
 Q Bottom (cfs): 21.44
 Velocity Top (ft/s): 1.39
 Velocity Bottom (ft/s): 2.54
 Avg Velocity (ft/s): 1.97
 wave Velocity (ft/s): 3.13
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0448
 Flow Type: Pipe
 Length (ft): 20
 Top Elevation (ft): 226.5
 Bottom Elevation (ft): 226.3
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 0.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 30
 Used Pipe Diameter (in): 30
 Manning's N: 0.02
 Map Slope: 0.0100
 Q for Flow Path (cfs): 0.13
 Q Top (cfs): 21.44
 Q Bottom (cfs): 21.57
 Avg Velocity (ft/s): 6.03
 wave Velocity (ft/s): 7.44
 DATA FOR FLOW PATH 4

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.2514
 Flow Type: Natural Channel
 Length (ft): 640
 Top Elevation (ft): 226.3
 Bottom Elevation (ft): 220.4
 Contributing Area (acres): 10.88
 Percent of Sub-Area (%): 39.9
 Overland Type: Valley
 Map Slope: 0.0092
 Effective Slope: 0.0092
 Q for Flow Path (cfs): 14.31
 Q Top (cfs): 21.57
 Q Bottom (cfs): 35.88
 Velocity Top (ft/s): 2.94
 Velocity Bottom (ft/s): 3.38
 Avg Velocity (ft/s): 3.16
 wave Velocity (ft/s): 4.74

♀
 Tc for frequency = 100.00: 20.170 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 20.170 min. = 20 min.

 SUB AREA INPUT DATA

Sub Area Name: B1
 Total Area (ac): 27.28
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 2.490
 C Total: 0.691
 Sum Q Segments (cfs): 46.94
 Q Total (cfs): 46.94
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,210.21
 Time of Concentration (min): 20.170

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 13.4989
 Flow Type: Overland
 Length (ft): 670
 Top Elevation (ft): 250.5
 Bottom Elevation (ft): 235
 Contributing Area (acres): 2.1
 Percent of Sub-Area (%): 7.7
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0231
 Effective Slope: 0.0231
 Q for Flow Path (cfs): 3.61
 Avg Velocity (ft/s): 0.83
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 3.00
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.5409
 Flow Type: Channel
 Length (ft): 920
 Top Elevation (ft): 235
 Bottom Elevation (ft): 226.5
 Contributing Area (acres): 14.2
 Percent of Sub-Area (%): 52.1
 Bottom width (ft): 5
 Side Slope (H:V): 5
 Manning's N: 0.04
 Map Slope: 0.0092
 Q for Flow Path (cfs): 24.44
 Q Top (cfs): 3.61
 Q Bottom (cfs): 28.05
 Velocity Top (ft/s): 1.52
 Velocity Bottom (ft/s): 2.74
 Avg Velocity (ft/s): 2.13
 wave Velocity (ft/s): 3.38
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0421
 Flow Type: Pipe
 Length (ft): 20
 Top Elevation (ft): 226.5
 Bottom Elevation (ft): 226.3
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 0.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 33
 Used Pipe Diameter (in): 33
 Manning's N: 0.02
 Map Slope: 0.0100
 Q for Flow Path (cfs): 0.17
 Q Top (cfs): 28.05
 Q Bottom (cfs): 28.22
 Avg Velocity (ft/s): 6.47
 Wave Velocity (ft/s): 7.93
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.0883
 Flow Type: Natural Channel
 Length (ft): 640
 Top Elevation (ft): 226.3
 Bottom Elevation (ft): 220.4
 Contributing Area (acres): 10.88
 Percent of Sub-Area (%): 39.9
 Overland Type: Valley
 Map Slope: 0.0092
 Effective Slope: 0.0092
 Q for Flow Path (cfs): 18.72
 Q Top (cfs): 28.22
 Q Bottom (cfs): 46.94
 Velocity Top (ft/s): 3.16
 Velocity Bottom (ft/s): 3.65
 Avg Velocity (ft/s): 3.41
 Wave Velocity (ft/s): 5.11

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project: Santa Paula West 2
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed C

Name	Zone	Storm	Soil	Area (acres)	TC (min)
C	K	10	4.00	23.3 / 23	TC ERROR
C	K	25	4.00	23.3 / 23	27.150 / 27
C	K	50	4.00	23.3 / 23	23.859 / 24
C	K	100	4.00	23.3 / 23	19.399 / 19

♀

Watershed Name: Watershed C

Sub-Area Name: C

Computing Tc for all rainfall frequencies for sub-area C...

Tc for frequency = 10.00: 32.925 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 32.925 min. = 33 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: C
 Total Area (ac): 23.31
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 1.387
 C Total: 0.523
 Sum Q Segments (cfs): 16.90
 Q Total (cfs): 16.90
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,975.52
 Time of Concentration (min): 32.925

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 24.2017
 Flow Type: Overland
 Length (ft): 600
 Top Elevation (ft): 251
 Bottom Elevation (ft): 241
 Contributing Area (acres): 0.46
 Percent of Sub-Area (%): 2.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0167
 Effective Slope: 0.0167
 Q for Flow Path (cfs): 0.33
 Avg Velocity (ft/s): 0.41
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 1.61
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.7087
 Flow Type: Natural Channel
 Length (ft): 885
 Top Elevation (ft): 241
 Bottom Elevation (ft): 225
 Contributing Area (acres): 3.53
 Percent of Sub-Area (%): 15.1
 Overland Type: Valley
 Map Slope: 0.0181
 Effective Slope: 0.0181
 Q for Flow Path (cfs): 2.56
 Q Top (cfs): 0.33
 Q Bottom (cfs): 2.89
 Velocity Top (ft/s): 1.67
 Velocity Bottom (ft/s): 2.50

Avg Velocity (ft/s): 2.09
Wave Velocity (ft/s): 3.13
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0477
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 12
Used Pipe Diameter (in): 12
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.07
Q Top (cfs): 2.89
Q Bottom (cfs): 2.97
Avg Velocity (ft/s): 5.56
Wave Velocity (ft/s): 6.99
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.3586
Flow Type: Natural Channel
Length (ft): 140
Top Elevation (ft): 224.8
Bottom Elevation (ft): 224.3
Contributing Area (acres): 0.91
Percent of Sub-Area (%): 3.9
Overland Type: Valley
Map Slope: 0.0036
Effective Slope: 0.0036
Q for Flow Path (cfs): 0.66
Q Top (cfs): 2.97
Q Bottom (cfs): 3.63
Velocity Top (ft/s): 1.12
Velocity Bottom (ft/s): 1.17
Avg Velocity (ft/s): 1.14
Wave Velocity (ft/s): 1.72
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.3184
Flow Type: Pipe
Length (ft): 50
Top Elevation (ft): 224.2
Bottom Elevation (ft): 224
Contributing Area (acres): 10.7
Percent of Sub-Area (%): 45.9
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 36
Used Pipe Diameter (in): 36
Manning's N: 0.04
Map Slope: 0.0040
Q for Flow Path (cfs): 7.76
Q Top (cfs): 3.63
Q Bottom (cfs): 11.38
Avg Velocity (ft/s): 1.98
Wave Velocity (ft/s): 2.62
DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.2903
 Flow Type: Natural Channel
 Length (ft): 475
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220.6
 Contributing Area (acres): 7.61
 Percent of Sub-Area (%): 32.6
 Overland Type: Valley
 Map Slope: 0.0072
 Effective Slope: 0.0072
 Q for Flow Path (cfs): 5.52
 Q Top (cfs): 11.38
 Q Bottom (cfs): 16.90
 Velocity Top (ft/s): 2.19
 Velocity Bottom (ft/s): 2.42
 Avg Velocity (ft/s): 2.30
 wave velocity (ft/s): 3.46
 †
 Tc for frequency = 25.00: 27.150 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 27.150 min. = 27 min.

SUB AREA INPUT DATA

Sub Area Name: C
 Total Area (ac): 23.31
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 1.695
 C Total: 0.600
 Sum Q Segments (cfs): 23.70
 Q Total (cfs): 23.70
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,628.98
 Time of Concentration (min): 27.150

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 19.0565
 Flow Type: Overland
 Length (ft): 600
 Top Elevation (ft): 251
 Bottom Elevation (ft): 241
 Contributing Area (acres): 0.46
 Percent of Sub-Area (%): 2.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0167
 Effective Slope: 0.0167
 Q for Flow Path (cfs): 0.47
 Avg Velocity (ft/s): 0.52
 Passed Scour Check: YES
 Scour velocity (ft/sec): 1.70

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.4030
Flow Type: Natural Channel
Length (ft): 885
Top Elevation (ft): 241
Bottom Elevation (ft): 225
Contributing Area (acres): 3.53
Percent of Sub-Area (%): 15.1
Overland Type: Valley
Map Slope: 0.0181
Effective Slope: 0.0181
Q for Flow Path (cfs): 3.59
Q Top (cfs): 0.47
Q Bottom (cfs): 4.06
Velocity Top (ft/s): 1.76
Velocity Bottom (ft/s): 2.70
Avg Velocity (ft/s): 2.23
Wave Velocity (ft/s): 3.35
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0414
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 15
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.10
Q Top (cfs): 4.06
Q Bottom (cfs): 4.16
Avg Velocity (ft/s): 6.10
Wave Velocity (ft/s): 8.06
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.2577
Flow Type: Natural Channel
Length (ft): 140
Top Elevation (ft): 224.8
Bottom Elevation (ft): 224.3
Contributing Area (acres): 0.91
Percent of Sub-Area (%): 3.9
Overland Type: Valley
Map Slope: 0.0036
Effective Slope: 0.0036
Q for Flow Path (cfs): 0.93
Q Top (cfs): 4.16
Q Bottom (cfs): 5.08
Velocity Top (ft/s): 1.21
Velocity Bottom (ft/s): 1.27
Avg Velocity (ft/s): 1.24
Wave Velocity (ft/s): 1.86
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 0.2974

Flow Type: Pipe
Length (ft): 50
Top Elevation (ft): 224.2
Bottom Elevation (ft): 224
Contributing Area (acres): 10.7
Percent of Sub-Area (%): 45.9
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 39
Used Pipe Diameter (in): 39
Manning's N: 0.04
Map Slope: 0.0040
Q for Flow Path (cfs): 10.88
Q Top (cfs): 5.08
Q Bottom (cfs): 15.96
Avg Velocity (ft/s): 2.15
Wave Velocity (ft/s): 2.80
DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.0937
Flow Type: Natural Channel
Length (ft): 475
Top Elevation (ft): 224
Bottom Elevation (ft): 220.6
Contributing Area (acres): 7.61
Percent of Sub-Area (%): 32.6
Overland Type: valley
Map Slope: 0.0072
Effective Slope: 0.0072
Q for Flow Path (cfs): 7.74
Q Top (cfs): 15.96
Q Bottom (cfs): 23.70
Velocity Top (ft/s): 2.39
Velocity Bottom (ft/s): 2.65
Avg Velocity (ft/s): 2.52
Wave Velocity (ft/s): 3.78
♀
Tc for frequency = 50.00: 23.859 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 23.859 min. = 24 min.

SUB AREA INPUT DATA

Sub Area Name: C
Total Area (ac): 23.31
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.070
C Total: 0.653
Sum Q Segments (cfs): 31.52
Q Total (cfs): 31.52
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,431.53
Time of Concentration (min): 23.859

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 16.2876
 Flow Type: Overland
 Length (ft): 600
 Top Elevation (ft): 251
 Bottom Elevation (ft): 241
 Contributing Area (acres): 0.46
 Percent of Sub-Area (%): 2.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0167
 Effective Slope: 0.0167
 Q for Flow Path (cfs): 0.62
 Avg Velocity (ft/s): 0.61
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 1.79
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.1495
 Flow Type: Natural Channel
 Length (ft): 885
 Top Elevation (ft): 241
 Bottom Elevation (ft): 225
 Contributing Area (acres): 3.53
 Percent of Sub-Area (%): 15.1
 Overland Type: Valley
 Map Slope: 0.0181
 Effective Slope: 0.0181
 Q for Flow Path (cfs): 4.77
 Q Top (cfs): 0.62
 Q Bottom (cfs): 5.40
 Velocity Top (ft/s): 1.85
 Velocity Bottom (ft/s): 2.89
 Avg Velocity (ft/s): 2.37
 Wave Velocity (ft/s): 3.55
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0411
 Flow Type: Pipe
 Length (ft): 20
 Top Elevation (ft): 225.4
 Bottom Elevation (ft): 224.8
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 0.4
 Initial Pipe Diameter (in): 12
 Calculated Pipe Diameter (in): 15
 Used Pipe Diameter (in): 15
 Manning's N: 0.02
 Map Slope: 0.0300
 Q for Flow Path (cfs): 0.14
 Q Top (cfs): 5.40
 Q Bottom (cfs): 5.53
 Avg Velocity (ft/s): 6.52
 Wave Velocity (ft/s): 8.12
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.1756
 Flow Type: Natural Channel

Length (ft): 140
 Top Elevation (ft): 224.8
 Bottom Elevation (ft): 224.3
 Contributing Area (acres): 0.91
 Percent of Sub-Area (%): 3.9
 Overland Type: Valley
 Map Slope: 0.0036
 Effective Slope: 0.0036
 Q for Flow Path (cfs): 1.23
 Q Top (cfs): 5.53
 Q Bottom (cfs): 6.76
 Velocity Top (ft/s): 1.29
 Velocity Bottom (ft/s): 1.36
 Avg Velocity (ft/s): 1.32
 Wave Velocity (ft/s): 1.98
 DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.2679
 Flow Type: Pipe
 Length (ft): 50
 Top Elevation (ft): 224.2
 Bottom Elevation (ft): 224
 Contributing Area (acres): 10.7
 Percent of Sub-Area (%): 45.9
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 48
 Used Pipe Diameter (in): 48
 Manning's N: 0.04
 Map Slope: 0.0040
 Q for Flow Path (cfs): 14.47
 Q Top (cfs): 6.76
 Q Bottom (cfs): 21.23
 Avg Velocity (ft/s): 2.31
 Wave Velocity (ft/s): 3.11
 DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.9372
 Flow Type: Natural Channel
 Length (ft): 475
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220.6
 Contributing Area (acres): 7.61
 Percent of Sub-Area (%): 32.6
 Overland Type: Valley
 Map Slope: 0.0072
 Effective Slope: 0.0072
 Q for Flow Path (cfs): 10.29
 Q Top (cfs): 21.23
 Q Bottom (cfs): 31.52
 Velocity Top (ft/s): 2.58
 Velocity Bottom (ft/s): 2.87
 Avg Velocity (ft/s): 2.72
 Wave Velocity (ft/s): 4.09

♀
 Tc for frequency = 100.00: 19.399 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 19.399 min. = 19 min.

SUB AREA INPUT DATA

Sub Area Name: C
 Total Area (ac): 23.31
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

 Intensity (in/hr): 2.552
 C Total: 0.696
 Sum Q Segments (cfs): 41.37
 Q Total (cfs): 41.37
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,163.95
 Time of Concentration (min): 19.399

DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 12.2905
 Flow Type: Overland
 Length (ft): 600
 Top Elevation (ft): 251
 Bottom Elevation (ft): 241
 Contributing Area (acres): 0.46
 Percent of Sub-Area (%): 2.0
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0167
 Effective Slope: 0.0167
 Q for Flow Path (cfs): 0.82
 Avg Velocity (ft/s): 0.81
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 1.88
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.9126
 Flow Type: Natural Channel
 Length (ft): 885
 Top Elevation (ft): 241
 Bottom Elevation (ft): 225
 Contributing Area (acres): 3.53
 Percent of Sub-Area (%): 15.1
 Overland Type: Valley
 Map Slope: 0.0181
 Effective Slope: 0.0181
 Q for Flow Path (cfs): 6.27
 Q Top (cfs): 0.82
 Q Bottom (cfs): 7.08
 Velocity Top (ft/s): 1.94
 Velocity Bottom (ft/s): 3.08
 Avg Velocity (ft/s): 2.51
 Wave Velocity (ft/s): 3.77
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0411
 Flow Type: Pipe
 Length (ft): 20
 Top Elevation (ft): 225.4

Bottom Elevation (ft): 224.8
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 0.4
 Initial Pipe Diameter (in): 12
 Calculated Pipe Diameter (in): 15
 Used Pipe Diameter (in): 15
 Manning's N: 0.02
 Map Slope: 0.0300
 Q for Flow Path (cfs): 0.18
 Q Top (cfs): 7.08
 Q Bottom (cfs): 7.26
 Avg Velocity (ft/s): 6.75
 Wave Velocity (ft/s): 8.12
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.1000
 Flow Type: Natural Channel
 Length (ft): 140
 Top Elevation (ft): 224.8
 Bottom Elevation (ft): 224.3
 Contributing Area (acres): 0.91
 Percent of Sub-Area (%): 3.9
 Overland Type: Valley
 Map Slope: 0.0036
 Effective Slope: 0.0036
 Q for Flow Path (cfs): 1.62
 Q Top (cfs): 7.26
 Q Bottom (cfs): 8.87
 Velocity Top (ft/s): 1.38
 Velocity Bottom (ft/s): 1.45
 Avg Velocity (ft/s): 1.41
 Wave Velocity (ft/s): 2.12
 DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.2590
 Flow Type: Pipe
 Length (ft): 50
 Top Elevation (ft): 224.2
 Bottom Elevation (ft): 224
 Contributing Area (acres): 10.7
 Percent of Sub-Area (%): 45.9
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 48
 Used Pipe Diameter (in): 48
 Manning's N: 0.04
 Map Slope: 0.0040
 Q for Flow Path (cfs): 18.99
 Q Top (cfs): 8.87
 Q Bottom (cfs): 27.87
 Avg Velocity (ft/s): 2.47
 Wave Velocity (ft/s): 3.22
 DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.7960
 Flow Type: Natural Channel
 Length (ft): 475
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220.6
 Contributing Area (acres): 7.61
 Percent of Sub-Area (%): 32.6

Overland Type: valley
 Map Slope: 0.0072
 Effective Slope: 0.0072
 Q for Flow Path (cfs): 13.51
 Q Top (cfs): 27.87
 Q Bottom (cfs): 41.37
 Velocity Top (ft/s): 2.78
 Velocity Bottom (ft/s): 3.10
 Avg Velocity (ft/s): 2.94
 Wave Velocity (ft/s): 4.41

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project: Santa Paula West 2
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: watershed D

Name	Zone	Storm	Soil	Area (acres)	TC (min)
D	K	10	4.00	7.3 / 7	20.297 / 20
D	K	25	4.00	7.3 / 7	16.006 / 16
D	K	50	4.00	7.3 / 7	13.691 / 14
D	K	100	4.00	7.3 / 7	10.309 / 10

♀

Watershed Name: watershed D

Sub-Area Name: D
 Computing Tc for all rainfall frequencies for sub-area D...

Tc for frequency = 10.00: 20.297 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 20.297 min. = 20 min.

SUB AREA INPUT DATA

Sub Area Name: D
 Total Area (ac): 7.26
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 1.770
 C Total: 0.612
 Sum Q Segments (cfs): 7.86
 Q Total (cfs): 7.86
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 1,217.80
 Time of Concentration (min): 20.297

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.2164
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: valley
Development Type: Undeveloped
Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 5.95
Avg Velocity (ft/s): 0.40
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.74
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0802
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 1.91
Q Top (cfs): 5.95
Q Bottom (cfs): 7.86
Velocity Top (ft/s): 3.96
Velocity Bottom (ft/s): 4.35
Avg Velocity (ft/s): 4.16
wave Velocity (ft/s): 6.23
♀
Tc for frequency = 25.00: 16.006 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 16.006 min. = 16 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 7.26
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.183
C Total: 0.663
Sum Q Segments (cfs): 10.51
Q Total (cfs): 10.51
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 960.35
Time of Concentration (min): 16.006

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 15.9330
 Flow Type: Overland
 Length (ft): 490
 Top Elevation (ft): 226
 Bottom Elevation (ft): 223
 Contributing Area (acres): 5.5
 Percent of Sub-Area (%): 75.8
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0061
 Effective Slope: 0.0061
 Q for Flow Path (cfs): 7.96
 Avg Velocity (ft/s): 0.51
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 1.83
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0728
 Flow Type: Natural Channel
 Length (ft): 30
 Top Elevation (ft): 226
 Bottom Elevation (ft): 220.4
 Contributing Area (acres): 1.76
 Percent of Sub-Area (%): 24.2
 Overland Type: Mountain
 Map Slope: 0.1867
 Effective Slope: 0.1527
 Q for Flow Path (cfs): 2.55
 Q Top (cfs): 7.96
 Q Bottom (cfs): 10.51
 Velocity Top (ft/s): 4.37
 Velocity Bottom (ft/s): 4.79
 Avg Velocity (ft/s): 4.58
 Wave Velocity (ft/s): 6.87
 ‡
 Tc for frequency = 50.00: 13.691 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 13.691 min. = 14 min.

SUB AREA INPUT DATA

Sub Area Name: D
 Total Area (ac): 7.26
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 50
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 2.717
 C Total: 0.707
 Sum Q Segments (cfs): 13.95
 Q Total (cfs): 13.95
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 821.46
 Time of Concentration (min): 13.691

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 13.6247
 Flow Type: Overland
 Length (ft): 490
 Top Elevation (ft): 226
 Bottom Elevation (ft): 223
 Contributing Area (acres): 5.5
 Percent of Sub-Area (%): 75.8
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0061
 Effective Slope: 0.0061
 Q for Flow Path (cfs): 10.57
 Avg Velocity (ft/s): 0.60
 Passed Scour Check: YES
 Scour Velocity (ft/sec): 1.96
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.0663
 Flow Type: Natural Channel
 Length (ft): 30
 Top Elevation (ft): 226
 Bottom Elevation (ft): 220.4
 Contributing Area (acres): 1.76
 Percent of Sub-Area (%): 24.2
 Overland Type: Mountain
 Map Slope: 0.1867
 Effective Slope: 0.1527
 Q for Flow Path (cfs): 3.38
 Q Top (cfs): 10.57
 Q Bottom (cfs): 13.95
 Velocity Top (ft/s): 4.80
 Velocity Bottom (ft/s): 5.26
 Avg Velocity (ft/s): 5.03
 Wave Velocity (ft/s): 7.55

‡
Tc for frequency = 100.00: 10.309 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 10.309 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: D
 Total Area (ac): 7.26
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Undeveloped
 Soil Type: 4.00
 Percent Impervious: 0
 SUB AREA OUTPUT

Intensity (in/hr): 3.570
 C Total: 0.755
 Sum Q Segments (cfs): 19.56
 Q Total (cfs): 19.56
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 618.52

Time of Concentration (min): 10.309

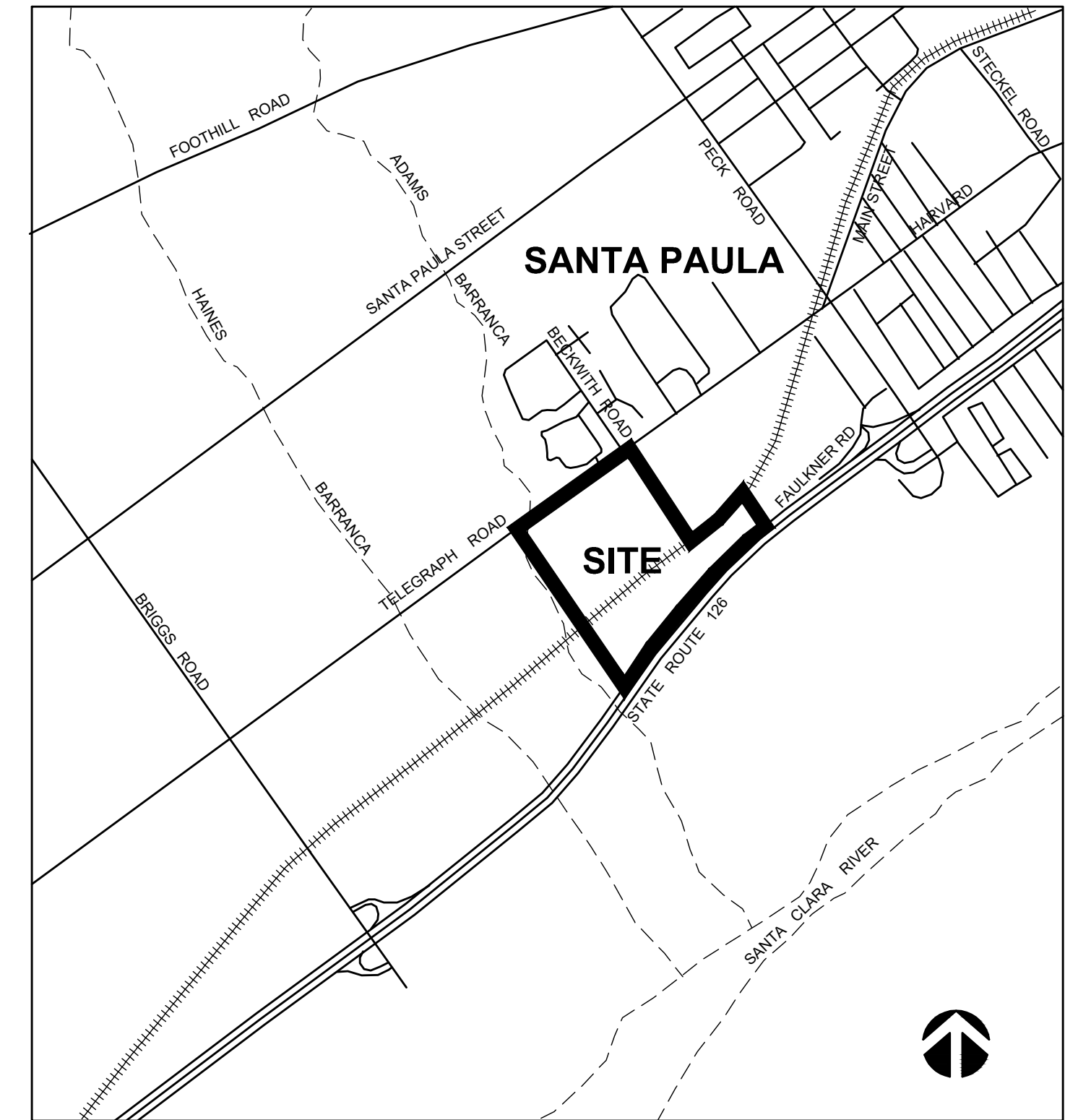
DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 10.2494
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 14.82
Avg Velocity (ft/s): 0.80
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.13
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0592
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 4.74
Q Top (cfs): 14.82
Q Bottom (cfs): 19.56
Velocity Top (ft/s): 5.37
Velocity Bottom (ft/s): 5.89
Avg Velocity (ft/s): 5.63
Wave Velocity (ft/s): 8.44

APPENDIX B

Existing Hydrology Exhibit A



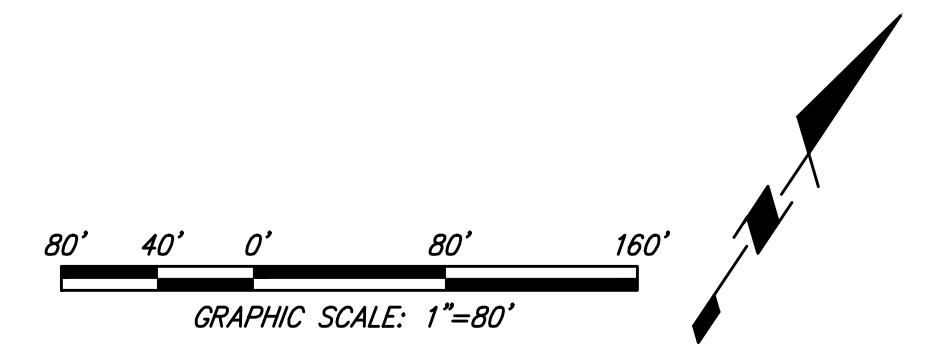
VICINITY MAP
NOT TO SCALE

DRAINAGE AREA CALCULATIONS

SUBAREA	ACRE	EXIST. Q ₁₀	EXIST. Q ₅₀	EXIST. Q ₁₀₀	STORM DRAIN
A	2.82	2.8	4.8	6.5	ADAMS
B1	16.4	11.2	21.6	28.4	1
B2	10.88	7.4	14.4	18.8	2
C1a	10.7	5.0	14.4	18.9	7,4
C1b	4.1	1.9	5.5	7.3	3
C1c	0.91	0.4	1.2	1.6	4
C2	7.61	3.6	10.3	13.5	5
D	7.26	7.9	14.0	19.6	6

LEGEND

- DRAINAGE AREA LIMITS
- EXISTING STORM DRAIN
- DRAINAGE AREA
- PIPE NUMBER
- FLOW PATH
- PROPERTY BOUNDARY
- SUBDRAINAGE AREA LIMITS



JENSEN DESIGN & SURVEY, INC.
 1672 DONLON STREET
 VENTURA, CALIF. 93003
 PHONE 805/654-6977
 FAX 805/654-6979
 www.jdsurvey.com

SCALE: 1"=80'
 DATE: Jun 01, 2011

J.N.: PAR01.4492
 DWG. NAME: 4492_EX-01_HYDRO.dwg

EXISTING HYDROLOGY FOR SANTA PAULA WEST 2

City of Santa Paula
 COUNTY OF VENTURA STATE OF CALIFORNIA

EXHIBIT
A
 1 OF 1

\\PAR14492\Eng\Exhibits\Hydrology\Reference\4492_EX-01_HYDRO.dwg Jun 01, 2011, 9:28am Apracore

APPENDIX C

Proposed Hydrology Calculations

PAR01.4492
4/21/2010

APPENDIX C
PROPOSED CONDITION CALCULATIONS

Flood Zone 2
Rainfall Zone K

Subarea	Area (acres)	Soil Type	10 yr Time of Concentration (min)	50 yr Time of Concentration (min)	100 yr Time of Concentration (min)	q10 (cfs/ac)	q50 (cfs/ac)	q100 (cfs/ac)	Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	Storm Drain
A	1.7	3	30	30	30	0.88	1.24	1.35	1.5	2.1	2.3	Adams
B1a	5.9	3	7	6	5	2.78	3.73	4.68	16.4	22.0	27.6	Basin, 2
B1b	8.2	3	6	6	5	3.02	4.10	4.61	24.8	33.6	37.8	Basin, 2
B1c	3.75	4	8	6	6	2.56	3.73	4.19	9.6	14.0	15.7	Basin, 2
B1 Total	17.85	3,4	-	-	-	-	-	-	50.8	69.6	81.1	Basin, 2
B2	1.97	4	11	7	7	2.08	3.35	3.81	4.1	6.6	7.5	2
C1	15.65	3,4	-	-	-	-	-	-	32.7	52.7	59.8	-
C2	9.24	4	-	-	-	-	-	-	19.3	31.1	35.3	-
C Total	24.89	3,4	11	7	7	2.09	3.37	3.82	52.0	84.0	95.0	Basin, 5
D	5.59	4	13	9	9	1.90	2.96	3.34	10.6	16.6	18.7	9
E	8.25	4	7	5	5	2.74	4.66	4.61	19.4	33.8	38.0	Basin, 8
TOTAL PEAK FLOW (cfs)**									134.3	212.7	242.6	
AVERAGE (cfs/ac)						2.26	3.39	3.80				
cfs/ac from City of Santa Paula Storm Drain Master Plan***						1.8	2.7	3.2				

**Does not include detention time

***City of Santa Paula Storm Drain Master Plan (July 2008). Hawks & Associates

APPENDIX C
HIGHWAY 126 CULVERT CALCULATIONS

EXISTING CONDITION CULVERT DATA SUMMARY

Pipe Number	Size (span x rise)	Invert in	Invert out	Length	slope	headwater	Culvert Master (cfs)	Equivalent Pipe Dimensions for Culvert Program
2	48"x24"	220.44	220.25	140	0.001	225	33.7	43"x27"
5	52"x30"	220.64	219.69	150	0.006	225	49.5	50"x31"
6	52"x30"	220.44	220.25	172	0.001	225	43.2	50"x31"
8	24"x21"	222.25	220.79	140	0.010	225	15.2	used a 24" cmp
9	Paula master plan has the majority of the onsite water planned and sized to go to Todd Lane Drain							

EXISTING CONDITION ROUTING TO CULVERTS

(proposed condition not to exceed peak flows)

Pipe Number	Existing Subarea	Area (ac)	Q10 (cfs)	Q100 (cfs)
2	(B1 + B2)/2	13.64	9.30	23.45
8	(B1 + B2)/2	13.64	9.30	23.45
5	C1a+C1b+C1c+C2	23.22	16.90	41.37
6	D	7.26	7.86	19.56
Adams	A	2.82	2.8	6.5

PROPOSED CONDITION ROUTING TO CULVERTS

Existing Condition Pipe Number	Proposed Condition Pipe Number	Proposed Subarea	Area (ac)	Q10 (cfs)	Q100 (cfs)
2	2	B1 + B2	19.82	15.60	16.70
8	8	E	8.25	9.0	13.0
5,6	5	C	24.9	26.80	46.00

DETENTION BASIN CALCULATIONS

Detention Basin	Contributing Subarea	Basin Volume (cf)	Outflow Pipe Location	Peak Inflow to Basin 10 year (cfs)	Peak Outflow 10 year (cfs)	Peak Inflow to Basin 50 year (cfs)	Peak Outflow 50 year (cfs)	Peak Inflow to Basin 100 year (cfs)	Peak Outflow 100 year (cfs)
1	B1 - 17.85 ac	191,000	2	50.8	7.7	69.6	9	81.1	9.2
2	E - 8.25 ac	31,450	8	19.4	9	33.8	12.8	38	13
3	C - 24.9 ac	78,200	5	52	26.8	84	41.7	95	46

PROPOSED CONDITION CALCULATIONS INCLUDING DETENTION

Subarea	Area (acres)	Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	Final Outflow Location
A	1.7	1.5	2.1	2.3	Adams
B1	17.85	7.7	9.0	9.2	2
B2	1.97	4.1	6.6	7.5	2
C	24.89	26.8	41.7	46.0	5
D	5.59	10.6	16.6	18.7	9
E	8.25	9.0	12.8	13.0	8
TOTAL		59.7	88.8	96.7	

Detention Basin 3 Hydrograph Summary Report

10 year 1

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description	
2	Manual	2.400	1	1153	18,986	---	----	----	10 unit	
3	Manual	52.03	1	1153	411,604	---	----	----	10 C area INFLOW	
4	Manual	0.000	1	n/a	0	---	----	----	50 unit	
5	Manual	0.000	1	n/a	0	---	----	----	50 C area	
6	Manual	0.000	1	n/a	0	---	----	----	100 unit	
7	Manual	0.000	1	n/a	0	---	----	----	100 C area	
	Reservoir	26.84	1	1162	411,145	3	224.19	60,443	east pond 10 OUTFLOW	
10	Reservoir	0.000	1	n/a	0	5	221.50	0.000	east pond 50	
11	Reservoir	0.000	1	n/a	0	7	221.50	0.000	east pond 100	
4492_PRELIM DET BASIN-bender.gpw					Return Period: 10 Year			Thursday, Feb 3, 2011		

Basin 3
50 year 2

Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
2	Manual	0.000	1	n/a	0	---	-----	-----	10 unit
3	Manual	0.000	1	n/a	0	---	-----	-----	10 C area
4	Manual	3.770	1	1152	27,827	---	-----	-----	50 unit
5	Manual	83.99	1	1152	619,937	---	-----	-----	50 C area <i>INFLOW</i>
6	Manual	0.000	1	n/a	0	---	-----	-----	100 unit
7	Manual	0.000	1	n/a	0	---	-----	-----	100 C area
9	Reservoir	0.000	1	n/a	0	3	221.50	0.000	east pond 10
10	Reservoir	41.74	1	1158	619,460	5	224.77	73,444	east pond 50 <i>OUTFLOW</i>
11	Reservoir	0.000	1	n/a	0	7	221.50	0.000	east pond 100

BASIN 3
100 year 3

Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description	
2	Manual	0.000	1	n/a	0	---	-----	-----	10 unit	
3	Manual	0.000	1	n/a	0	---	-----	-----	10 C area	
4	Manual	0.000	1	n/a	0	---	-----	-----	50 unit	
5	Manual	0.000	1	n/a	0	---	-----	-----	50 C area	
6	Manual	4.230	1	1152	36,154	---	-----	-----	100 unit	
	Manual	94.66		1152	809,028	---	-----	-----	100 C area INFLOW	
9	Reservoir	0.000	1	n/a	0	3	221.50	0.000	east pond 10	
10	Reservoir	0.000	1	n/a	0	5	221.50	0.000	east pond 50	
	Reservoir	45.89		1158	808,536	7	225.02	79,072	east pond 100 OUTFLOW	
4492_PRELIM DET BASIN-bender.gpw					Return Period: 100 Year			Thursday, Feb 3, 2011		

Detention Basin North + South Hydrograph Summary Report

10 year 1

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Manual	2.860	1	1153	18,760	---	-----	-----	<no description>
2	Manual	50.79	1	1153	333,189	---	-----	-----	B1 10
3	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
4	Manual	0.000	1	n/a	0	---	-----	-----	b1 50
5	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
6	Manual	0.000	1	n/a	0	---	-----	-----	b1 100
8	Reservoir	7.669	1	1182	321,731	2	230.99	125,699	northern pond 10 year outflow 'B'
9	Reservoir	0.000	1	n/a	0	4	226.00	0.000	northern pond 50
10	Reservoir	0.000	1	n/a	0	6	226.00	0.000	northern pond 100
12	Manual	2.680	1	1154	18,769	---	-----	-----	<no description>
13	Manual	19.34	1	1154	135,504	---	-----	-----	E 10 year
14	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
15	Manual	0.000	1	n/a	0	---	-----	-----	E 50 year
16	Manual	0.000	1	n/a	0	---	-----	-----	E 100 year
18	Reservoir	9.004	1	1161	131,547	13	226.29	14,610	southern pond 100 outflow 'B'
19	Reservoir	0.000	1	n/a	0	15	223.00	0.000	southern pond 50
20	Reservoir	0.000	1	n/a	0	16	223.00	0.000	southern pond 100

Hydrograph Summary Report

50 year²

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description
1	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
2	Manual	0.000	1	n/a	0	---	-----	-----	B1 10
3	Manual	4.100	1	1152	27,818	---	-----	-----	<no description>
4	Manual	69.58	1	1152	472,086	---	-----	-----	b1 50
5	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
6	Manual	0.000	1	n/a	0	---	-----	-----	b1 100
8	Reservoir	0.000	1	n/a	0	2	226.00	0.000	northern pond 10 year
9	Reservoir	9.019	1	1194	460,460	4	232.18	163,626	northern pond 50 OUTFLOW 'B'
10	Reservoir	0.000	1	n/a	0	6	226.00	0.000	northern pond 100
12	Manual	0.000	1	n/a	0	---	-----	-----	<no description>
13	Manual	0.000	1	n/a	0	---	-----	-----	E 10 year
14	Manual	4.550	1	1153	27,439	---	-----	-----	<no description>
15	Manual	33.74	1	1153	203,470	---	-----	-----	E 50 year
16	Manual	0.000	1	n/a	0	---	-----	-----	E 100 year
18	Reservoir	0.000	1	n/a	0	13	223.00	0.000	southern pond 10
19	Reservoir	12.60	1	1157	199,513	15	227.10	18,873	southern pond 50 OUTFLOW 'E'
20	Reservoir	0.000	1	n/a	0	16	223.00	0.000	southern pond 100

100 year 3

Hydrograph Summary Report

Hydraflow Hydrographs by Intelisolve v9.23

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph description	
1	Manual	0.000	1	n/a	0	---	----	----	<no description>	
2	Manual	0.000	1	n/a	0	---	----	----	B1 10	
3	Manual	0.000	1	n/a	0	---	----	----	<no description>	
4	Manual	0.000	1	n/a	0	---	----	----	b1 50	
5	Manual	5.100	1	1153	36,061	---	----	----	<no description>	
6	Manual	81.09	1	1153	573,432	---	----	----	b1 100	
8	Reservoir	0.000	1	n/a	0	2	226.00	0.000	northern pond 10 year	
9	Reservoir	0.000	1	n/a	0	4	226.00	0.000	northern pond 50	
10	Reservoir	9.197	1	1200	561,712	6	232.35	169,425	northern pond 100 <i>OUTFLOW 'S'</i>	
12	Manual	0.000	1	n/a	0	---	----	----	<no description>	
13	Manual	0.000	1	n/a	0	---	----	----	E 10 year	
14	Manual	0.000	1	n/a	0	---	----	----	<no description>	
15	Manual	0.000	1	n/a	0	---	----	----	E 50 year	
16	Manual	37.82	1	1153	267,402	---	----	----	E 100 year	
18	Reservoir	0.000	1	n/a	0	13	223.00	0.000	southern pond 10	
19	Reservoir	0.000	1	n/a	0	15	223.00	0.000	southern pond 50	
20	Reservoir	13.17	1	1158	263,445	16	227.37	20,665	southern pond 100 <i>OUTFLOW 'E'</i>	
4492_PRELIM DET BASIN-west.gpw					Return Period: 100 Year			Thursday, Feb 3, 2011		

APPENDIX D

Proposed Hydrology Exhibit B

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION

TC Program Version: 2.6.2008.11

Project:

Date: 12:00:00 AM

Engineer: Kinsey Hensley

Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed A

Name	Zone	Storm	Soil	Area (acres)	TC (min)
A	K	10	4.00	1.7 / 2	TC ERROR
A	K	25	4.00	1.7 / 2	TC ERROR
A	K	50	4.00	1.7 / 2	TC ERROR
A	K	100	4.00	1.7 / 2	TC ERROR

Watershed Name: Watershed A

Sub-Area Name: A

Computing Tc for all rainfall frequencies for sub-area A...

Tc for frequency = 10.00: 54.237 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 54.237 min. = 54 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A

Total Area (ac): 1.7

Flood Zone: 2

Rainfall Zone: K

Storm Frequency (years): 10

Development Type: Industrial

Soil Type: 4.00

Percent Impervious: 70

SUB AREA OUTPUT

Intensity (in/hr): 1.097

C Total: 0.785

Sum Q Segments (cfs): 1.46

Q Total (cfs): 1.46

Sum Percent Area (%): 100.0

Sum of Flow Path Travel Times (sec): 3,254.20

Time of Concentration (min): 54.237

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 0.7128

Flow Type: Overland

Length (ft): 30

Top Elevation (ft): 245

Bottom Elevation (ft): 242

Contributing Area (acres): 0.1

Percent of Sub-Area (%): 5.9

Overland Type: Mountain

Development Type: Industrial

Map Slope: 0.1000
 Effective Slope: 0.1000
 Q for Flow Path (cfs): 0.09
 Avg Velocity (ft/s): 0.70
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 38.4265
 Flow Type: Channel
 Length (ft): 1095
 Top Elevation (ft): 242
 Bottom Elevation (ft): 225
 Contributing Area (acres): 1
 Percent of Sub-Area (%): 58.8
 Bottom width (ft): 5
 Side Slope (H:V): 4
 Manning's N: 0.2
 Map Slope: 0.0155
 Q for Flow Path (cfs): 0.86
 Q Top (cfs): 0.09
 Q Bottom (cfs): 0.95
 Velocity Top (ft/s): 0.18
 Velocity Bottom (ft/s): 0.41
 Avg Velocity (ft/s): 0.29
 Wave Velocity (ft/s): 0.47
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 15.0974
 Flow Type: Channel
 Length (ft): 580
 Top Elevation (ft): 224
 Bottom Elevation (ft): 217
 Contributing Area (acres): 0.6
 Percent of Sub-Area (%): 35.3
 Bottom width (ft): 5
 Side Slope (H:V): 4
 Manning's N: 0.2
 Map Slope: 0.0121
 Q for Flow Path (cfs): 0.52
 Q Top (cfs): 0.95
 Q Bottom (cfs): 1.46
 Velocity Top (ft/s): 0.37
 Velocity Bottom (ft/s): 0.43
 Avg Velocity (ft/s): 0.40
 Wave Velocity (ft/s): 0.64
 ‡
 Tc for frequency = 25.00: 51.566 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 51.566 min. = 52 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
 Total Area (ac): 1.7
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70

SUB AREA OUTPUT

Intensity (in/hr): 1.254
 C Total: 0.805
 Sum Q Segments (cfs): 1.72
 Q Total (cfs): 1.72
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 3,093.94
 Time of Concentration (min): 51.566

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.6033
 Flow Type: Overland
 Length (ft): 30
 Top Elevation (ft): 245
 Bottom Elevation (ft): 242
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 5.9
 Overland Type: Mountain
 Development Type: Industrial
 Map Slope: 0.1000
 Effective Slope: 0.1000
 Q for Flow Path (cfs): 0.10
 Avg Velocity (ft/s): 0.83
 Passed Scour Check: N/A

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 36.5496
 Flow Type: Channel
 Length (ft): 1095
 Top Elevation (ft): 242
 Bottom Elevation (ft): 225
 Contributing Area (acres): 1
 Percent of Sub-Area (%): 58.8
 Bottom width (ft): 5
 Side Slope (H:V): 4
 Manning's N: 0.2
 Map Slope: 0.0155
 Q for Flow Path (cfs): 1.01
 Q Top (cfs): 0.10
 Q Bottom (cfs): 1.11
 Velocity Top (ft/s): 0.19
 Velocity Bottom (ft/s): 0.43
 Avg Velocity (ft/s): 0.31
 Wave Velocity (ft/s): 0.50

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 14.4127
 Flow Type: Channel
 Length (ft): 580
 Top Elevation (ft): 224
 Bottom Elevation (ft): 217
 Contributing Area (acres): 0.6
 Percent of Sub-Area (%): 35.3
 Bottom width (ft): 5
 Side Slope (H:V): 4
 Manning's N: 0.2
 Map Slope: 0.0121
 Q for Flow Path (cfs): 0.61

4492_JDS_PRP_TC_ALL

Q Top (cfs): 1.11
Q Bottom (cfs): 1.72
Velocity Top (ft/s): 0.39
Velocity Bottom (ft/s): 0.45
Avg Velocity (ft/s): 0.42
Wave Velocity (ft/s): 0.67
‡
Tc for frequency = 50.00: 48.958 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 48.958 min. = 49 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.7
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 1.446
C Total: 0.829
Sum Q Segments (cfs): 2.04
Q Total (cfs): 2.04
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 2,937.50
Time of Concentration (min): 48.958

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.5000
Flow Type: Overland
Length (ft): 30
Top Elevation (ft): 245
Bottom Elevation (ft): 242
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 5.9
Overland Type: Mountain
Development Type: Industrial
Map Slope: 0.1000
Effective Slope: 0.1000
Q for Flow Path (cfs): 0.12
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 34.7551
Flow Type: Channel
Length (ft): 1095
Top Elevation (ft): 242
Bottom Elevation (ft): 225
Contributing Area (acres): 1
Percent of Sub-Area (%): 58.8
Bottom width (ft): 5
Side slope (H:V): 4
Manning's N: 0.2
Map Slope: 0.0155

4492_JDS_PRP_TC_ALL

Q for Flow Path (cfs): 1.20
Q Top (cfs): 0.12
Q Bottom (cfs): 1.32
Velocity Top (ft/s): 0.20
Velocity Bottom (ft/s): 0.45
Avg velocity (ft/s): 0.33
wave velocity (ft/s): 0.53
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 13.7032
Flow Type: Channel
Length (ft): 580
Top Elevation (ft): 224
Bottom Elevation (ft): 217
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 35.3
Bottom width (ft): 5
Side Slope (H:V): 4
Manning's N: 0.2
Map Slope: 0.0121
Q for Flow Path (cfs): 0.72
Q Top (cfs): 1.32
Q Bottom (cfs): 2.04
Velocity Top (ft/s): 0.42
Velocity Bottom (ft/s): 0.47
Avg velocity (ft/s): 0.44
wave velocity (ft/s): 0.71

‡
Tc for frequency = 100.00: 46.936 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 46.936 min. = 47 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.7
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 1.630
C Total: 0.842
Sum Q Segments (cfs): 2.33
Q Total (cfs): 2.33
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 2,816.18
Time of Concentration (min): 46.936

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.4395
Flow Type: Overland
Length (ft): 30
Top Elevation (ft): 245
Bottom Elevation (ft): 242
Contributing Area (acres): 0.1

Percent of Sub-Area (%): 5.9
Overland Type: Mountain
Development Type: Industrial
Map Slope: 0.1000
Effective Slope: 0.1000
Q for Flow Path (cfs): 0.14
Avg Velocity (ft/s): 1.14
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 33.2898
Flow Type: Channel
Length (ft): 1095
Top Elevation (ft): 242
Bottom Elevation (ft): 225
Contributing Area (acres): 1
Percent of Sub-Area (%): 58.8
Bottom width (ft): 5
Side Slope (H:V): 4
Manning's N: 0.2
Map Slope: 0.0155
Q for Flow Path (cfs): 1.37
Q Top (cfs): 0.14
Q Bottom (cfs): 1.51
Velocity Top (ft/s): 0.21
Velocity Bottom (ft/s): 0.47
Avg Velocity (ft/s): 0.34
Wave Velocity (ft/s): 0.55
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 13.2071
Flow Type: Channel
Length (ft): 580
Top Elevation (ft): 224
Bottom Elevation (ft): 217
Contributing Area (acres): 0.6
Percent of Sub-Area (%): 35.3
Bottom width (ft): 5
Side Slope (H:V): 4
Manning's N: 0.2
Map Slope: 0.0121
Q for Flow Path (cfs): 0.82
Q Top (cfs): 1.51
Q Bottom (cfs): 2.33
Velocity Top (ft/s): 0.43
Velocity Bottom (ft/s): 0.49
Avg Velocity (ft/s): 0.46
wave velocity (ft/s): 0.73

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed B

4492_JDS_PRP_TC_ALL						
Name	Zone	Storm	Soil	Area (acres)		TC (min)
B1a	K	10	3.00	5.9 /	6	6.625 / 7
B1a	K	25	3.00	5.9 /	6	5.962 / 6
B1a	K	50	3.00	5.9 /	6	5.643 / 6
B1a	K	100	3.00	5.9 /	6	TC ERROR
B1b	K	10	3.00	8.2 /	8	6.138 / 6
B1b	K	25	3.00	8.2 /	8	5.660 / 6
B1b	K	50	3.00	8.2 /	8	TC ERROR
B1b	K	100	3.00	8.2 /	8	TC ERROR
B1c	K	10	4.00	3.8 /	4	7.849 / 8
B1c	K	25	4.00	3.8 /	4	7.619 / 8
B1c	K	50	4.00	3.8 /	4	5.788 / 6
B1c	K	100	4.00	3.8 /	4	5.656 / 6
B2a	K	10	4.00	2.0 /	2	11.069 / 11
B2a	K	25	4.00	2.0 /	2	8.653 / 9
B2a	K	50	4.00	2.0 /	2	6.850 / 7
B2a	K	100	4.00	2.0 /	2	6.779 / 7

‡

Watershed Name: Watershed B

Sub-Area Name: B1a

Computing Tc for all rainfall frequencies for sub-area B1a...

Tc for frequency = 10.00: 6.625 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 6.625 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: B1a

Total Area (ac): 5.9

Flood Zone: 2

Rainfall Zone: K

Storm Frequency (years): 10

Development Type: Industrial

Soil Type: 3.00

Percent Impervious: 70

SUB AREA OUTPUT

Intensity (in/hr): 3.094

C Total: 0.899

Sum Q Segments (cfs): 16.42

Q Total (cfs): 16.42

Sum Percent Area (%): 100.0

Sum of Flow Path Travel Times (sec): 397.50

Time of Concentration (min): 6.625

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 2.2608

Flow Type: Overland

Length (ft): 60

Top Elevation (ft): 250

Bottom Elevation (ft): 248

Contributing Area (acres): 0.05

Percent of Sub-Area (%): 0.8

Overland Type: Valley

Development Type: Undeveloped

Map Slope: 0.0333
 Effective Slope: 0.0333
 Q for Flow Path (cfs): 0.14
 Avg Velocity (ft/s): 0.44
 Passed Scour Check: YES
 Scour velocity (ft/sec): 1.99
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.4322
 Flow Type: Street
 Length (ft): 677
 Top Elevation (ft): 248
 Bottom Elevation (ft): 238
 Contributing Area (acres): 2.85
 Percent of Sub-Area (%): 48.3
 Street Width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0148
 Q for Flow Path (cfs): 7.93
 Q Top (cfs): 0.14
 Q Bottom (cfs): 8.07
 Velocity Top (ft/s): 1.16
 Velocity Bottom (ft/s): 3.22
 Avg Velocity (ft/s): 2.19
 wave Velocity (ft/s): 3.29
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.9320
 Flow Type: Pipe
 Length (ft): 545
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 3
 Percent of Sub-Area (%): 50.8
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 21
 Used Pipe Diameter (in): 24
 Manning's N: 0.011
 Map Slope: 0.0147
 Q for Flow Path (cfs): 8.35
 Q Top (cfs): 8.07
 Q Bottom (cfs): 16.42
 Avg Velocity (ft/s): 7.36
 wave Velocity (ft/s): 9.75
 ‡
 Tc for frequency = 25.00: 5.962 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.962 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1a
 Total Area (ac): 5.9
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

4492_JDS_PRP_TC_ALL

Intensity (in/hr): 3.800
C Total: 0.908
Sum Q Segments (cfs): 20.35
Q Total (cfs): 20.35
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 357.70
Time of Concentration (min): 5.962

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.7916
Flow Type: Overland
Length (ft): 60
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0333
Effective Slope: 0.0333
Q for Flow Path (cfs): 0.17
Avg Velocity (ft/s): 0.56
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.04

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.2516
Flow Type: Street
Length (ft): 677
Top Elevation (ft): 248
Bottom Elevation (ft): 238
Contributing Area (acres): 2.85
Percent of Sub-Area (%): 48.3
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0148
Q for Flow Path (cfs): 9.83
Q Top (cfs): 0.17
Q Bottom (cfs): 10.00
Velocity Top (ft/s): 1.23
Velocity Bottom (ft/s): 3.40
Avg Velocity (ft/s): 2.31
Wave Velocity (ft/s): 3.47

DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.9184
Flow Type: Pipe
Length (ft): 545
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 3
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0147
Q for Flow Path (cfs): 10.35

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Q Top (cfs): 10.00
Q Bottom (cfs): 20.35
Avg Velocity (ft/s): 7.72
Wave Velocity (ft/s): 9.89
‡
Tc for frequency = 50.00: 5.643 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.643 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1a
Total Area (ac): 5.9
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.100
C Total: 0.911
Sum Q Segments (cfs): 22.03
Q Total (cfs): 22.03
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 338.56
Time of Concentration (min): 5.643

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.5366
Flow Type: Overland
Length (ft): 60
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0333
Effective Slope: 0.0333
Q for Flow Path (cfs): 0.19
Avg Velocity (ft/s): 0.65
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.06
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.1878
Flow Type: Street
Length (ft): 677
Top Elevation (ft): 248
Bottom Elevation (ft): 238
Contributing Area (acres): 2.85
Percent of Sub-Area (%): 48.3
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0148
Q for Flow Path (cfs): 10.64
Q Top (cfs): 0.19

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Q Bottom (cfs): 10.83
Velocity Top (ft/s): 1.25
Velocity Bottom (ft/s): 3.47
Avg Velocity (ft/s): 2.36
Wave Velocity (ft/s): 3.54
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.9184
Flow Type: Pipe
Length (ft): 545
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 3
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0147
Q for Flow Path (cfs): 11.20
Q Top (cfs): 10.83
Q Bottom (cfs): 22.03
Avg Velocity (ft/s): 7.87
Wave Velocity (ft/s): 9.89

‡
Tc for frequency = 100.00: 4.827 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 4.827 min. = 5 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B1a
Total Area (ac): 5.9
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 5.100
C Total: 0.917
Sum Q Segments (cfs): 27.60
Q Total (cfs): 27.60
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 289.62
Time of Concentration (min): 4.827

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.1718
Flow Type: Overland
Length (ft): 60
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.8
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0333
Effective Slope: 0.0333
Q for Flow Path (cfs): 0.23
Avg Velocity (ft/s): 0.85
Passed Scour Check: YES
Scour velocity (ft/sec): 2.12
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.0119
Flow Type: Street
Length (ft): 677
Top Elevation (ft): 248
Bottom Elevation (ft): 238
Contributing Area (acres): 2.85
Percent of Sub-Area (%): 48.3
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0148
Q for Flow Path (cfs): 13.33
Q Top (cfs): 0.23
Q Bottom (cfs): 13.57
Velocity Top (ft/s): 1.32
Velocity Bottom (ft/s): 3.67
Avg Velocity (ft/s): 2.50
Wave Velocity (ft/s): 3.75
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.6433
Flow Type: Pipe
Length (ft): 545
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 3
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0147
Q for Flow Path (cfs): 14.03
Q Top (cfs): 13.57
Q Bottom (cfs): 27.60
Avg Velocity (ft/s): 10.93
Wave Velocity (ft/s): 14.12

♀
Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: B1b
Computing Tc for all rainfall frequencies for sub-area B1b...

Tc for frequency = 10.00: 6.138 Minutes
DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 6.138 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1b

Total Area (ac): 8.2
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 3.400
 C Total: 0.904
 Sum Q Segments (cfs): 25.19
 Q Total (cfs): 25.19
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 368.29
 Time of Concentration (min): 6.138

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.0000
 Flow Type: Overland
 Length (ft): 60
 Top Elevation (ft): 250
 Bottom Elevation (ft): 248
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 0.6
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0333
 Effective Slope: 0.0333
 Q for Flow Path (cfs): 0.15
 Avg Velocity (ft/s): 0.50
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.4914
 Flow Type: Street
 Length (ft): 675
 Top Elevation (ft): 248
 Bottom Elevation (ft): 235.5
 Contributing Area (acres): 1.1
 Percent of Sub-Area (%): 13.4
 Street width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0185
 Q for Flow Path (cfs): 3.38
 Q Top (cfs): 0.15
 Q Bottom (cfs): 3.53
 Velocity Top (ft/s): 1.40
 Velocity Bottom (ft/s): 2.90
 Avg Velocity (ft/s): 2.15
 Wave Velocity (ft/s): 3.22
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.6468
 Flow Type: Pipe
 Length (ft): 280
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 7.05

Percent of Sub-Area (%): 86.0
 Initial Pipe Diameter (in): 30
 Calculated Pipe Diameter (in): 21
 Used Pipe Diameter (in): 30
 Manning's N: 0.011
 Map Slope: 0.0196
 Q for Flow Path (cfs): 21.66
 Q Top (cfs): 3.53
 Q Bottom (cfs): 25.19
 Avg Velocity (ft/s): 5.45
 Wave Velocity (ft/s): 7.22
 ‡
 Tc for frequency = 25.00: 5.660 Minutes
 DATA FOR SUB AREA 2

 SUB AREA TIME OF CONCENTRATION: 5.660 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1b
 Total Area (ac): 8.2
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 3.800
 C Total: 0.908
 Sum Q Segments (cfs): 28.29
 Q Total (cfs): 28.29
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 339.63
 Time of Concentration (min): 5.660

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.7916
 Flow Type: Overland
 Length (ft): 60
 Top Elevation (ft): 250
 Bottom Elevation (ft): 248
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 0.6
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0333
 Effective Slope: 0.0333
 Q for Flow Path (cfs): 0.17
 Avg Velocity (ft/s): 0.56
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3987
 Flow Type: Street
 Length (ft): 675
 Top Elevation (ft): 248
 Bottom Elevation (ft): 235.5
 Contributing Area (acres): 1.1

Percent of Sub-Area (%): 13.4
 Street Width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0185
 Q for Flow Path (cfs): 3.79
 Q Top (cfs): 0.17
 Q Bottom (cfs): 3.97
 Velocity Top (ft/s): 1.44
 Velocity Bottom (ft/s): 2.98
 Avg Velocity (ft/s): 2.21
 Wave Velocity (ft/s): 3.31
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.4702
 Flow Type: Pipe
 Length (ft): 280
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 7.05
 Percent of Sub-Area (%): 86.0
 Initial Pipe Diameter (in): 30
 Calculated Pipe Diameter (in): 24
 Used Pipe Diameter (in): 30
 Manning's N: 0.011
 Map Slope: 0.0196
 Q for Flow Path (cfs): 24.32
 Q Top (cfs): 3.97
 Q Bottom (cfs): 28.29
 Avg Velocity (ft/s): 7.33
 Wave Velocity (ft/s): 9.92

‡
 Tc for frequency = 50.00: 4.711 Minutes
 DATA FOR SUB AREA 2

 SUB AREA TIME OF CONCENTRATION: 4.711 min. = 5 min. ** TC ERROR **

 SUB AREA INPUT DATA

 Sub Area Name: B1b
 Total Area (ac): 8.2
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 50
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 4.548
 C Total: 0.914
 Sum Q Segments (cfs): 34.08
 Q Total (cfs): 34.08
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 282.68
 Time of Concentration (min): 4.711

 DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0000
 Flow Type: Overland
 Length (ft): 60

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Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.6
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0333
Effective Slope: 0.0333
Q for Flow Path (cfs): 0.21
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.2549
Flow Type: Street
Length (ft): 675
Top Elevation (ft): 248
Bottom Elevation (ft): 235.5
Contributing Area (acres): 1.1
Percent of Sub-Area (%): 13.4
Street width (ft): 40
Curb Height (in): 6
Map Slope: 0.0185
Q for Flow Path (cfs): 4.57
Q Top (cfs): 0.21
Q Bottom (cfs): 4.78
Velocity Top (ft/s): 1.50
Velocity Bottom (ft/s): 3.11
Avg Velocity (ft/s): 2.30
Wave Velocity (ft/s): 3.46
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.4564
Flow Type: Pipe
Length (ft): 280
Top Elevation (ft): 235.5
Bottom Elevation (ft): 230
Contributing Area (acres): 7.05
Percent of Sub-Area (%): 86.0
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0196
Q for Flow Path (cfs): 29.30
Q Top (cfs): 4.78
Q Bottom (cfs): 34.08
Avg Velocity (ft/s): 7.71
Wave Velocity (ft/s): 10.23
♀
Tc for frequency = 100.00: 4.510 Minutes
DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 4.510 min. = 5 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B1b
Total Area (ac): 8.2
Flood Zone: 2
Rainfall Zone: K

Storm Frequency (years): 100
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 5.100
 C Total: 0.917
 Sum Q Segments (cfs): 38.36
 Q Total (cfs): 38.36
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 270.62
 Time of Concentration (min): 4.510

DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0000
 Flow Type: Overland
 Length (ft): 60
 Top Elevation (ft): 250
 Bottom Elevation (ft): 248
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 0.6
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0333
 Effective Slope: 0.0333
 Q for Flow Path (cfs): 0.23
 Avg Velocity (ft/s): 1.00
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.1666
 Flow Type: Street
 Length (ft): 675
 Top Elevation (ft): 248
 Bottom Elevation (ft): 235.5
 Contributing Area (acres): 1.1
 Percent of Sub-Area (%): 13.4
 Street width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0185
 Q for Flow Path (cfs): 5.15
 Q Top (cfs): 0.23
 Q Bottom (cfs): 5.38
 Velocity Top (ft/s): 1.54
 Velocity Bottom (ft/s): 3.19
 Avg Velocity (ft/s): 2.37
 Wave Velocity (ft/s): 3.55
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.3436
 Flow Type: Pipe
 Length (ft): 280
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 7.05
 Percent of Sub-Area (%): 86.0
 Initial Pipe Diameter (in): 30
 Calculated Pipe Diameter (in): 27

Used Pipe Diameter (in): 30
 Manning's N: 0.011
 Map Slope: 0.0196
 Q for Flow Path (cfs): 32.98
 Q Top (cfs): 5.38
 Q Bottom (cfs): 38.36
 Avg Velocity (ft/s): 10.03
 wave Velocity (ft/s): 13.58

‡

Project:
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

 Sub-Area Name: B1c
 Computing Tc for all rainfall frequencies for sub-area B1c...

 Tc for frequency = 10.00: 7.849 Minutes
 DATA FOR SUB AREA 3

 SUB AREA TIME OF CONCENTRATION: 7.849 min. = 8 min.

 SUB AREA INPUT DATA

 Sub Area Name: B1c
 Total Area (ac): 3.75
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 2.865
 C Total: 0.880
 Sum Q Segments (cfs): 9.46
 Q Total (cfs): 9.46
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 470.94
 Time of Concentration (min): 7.849

 DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3333
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 238
 Bottom Elevation (ft): 237
 Contributing Area (acres): 0.1
 Percent of Sub-Area (%): 2.7
 Overland Type: valley
 Development Type: Industrial
 Map Slope: 0.0100
 Effective Slope: 0.0100
 Q for Flow Path (cfs): 0.25
 Avg Velocity (ft/s): 0.50
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.0957

Flow Type: Street
 Length (ft): 500
 Top Elevation (ft): 237
 Bottom Elevation (ft): 234
 Contributing Area (acres): 1
 Percent of Sub-Area (%): 26.7
 Street width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0060
 Q for Flow Path (cfs): 2.52
 Q Top (cfs): 0.25
 Q Bottom (cfs): 2.77
 Velocity Top (ft/s): 0.96
 Velocity Bottom (ft/s): 1.75
 Avg Velocity (ft/s): 1.36
 Wave Velocity (ft/s): 2.03
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.4200
 Flow Type: Pipe
 Length (ft): 275
 Top Elevation (ft): 234
 Bottom Elevation (ft): 230
 Contributing Area (acres): 2.65
 Percent of Sub-Area (%): 70.7
 Initial Pipe Diameter (in): 18
 Calculated Pipe Diameter (in): 18
 Used Pipe Diameter (in): 18
 Manning's N: 0.011
 Map Slope: 0.0145
 Q for Flow Path (cfs): 6.68
 Q Top (cfs): 2.77
 Q Bottom (cfs): 9.46
 Avg Velocity (ft/s): 8.05
 Wave Velocity (ft/s): 10.91
 †
 Tc for frequency = 25.00: 7.619 Minutes
 DATA FOR SUB AREA 3

 SUB AREA TIME OF CONCENTRATION: 7.619 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: B1c
 Total Area (ac): 3.75
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 3.191
 C Total: 0.886
 Sum Q Segments (cfs): 10.60
 Q Total (cfs): 10.60
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 457.13
 Time of Concentration (min): 7.619

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.2287
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 238
Bottom Elevation (ft): 237
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0100
Effective Slope: 0.0100
Q for Flow Path (cfs): 0.28
Avg Velocity (ft/s): 0.52
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.9796
Flow Type: Street
Length (ft): 500
Top Elevation (ft): 237
Bottom Elevation (ft): 234
Contributing Area (acres): 1
Percent of Sub-Area (%): 26.7
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0060
Q for Flow Path (cfs): 2.83
Q Top (cfs): 0.28
Q Bottom (cfs): 3.11
Velocity Top (ft/s): 0.99
Velocity Bottom (ft/s): 1.80
Avg Velocity (ft/s): 1.40
Wave Velocity (ft/s): 2.09
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.4106
Flow Type: Pipe
Length (ft): 275
Top Elevation (ft): 234
Bottom Elevation (ft): 230
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 70.7
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 18
Manning's N: 0.011
Map Slope: 0.0145
Q for Flow Path (cfs): 7.49
Q Top (cfs): 3.11
Q Bottom (cfs): 10.60
Avg Velocity (ft/s): 8.28
Wave Velocity (ft/s): 11.16
‡
Tc for frequency = 50.00: 5.788 Minutes
DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 5.788 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1c
Total Area (ac): 3.75
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.100
C Total: 0.897
Sum Q Segments (cfs): 13.79
Q Total (cfs): 13.79
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 347.28
Time of Concentration (min): 5.788

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.6667
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 238
Bottom Elevation (ft): 237
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 2.7
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0100
Effective Slope: 0.0100
Q for Flow Path (cfs): 0.37
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.7250
Flow Type: Street
Length (ft): 500
Top Elevation (ft): 237
Bottom Elevation (ft): 234
Contributing Area (acres): 1
Percent of Sub-Area (%): 26.7
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0060
Q for Flow Path (cfs): 3.68
Q Top (cfs): 0.37
Q Bottom (cfs): 4.05
Velocity Top (ft/s): 1.05
Velocity Bottom (ft/s): 1.93
Avg Velocity (ft/s): 1.49
Wave Velocity (ft/s): 2.24
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.3962
Flow Type: Pipe
Length (ft): 275
Top Elevation (ft): 234

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Bottom Elevation (ft): 230
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 70.7
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 18
Manning's N: 0.011
Map Slope: 0.0145
Q for Flow Path (cfs): 9.74
Q Top (cfs): 4.05
Q Bottom (cfs): 13.79
Avg Velocity (ft/s): 8.86
Wave Velocity (ft/s): 11.57
♀
Tc for frequency = 100.00: 5.656 Minutes
DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 5.656 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1c
Total Area (ac): 3.75
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.590
C Total: 0.901
Sum Q Segments (cfs): 15.51
Q Total (cfs): 15.51
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 339.36
Time of Concentration (min): 5.656

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.6667
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 238
Bottom Elevation (ft): 237
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 2.7
Overland Type: valley
Development Type: Industrial
Map Slope: 0.0100
Effective Slope: 0.0100
Q for Flow Path (cfs): 0.41
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.6166
Flow Type: Street
Length (ft): 500
Top Elevation (ft): 237

Bottom Elevation (ft): 234
Contributing Area (acres): 1
Percent of Sub-Area (%): 26.7
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0060
Q for Flow Path (cfs): 4.14
Q Top (cfs): 0.41
Q Bottom (cfs): 4.55
Velocity Top (ft/s): 1.09
Velocity Bottom (ft/s): 1.99
Avg Velocity (ft/s): 1.54
Wave Velocity (ft/s): 2.30
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.3728
Flow Type: Pipe
Length (ft): 275
Top Elevation (ft): 234
Bottom Elevation (ft): 230
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 70.7
Initial Pipe Diameter (in): 18
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 21
Manning's N: 0.011
Map Slope: 0.0145
Q for Flow Path (cfs): 10.96
Q Top (cfs): 4.55
Q Bottom (cfs): 15.51
Avg Velocity (ft/s): 9.10
Wave Velocity (ft/s): 12.30

‡
Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: B2a
Computing Tc for all rainfall frequencies for sub-area B2a...

Tc for frequency = 10.00: 11.069 Minutes
DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 11.069 min. = 11 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
Total Area (ac): 1.97
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.396
C Total: 0.870
Sum Q Segments (cfs): 4.10
Q Total (cfs): 4.10

Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 664.13
 Time of Concentration (min): 11.069

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3333
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 231
 Bottom Elevation (ft): 230
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 2.5
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0100
 Effective Slope: 0.0100
 Q for Flow Path (cfs): 0.10
 Avg Velocity (ft/s): 0.50
 Passed Scour Check: N/A

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.7414
 Flow Type: Street
 Length (ft): 275
 Top Elevation (ft): 230
 Bottom Elevation (ft): 228.5
 Contributing Area (acres): 0.75
 Percent of Sub-Area (%): 38.1
 Street width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0055
 Q for Flow Path (cfs): 1.56
 Q Top (cfs): 0.10
 Q Bottom (cfs): 1.67
 Velocity Top (ft/s): 0.74
 Velocity Bottom (ft/s): 1.49
 Avg Velocity (ft/s): 1.11
 Wave Velocity (ft/s): 1.67

DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 4.9940
 Flow Type: Pipe
 Length (ft): 550
 Top Elevation (ft): 229.5
 Bottom Elevation (ft): 224
 Contributing Area (acres): 1.17
 Percent of Sub-Area (%): 59.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 12
 Used Pipe Diameter (in): 24
 Manning's N: 0.011
 Map Slope: 0.0100
 Q for Flow Path (cfs): 2.44
 Q Top (cfs): 1.67
 Q Bottom (cfs): 4.10
 Avg Velocity (ft/s): 1.44
 Wave Velocity (ft/s): 1.84

♀
 Tc for frequency = 25.00: 8.653 Minutes

DATA FOR SUB AREA 4

 SUB AREA TIME OF CONCENTRATION: 8.653 min. = 9 min.

SUB AREA INPUT DATA

 Sub Area Name: B2a
 Total Area (ac): 1.97
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 2.987
 C Total: 0.883
 Sum Q Segments (cfs): 5.19
 Q Total (cfs): 5.19
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 519.18
 Time of Concentration (min): 8.653

DATA FOR FLOW PATH 1

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.2287
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 231
 Bottom Elevation (ft): 230
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 2.5
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0100
 Effective Slope: 0.0100
 Q for Flow Path (cfs): 0.13
 Avg Velocity (ft/s): 0.52
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.5839
 Flow Type: Street
 Length (ft): 275
 Top Elevation (ft): 230
 Bottom Elevation (ft): 228.5
 Contributing Area (acres): 0.75
 Percent of Sub-Area (%): 38.1
 Street width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0055
 Q for Flow Path (cfs): 1.98
 Q Top (cfs): 0.13
 Q Bottom (cfs): 2.11
 Velocity Top (ft/s): 0.79
 Velocity Bottom (ft/s): 1.58
 Avg velocity (ft/s): 1.18
 wave velocity (ft/s): 1.77
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.8404
 Flow Type: Pipe
 Length (ft): 550
 Top Elevation (ft): 229.5
 Bottom Elevation (ft): 224
 Contributing Area (acres): 1.17
 Percent of Sub-Area (%): 59.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 15
 Used Pipe Diameter (in): 24
 Manning's N: 0.011
 Map Slope: 0.0100
 Q for Flow Path (cfs): 3.08
 Q Top (cfs): 2.11
 Q Bottom (cfs): 5.19
 Avg Velocity (ft/s): 2.40
 wave Velocity (ft/s): 3.23
 ‡
 Tc for frequency = 50.00: 6.850 Minutes
 DATA FOR SUB AREA 4

 SUB AREA TIME OF CONCENTRATION: 6.850 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
 Total Area (ac): 1.97
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 50
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 3.771
 C Total: 0.894
 Sum Q Segments (cfs): 6.64
 Q Total (cfs): 6.64
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 411.02
 Time of Concentration (min): 6.850

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.6667
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 231
 Bottom Elevation (ft): 230
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 2.5
 Overland Type: valley
 Development Type: Industrial
 Map Slope: 0.0100
 Effective Slope: 0.0100
 Q for Flow Path (cfs): 0.17
 Avg Velocity (ft/s): 1.00
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.4292
 Flow Type: Street
 Length (ft): 275
 Top Elevation (ft): 230
 Bottom Elevation (ft): 228.5
 Contributing Area (acres): 0.75
 Percent of Sub-Area (%): 38.1
 Street width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0055
 Q for Flow Path (cfs): 2.53
 Q Top (cfs): 0.17
 Q Bottom (cfs): 2.70
 Velocity Top (ft/s): 0.84
 Velocity Bottom (ft/s): 1.68
 Avg Velocity (ft/s): 1.26
 Wave Velocity (ft/s): 1.89
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.7544
 Flow Type: Pipe
 Length (ft): 550
 Top Elevation (ft): 229.5
 Bottom Elevation (ft): 224
 Contributing Area (acres): 1.17
 Percent of Sub-Area (%): 59.4
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 15
 Used Pipe Diameter (in): 24
 Manning's N: 0.011
 Map Slope: 0.0100
 Q for Flow Path (cfs): 3.94
 Q Top (cfs): 2.70
 Q Bottom (cfs): 6.64
 Avg Velocity (ft/s): 2.55
 Wave Velocity (ft/s): 3.33
 ‡
 Tc for frequency = 100.00: 6.779 Minutes
 DATA FOR SUB AREA 4

 SUB AREA TIME OF CONCENTRATION: 6.779 min. = 7 min.

SUB AREA INPUT DATA

 Sub Area Name: B2a
 Total Area (ac): 1.97
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 4.226
 C Total: 0.898
 Sum Q Segments (cfs): 7.48
 Q Total (cfs): 7.48
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 406.73
 Time of Concentration (min): 6.779

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.6667
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 231
Bottom Elevation (ft): 230
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 2.5
Overland Type: valley
Development Type: Industrial
Map Slope: 0.0100
Effective Slope: 0.0100
Q for Flow Path (cfs): 0.19
Avg velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.3578
Flow Type: Street
Length (ft): 275
Top Elevation (ft): 230
Bottom Elevation (ft): 228.5
Contributing Area (acres): 0.75
Percent of Sub-Area (%): 38.1
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0055
Q for Flow Path (cfs): 2.85
Q Top (cfs): 0.19
Q Bottom (cfs): 3.04
Velocity Top (ft/s): 0.86
Velocity Bottom (ft/s): 1.73
Avg Velocity (ft/s): 1.30
Wave velocity (ft/s): 1.94
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.7544
Flow Type: Pipe
Length (ft): 550
Top Elevation (ft): 229.5
Bottom Elevation (ft): 224
Contributing Area (acres): 1.17
Percent of Sub-Area (%): 59.4
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0100
Q for Flow Path (cfs): 4.44
Q Top (cfs): 3.04
Q Bottom (cfs): 7.48
Avg Velocity (ft/s): 2.62
Wave Velocity (ft/s): 3.33
VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project:
Date: 12:00:00 AM

Engineer: Kinsey Hensley
 Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed B

Name	Zone	Storm	Soil	Area (acres)	TC (min)
B1a	K	10	3.00	19.9 / 20	8.302 / 8
B1a	K	25	3.00	19.9 / 20	7.107 / 7
B1a	K	50	3.00	19.9 / 20	6.566 / 7
B1a	K	100	3.00	19.9 / 20	5.620 / 6

♀

Watershed Name: Watershed B

Sub-Area Name: B1a
 Computing Tc for all rainfall frequencies for sub-area B1a...

Tc for frequency = 10.00: 8.302 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 8.302 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: B1a
 Total Area (ac): 19.9
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 10
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 2.865
 C Total: 0.896
 Sum Q Segments (cfs): 51.06
 Q Total (cfs): 51.06
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 498.11
 Time of Concentration (min): 8.302

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.9907
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 250
 Bottom Elevation (ft): 248
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 0.3
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0200
 Effective Slope: 0.0200
 Q for Flow Path (cfs): 0.13
 Avg Velocity (ft/s): 0.42
 Passed Scour Check: YES

Scour Velocity (ft/sec): 1.53
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.4888
 Flow Type: Street
 Length (ft): 675
 Top Elevation (ft): 248
 Bottom Elevation (ft): 238
 Contributing Area (acres): 2.85
 Percent of Sub-Area (%): 14.3
 Street width (ft): 32
 Curb Height (in): 6
 Map slope: 0.0148
 Q for Flow Path (cfs): 7.31
 Q Top (cfs): 0.13
 Q Bottom (cfs): 7.44
 Velocity Top (ft/s): 1.14
 Velocity Bottom (ft/s): 3.16
 Avg Velocity (ft/s): 2.15
 wave Velocity (ft/s): 3.22
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.8223
 Flow Type: Pipe
 Length (ft): 545
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 17
 Percent of Sub-Area (%): 85.4
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 30
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0147
 Q for Flow Path (cfs): 43.62
 Q Top (cfs): 7.44
 Q Bottom (cfs): 51.06
 Avg velocity (ft/s): 8.31
 wave velocity (ft/s): 11.05
 ♀
 Tc for frequency = 25.00: 7.107 Minutes
 DATA FOR SUB AREA 1

 SUB AREA TIME OF CONCENTRATION: 7.107 min. = 7 min.

SUB AREA INPUT DATA

 Sub Area Name: B1a
 Total Area (ac): 19.9
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 3.454
 C Total: 0.904
 Sum Q Segments (cfs): 62.17
 Q Total (cfs): 62.17

4492_JDS_PRP_TC_ALL

Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 426.40
Time of Concentration (min): 7.107

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.1441
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.3
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0200
Effective Slope: 0.0200
Q for Flow Path (cfs): 0.16
Avg Velocity (ft/s): 0.53
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.56
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3203
Flow Type: Street
Length (ft): 675
Top Elevation (ft): 248
Bottom Elevation (ft): 238
Contributing Area (acres): 2.85
Percent of Sub-Area (%): 14.3
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0148
Q for Flow Path (cfs): 8.90
Q Top (cfs): 0.16
Q Bottom (cfs): 9.06
Velocity Top (ft/s): 1.20
Velocity Bottom (ft/s): 3.32
Avg Velocity (ft/s): 2.26
Wave Velocity (ft/s): 3.39
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.6423
Flow Type: Pipe
Length (ft): 545
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 17
Percent of Sub-Area (%): 85.4
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 33
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0147
Q for Flow Path (cfs): 53.11
Q Top (cfs): 9.06
Q Bottom (cfs): 62.17
Avg Velocity (ft/s): 10.50
wave velocity (ft/s): 14.14

♀

Tc for frequency = 50.00: 6.566 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 6.566 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: B1a
Total Area (ac): 19.9
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT-----
Intensity (in/hr): 3.771
C Total: 0.908
Sum Q Segments (cfs): 68.12
Q Total (cfs): 68.12
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 393.95
Time of Concentration (min): 6.566

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.6881
Flow Type: Overland
Length (ft): 100
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.3
Overland Type: valley
Development Type: Undeveloped
Map Slope: 0.0200
Effective Slope: 0.0200
Q for Flow Path (cfs): 0.17
Avg Velocity (ft/s): 0.62
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.58
DATA FOR FLOW PATH 2-----
Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.2448
Flow Type: Street
Length (ft): 675
Top Elevation (ft): 248
Bottom Elevation (ft): 238
Contributing Area (acres): 2.85
Percent of Sub-Area (%): 14.3
Street width (ft): 32
Curb Height (in): 6
Map Slope: 0.0148
Q for Flow Path (cfs): 9.76
Q Top (cfs): 0.17
Q Bottom (cfs): 9.93
Velocity Top (ft/s): 1.22
Velocity Bottom (ft/s): 3.40
Avg Velocity (ft/s): 2.31
wave Velocity (ft/s): 3.47

DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.6330
 Flow Type: Pipe
 Length (ft): 545
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 17
 Percent of Sub-Area (%): 85.4
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 33
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0147
 Q for Flow Path (cfs): 58.19
 Q Top (cfs): 9.93
 Q Bottom (cfs): 68.12
 Avg Velocity (ft/s): 10.82
 Wave Velocity (ft/s): 14.35
 †
 Tc for frequency = 100.00: 5.620 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.620 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: B1a
 Total Area (ac): 19.9
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Industrial
 Soil Type: 3.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 4.590
 C Total: 0.914
 Sum Q Segments (cfs): 83.49
 Q Total (cfs): 83.49
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 337.19
 Time of Concentration (min): 5.620

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 2.0317
 Flow Type: Overland
 Length (ft): 100
 Top Elevation (ft): 250
 Bottom Elevation (ft): 248
 Contributing Area (acres): 0.05
 Percent of Sub-Area (%): 0.3
 Overland Type: Valley
 Development Type: Undeveloped
 Map Slope: 0.0200
 Effective Slope: 0.0200
 Q for Flow Path (cfs): 0.21
 Avg Velocity (ft/s): 0.82
 Passed Scour Check: YES

Scour Velocity (ft/sec): 1.62
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.0829
 Flow Type: Street
 Length (ft): 675
 Top Elevation (ft): 248
 Bottom Elevation (ft): 238
 Contributing Area (acres): 2.85
 Percent of Sub-Area (%): 14.3
 Street width (ft): 32
 Curb Height (in): 6
 Map Slope: 0.0148
 Q for Flow Path (cfs): 11.96
 Q Top (cfs): 0.21
 Q Bottom (cfs): 12.17
 Velocity Top (ft/s): 1.29
 Velocity Bottom (ft/s): 3.58
 Avg Velocity (ft/s): 2.43
 Wave Velocity (ft/s): 3.65
 DATA FOR FLOW PATH 3

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.5053
 Flow Type: Pipe
 Length (ft): 545
 Top Elevation (ft): 238
 Bottom Elevation (ft): 230
 Contributing Area (acres): 17
 Percent of Sub-Area (%): 85.4
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 36
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0147
 Q for Flow Path (cfs): 71.32
 Q Top (cfs): 12.17
 Q Bottom (cfs): 83.49
 Avg Velocity (ft/s): 13.52
 wave Velocity (ft/s): 17.98

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project:
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

 S U M M A R Y O F C O M P U T A T I O N S

watershed Name: watershed C

Name	Zone	Storm	Soil	Area (acres)	TC (min)
C1	K	10	4.00	24.9 / 25	11.376 / 11
C1	K	25	4.00	24.9 / 25	10.664 / 11
C1	K	50	4.00	24.9 / 25	7.306 / 7
C1	K	100	4.00	24.9 / 25	7.011 / 7

♀

Watershed Name: Watershed C

Sub-Area Name: C1
Computing Tc for all rainfall frequencies for sub-area C1...

Tc for frequency = 10.00: 11.376 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 11.376 min. = 11 min.

SUB AREA INPUT DATA

Sub Area Name: C1
Total Area (ac): 24.92
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.396
C Total: 0.870
Sum Q Segments (cfs): 51.93
Q Total (cfs): 51.93
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 682.53
Time of Concentration (min): 11.376

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 6.6667
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 250
Bottom Elevation (ft): 245
Contributing Area (acres): 0.63
Percent of Sub-Area (%): 2.5
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0250
Effective Slope: 0.0250
Q for Flow Path (cfs): 1.31
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.8125
Flow Type: Street
Length (ft): 450
Top Elevation (ft): 245
Bottom Elevation (ft): 236
Contributing Area (acres): 1.5
Percent of Sub-Area (%): 6.0
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0200
Q for Flow Path (cfs): 3.13
Q Top (cfs): 1.31
Q Bottom (cfs): 4.44

Velocity Top (ft/s): 2.37
 Velocity Bottom (ft/s): 3.15
 Avg Velocity (ft/s): 2.76
 Wave Velocity (ft/s): 4.14
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0677
 Flow Type: Pipe
 Length (ft): 470
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 6.4
 Percent of Sub-Area (%): 25.7
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 27
 Used Pipe Diameter (in): 27
 Manning's N: 0.02
 Map Slope: 0.0117
 Q for Flow Path (cfs): 13.34
 Q Top (cfs): 4.44
 Q Bottom (cfs): 17.77
 Avg Velocity (ft/s): 5.53
 Wave Velocity (ft/s): 7.34
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0407
 Flow Type: Pipe
 Length (ft): 490
 Top Elevation (ft): 230
 Bottom Elevation (ft): 224
 Contributing Area (acres): 7.15
 Percent of Sub-Area (%): 28.7
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 27
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0122
 Q for Flow Path (cfs): 14.90
 Q Top (cfs): 17.77
 Q Bottom (cfs): 32.67
 Avg Velocity (ft/s): 6.03
 Wave Velocity (ft/s): 7.85
 DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.7879
 Flow Type: Pipe
 Length (ft): 508
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220
 Contributing Area (acres): 9.24
 Percent of Sub-Area (%): 37.1
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 33
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0079
 Q for Flow Path (cfs): 19.25
 Q Top (cfs): 32.67
 Q Bottom (cfs): 51.93
 Avg velocity (ft/s): 8.63

Wave Velocity (ft/s): 10.75

♀

Tc for frequency = 25.00: 10.664 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 10.664 min. = 11 min.

SUB AREA INPUT DATA

Sub Area Name: C1
 Total Area (ac): 24.92
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 2.657
 C Total: 0.876
 Sum Q Segments (cfs): 58.01
 Q Total (cfs): 58.01
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 639.84
 Time of Concentration (min): 10.664

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 6.1799
 Flow Type: Overland
 Length (ft): 200
 Top Elevation (ft): 250
 Bottom Elevation (ft): 245
 Contributing Area (acres): 0.63
 Percent of Sub-Area (%): 2.5
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0250
 Effective Slope: 0.0250
 Q for Flow Path (cfs): 1.47
 Avg Velocity (ft/s): 0.54
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.7665
 Flow Type: Street
 Length (ft): 450
 Top Elevation (ft): 245
 Bottom Elevation (ft): 236
 Contributing Area (acres): 1.5
 Percent of Sub-Area (%): 6.0
 Street width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0200
 Q for Flow Path (cfs): 3.49
 Q Top (cfs): 1.47
 Q Bottom (cfs): 4.96
 Velocity Top (ft/s): 2.43
 Velocity Bottom (ft/s): 3.23
 Avg Velocity (ft/s): 2.83

Wave Velocity (ft/s): 4.25
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0520
 Flow Type: Pipe
 Length (ft): 470
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 6.4
 Percent of Sub-Area (%): 25.7
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 27
 Used Pipe Diameter (in): 27
 Manning's N: 0.02
 Map Slope: 0.0117
 Q for Flow Path (cfs): 14.90
 Q Top (cfs): 4.96
 Q Bottom (cfs): 19.86
 Avg Velocity (ft/s): 5.64
 Wave Velocity (ft/s): 7.45
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.0407
 Flow Type: Pipe
 Length (ft): 490
 Top Elevation (ft): 230
 Bottom Elevation (ft): 224
 Contributing Area (acres): 7.15
 Percent of Sub-Area (%): 28.7
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 27
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0122
 Q for Flow Path (cfs): 16.64
 Q Top (cfs): 19.86
 Q Bottom (cfs): 36.50
 Avg Velocity (ft/s): 6.19
 wave Velocity (ft/s): 7.85
 DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.6248
 Flow Type: Pipe
 Length (ft): 508
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220
 Contributing Area (acres): 9.24
 Percent of Sub-Area (%): 37.1
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 36
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0079
 Q for Flow Path (cfs): 21.51
 Q Top (cfs): 36.50
 Q Bottom (cfs): 58.01
 Avg velocity (ft/s): 10.58
 wave velocity (ft/s): 13.55

♀
 Tc for frequency = 50.00: 7.306 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 7.306 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: C1
Total Area (ac): 24.92
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.771
C Total: 0.894
Sum Q Segments (cfs): 83.98
Q Total (cfs): 83.98
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 438.36
Time of Concentration (min): 7.306

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3333
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 250
Bottom Elevation (ft): 245
Contributing Area (acres): 0.63
Percent of Sub-Area (%): 2.5
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0250
Effective Slope: 0.0250
Q for Flow Path (cfs): 2.12
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.6211
Flow Type: Street
Length (ft): 450
Top Elevation (ft): 245
Bottom Elevation (ft): 236
Contributing Area (acres): 1.5
Percent of Sub-Area (%): 6.0
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0200
Q for Flow Path (cfs): 5.05
Q Top (cfs): 2.12
Q Bottom (cfs): 7.18
Velocity Top (ft/s): 2.65
Velocity Bottom (ft/s): 3.52
Avg Velocity (ft/s): 3.08
Wave Velocity (ft/s): 4.63
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.9735
 Flow Type: Pipe
 Length (ft): 470
 Top Elevation (ft): 235.5
 Bottom Elevation (ft): 230
 Contributing Area (acres): 6.4
 Percent of Sub-Area (%): 25.7
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 30
 Used Pipe Diameter (in): 30
 Manning's N: 0.02
 Map Slope: 0.0117
 Q for Flow Path (cfs): 21.57
 Q Top (cfs): 7.18
 Q Bottom (cfs): 28.75
 Avg Velocity (ft/s): 6.18
 wave velocity (ft/s): 8.05
 DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.7858
 Flow Type: Pipe
 Length (ft): 490
 Top Elevation (ft): 230
 Bottom Elevation (ft): 224
 Contributing Area (acres): 7.15
 Percent of Sub-Area (%): 28.7
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 30
 Used Pipe Diameter (in): 36
 Manning's N: 0.011
 Map Slope: 0.0122
 Q for Flow Path (cfs): 24.09
 Q Top (cfs): 28.75
 Q Bottom (cfs): 52.84
 Avg Velocity (ft/s): 8.34
 wave velocity (ft/s): 10.39
 DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.5923
 Flow Type: Pipe
 Length (ft): 508
 Top Elevation (ft): 224
 Bottom Elevation (ft): 220
 Contributing Area (acres): 9.24
 Percent of Sub-Area (%): 37.1
 Initial Pipe Diameter (in): 36
 Calculated Pipe Diameter (in): 39
 Used Pipe Diameter (in): 39
 Manning's N: 0.011
 Map Slope: 0.0079
 Q for Flow Path (cfs): 31.14
 Q Top (cfs): 52.84
 Q Bottom (cfs): 83.98
 Avg Velocity (ft/s): 11.58
 wave velocity (ft/s): 14.29
 ‡
 Tc for frequency = 100.00: 7.011 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 7.011 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: C1
Total Area (ac): 24.92
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.226
C Total: 0.898
Sum Q Segments (cfs): 94.57
Q Total (cfs): 94.57
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 420.64
Time of Concentration (min): 7.011

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3333
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 250
Bottom Elevation (ft): 245
Contributing Area (acres): 0.63
Percent of Sub-Area (%): 2.5
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0250
Effective slope: 0.0250
Q for Flow Path (cfs): 2.39
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.5770
Flow Type: Street
Length (ft): 450
Top Elevation (ft): 245
Bottom Elevation (ft): 236
Contributing Area (acres): 1.5
Percent of Sub-Area (%): 6.0
Street width (ft): 40
Curb Height (in): 6
Map Slope: 0.0200
Q for Flow Path (cfs): 5.69
Q Top (cfs): 2.39
Q Bottom (cfs): 8.08
Velocity Top (ft/s): 2.73
Velocity Bottom (ft/s): 3.62
Avg velocity (ft/s): 3.17
Wave Velocity (ft/s): 4.76
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.9271
Flow Type: Pipe

Length (ft): 470
Top Elevation (ft): 235.5
Bottom Elevation (ft): 230
Contributing Area (acres): 6.4
Percent of Sub-Area (%): 25.7
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 33
Used Pipe Diameter (in): 33
Manning's N: 0.02
Map Slope: 0.0117
Q for Flow Path (cfs): 24.29
Q Top (cfs): 8.08
Q Bottom (cfs): 32.37
Avg Velocity (ft/s): 6.38
Wave Velocity (ft/s): 8.45
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.6094
Flow Type: Pipe
Length (ft): 490
Top Elevation (ft): 230
Bottom Elevation (ft): 224
Contributing Area (acres): 7.15
Percent of Sub-Area (%): 28.7
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 33
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0122
Q for Flow Path (cfs): 27.13
Q Top (cfs): 32.37
Q Bottom (cfs): 59.50
Avg Velocity (ft/s): 10.47
Wave Velocity (ft/s): 13.40
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.5637
Flow Type: Pipe
Length (ft): 508
Top Elevation (ft): 224
Bottom Elevation (ft): 220
Contributing Area (acres): 9.24
Percent of Sub-Area (%): 37.1
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 42
Used Pipe Diameter (in): 42
Manning's N: 0.011
Map Slope: 0.0079
Q for Flow Path (cfs): 35.06
Q Top (cfs): 59.50
Q Bottom (cfs): 94.57
Avg Velocity (ft/s): 11.95
Wave Velocity (ft/s): 15.02

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

 SUMMARY OF COMPUTATIONS

Watershed Name: Watershed D

Name	Zone	Storm	Soil	Area (acres)	TC (min)
D	K	10	4.00	5.6 / 6	12.771 / 13
D	K	25	4.00	5.6 / 6	12.345 / 12
D	K	50	4.00	5.6 / 6	8.787 / 9
D	K	100	4.00	5.6 / 6	8.640 / 9

♀

Watershed Name: Watershed D

Sub-Area Name: D

Computing Tc for all rainfall frequencies for sub-area D...

Tc for frequency = 10.00: 12.771 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 12.771 min. = 13 min.

SUB AREA INPUT DATA

Sub Area Name: D

Total Area (ac): 5.59

Flood Zone: 2

Rainfall Zone: K

Storm Frequency (years): 10

Development Type: Industrial

Soil Type: 4.00

Percent Impervious: 70

SUB AREA OUTPUT

Intensity (in/hr): 2.199

C Total: 0.864

Sum Q Segments (cfs): 10.63

Q Total (cfs): 10.63

Sum Percent Area (%): 100.0

Sum of Flow Path Travel Times (sec): 766.25

Time of Concentration (min): 12.771

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 6.6667

Flow Type: Overland

Length (ft): 200

Top Elevation (ft): 228

Bottom Elevation (ft): 227

Contributing Area (acres): 0.41

Percent of Sub-Area (%): 7.3

Overland Type: Valley

Development Type: Industrial

Map slope: 0.0050

Effective slope: 0.0050

Q for Flow Path (cfs): 0.78

Avg Velocity (ft/s): 0.50

Passed Scour Check: N/A

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 5.9186
 Flow Type: Street
 Length (ft): 645
 Top Elevation (ft): 227
 Bottom Elevation (ft): 225.5
 Contributing Area (acres): 2.9
 Percent of Sub-Area (%): 51.9
 Street width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0023
 Q for Flow Path (cfs): 5.51
 Q Top (cfs): 0.78
 Q Bottom (cfs): 6.29
 Velocity Top (ft/s): 0.92
 Velocity Bottom (ft/s): 1.50
 Avg Velocity (ft/s): 1.21
 Wave Velocity (ft/s): 1.82
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.1856
 Flow Type: Pipe
 Length (ft): 60
 Top Elevation (ft): 225.5
 Bottom Elevation (ft): 220.3
 Contributing Area (acres): 2.28
 Percent of Sub-Area (%): 40.8
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 15
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0867
 Q for Flow Path (cfs): 4.33
 Q Top (cfs): 6.29
 Q Bottom (cfs): 10.63
 Avg Velocity (ft/s): 4.23
 Wave Velocity (ft/s): 5.39
 ‡
 Tc for frequency = 25.00: 12.345 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 12.345 min. = 12 min.

SUB AREA INPUT DATA

Sub Area Name: D
 Total Area (ac): 5.59
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 2.534
 C Total: 0.873
 Sum Q Segments (cfs): 12.37
 Q Total (cfs): 12.37
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 740.70
 Time of Concentration (min): 12.345

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 6.5143
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 228
Bottom Elevation (ft): 227
Contributing Area (acres): 0.41
Percent of Sub-Area (%): 7.3
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0050
Effective Slope: 0.0050
Q for Flow Path (cfs): 0.91
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 5.7132
Flow Type: Street
Length (ft): 645
Top Elevation (ft): 227
Bottom Elevation (ft): 225.5
Contributing Area (acres): 2.9
Percent of Sub-Area (%): 51.9
Street width (ft): 40
Curb Height (in): 6
Map Slope: 0.0023
Q for Flow Path (cfs): 6.42
Q Top (cfs): 0.91
Q Bottom (cfs): 7.32
Velocity Top (ft/s): 0.96
Velocity Bottom (ft/s): 1.55
Avg Velocity (ft/s): 1.25
Wave Velocity (ft/s): 1.88
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.1176
Flow Type: Pipe
Length (ft): 60
Top Elevation (ft): 225.5
Bottom Elevation (ft): 220.3
Contributing Area (acres): 2.28
Percent of Sub-Area (%): 40.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 24
Manning's N: 0.02
Map Slope: 0.0867
Q for Flow Path (cfs): 5.05
Q Top (cfs): 7.32
Q Bottom (cfs): 12.37
Avg Velocity (ft/s): 6.40
Wave Velocity (ft/s): 8.51
‡
Tc for frequency = 50.00: 8.787 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 8.787 min. = 9 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 5.59
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.333
C Total: 0.888
Sum Q Segments (cfs): 16.55
Q Total (cfs): 16.55
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 527.24
Time of Concentration (min): 8.787

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3333
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 228
Bottom Elevation (ft): 227
Contributing Area (acres): 0.41
Percent of Sub-Area (%): 7.3
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0050
Effective Slope: 0.0050
Q for Flow Path (cfs): 1.21
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 5.3399
Flow Type: Street
Length (ft): 645
Top Elevation (ft): 227
Bottom Elevation (ft): 225.5
Contributing Area (acres): 2.9
Percent of Sub-Area (%): 51.9
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0023
Q for Flow Path (cfs): 8.58
Q Top (cfs): 1.21
Q Bottom (cfs): 9.80
Velocity Top (ft/s): 1.02
Velocity Bottom (ft/s): 1.66
Avg Velocity (ft/s): 1.34
Wave Velocity (ft/s): 2.01
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.1141
Flow Type: Pipe

Length (ft): 60
 Top Elevation (ft): 225.5
 Bottom Elevation (ft): 220.3
 Contributing Area (acres): 2.28
 Percent of Sub-Area (%): 40.8
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 18
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0867
 Q for Flow Path (cfs): 6.75
 Q Top (cfs): 9.80
 Q Bottom (cfs): 16.55
 Avg Velocity (ft/s): 6.82
 Wave Velocity (ft/s): 8.76
 †
 Tc for frequency = 100.00: 8.640 Minutes
 DATA FOR SUB AREA 1

 SUB AREA TIME OF CONCENTRATION: 8.640 min. = 9 min.

SUB AREA INPUT DATA

Sub Area Name: D
 Total Area (ac): 5.59
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

 Intensity (in/hr): 3.740
 C Total: 0.893
 Sum Q Segments (cfs): 18.67
 Q Total (cfs): 18.67
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 518.38
 Time of Concentration (min): 8.640

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3333
 Flow Type: Overland
 Length (ft): 200
 Top Elevation (ft): 228
 Bottom Elevation (ft): 227
 Contributing Area (acres): 0.41
 Percent of Sub-Area (%): 7.3
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0050
 Effective Slope: 0.0050
 Q for Flow Path (cfs): 1.37
 Avg Velocity (ft/s): 1.00
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

 Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 5.1922
 Flow Type: Street

Length (ft): 645
 Top Elevation (ft): 227
 Bottom Elevation (ft): 225.5
 Contributing Area (acres): 2.9
 Percent of Sub-Area (%): 51.9
 Street Width (ft): 40
 Curb Height (in): 6
 Map slope: 0.0023
 Q for Flow Path (cfs): 9.69
 Q Top (cfs): 1.37
 Q Bottom (cfs): 11.06
 Velocity Top (ft/s): 1.05
 Velocity Bottom (ft/s): 1.71
 Avg Velocity (ft/s): 1.38
 Wave Velocity (ft/s): 2.07
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.1141
 Flow Type: Pipe
 Length (ft): 60
 Top Elevation (ft): 225.5
 Bottom Elevation (ft): 220.3
 Contributing Area (acres): 2.28
 Percent of Sub-Area (%): 40.8
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 18
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0867
 Q for Flow Path (cfs): 7.62
 Q Top (cfs): 11.06
 Q Bottom (cfs): 18.67
 Avg Velocity (ft/s): 6.97
 wave Velocity (ft/s): 8.76

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
 TIME OF CONCENTRATION
 TC Program Version: 2.6.2008.11
 Project:
 Date: 12:00:00 AM
 Engineer: Kinsey Hensley
 Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: watershed E

Name	Zone	Storm	Soil	Area (acres)	TC (min)
E	K	10	4.00	8.2 / 8	8.831 / 9
E	K	25	4.00	8.2 / 8	8.625 / 9
E	K	50	4.00	8.2 / 8	5.229 / 5
E	K	100	4.00	8.2 / 8	5.183 / 5

♀

Watershed Name: Watershed E

Sub-Area Name: E
 Computing Tc for all rainfall frequencies for sub-area E...

Tc for frequency = 10.00: 8.831 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 8.831 min. = 9 min.

SUB AREA INPUT DATA

Sub Area Name: E
Total Area (ac): 8.24
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.680
C Total: 0.876
Sum Q Segments (cfs): 19.35
Q Total (cfs): 19.35
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 529.85
Time of Concentration (min): 8.831

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 6.6667
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 232
Bottom Elevation (ft): 231
Contributing Area (acres): 1
Percent of Sub-Area (%): 12.1
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0050
Effective slope: 0.0050
Q for Flow Path (cfs): 2.35
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.8006
Flow Type: Street
Length (ft): 415
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2
Percent of Sub-Area (%): 24.3
Street width (ft): 40
Curb Height (in): 6
Map Slope: 0.0120
Q for Flow Path (cfs): 4.70
Q Top (cfs): 2.35
Q Bottom (cfs): 7.05
Velocity Top (ft/s): 2.24
Velocity Bottom (ft/s): 2.89
Avg velocity (ft/s): 2.56
Wave velocity (ft/s): 3.84
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.3636
 Flow Type: Pipe
 Length (ft): 225
 Top Elevation (ft): 226
 Bottom Elevation (ft): 220
 Contributing Area (acres): 5.24
 Percent of Sub-Area (%): 63.6
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 24
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0267
 Q for Flow Path (cfs): 12.31
 Q Top (cfs): 7.05
 Q Bottom (cfs): 19.35
 Avg Velocity (ft/s): 7.79
 Wave Velocity (ft/s): 10.31
 ‡
 Tc for frequency = 25.00: 8.625 Minutes
 DATA FOR SUB AREA 1

 SUB AREA TIME OF CONCENTRATION: 8.625 min. = 9 min.

SUB AREA INPUT DATA

Sub Area Name: E
 Total Area (ac): 8.24
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 25
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 2.987
 C Total: 0.883
 Sum Q Segments (cfs): 21.73
 Q Total (cfs): 21.73
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 517.52
 Time of Concentration (min): 8.625

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 6.5143
 Flow Type: Overland
 Length (ft): 200
 Top Elevation (ft): 232
 Bottom Elevation (ft): 231
 Contributing Area (acres): 1
 Percent of Sub-Area (%): 12.1
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0050
 Effective slope: 0.0050
 Q for Flow Path (cfs): 2.64
 Avg Velocity (ft/s): 0.51
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.7529
 Flow Type: Street
 Length (ft): 415
 Top Elevation (ft): 231
 Bottom Elevation (ft): 226
 Contributing Area (acres): 2
 Percent of Sub-Area (%): 24.3
 Street Width (ft): 40
 Curb Height (in): 6
 Map slope: 0.0120
 Q for Flow Path (cfs): 5.27
 Q Top (cfs): 2.64
 Q Bottom (cfs): 7.91
 Velocity Top (ft/s): 2.30
 Velocity Bottom (ft/s): 2.96
 Avg Velocity (ft/s): 2.63
 Wave Velocity (ft/s): 3.95
 DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.3582
 Flow Type: Pipe
 Length (ft): 225
 Top Elevation (ft): 226
 Bottom Elevation (ft): 220
 Contributing Area (acres): 5.24
 Percent of Sub-Area (%): 63.6
 Initial Pipe Diameter (in): 24
 Calculated Pipe Diameter (in): 24
 Used Pipe Diameter (in): 24
 Manning's N: 0.02
 Map Slope: 0.0267
 Q for Flow Path (cfs): 13.82
 Q Top (cfs): 7.91
 Q Bottom (cfs): 21.73
 Avg Velocity (ft/s): 8.02
 Wave Velocity (ft/s): 10.47
 †
 Tc for frequency = 50.00: 5.229 Minutes
 DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.229 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: E
 Total Area (ac): 8.24
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 50
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 4.548
 C Total: 0.901
 Sum Q Segments (cfs): 33.76
 Q Total (cfs): 33.76
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 313.75
 Time of Concentration (min): 5.229

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.3333
Flow Type: Overland
Length (ft): 200
Top Elevation (ft): 232
Bottom Elevation (ft): 231
Contributing Area (acres): 1
Percent of Sub-Area (%): 12.1
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0050
Effective Slope: 0.0050
Q for Flow Path (cfs): 4.10
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.5824
Flow Type: Street
Length (ft): 415
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2
Percent of Sub-Area (%): 24.3
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0120
Q for Flow Path (cfs): 8.19
Q Top (cfs): 4.10
Q Bottom (cfs): 12.29
Velocity Top (ft/s): 2.54
Velocity Bottom (ft/s): 3.28
Avg Velocity (ft/s): 2.91
Wave Velocity (ft/s): 4.37
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.3135
Flow Type: Pipe
Length (ft): 225
Top Elevation (ft): 226
Bottom Elevation (ft): 220
Contributing Area (acres): 5.24
Percent of Sub-Area (%): 63.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 30
Used Pipe Diameter (in): 30
Manning's N: 0.02
Map Slope: 0.0267
Q for Flow Path (cfs): 21.47
Q Top (cfs): 12.29
Q Bottom (cfs): 33.76
Avg Velocity (ft/s): 8.95
Wave Velocity (ft/s): 11.96
‡
Tc for frequency = 100.00: 5.183 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.183 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: E
 Total Area (ac): 8.24
 Flood Zone: 2
 Rainfall Zone: K
 Storm Frequency (years): 100
 Development Type: Industrial
 Soil Type: 4.00
 Percent Impervious: 70
 SUB AREA OUTPUT

Intensity (in/hr): 5.100
 C Total: 0.904
 Sum Q Segments (cfs): 37.99
 Q Total (cfs): 37.99
 Sum Percent Area (%): 100.0
 Sum of Flow Path Travel Times (sec): 310.96
 Time of Concentration (min): 5.183

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 3.3333
 Flow Type: Overland
 Length (ft): 200
 Top Elevation (ft): 232
 Bottom Elevation (ft): 231
 Contributing Area (acres): 1
 Percent of Sub-Area (%): 12.1
 Overland Type: Valley
 Development Type: Industrial
 Map Slope: 0.0050
 Effective Slope: 0.0050
 Q for Flow Path (cfs): 4.61
 Avg Velocity (ft/s): 1.00
 Passed Scour Check: N/A
 DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 1.5396
 Flow Type: Street
 Length (ft): 415
 Top Elevation (ft): 231
 Bottom Elevation (ft): 226
 Contributing Area (acres): 2
 Percent of Sub-Area (%): 24.3
 Street Width (ft): 40
 Curb Height (in): 6
 Map Slope: 0.0120
 Q for Flow Path (cfs): 9.22
 Q Top (cfs): 4.61
 Q Bottom (cfs): 13.83
 Velocity Top (ft/s): 2.62
 Velocity Bottom (ft/s): 3.37
 Avg Velocity (ft/s): 3.00
 Wave Velocity (ft/s): 4.49
 DATA FOR FLOW PATH 3

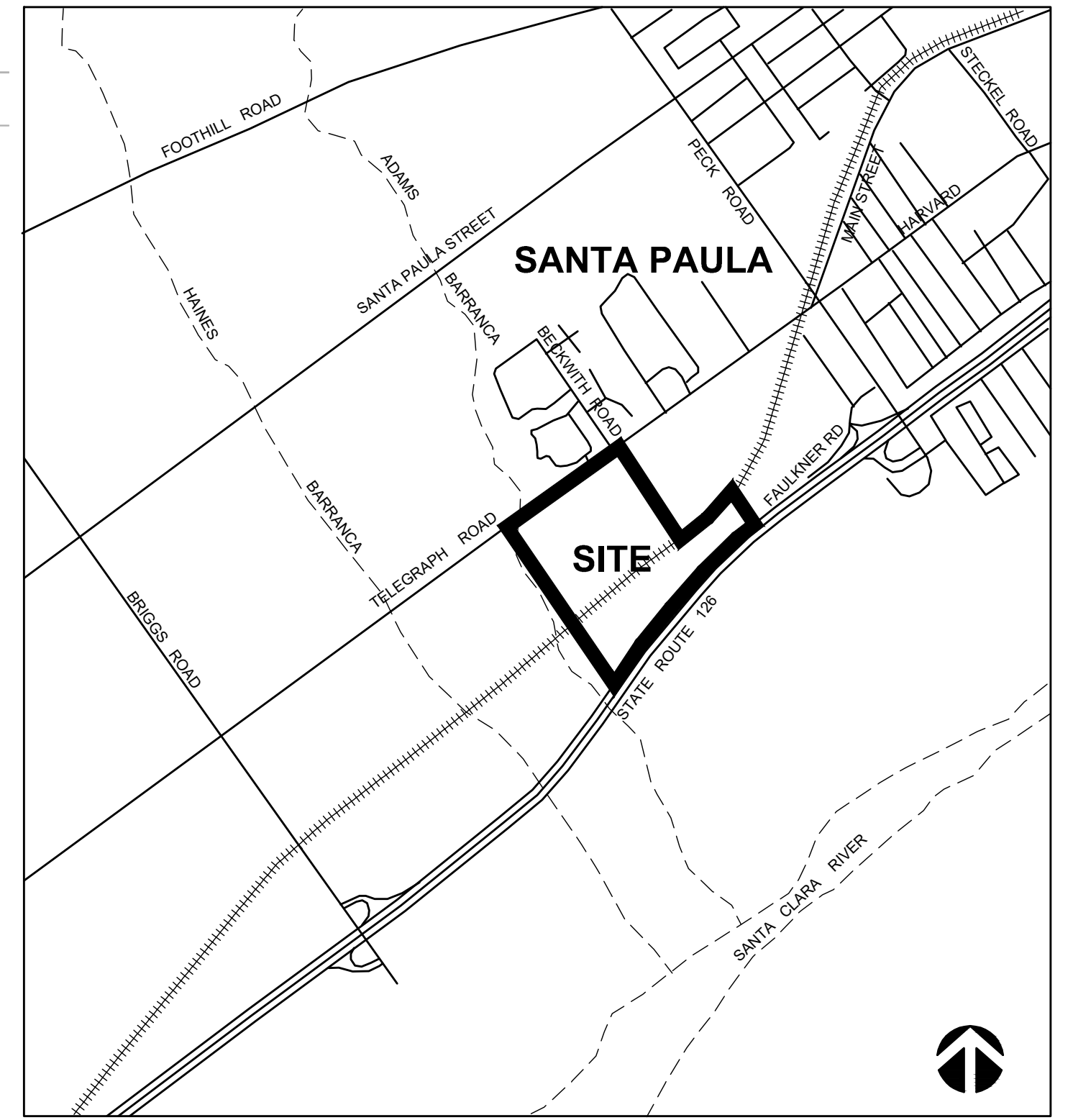
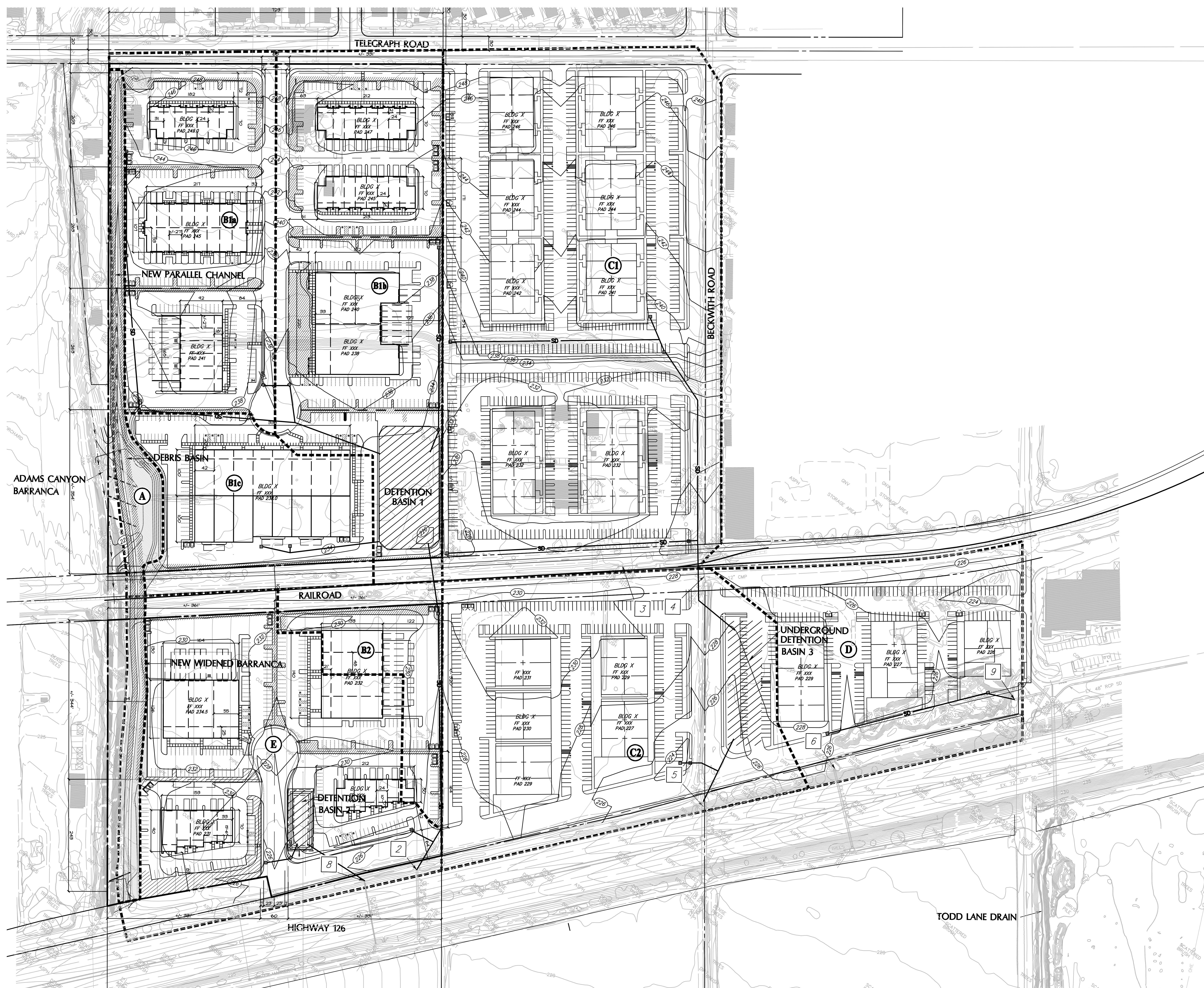
Flow Path Name: FlowPath
 FLOW PATH TRAVEL TIME (min): 0.3098
 Flow Type: Pipe

4492_JDS_PRP_TC_ALL

Length (ft): 225
Top Elevation (ft): 226
Bottom Elevation (ft): 220
Contributing Area (acres): 5.24
Percent of Sub-Area (%): 63.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 30
Used Pipe Diameter (in): 30
Manning's N: 0.02
Map Slope: 0.0267
Q for Flow Path (cfs): 24.16
Q Top (cfs): 13.83
Q Bottom (cfs): 37.99
Avg Velocity (ft/s): 9.27
Wave Velocity (ft/s): 12.10

APPENDIX D

Proposed Hydrology Exhibit B



VICINITY MAP
NOT TO SCALE

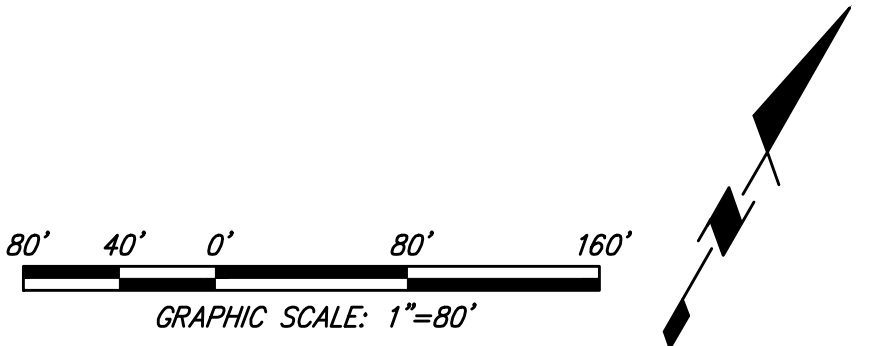
DRAINAGE AREA CALCULATIONS

SUBAREA	ACRE	PROPOSED Q ₁₀	PROPOSED Q ₅₀	PROPOSED Q ₁₀₀	STORM DRAIN OUTLET
A	1.7	1.5	2.1	2.3	ADAMS
B1a	5.9	16.4	22.0	27.6	BASIN, 2
B1b	8.2	24.8	33.6	37.8	BASIN, 2
B1c	3.75	9.6	14.0	15.7	BASIN, 2
B2	1.97	4.1	6.6	7.5	2
C1	15.65	32.7	52.7	59.8	BASIN, 5
C2	9.24	19.4	27.7	32.3	BASIN, 5
D	5.59	10.6	16.6	18.7	9
E	8.25	19.4	33.8	38.0	BASIN, 8

PEAK FLOWS SHOWN ARE UNDETAINED VALUES

LEGEND

- DRAINAGE AREA LIMITS
- EXISTING STORM DRAIN
- STORM DRAIN INLET
- STORM DRAIN
- PROPOSED CONTOUR
- TREATMENT/INFILTRATION/DETENTION AREA
- DRAINAGE AREA
- PIPE NUMBER



JENSEN DESIGN & SURVEY, INC.
 1672 DONLON STREET
 VENTURA, CALIF. 93003
 PHONE 805/654-6977
 FAX 805/654-6979
 www.jdsurvey.com

SCALE: 1"=80'
 DATE: Jun 01, 2011

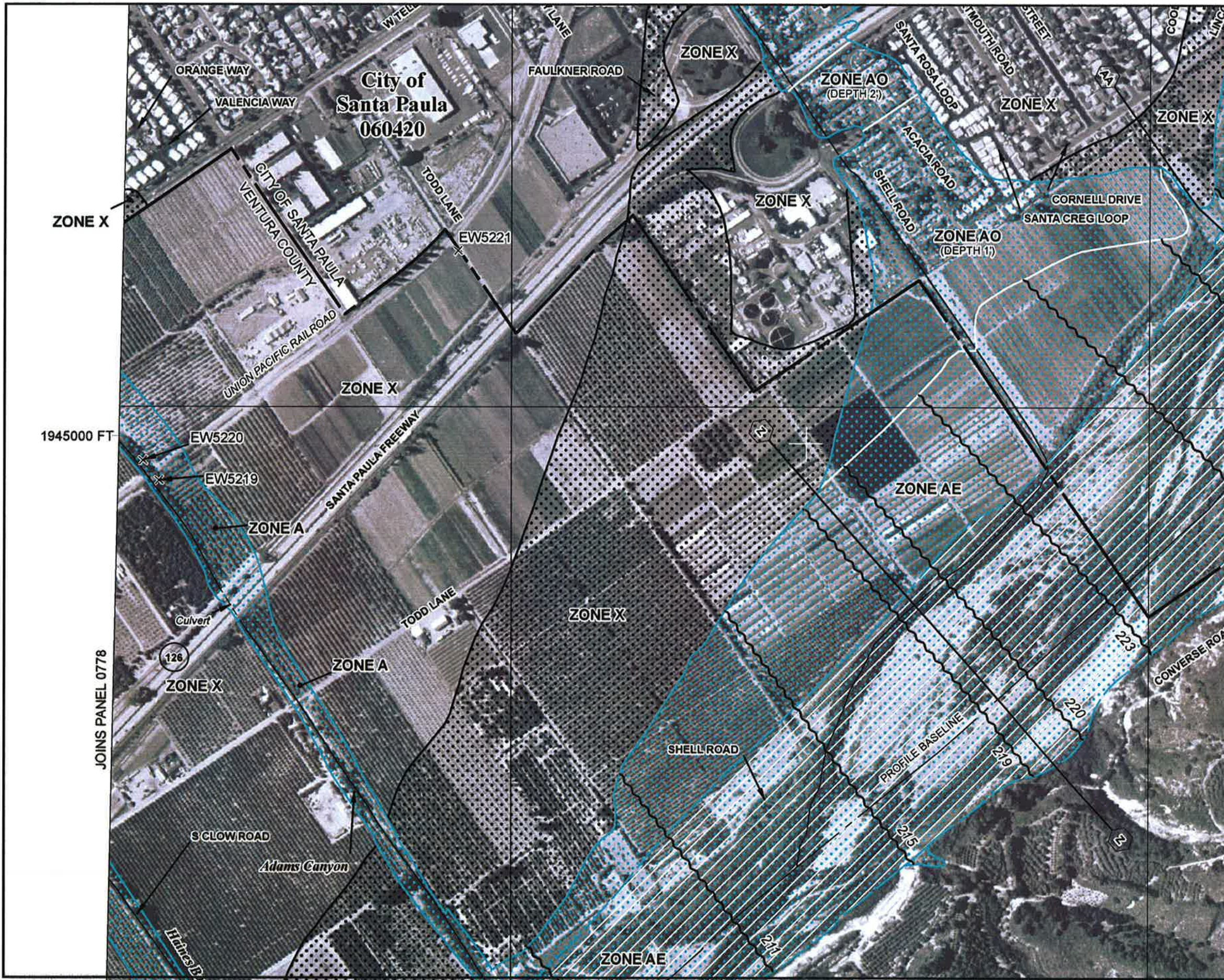
PROPOSED HYDROLOGY FOR SANTA PAULA WEST 2

City of Santa Paula
 COUNTY OF VENTURA
 STATE OF CALIFORNIA

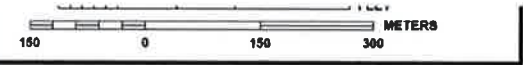
J:\PAR14492\Eng\Exhibits\Hydrology Reference\4492_Prop-01_Hydro.dwg Jun 01, 2011, 9:31am kpsaco

APPENDIX E

Existing FIRM Maps & Soils Maps



Insurance is available in this community, contact your Insurance Agent or the National Flood Insurance Program at 1-800-638-6620.



PANEL 0779E

FIRM
FLOOD INSURANCE RATE MAP

**VENTURA COUNTY,
CALIFORNIA
AND INCORPORATED AREAS**

PANEL 779 OF 1275
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0779	E
VENTURA COUNTY	060413	0779	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06111C0779E

EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Prepared by: Jensen Design & Survey Inc.

Parcel boundaries on this exhibit are a graphical representation only. They should not be used in place of record boundary information and/or field survey data and do not accurately define property boundaries.

SOIL TYPE MAP

1 inch equals 300 feet



JOINS PANEL 0776

623000 FT

119°05'37.5"

34°20'37.5"



County
Incorporated Areas

ZONE A

ZONE X

ZONE X

ZONE A

SANTA PAULA STREET

Adams Canyon

AVOCADO WAY

PEACH DRIVE

BECKWITH ROAD

GUAVA DRIVE

PLUM WAY

APRICOT WAY

PERSIMMON WAY

TANGERINE WAY

PERSIMMON WAY

LIME WAY

LEMON WAY

ORANGE WAY

VALENCIA COURT

ZONE AE

ZONE X

COUNTRY VIEW COURT

LIMIT OF DETAILED STUDY

ZONE X

ZONE A

ZONE X

38°01'00m N

Insurance is available in this community, contact your Insurance Agent or the National Flood Insurance Program at 1-800-638-6620.



PANEL 0778E

FIRM
FLOOD INSURANCE RATE MAP

VENTURA COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 778 OF 1275
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0778	E
VENTURA COUNTY	060413	0778	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

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APPENDIX F

Adams Barranca HEC-RAS Analysis Maps and Calculations

Adams Canyon – Hydraulic Analysis Report

Introduction

Adams Canyon is located in the unincorporated areas of Ventura County, California. The study was performed for 1.05 miles of the stream. The extent of the stream is from the confluence with the Santa Clara River and continuing upstream to 800 ft north of Telegraph Road. The channel is earthen. The entire study reach area is agricultural. There are three bridges in the study extent namely East Telegraph Road, Union Pacific Railroad and Highway 126. The stream was a natural channel consisting of minor vegetation.

Structure Data

The structure information for East Telegraph Road and Union Pacific Railroad is obtained from the field reconnaissance and information provided by CalTrans and record drawings from the County. The information was incorporated in this analysis.

	Model Type
Telegraph Road	Culvert
Railroad	Bridge
Highway 126	Two Culverts

Terrain Data

LIDAR data was provided by Ventura County. The data was in the form of mass points (each point was attributed with latitude, longitude and elevation), with a horizontal datum of NAD 1983 with projection of “*State Plane California V FIPS 0405 Feet*” and the vertical datum is “*NAVD 88*”. These points were used to generate a surface with 1’ and 5’ contour intervals in Sufer 8. The surface was then converted to a CAD drawing lowered by 2.5 feet to match the NGVD 29 datum that a flown aerial topo was generated by Central Coast Mapping in March 2007.

Streamline and Flow Paths

- Streamline was generated using the flowline of the Adams Barranca.
- Overland Flowpaths were generated following the west and east side of the bank contours and path of travel for the overflow water.
- Lateral structure elevations were determined by topography

Cross Section Generation

Cross-sections geometry was extracted from the terrain. Each cross-section was oriented such that it is normal to the floodplain.

Manning’s Roughness Coefficient (n) Calculations

Manning’s coefficient values were determined for each cross section using the Cowan (1956) procedure outlined in “*Guide for Selecting Manning’s Roughness Coefficients for Natural Channels and Floodplains*” (Authors: G.J. Arcement and V.R. Schneider, USGS Water supply Paper 2339). Photographs taken during field reconnaissance were used in conjunction with the aerial images to estimate Manning’s coefficients for the channel

portion of the cross section. For overbank areas, land-use classification data was developed from the aerial imagery. Polygons were digitized for different landuses, which were attributed with the corresponding Manning's n values. Manning's n value of 0.045 was used for the main channel and between 0.03 and 0.035 for the overbanks. See attached computation table (Attachment 1).

Boundary Conditions

For a downstream WS Elevation in SC River from FIRM 06111C0779E, we used 208.25 on the 88 datum, and lowered it 2.5' to be on the '29 datum = 205.75

Discharge Point Locations

Discharges for the Adams Barranca vary depending on the source. Ventura County Watershed Protection District current adopted flow rate is from the HSPF Model of 6,880 cfs. A revised discharges was provided by VCWPD in Appendix L Ventura Design Storm by Mark Banduraga of 5,150 cfs. A separate VcRAT analysis was completed by Jensen Design & Survey using aerial reduction totaling 4,810 cfs. The varying discharges are shown in the table below:

	100-Year
HSPF Model	
VCWPD	6,880
HMS Model	
VCWPD	5,150
JDS Model	4,810

HEC-RAS Project – Existing

- **PLANS:** The name of the project is 4492_Adams Barranca.prj
 - Adams Canyon - Plan With Embankment (p05, g05, f02)
 - **Adams Canyon – Plan With Embankment with lateral structures at top of bank (p12, g09, f02) – used for Specific Plan Report**
 - **Right Overbank**
 - **Adams Canyon Right Overbank Profile (p18, g13, f08)**
 - **Left Overbank**
 - **Adams Canyon Left Overbank Profile (p17, g14, f07)**

Discharges in the main stream were reduced using lateral structures for the without embankment scenario and balanced appropriately with the right and left overbank as shown in the table below for the **EXISTING** condition:

LOB_RS	100-YR
5096.3	1218
4223.5	1306

ROB_RS	100-YR
4966.8	1
4634	757
4222.5	2308

Methodology Existing Condition

Plan 5: With Embankment Plan and levees

- The channel embankments had higher elevations than the overbank areas. The embankments in this case act as levees, but do not satisfy levee requirements as per 65.10 and hence need to be failed as directed by FEMA Regional Engineer during field reconnaissance.
- Levees option was used on the crest of the levee, and their elevations were arbitrarily raised above the 0.2-percent annual chance water surface elevation as mentioned in Appendix H: Guidance for Mapping of Areas Protected by Levee Systems of the FEMA Guidelines and Specifications for Flood Hazard Mapping Partners.
- In this analysis only the channel portion was analyzed through out the length of the stream and the cross sections were cut off using levee option to consider only the areas within the embankments.

Plan 12: With Embankment Plan with lateral structures

- Lateral structures were placed on top of the embankments on *both* sides and were optimized
- The use of lateral structures reduced the flow in the channel. Some amount of water overtopped the channel embankments as they exist in the field and the rest of the water flowed through the channel.

Plan 17: Right overbank

- An overbank flowline was delineated using 1 foot contours on the right (west) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the right side of Plan 12.

Plan 18: Left overbank

- An overbank flowline was delineated using 1 foot contours on the left (east) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the left side of Plan 12.

HEC-RAS Project – Proposed

- **PLANS:** The name of the project is 4492_Adams Barranca.prj
 - Adams Canyon – Proposed Geometry – larger channel section between 126 and RR and Lateral structures, no parallel channel at the north end (p7, g10, f03)
 - **Adams Canyon – Proposed Geometry – larger channel section and parallel channel on north end of project (p19, g11, f05)**
 - **Right Overbank**
 - **Adams Canyon Right Overbank Profile (p22, g13, f06) (used same alignment and sections as existing condition)**
 - **Left Overbank**
 - **Adams Canyon Left Overbank Profile (p21, g12, f09)**

Discharges in the main stream were reduced using lateral structures for the without embankment scenario and balanced appropriately with the right and left overbank as shown in the table below for the **PROPOSED** condition:

LOB_RS	100-YR
3711.2	1000
1067.7	1147

ROB_RS	100-YR
4966.8	1
4634	738
4222.5	2028
284.2	2073

Methodology Proposed Condition

Plan 19: Proposed Geometry

- It was observed on the Existing condition (Plan 12) that a break out of 1,215 cfs occurred upstream of Telegraph Road and Traveled over telegraph Road to the frontage of the project site. We have designed this overflow condition to be captured in the parking lot and diverted to the west and then to the south in a parallel channel. The proposed buildings are protected from the 100 year water surface elevation.
- A flow file was created based on the assumption that at the beginning of the new channel (easterly end) the flow rate would start at 300 cfs. Then it would increase to the full 1,215 cfs at the northwesterly property corner before heading south. 8.
- The proposed channel is joined with the existing channel upstream of station 3525.2. The channel is then widened to accommodate the additional 1,215 cfs added to the system.

- It was noticed that the water was overtopping the existing top of bank on the west side of the channel downstream of the railroad. This was not occurring in the existing condition and therefore the proposed widened channel is proposed to have a notch cut in the top between stations 2839.2 and 2708.7 to allow the water to overflow to the east through the frontage road and over the highway, as it did in the existing condition. Therefore no impacts will occur on the west side of the barranca.

Plan 22: Right overbank

- An overbank flowline was delineated using 1 foot contours on the right (west) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the right side of Plan 19.

Plan 21: Left overbank

- An overbank flowline was delineated using 1 foot contours on the left (east) overbank
- The cross-sections were taken parallel to the contours in the overflow area, which is a lower portion of the east side of the channel between stations 2839.2 and 2708.7.
- The flow rates were determined using the overflow from the lateral structures on the left side of Plan 19.

Mapping

BFEs for the main channel are obtained from Plan # 12 and Plan #19.

BFEs for the left overbank are obtained from Plan # 18 & #21.

BFEs for the right overbank are obtained from Plan # 17 & #22

EXISTING CONDITION OVERFLOW VALUES FROM MAIN CHANNEL

Flow data with both levees in place EXISTING

LOB		EAST			WEST		
LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS	LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS
5253.1-4539	5096.3	1218	1218	X	4966.8	1	1
4239	4809	-		4539	4634	756	757
3821.1	4223.5	88	1306	4239	4222.5	1551	2308
	3757	-		3689	3948.3	-	
	3400.4	-		3525	3739	-	
	3030.5	-		X	3517.9	-	
	2936.1	-		3379+3128	3253	-	
	2728.9	-		2839	2612.2	-	
2501	2302.1	-		2501-2424	2471.6	-	
2424-1818	1067.8	-		2096-1818	284.2	-	
X	365.2	-					

LOB		EAST			WEST		
LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS	LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS
X	4966.8	1	1	X	4966.8	1	1
4539	4634	756	757	4539	4634	756	757
4239	4222.5	1551	2308	4239	4222.5	1551	2308
3689	3948.3	-		3689	3948.3	-	
3525	3739	-		3525	3739	-	
X	3517.9	-		X	3517.9	-	
3379+3128	3253	-		3379+3128	3253	-	
2839	2612.2	-		2839	2612.2	-	
2501-2424	2471.6	-		2501-2424	2471.6	-	
2096-1818	284.2	-		2096-1818	284.2	-	

PROPOSED CONDITION OVERFLOW VALUES FROM MAIN CHANNEL

Flow data with both levees in place

LOB		EAST		WEST	
LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS	LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION
2839.2, 2755.9	3711.2	1000	1000	X	4966.8
X	3508.3	-		4539	4634
X	3115.4	-		4239	4222.5
X	2935	-		3689	3948.3
X	2726.6	-		3525	3739
2501	2302	-		X	3517.9
2424-1818	1067.7	147	1147	3379+3128	3253
X	365.2	-		2839	2612.2
				2501-2424	2471.6
				2096-1818	284.2

LOB		EAST		WEST	
LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION	FLOW IN FROM MAIN CHANNEL	TOTAL FLOW INPUT INTO HEC RAS	LATERAL STATION FROM MAIN CHANNEL	CROSS SECTION
				X	4966.8
				4539	4634
				4239	4222.5
				3689	3948.3
				3525	3739
				X	3517.9
				3379+3128	3253
				2839	2612.2
				2501-2424	2471.6
				2096-1818	284.2
					45
					2073

Table 3-1 Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
A. Natural Streams			
1. Main Channels			
a. Clean, straight, full, no rifts or deep pools	0.025	0.030	0.033
b. Same as above, but more stones and weeds	0.030	0.035	0.040
c. Clean, winding, some pools and shoals	0.033	0.040	0.045
d. Same as above, but some weeds and stones	0.035	0.045	0.050
e. Same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
f. Same as "d" but more stones	0.045	0.050	0.060
g. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
h. Very weedy reaches, deep pools, or floodways with heavy stands of timber and brush	0.070	0.100	0.150
2. Flood Plains			
a. Pasture no brush	0.025	0.030	0.035
1. Short grass	0.030	0.035	0.050
2. High grass			
b. Cultivated areas	0.020	0.030	0.040
1. No crop	0.025	0.035	0.045
2. Mature row crops	0.030	0.040	0.050
3. Mature field crops			
c. Brush	0.035	0.050	0.070
1. Scattered brush, heavy weeds	0.035	0.050	0.060
2. Light brush and trees, in winter	0.040	0.060	0.080
3. Light brush and trees, in summer	0.045	0.070	0.110
4. Medium to dense brush, in winter	0.070	0.100	0.160
5. Medium to dense brush, in summer			
d. Trees	0.030	0.040	0.050
1. Cleared land with tree stumps, no sprouts	0.050	0.060	0.080
2. Same as above, but heavy sprouts	0.080	0.100	0.120
3. Heavy stand of timber, few down trees, little undergrowth, flow below branches	0.100	0.120	0.160
4. Same as above, but with flow into branches			
5. Dense willows, summer, straight	0.110	0.150	0.200
3. Mountain Streams, no vegetation in channel, banks usually steep, with trees and brush on banks submerged			
a. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
b. Bottom: cobbles with large boulders	0.040	0.050	0.070

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
<i>C. Excavated or Dredged Channels</i>			
1. Earth, straight and uniform			
a. Clean, recently completed	0.016	0.018	0.020
b. Clean, after weathering	0.018	0.022	0.025
c. Gravel, uniform section, clean	0.022	0.025	0.030
d. With short grass, few weeds	0.022	0.027	0.033
2. Earth, winding and sluggish			
a. No vegetation	0.023	0.025	0.030
b. Grass, some weeds	0.025	0.030	0.033
c. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
d. Earth bottom and rubble side	0.028	0.030	0.035
e. Stony bottom and weedy banks	0.025	0.035	0.040
f. Cobble bottom and clean sides	0.030	0.040	0.050
3. Dragline-excavated or dredged			
a. No vegetation	0.025	0.028	0.033
b. Light brush on banks	0.035	0.050	0.060
4. Rock cuts			
a. Smooth and uniform	0.025	0.035	0.040
b. Jagged and irregular	0.035	0.040	0.050
5. Channels not maintained, weeds and brush			
a. Clean bottom, brush on sides	0.040	0.050	0.080
b. Same as above, highest stage of flow	0.045	0.070	0.110
c. Dense weeds, high as flow depth	0.050	0.080	0.120
d. Dense brush, high stage	0.080	0.100	0.140

Other sources that include pictures of selected streams as a guide to n value determination are available (Fasken, 1963; Barnes, 1967; and Hicks and Mason, 1991). In general, these references provide color photos with tables of calibrated n values for a range of flows.

Although there are many factors that affect the selection of the n value for the channel, some of the most important factors are the type and size of materials that compose the bed and banks of a channel, and the shape of the channel. Cowan (1956) developed a procedure for estimating the effects of these factors to determine the value of Manning's n of a channel. In Cowan's procedure, the value of n is computed by the following equation:

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
B. Lined or Built-Up Channels			
1. Concrete			
a. Trowel finish	0.011	0.013	0.015
b. Float Finish	0.013	0.015	0.016
c. Finished, with gravel bottom	0.015	0.017	0.020
d. Unfinished	0.014	0.017	0.020
e. Gunitite, good section	0.016	0.019	0.023
f. Gunitite, wavy section	0.018	0.022	0.025
g. On good excavated rock	0.017	0.020	
h. On irregular excavated rock	0.022	0.027	
2. Concrete bottom float finished with sides of:			
a. Dressed stone in mortar	0.015	0.017	0.020
b. Random stone in mortar	0.017	0.020	0.024
c. Cement rubble masonry, plastered	0.016	0.020	0.024
d. Cement rubble masonry	0.020	0.025	0.030
e. Dry rubble on riprap	0.020	0.030	0.035
3. Gravel bottom with sides of:			
a. Formed concrete	0.017	0.020	0.025
b. Random stone in mortar	0.020	0.023	0.026
c. Dry rubble or riprap	0.023	0.033	0.036
4. Brick			
a. Glazed	0.011	0.013	0.015
b. In cement mortar	0.012	0.015	0.018
5. Metal			
a. Smooth steel surfaces	0.011	0.012	0.014
b. Corrugated metal	0.021	0.025	0.030
6. Asphalt			
a. Smooth	0.013	0.013	
b. Rough	0.016	0.016	
7. Vegetal lining			
	0.030		0.500

EXISTING CONDITION

HEC-RAS Plan: plan 12 River: ADAMS_BARRANCA Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (%/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	5253.2	PF 1	4810.00	243.87	254.29	253.05	256.03	0.009797	10.58	454.60	74.39	0.75
1	5253.1		Lat Struct									
1	5253		Lat Struct									
1	5063.9	PF 1	4810.00	240.99	250.35	250.35	253.42	0.018061	14.06	342.04	55.81	1.00
1	4738.5	PF 1	4092.45	237.94	251.00	246.17	251.19	0.000997	3.59	1255.40	836.86	0.25
1	4645.2	PF 1	3592.26	237.62	250.98	246.84	251.08	0.000710	2.77	1441.87	1619.65	0.21
1	4585		Culvert									
1	4539.6	PF 1	3592.26	234.97	244.37	242.79	245.98	0.009800	10.16	353.57	59.96	0.74
1	4539.5		Lat Struct									
1	4539		Lat Struct									
1	4239.6	PF 1	2836.84	231.97	240.66	240.51	242.25	0.017405	10.12	281.76	409.66	0.93
1	4239.5		Lat Struct									
1	4239		Lat Struct									
1	3821.2	PF 1	1285.26	228.71	235.15	233.67	235.83	0.010969	6.62	199.09	2236.88	0.71
1	3821.1		Lat Struct									
1	3821		Lat Struct									
1	3689.1	PF 1	1197.39	226.71	234.16	232.14	234.71	0.006221	5.95	201.17	2610.27	0.55
1	3689		Lat Struct									
1	3688.9		Lat Struct									
1	3525.2	PF 1	1197.37	225.00	232.40	231.05	233.43	0.009066	8.13	147.21	2282.76	0.66
1	3525.1		Lat Struct									
1	3525		Lat Struct									
1	3404.4	PF 1	1197.37	224.98	231.64	229.49	232.42	0.006649	7.06	169.69	2399.74	0.55
1	3393		Bridge									
1	3379.6	PF 1	1197.37	224.00	231.34	229.31	232.23	0.006835	7.58	157.95	2274.41	0.56
1	3379.5		Lat Struct									
1	3379		Lat Struct									
1	3128.6	PF 1	1197.37	220.85	228.49	227.34	229.90	0.012650	9.52	125.80	2672.85	0.74
1	3128.5		Lat Struct									
1	3128		Lat Struct									
1	2839.3	PF 1	1197.37	217.21	225.50	223.85	226.63	0.009703	8.53	140.33	1489.29	0.66
1	2839.2		Lat Struct									
1	2839		Lat Struct									
1	2708.7	PF 1	1197.37	217.90	224.82	222.33	225.48	0.006333	6.49	184.36	1119.05	0.54
1	2585		Culvert									
1	2501.9	PF 1	1197.37	215.50	223.55	221.48	224.44	0.006943	7.54	158.76	2820.96	0.57
1	2501.5		Lat Struct									
1	2501		Lat Struct									
1	2488.0	PF 1	1197.37	217.00	223.38	222.01	224.30	0.008501	7.70	155.40	2982.54	0.64

EXISTING CONDITION

HEC-RAS Plan: plan 12 River: ADAMS_BARRANCA Reach: 1 Profile: PF 1 (Continued)

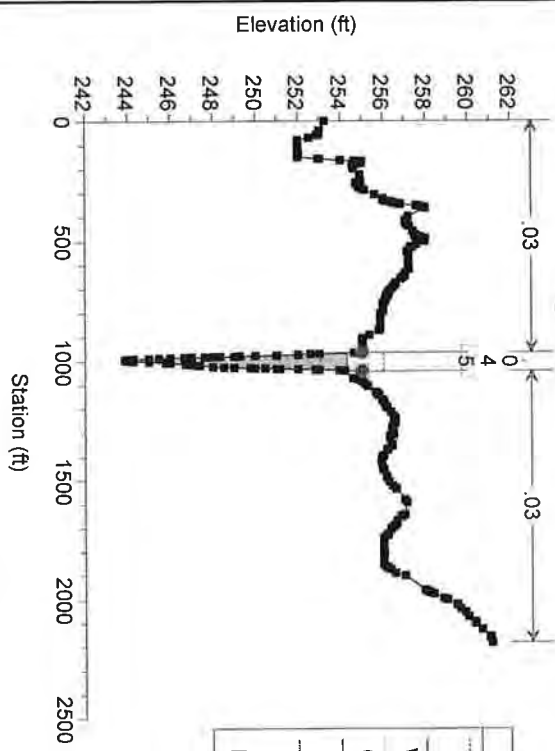
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	2487.9		Lat Struct									
1	2487		Lat Struct									
1	2424.2	PF 1	1197.37	215.08	222.91	221.07	223.77	0.007048	7.47	160.22	2653.10	0.58
1	2424.1		Lat Struct									
1	2424		Lat Struct									
1	2096.2	PF 1	1197.37	212.00	219.49	218.29	220.79	0.011599	9.14	130.96	2643.93	0.72
1	2096.1		Lat Struct									
1	2096		Lat Struct									
1	1972.4	PF 1	1195.29	210.93	217.98	216.62	219.21	0.013690	8.91	134.30	2697.33	0.75
1	1972.3		Lat Struct									
1	1972		Lat Struct									
1	1818.2	PF 1	1195.29	208.00	214.25	214.25	216.27	0.026364	11.42	104.70	2214.83	1.00
1	1818.1		Lat Struct									
1	1818		Lat Struct									
1	204.7	PF 1	1195.29	199.82	205.75	203.08	205.83	0.001480	2.36	547.64	297.71	0.26

EXISTING CONDITIONS LRT STRUCTURE

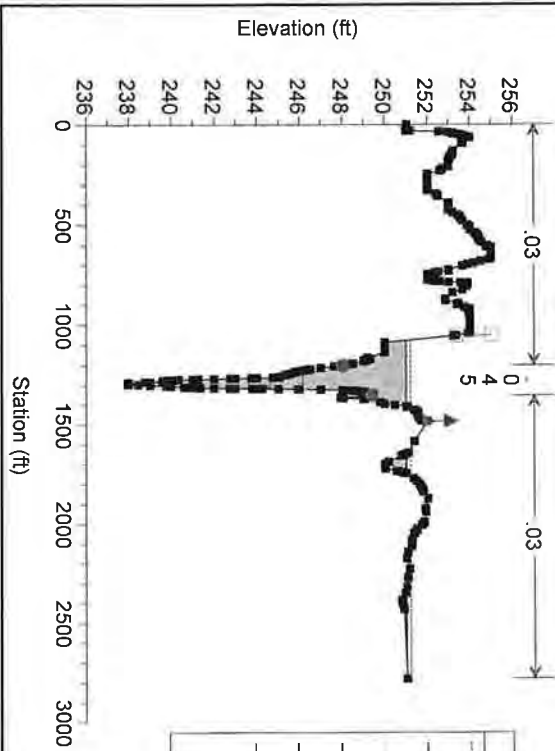
HEC-RAS Plan plan 12 River: ADAMS BARRANCA Reach: 1 Profile: PF 1

Reach	River Sta	Profile	Q US (cfs)	Q Leaving Total (cfs)	Q DS (cfs)	Q Weir (cfs)	Q Gates (cfs)	W Top Width (ft)	Weir Max Depth (ft)	Weir Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US (ft)	W.S. US (ft)	E.G. DS (ft)	W.S. DS (ft)
1	5233.1	PF 1	4810.00	1217.74	3592.26	1217.74		278.91	2.84	1.58	248.16	256.03	254.29	251.08	250.98
1	5253	PF 1	4810.00	0.00	3592.26	0.00					282.00	266.03	264.29	261.08	259.98
1	4539.5	PF 1	3592.26	0.00	2835.84	0.00					242.00	245.97	244.37	242.25	240.66
1	4539.5	PF 1	3592.26	756.65	2835.84	756.65	257.43	1.92	1.26		240.00	245.97	244.37	242.25	240.66
1	4239.5	PF 1	2835.84	0.00	1285.26	0.00					235.51	242.25	240.66	235.83	235.15
1	4239	PF 1	2835.84	1551.22	1285.26	1551.22	401.03	2.85	1.46		235.10	242.24	240.66	235.83	235.15
1	3821.1	PF 1	1285.26	87.85	1197.39	87.85	122.46	0.90	0.47		234.00	235.83	235.15	234.71	234.16
1	3821	PF 1	1285.26	0.00	1197.39	0.00					234.84	234.70	234.15	234.16	234.16
1	3689	PF 1	1197.39	0.00	1197.37	0.00					234.00	234.70	234.15	233.43	232.40
1	3689.9	PF 1	1197.39	0.02	1197.37	0.02	0.73	0.10	0.05		234.00	234.70	234.15	233.43	232.40
1	3525.1	PF 1	1197.37	0.00	1197.37	0.00					234.00	233.43	232.40	232.42	231.64
1	3525	PF 1	1197.37	0.00	1197.37	0.00					234.00	233.43	232.40	232.42	231.64
1	3379.5	PF 1	1197.37	0.00	1197.37	0.00					231.80	232.23	231.34	229.90	228.49
1	3379	PF 1	1197.37	0.00	1197.37	0.00					233.20	232.23	231.34	229.90	228.49
1	3128.5	PF 1	1197.37	0.00	1197.37	0.00					227.00	229.90	228.49	226.63	225.50
1	3128	PF 1	1197.37	0.00	1197.37	0.00					228.00	229.89	228.49	226.63	225.50
1	2839.2	PF 1	1197.37	0.00	1197.37	0.00					228.00	226.63	225.50	225.48	224.82
1	2839	PF 1	1197.37	0.00	1197.37	0.00					227.50	226.63	225.50	225.48	224.82
1	2501.5	PF 1	1197.37	0.00	1197.37	0.00					225.93	224.43	223.54	224.30	223.38
1	2501.5	PF 1	1197.37	0.00	1197.37	0.00					226.17	224.43	223.54	224.30	223.38
1	2487.9	PF 1	1197.37	0.00	1197.37	0.00					225.93	224.30	223.37	222.77	222.91
1	2487	PF 1	1197.37	0.00	1197.37	0.00					226.17	224.29	223.37	223.77	222.91
1	2424.1	PF 1	1197.37	0.00	1197.37	0.00					223.04	223.77	222.90	220.79	219.49
1	2424	PF 1	1197.37	0.00	1197.37	0.00					217.61	220.79	219.49	219.21	217.98
1	2096.1	PF 1	1197.37	2.05	1195.29	2.05	11.56	0.37	0.18		216.10	219.21	219.49	219.21	217.98
1	2096	PF 1	1197.37	0.01	1195.29	0.01	1.59	0.05	0.02		217.93	220.78	219.48	219.21	217.98
1	1972.3	PF 1	1195.29	4.44	1195.29	4.44	25.31	0.36	0.18		216.10	219.21	219.48	219.21	217.98
1	1972	PF 1	1195.29	0.01	1195.29	0.01	1.48	0.04	0.02		217.93	219.20	217.97	216.27	214.25
1	1818.1	PF 1	1195.29	0.00	1195.29	0.00					210.96	216.27	214.25	205.83	205.75
1	1818	PF 1	1195.29	0.00	1195.29	0.00					209.42	216.27	214.25	205.83	205.75

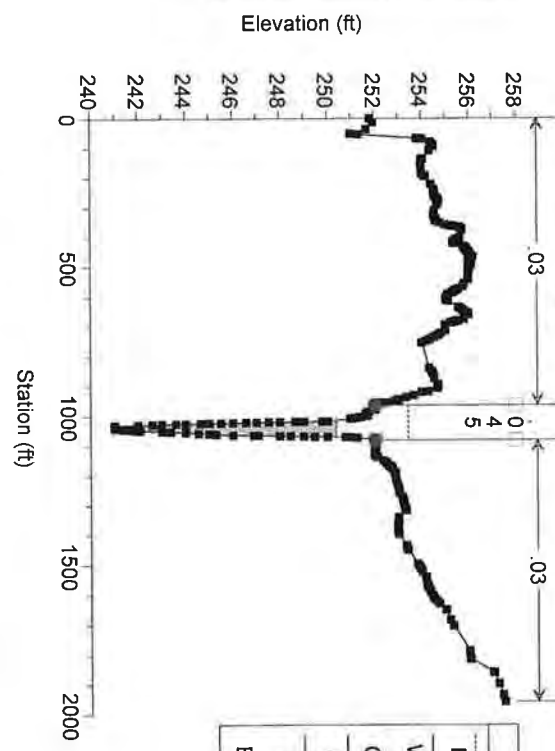
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 River = ADAMS_BARRANCA Reach = 1 RS = 5253.2



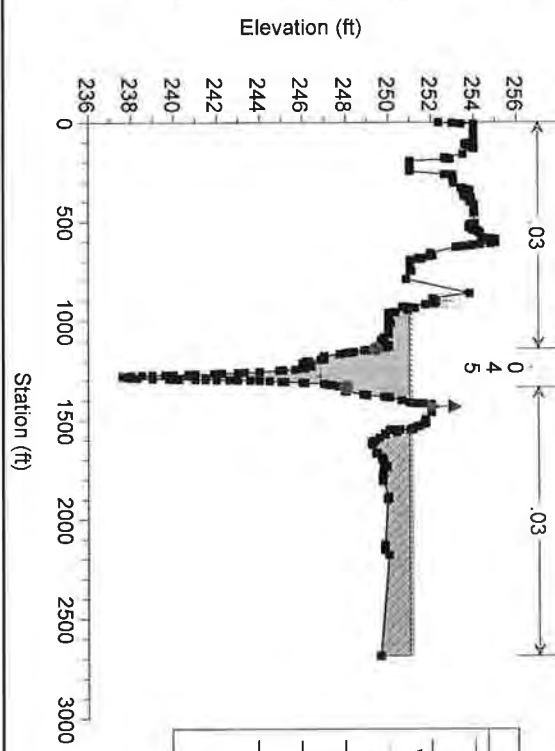
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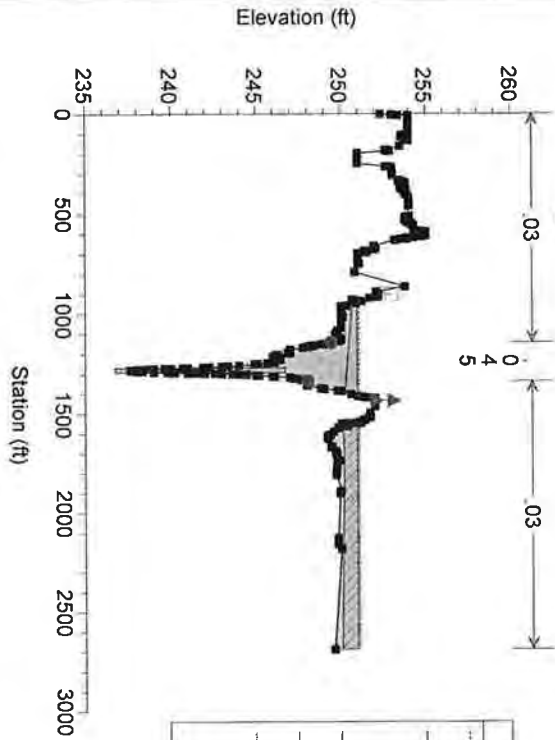
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 River = ADAMS_BARRANCA Reach = 1 RS = 5063.9



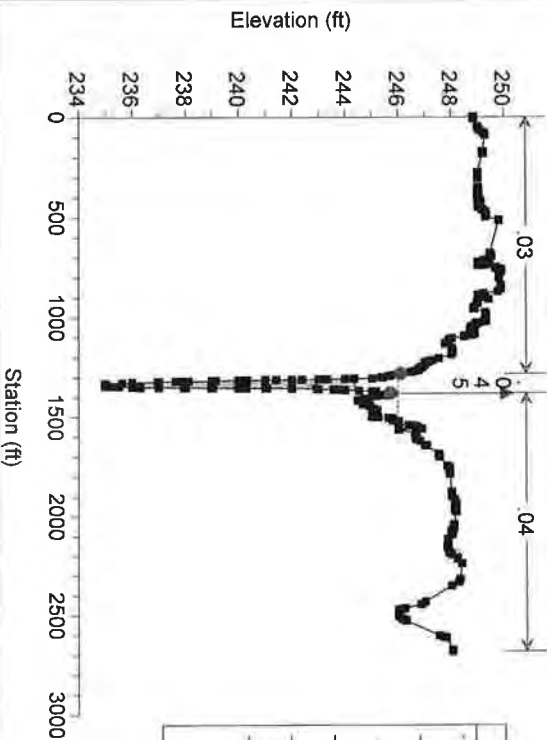
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4645.2



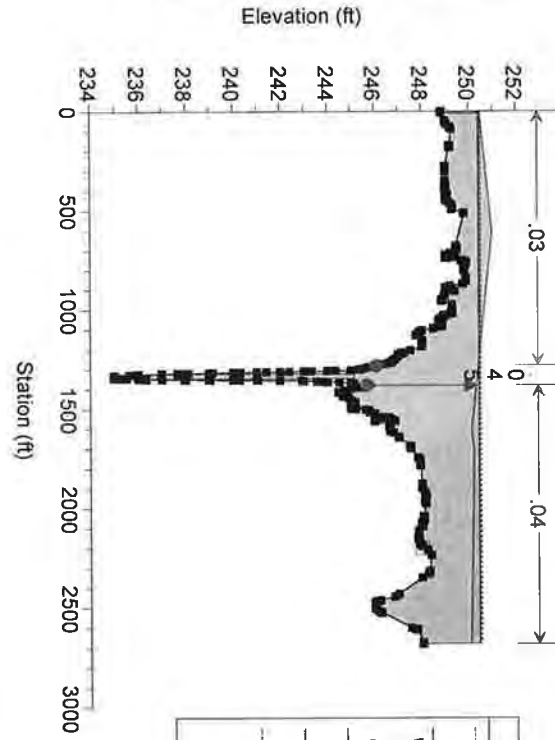
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4585 Culiv Telegraph Road



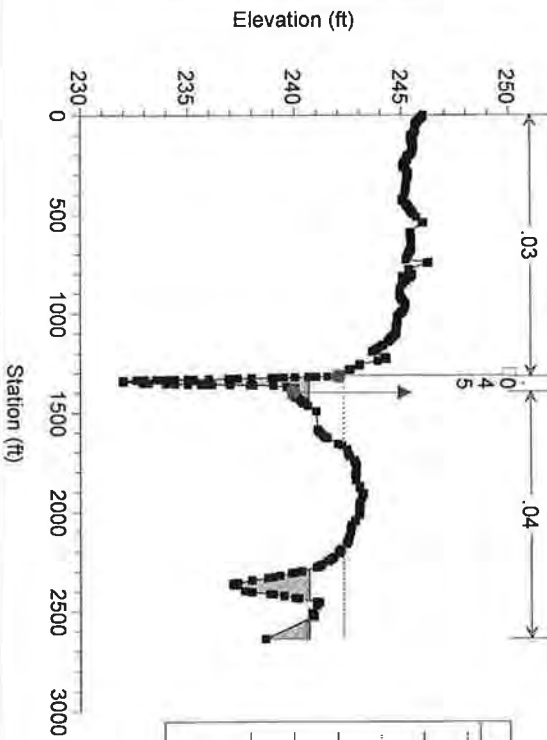
4492_Adams Barranca Plan: Plan 12 2/3/2011
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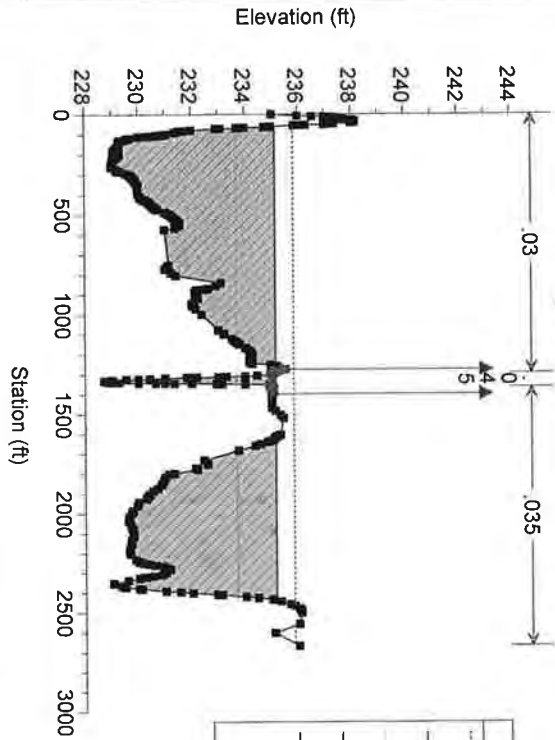
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4585 Culiv Telegraph Road



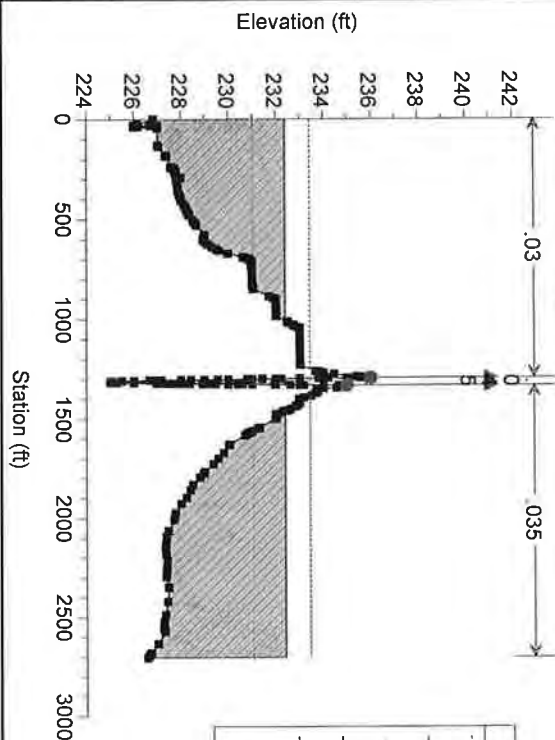
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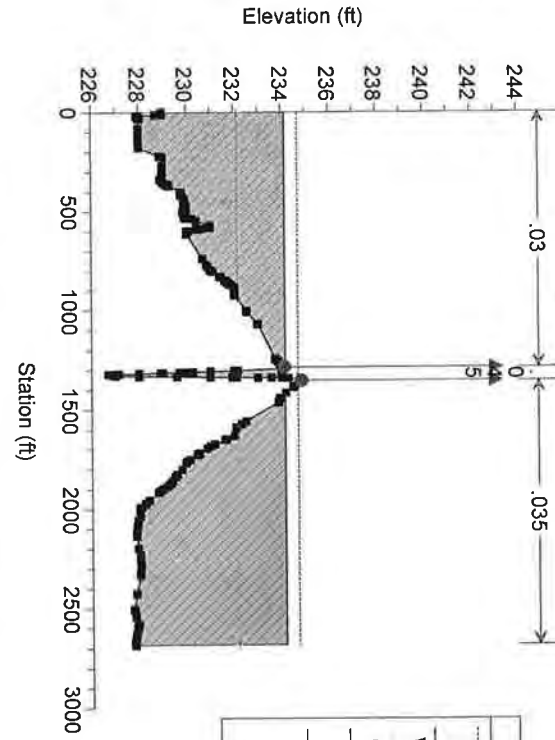
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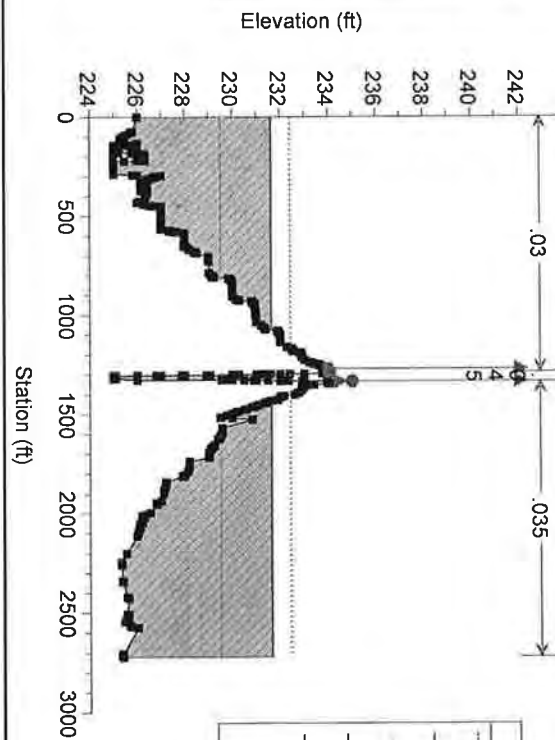
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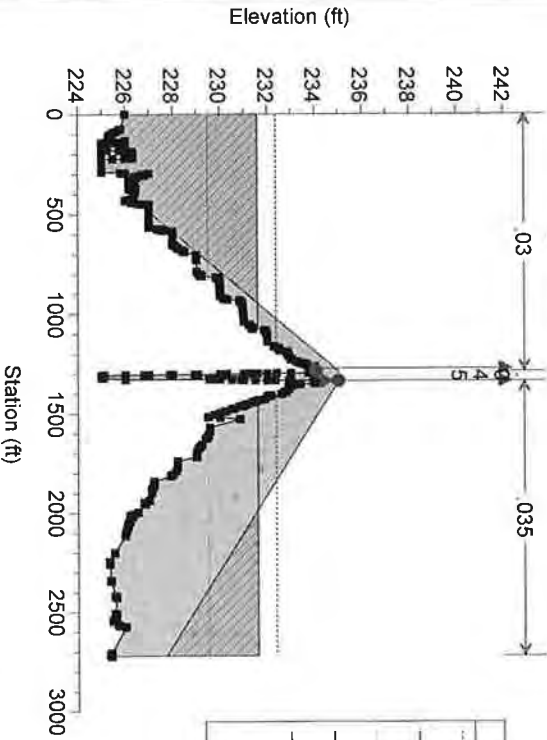
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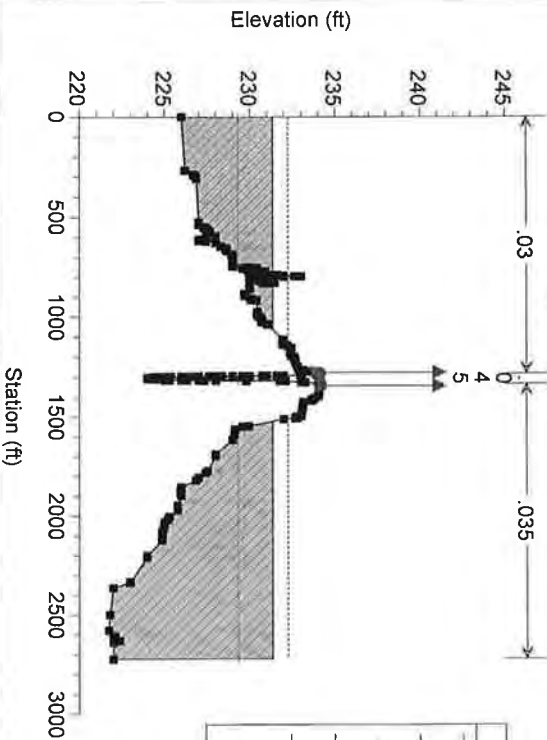
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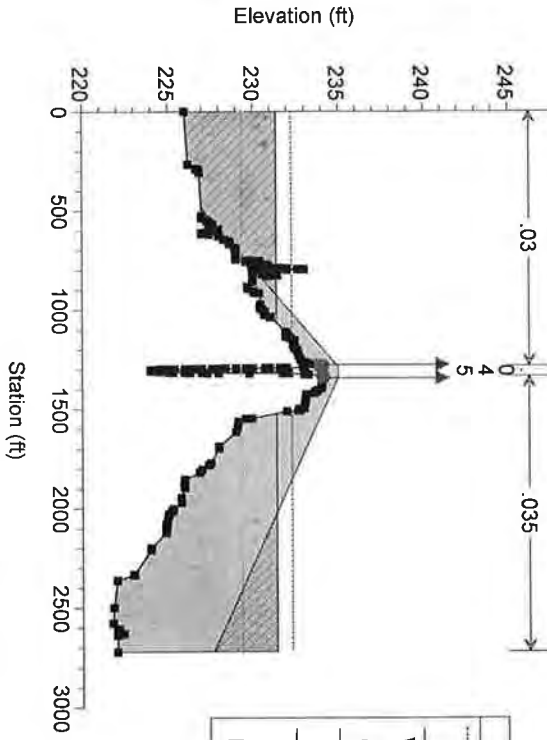
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 3393 BR Railroad



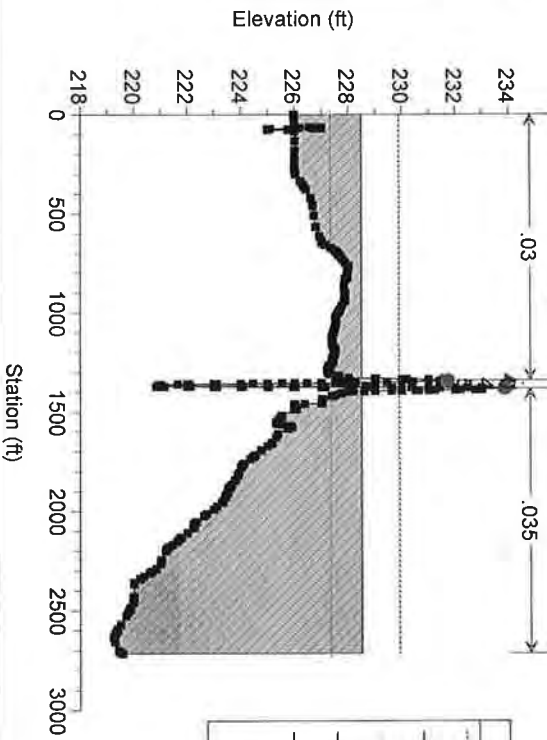
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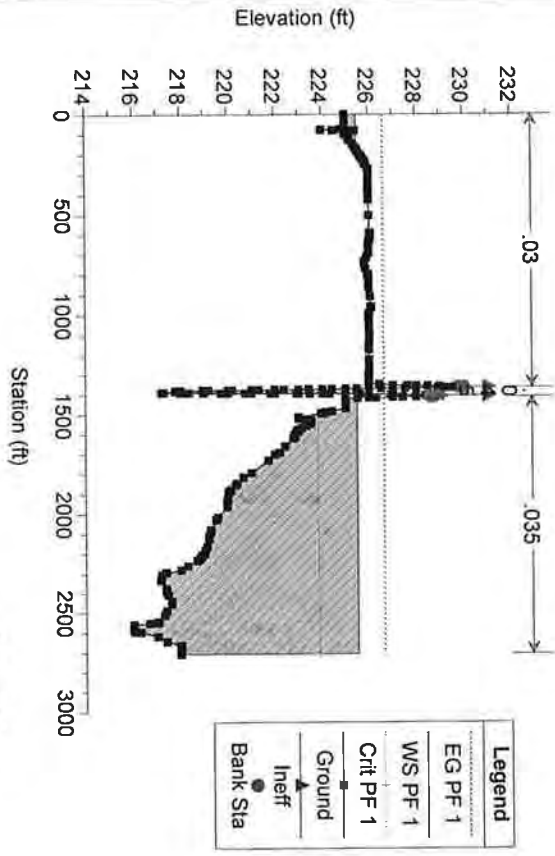
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 River = ADAMS_BARRANCA Reach = 1 RS = 3393 BR Railroad



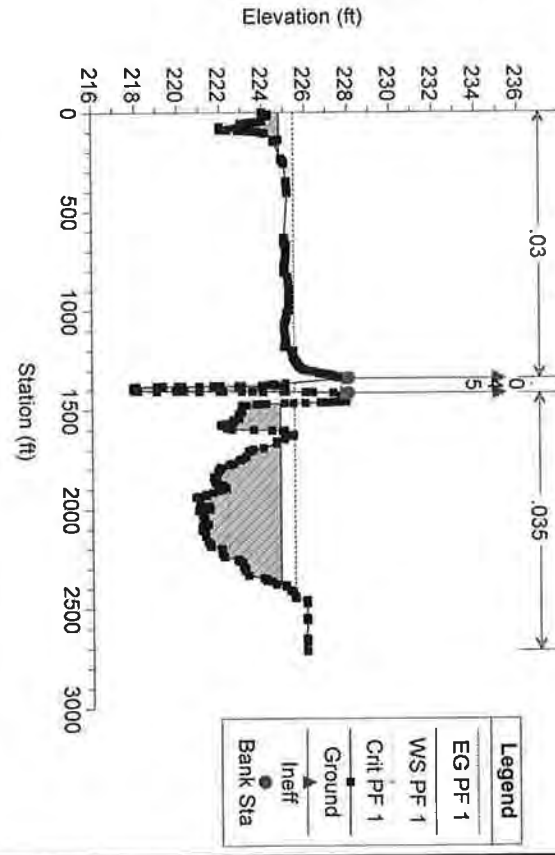
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 River = ADAMS_BARRANCA Reach = 1 RS = 3128.6



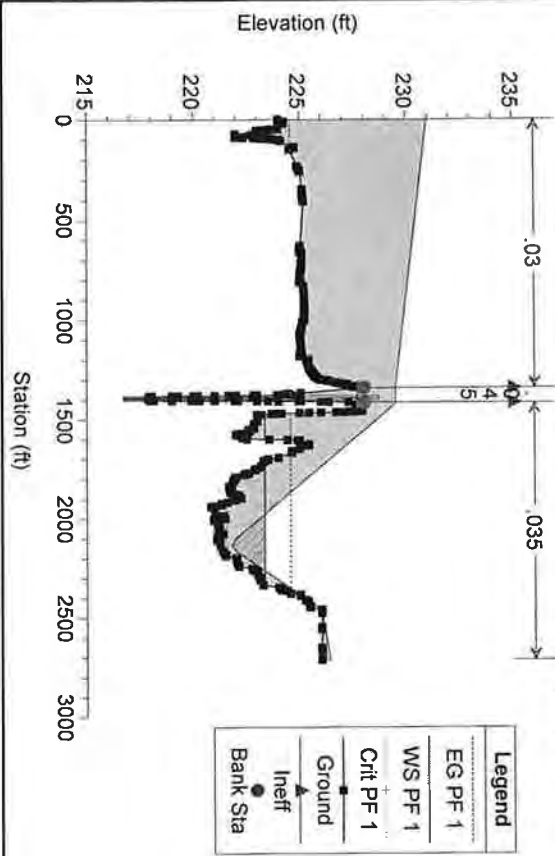
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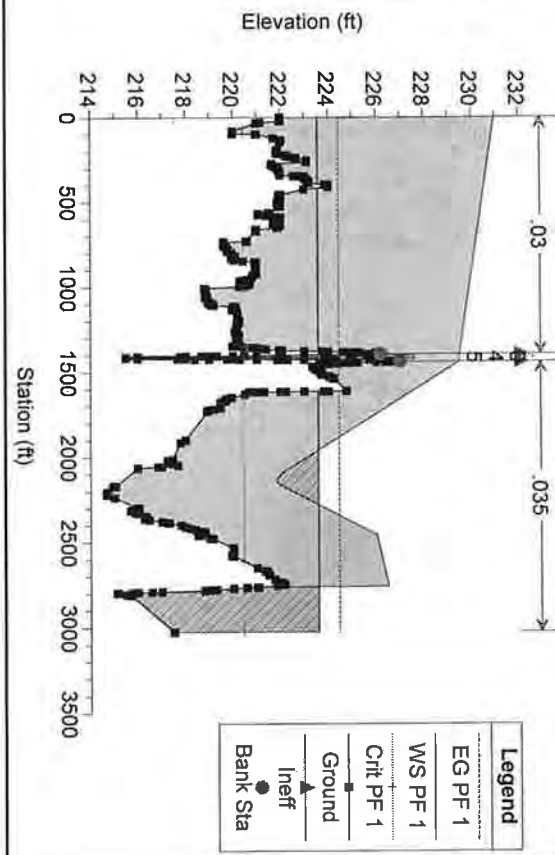
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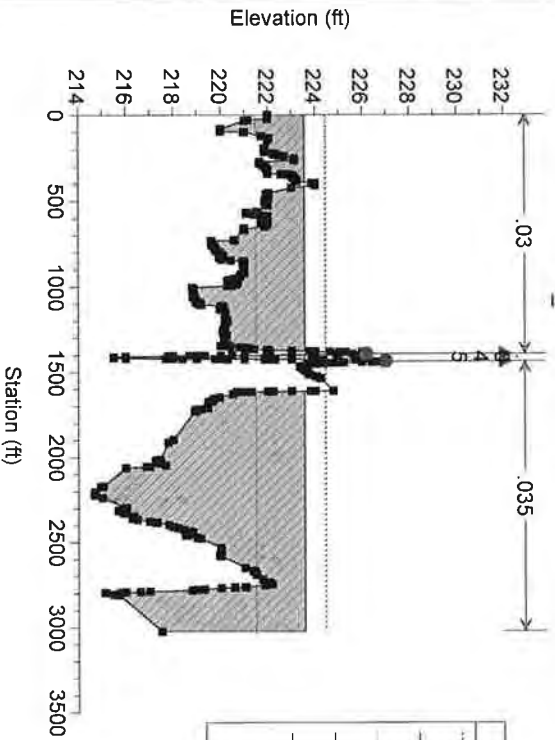
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 2585 Culv highway 126



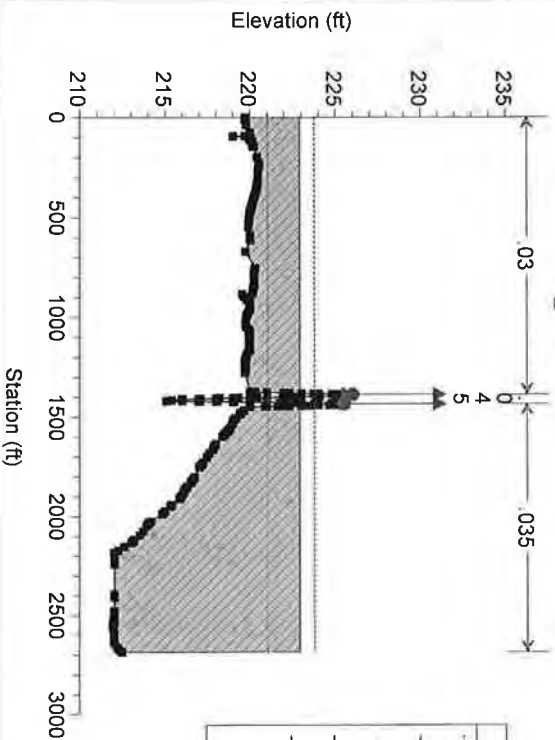
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 2585 Culv highway 126



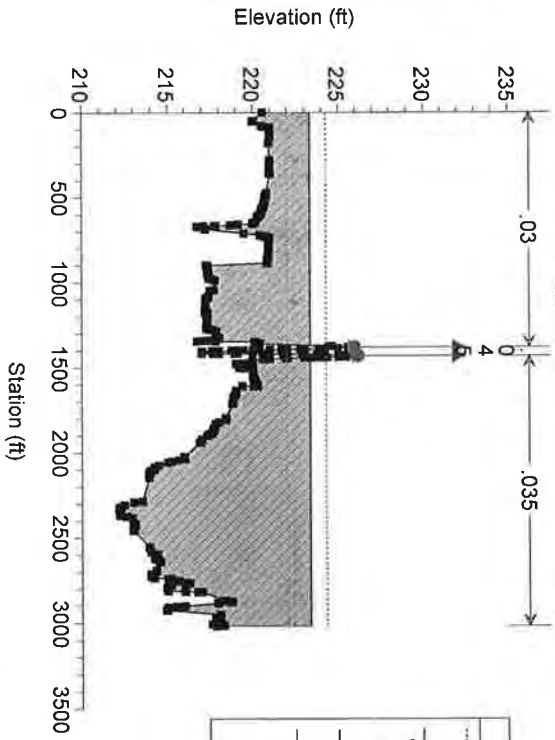
4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 2501.9



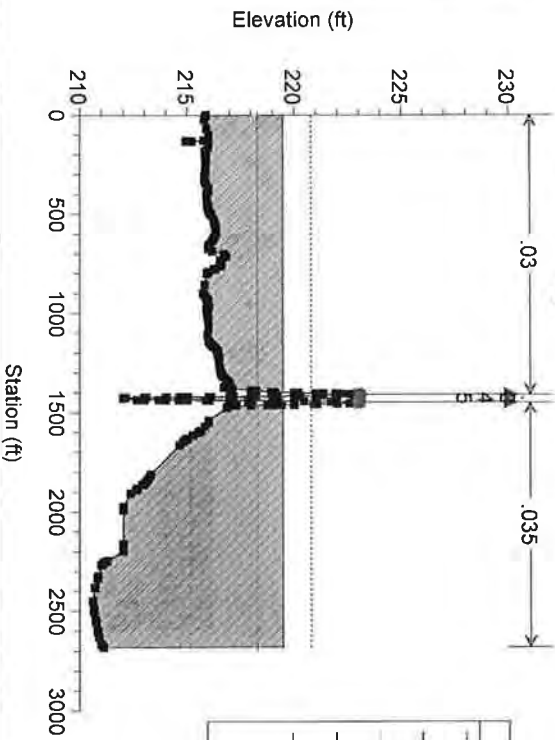
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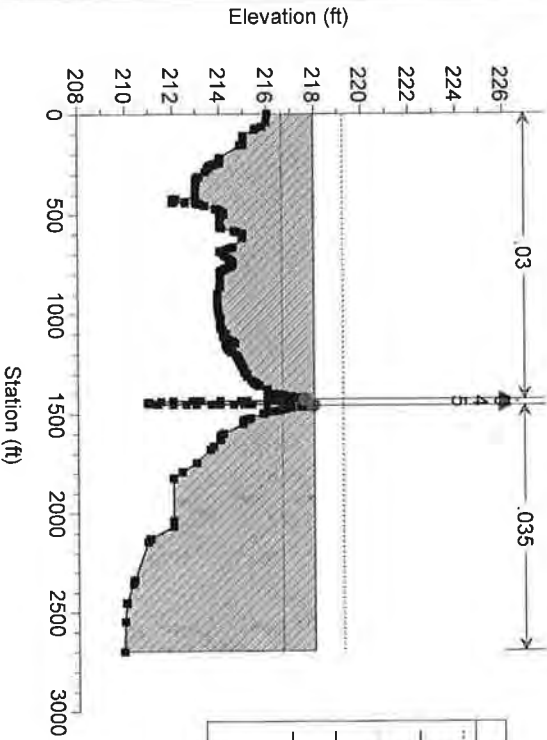
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4492_Adams Barranca Plan: Plan 12 2/3/2011
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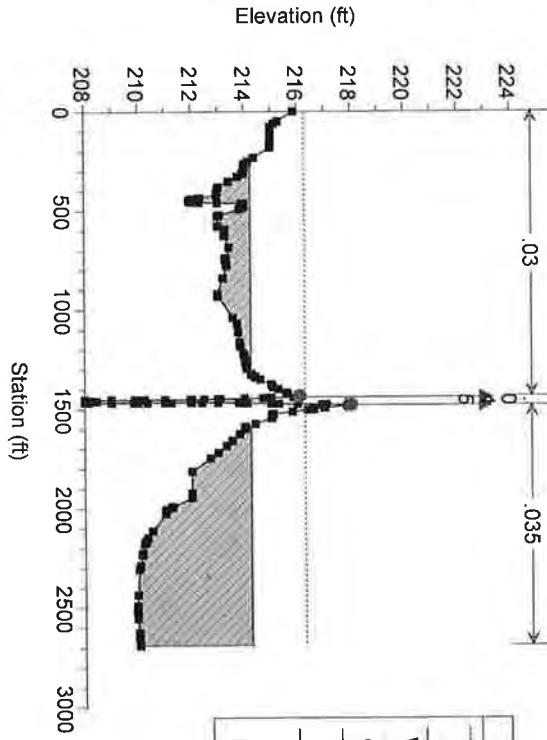


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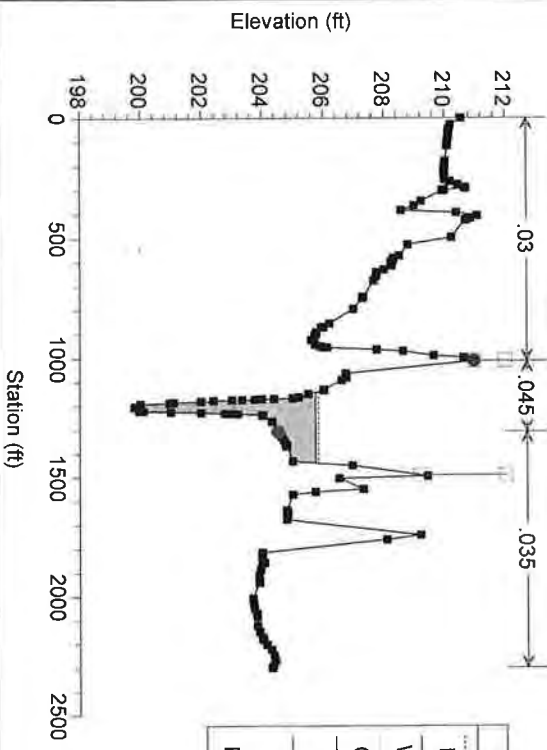
Legend	
EG PF 1	Ground
WS PF 1	Crit PF 1
▲	Ineff
●	Bank Sta

4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 1818.2



Legend	
EG PF 1	Ground
WS PF 1	Crit PF 1
▲	Ineff
●	Bank Sta

4492_Adams Barranca Plan: Plan 12 2/3/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 204.7



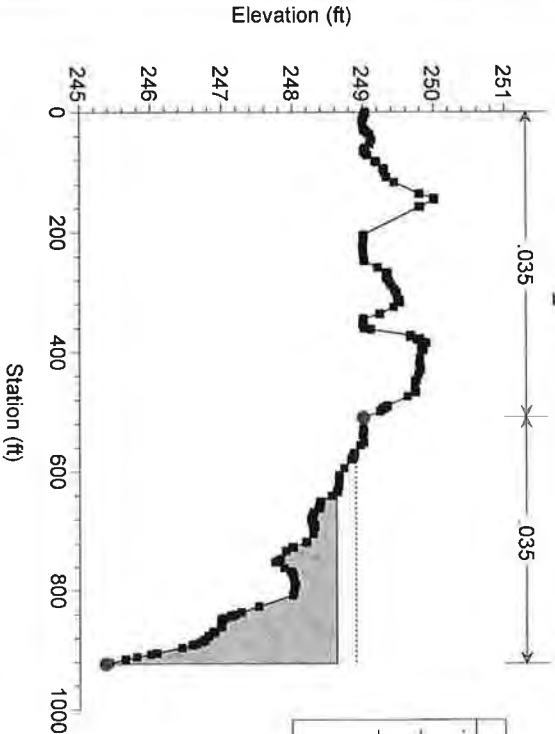
Legend	
EG PF 1	Ground
WS PF 1	Crit PF 1
▲	Ineff
●	Bank Sta

EXISTING RIGHT OVERBANK

HEC-RAS Plan: plan 17 River: East Overflow Reach: 1 Profile: PF 1

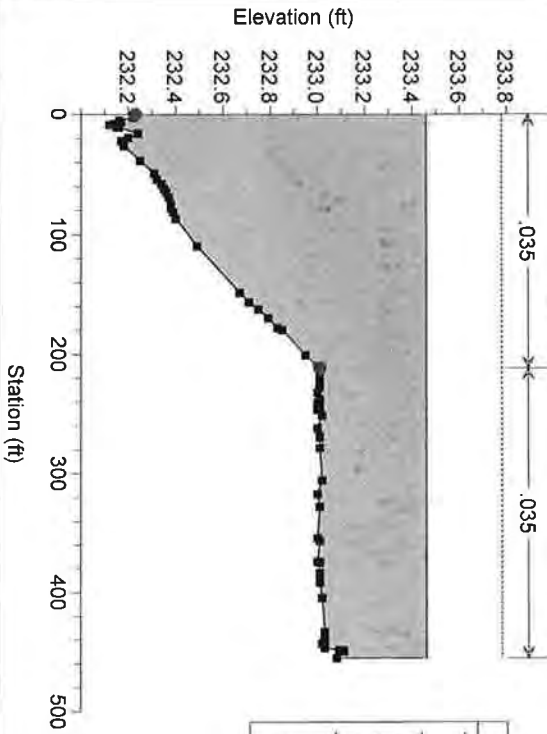
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	5096.3	PF 1	1218.00	245.36	248.62		248.90	0.010011	4.23	288.14	286.96	0.74
1	4809.0	PF 1	1218.00	242.01	244.44	244.44	245.00	0.018036	6.02	202.20	183.75	1.01
1	4223.5	PF 1	1306.00	232.12	233.46	233.46	233.78	0.014706	4.92	307.66	455.33	0.89
1	3757.0	PF 1	1306.00	229.35	230.75	230.38	230.86	0.003380	2.81	514.02	509.05	0.45
1	3400.4	PF 1	1306.00	226.72	226.79	226.79	227.08	0.020711	0.72	304.91	567.31	0.63
1	3030.5	PF 1	1306.00	224.41	226.40		226.41	0.000164	0.78	1876.29	1323.20	0.10
1	2936.1	PF 1	1306.00	224.64	225.95	225.95	226.32	0.019511	4.89	266.95	356.20	1.00
1	2728.9	PF 1	1306.00	220.00	220.44	220.31	220.53	0.009215	2.01	547.14	1257.03	0.60
1	2302.1	PF 1	1306.00	215.99	216.46		216.56	0.009713	1.97	524.24	1147.68	0.61
1	1067.8	PF 1	1306.00	210.41	211.50	211.09	211.54	0.002092	1.92	827.03	1155.05	0.34
1	365.2	PF 1	1306.00	206.98	207.98	207.98	208.31	0.021093	4.64	281.42	430.67	1.01

4492 Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 5096.3



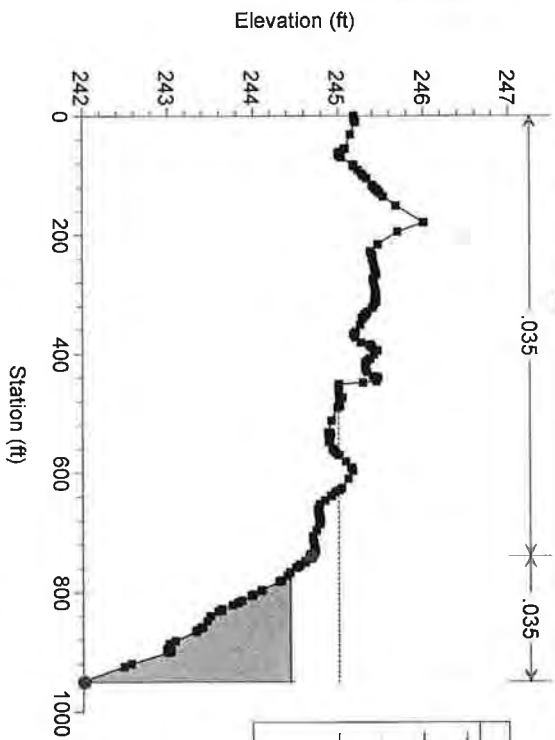
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WS PF 1	-----
Crit PF 1	-----
Ground	●
Bank Sta	●

4492 Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 4223.5



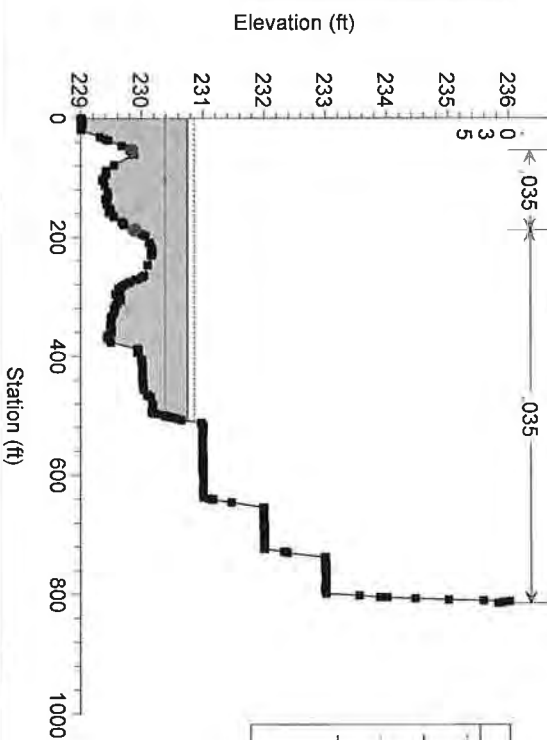
Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	●
Bank Sta	●

4492 Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 4809.0



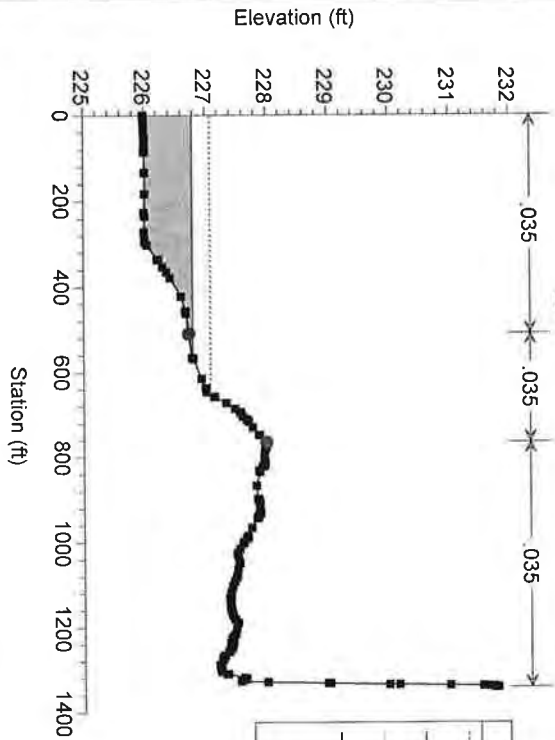
Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	●
Bank Sta	●

4492 Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 3757.0



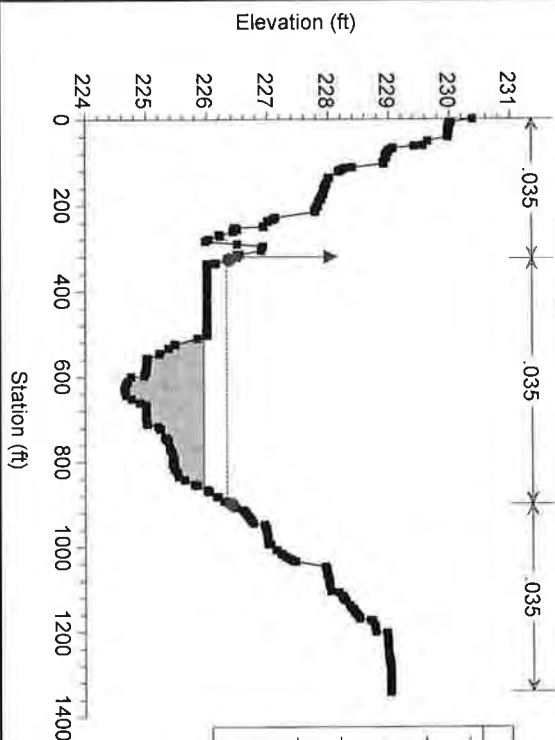
Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	●
Bank Sta	●

4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 3400.4



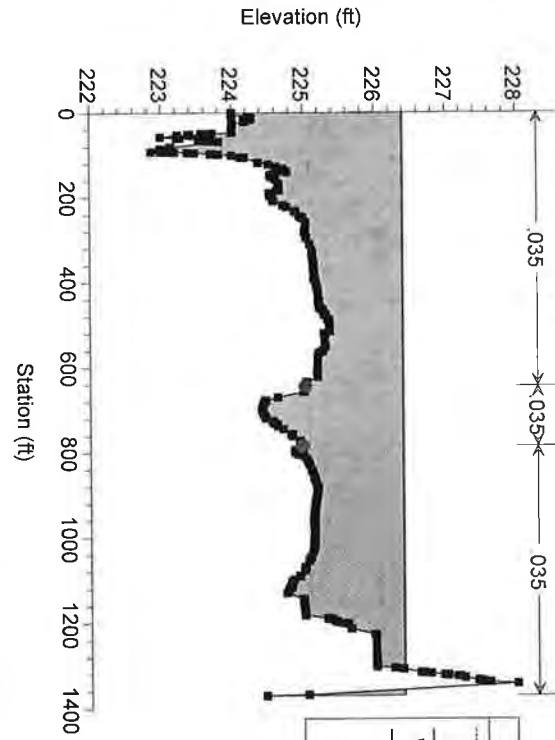
Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	-----
Bank Sta	●

4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 2936.1



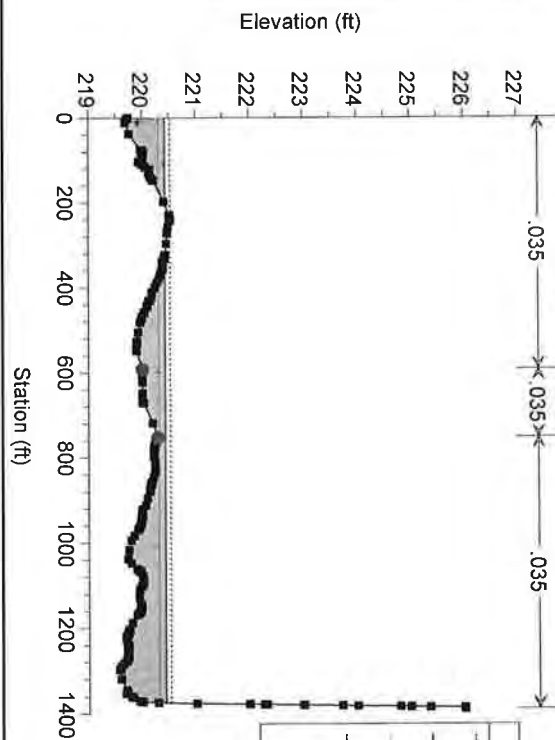
Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	-----
Ineff	▲
Bank Sta	●

4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 3030.5



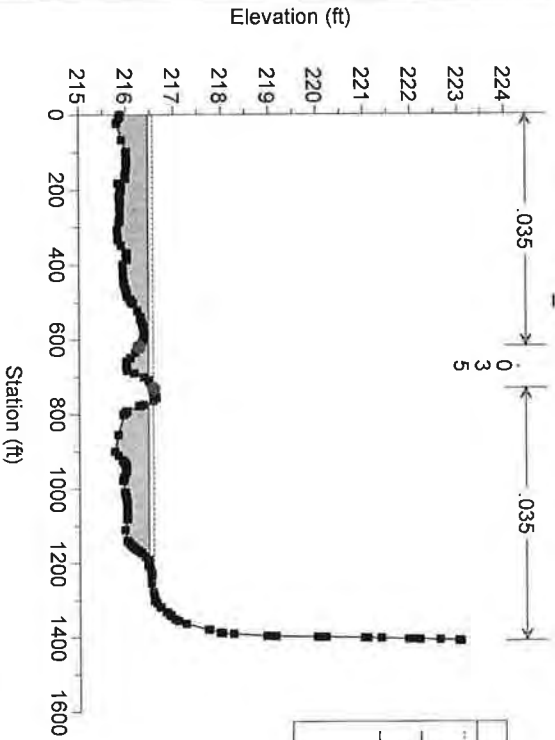
Legend	
EG PF 1	-----
WS PF 1	-----
Ground	-----
Bank Sta	●

4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 2728.9

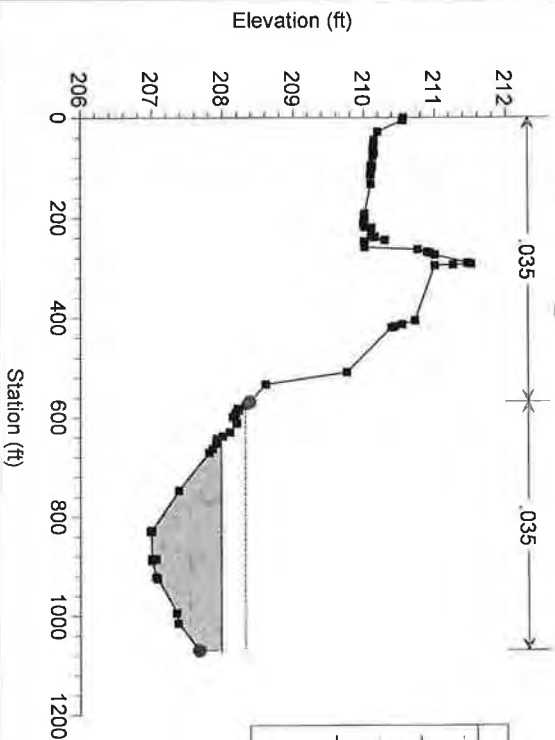


Legend	
EG PF 1	-----
WS PF 1	-----
Crit PF 1	-----
Ground	-----
Bank Sta	●

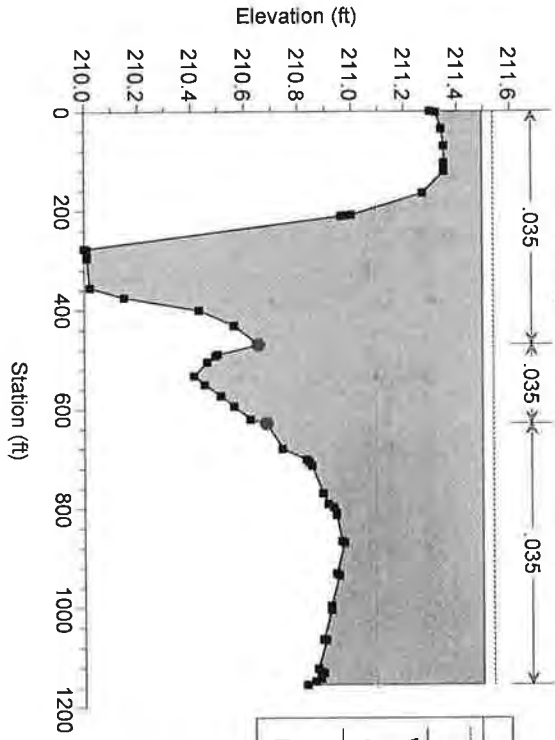
4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 2302.1



4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 365.2



4492_Adams Barranca Plan: Plan 17 2/2/2011
 River = East_Overflow Reach = 1 RS = 1067.8

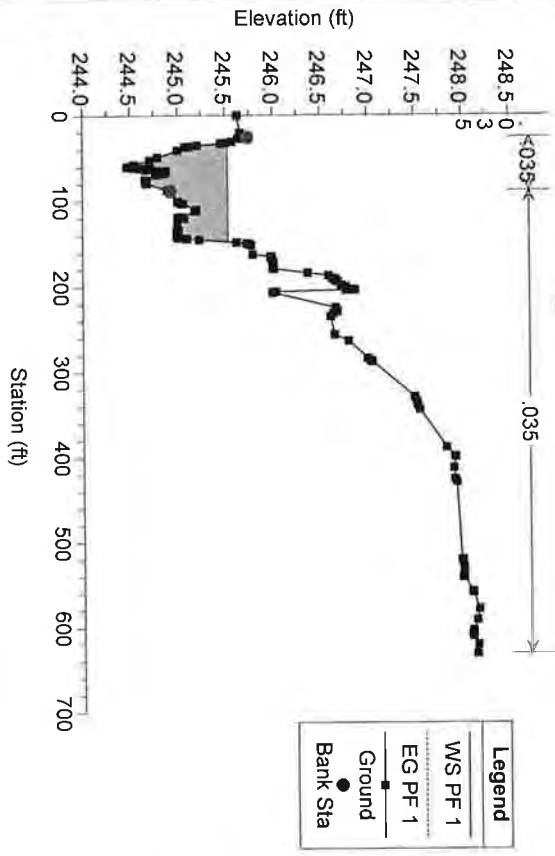


BRISTONS LEFT OVER BANK

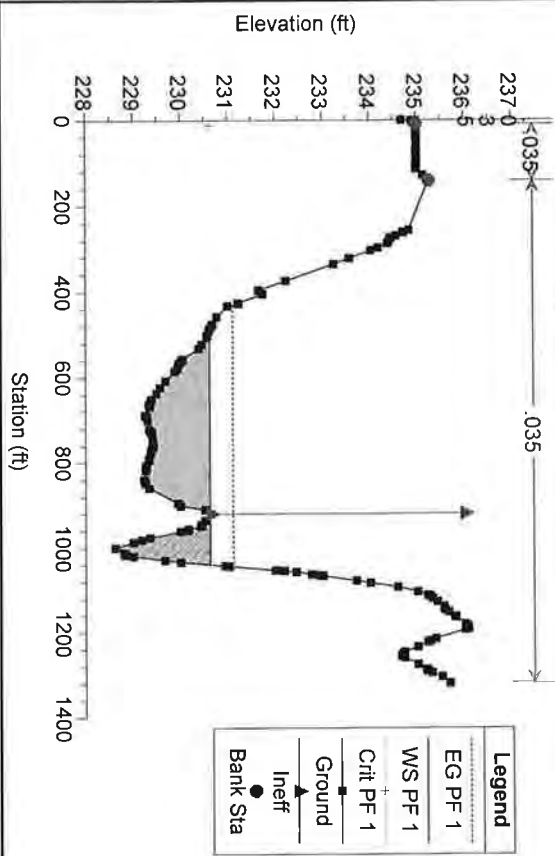
HEC-RAS Plan: Plan 18 River: West Overflow Reach: 2 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
2	4966.8	PF 1	1.00	244.47	245.53		245.53	0.000000	0.02	68.71	115.64	0.00
2	4634.0	PF 1	757.00	239.66	240.63	240.63	240.90	0.021030	4.75	182.48	897.83	1.02
2	4222.5	PF 1	2308.00	234.99	230.63	230.63	231.11	0.018254		414.59	551.36	0.00
2	3948.3	PF 1	2308.00	231.02	229.95	229.95	230.43	0.018292		414.46	581.86	0.00
2	3739.0	PF 1	2308.00	228.61	229.17		229.31	0.005764	1.69	807.60	1086.56	0.48
2	3517.9	PF 1	2308.00	226.35	226.25	226.25	226.56	0.019426	5.31	524.39	850.91	1.01
2	3253.0	PF 1	2308.00	222.25	224.23		224.24	0.000105	0.67	3082.71	1414.32	0.09
2	2612.2	PF 1	2308.00	221.87	223.38	223.38	223.94	0.014818	6.20	402.03	378.91	0.95
2	2471.6	PF 1	2308.00	212.36	213.28	213.28	213.69	0.019266	4.67	448.58	551.97	0.98
2	284.2	PF 1	2308.00	203.69	205.75	204.76	205.78	0.000687	1.75	1613.43	1146.47	0.22

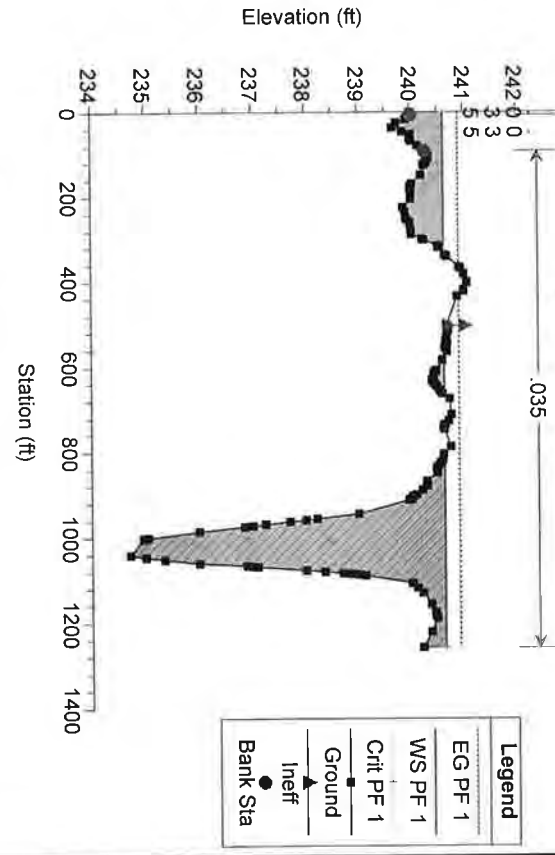
4492_Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 4966.8



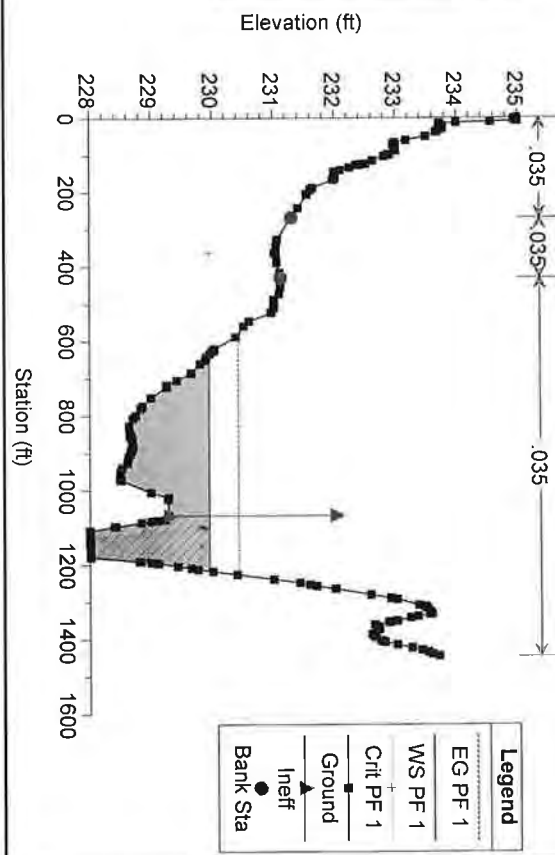
4492_Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 4222.5



4492_Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 4634.0

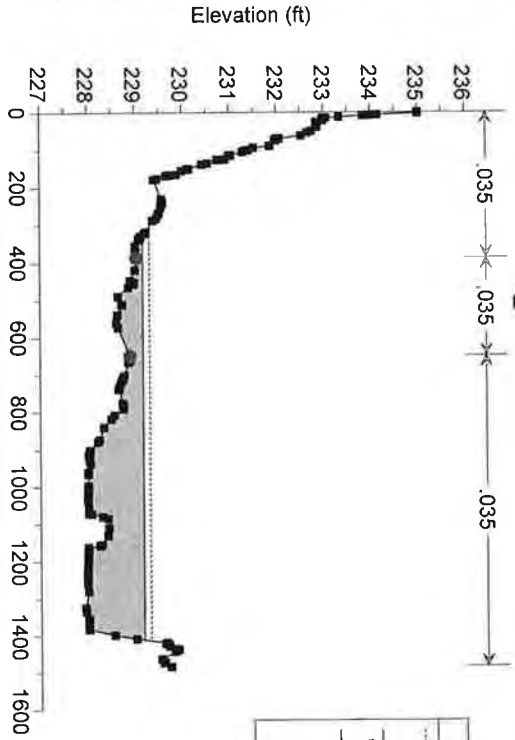


4492_Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 3948.3



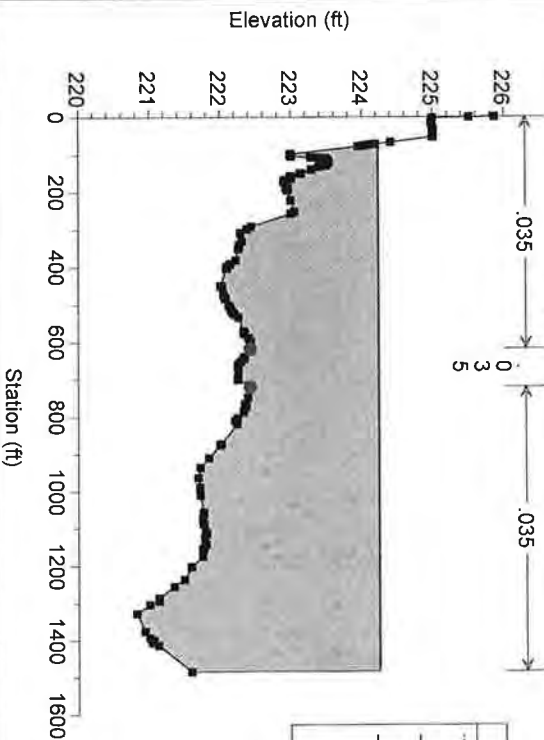
4492_Adams Barranca Plan: Plan 18 2/2/2011

River = West_Overflow Reach = 2 RS = 3739.0



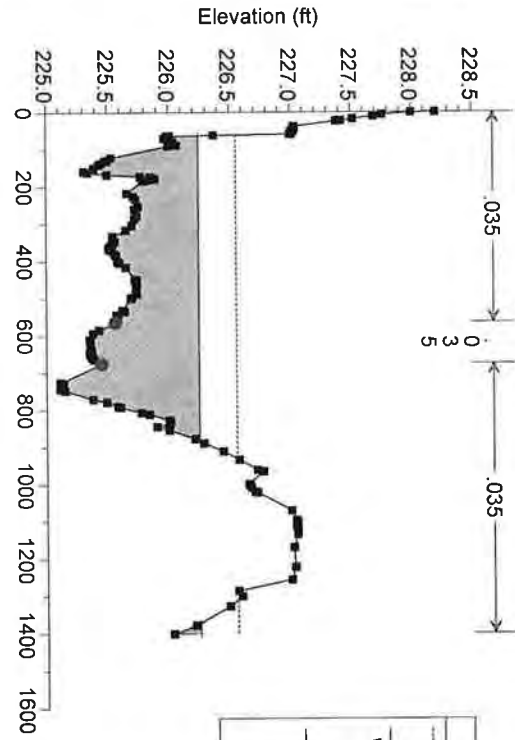
4492_Adams Barranca Plan: Plan 18 2/2/2011

River = West_Overflow Reach = 2 RS = 3253.0



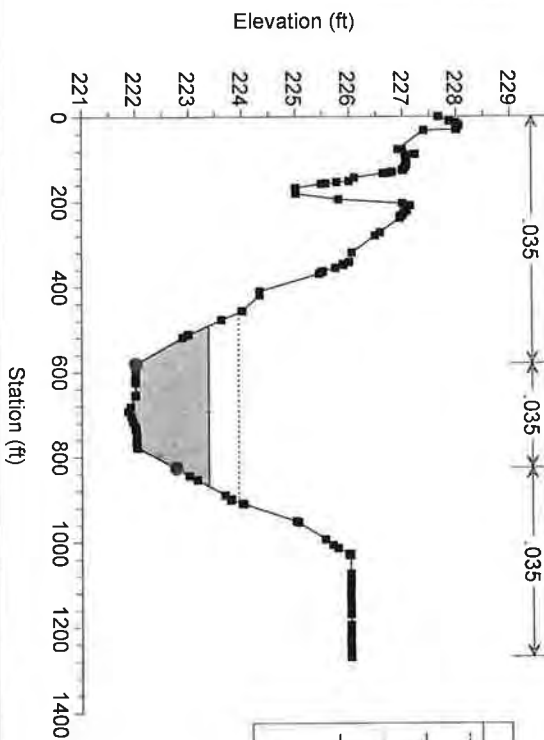
4492_Adams Barranca Plan: Plan 18 2/2/2011

River = West_Overflow Reach = 2 RS = 3517.9

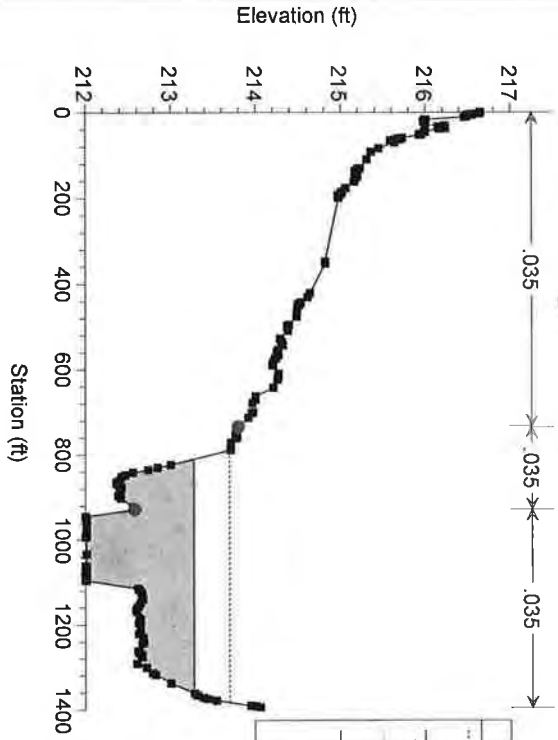


4492_Adams Barranca Plan: Plan 18 2/2/2011

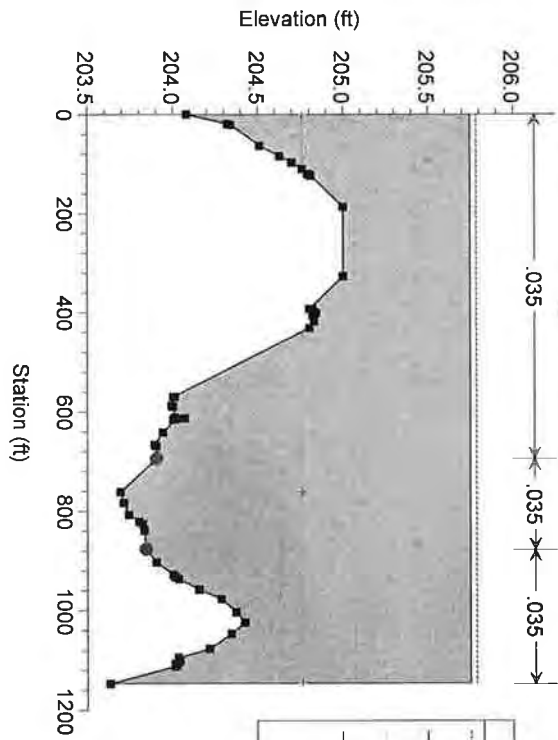
River = West_Overflow Reach = 2 RS = 2612.2



4492 Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 2471.6



4492 Adams Barranca Plan: Plan 18 2/2/2011
 River = West_Overflow Reach = 2 RS = 284.2



PROPOSED GEOMETRY

HEC-RAS Plan: plan 19 Profile: PF 1

River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W/S Elev (ft)	Crt W/S (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
PROPOSED_CHANNEL	2	1250.1	PF 1	300.00	245.75	250.07		250.10	0.000036	1.41	226.96	100.00	0.14
PROPOSED_CHANNEL	2	1050.1	PF 1	300.00	242.19	250.08		250.09	0.000005	0.77	411.33	100.00	0.06
PROPOSED_CHANNEL	2	927.7	PF 1	1218.00	240.38	247.64		249.86	0.000503	11.95	102.42	66.80	0.98
PROPOSED_CHANNEL	2	727.6	PF 1	1218.00	237.38	243.91		245.03	0.0006259	8.51	143.15	65.28	1.01
PROPOSED_CHANNEL	2	527.6	PF 1	1218.00	234.38	240.71		242.08	0.0003737	9.45	137.12	77.06	0.84
PROPOSED_CHANNEL	2	327.6	PF 1	1218.00	231.38	236.20		237.34	0.0004058	9.25	152.04	61.57	0.89
PROPOSED_CHANNEL	2	166.5	PF 1	1218.00	226.75	233.44		233.55	0.000225	2.63	463.59	108.05	0.22
ADAMS_BARRANCA	1	5253.2	PF 1	4810.00	243.87	256.33		257.28	0.0004054	7.85	612.82	78.40	0.49
ADAMS_BARRANCA	1	5063.9	PF 1	4810.00	240.99	250.82		253.46	0.015501	13.04	369.00	60.37	0.93
ADAMS_BARRANCA	1	4738.5	PF 1	4810.00	237.94	251.61		251.79	0.001154	3.49	1471.11	398.93	0.26
ADAMS_BARRANCA	1	4645.2	PF 1	4810.00	237.62	251.55		251.68	0.000897	3.01	1725.09	497.33	0.23
ADAMS_BARRANCA	1	4585		Culvert									
ADAMS_BARRANCA	1	4539.6	PF 1	3592.00	234.97	243.91		242.79	0.011623	10.99	326.85	55.85	0.80
ADAMS_BARRANCA	1	4539		Lat Struct									
ADAMS_BARRANCA	1	4239.6	PF 1	2854.98	231.97	240.94		242.12	0.011422	9.01	357.67	169.37	0.76
ADAMS_BARRANCA	1	4239		Lat Struct									
ADAMS_BARRANCA	1	3821.2	PF 1	1567.97	228.71	234.25		234.25	0.020630	10.61	147.73	81.17	1.00
ADAMS_BARRANCA	1	3821		Lat Struct									
ADAMS_BARRANCA	1	3689.1	PF 1	1567.97	226.73	233.25		233.45	0.000644	3.53	443.62	1319.53	0.31
ADAMS_BARRANCA	1	3689		Lat Struct									
ADAMS_BARRANCA	1	3525.2	PF 1	1567.97	225.02	233.28		229.01	0.000179	2.28	688.86	2160.37	0.17
ADAMS_BARRANCA	2	3689.1	PF 1	2785.97	226.73	232.08		233.25	0.005652	8.70	320.12	1184.63	0.87
ADAMS_BARRANCA	2	3689		Lat Struct									
ADAMS_BARRANCA	2	3688.9		Lat Struct									
ADAMS_BARRANCA	2	3525.2	PF 1	2785.97	225.02	232.32		229.90	0.001001	4.86	573.34	1999.40	0.39
ADAMS_BARRANCA	2	3525		Lat Struct									
ADAMS_BARRANCA	2	3404.4	PF 1	2785.97	224.78	231.88		229.13	0.001323	6.41	434.89	69.10	0.45
ADAMS_BARRANCA	2	3393		Mult Open									
ADAMS_BARRANCA	2	3379.6	PF 1	2785.97	224.55	228.54		228.54	0.007397	10.87	256.19	1768.66	1.00
ADAMS_BARRANCA	2	3379.5		Lat Struct									
ADAMS_BARRANCA	2	3379		Lat Struct									
ADAMS_BARRANCA	2	3128.6	PF 1	2785.97	221.40	228.20		225.85	0.001572	6.62	420.69	1527.16	0.49
ADAMS_BARRANCA	2	3128		Lat Struct									
ADAMS_BARRANCA	2	2839.3	PF 1	2782.37	218.20	228.35		222.62	0.000314	3.79	756.99	2103.82	0.23
ADAMS_BARRANCA	2	2839.2		Lat Struct									
ADAMS_BARRANCA	2	2839		Lat Struct									
ADAMS_BARRANCA	2	2756	PF 1	2047.13	216.68	228.50		228.50	0.000001	0.26	9525.21	1747.71	0.02
ADAMS_BARRANCA	2	2755.9		Lat Struct									
ADAMS_BARRANCA	2	2755		Lat Struct									
ADAMS_BARRANCA	2	2708.7	PF 1	1819.44	216.58	227.42		224.61	0.002328	7.96	228.53	2612.15	0.56
ADAMS_BARRANCA	2	2685		Culvert									
ADAMS_BARRANCA	2	2501.9	PF 1	1819.44	215.50	225.23		226.39	0.007486	8.64	210.61	33.08	0.60
ADAMS_BARRANCA	2	2501.5		Lat Struct									
ADAMS_BARRANCA	2	2501		Lat Struct									
ADAMS_BARRANCA	2	2488.0	PF 1	1819.44	217.00	225.23		223.29	0.007236	8.08	225.19	41.20	0.61

HEC-RAS Plan: plan 19 Profile: PF 1 (Continued)

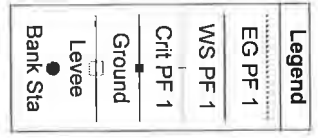
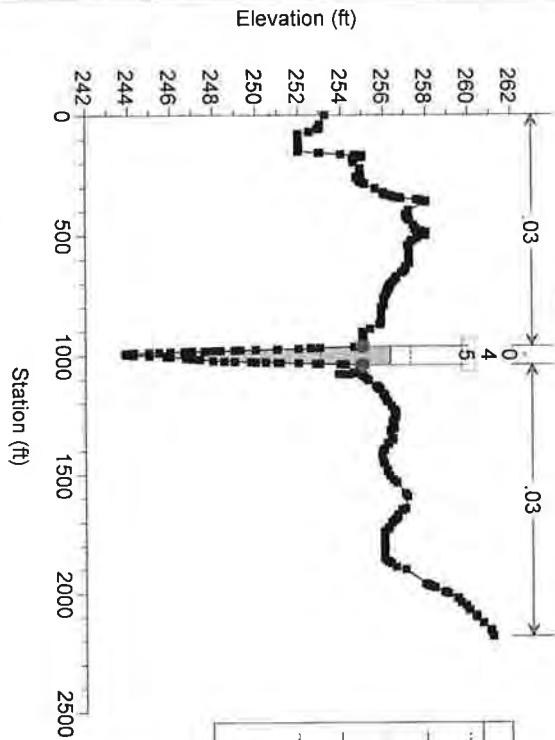
River	Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Chl W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
ADAMS_BARRANCA	2	2487.1		Lat Struct									
ADAMS_BARRANCA	2	2487		Lat Struct									
ADAMS_BARRANCA	2	2424.2	PF 1	1819.44	215.08	224.74	222.45	225.60	0.006661	8.24	220.89	34.84	0.58
ADAMS_BARRANCA	2	2424.1		Lat Struct									
ADAMS_BARRANCA	2	2424		Lat Struct									
ADAMS_BARRANCA	2	2096.2	PF 1	1819.44	212.00	220.71	219.85	222.61	0.014476	11.06	164.55	28.83	0.82
ADAMS_BARRANCA	2	2096.1		Lat Struct									
ADAMS_BARRANCA	2	2096		Lat Struct									
ADAMS_BARRANCA	2	1972.4	PF 1	1755.82	210.93	218.78	218.28	220.68	0.016914	11.07	159.15	31.00	0.85
ADAMS_BARRANCA	2	1972.3		Lat Struct									
ADAMS_BARRANCA	2	1972		Lat Struct									
ADAMS_BARRANCA	2	1818.2	PF 1	1629.09	208.00	215.40	215.40	217.55	0.024728	11.77	138.40	32.24	1.00
ADAMS_BARRANCA	2	1818.1		Lat Struct									
ADAMS_BARRANCA	2	1818		Lat Struct									
ADAMS_BARRANCA	2	204.7	PF 1	1629.09	199.82	205.75	203.70	205.89	0.002611	3.14	547.64	297.71	0.35

PROPOSED WEIR AND STRUCTURES

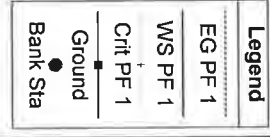
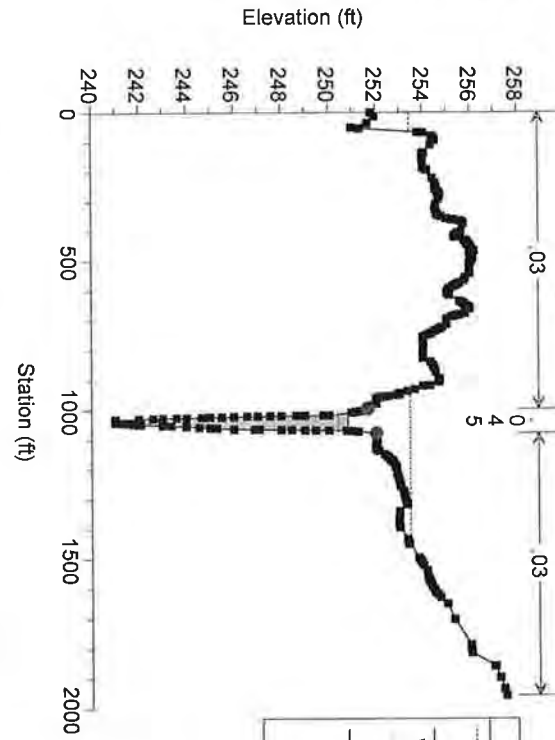
HEC-RAS Plan: plan_19 Profile: PF 1

River	Reach	River Sta	Profile	Q US (cfs)	Q Leaving Total (cfs)	Q DS (cfs)	Q Weir (cfs)	Q Gates (cfs)	Wt Top Width (ft)	Weir Max Depth (ft)	Weir Avg Depth (ft)	Min El Weir Flow (ft)	E.G. US (ft)	W.S. US (ft)	E.G. DS (ft)	W.S. DS (ft)
ADAMS_BARRANCA	1	4539	PF 1	3592.00	737.02	2854.98	737.02		247.26	1.74	1.28	240.00	245.78	243.91	242.12	240.94
ADAMS_BARRANCA	1	4239	PF 1	2884.98	1288.47	1567.97	1288.47		357.01	2.81	1.37	235.10	242.11	240.93	236.00	234.25
ADAMS_BARRANCA	1	3821	PF 1	1567.97	0.00	1567.97	0.00					234.94	236.00	234.25	233.45	233.25
ADAMS_BARRANCA	1	3689	PF 1	1567.97	0.00	1567.97	0.00					234.84	233.45	233.25	233.36	233.28
ADAMS_BARRANCA	2	3689	PF 1	2785.97	0.00	2785.97	0.00					234.84	233.25	232.08	232.69	232.32
ADAMS_BARRANCA	2	3688.9	PF 1	2785.97	0.00	2785.97	0.00					233.48	233.25	232.08	232.52	231.88
ADAMS_BARRANCA	2	3525	PF 1	2785.97	0.00	2785.97	0.00					234.00	232.69	232.32	232.52	231.88
ADAMS_BARRANCA	2	3379.5	PF 1	1819.44	0.00	1819.44	0.00					228.00	230.37	228.41	227.42	228.20
ADAMS_BARRANCA	2	3379	PF 1	2785.97	0.00	2785.97	0.00					233.20	230.37	228.54	228.88	228.20
ADAMS_BARRANCA	2	3128	PF 1	2785.97	3.57	2782.37	3.57		26.49	0.35	0.15	228.00	228.88	228.20	228.57	228.35
ADAMS_BARRANCA	2	2839.2	PF 1	2782.37	735.29	2047.13	735.29		70.74	3.50	2.89	225.00	228.57	228.50	228.50	228.50
ADAMS_BARRANCA	2	2839	PF 1	2782.37	0.00	2782.37	0.00					228.60	228.57	228.50	228.50	228.50
ADAMS_BARRANCA	2	2755.8	PF 1	2047.13	227.44	1819.44	227.44		39.02	3.50	1.82	225.00	228.50	228.50	228.41	227.42
ADAMS_BARRANCA	2	2755	PF 1	2047.13	0.00	1819.44	0.00					228.00	228.50	228.48	228.41	227.42
ADAMS_BARRANCA	2	2501.5	PF 1	1819.44	0.00	1819.44	0.00					225.93	228.38	225.23	226.24	225.23
ADAMS_BARRANCA	2	2501	PF 1	1819.44	0.00	1819.44	0.00					226.17	228.38	225.23	226.24	225.23
ADAMS_BARRANCA	2	2487.1	PF 1	1819.44	0.00	1819.44	0.00					225.93	226.24	225.93	226.24	224.74
ADAMS_BARRANCA	2	2487	PF 1	1819.44	0.00	1819.44	0.00					225.51	226.24	225.51	225.80	224.74
ADAMS_BARRANCA	2	2424.1	PF 1	1819.44	0.00	1819.44	0.00					223.00	225.80	224.74	222.61	220.71
ADAMS_BARRANCA	2	2424	PF 1	1819.44	0.00	1819.44	0.00					223.00	225.79	224.74	222.61	220.71
ADAMS_BARRANCA	2	2096.1	PF 1	1819.44	42.95	1755.82	42.95		42.00	1.18	0.59	217.60	222.61	220.71	220.68	218.78
ADAMS_BARRANCA	2	2096	PF 1	1819.44	20.84	1755.82	20.84		33.37	0.85	0.42	217.93	222.61	220.71	220.68	218.78
ADAMS_BARRANCA	2	1972.3	PF 1	1755.82	104.01	1629.09	104.01		102.00	1.18	0.59	216.00	220.68	217.55	215.40	215.40
ADAMS_BARRANCA	2	1972	PF 1	1755.82	23.06	1629.09	23.06		37.51	0.84	0.42	217.93	220.67	218.77	217.55	215.40
ADAMS_BARRANCA	2	1818.1	PF 1	1629.09	0.00	1629.09	0.00					211.00	217.55	215.40	205.89	205.75
ADAMS_BARRANCA	2	1818	PF 1	1629.09	0.00	1629.09	0.00					209.42	217.55	215.40	205.89	205.75

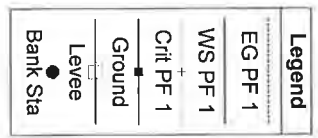
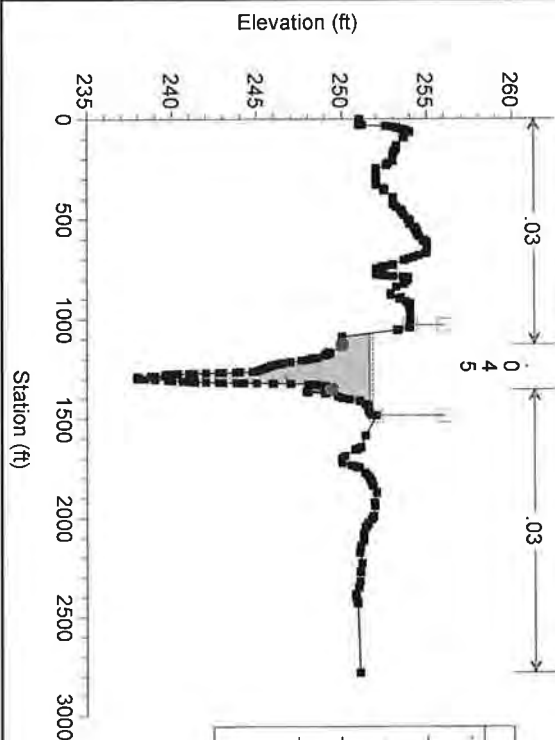
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 5253.2



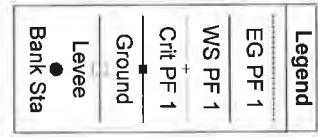
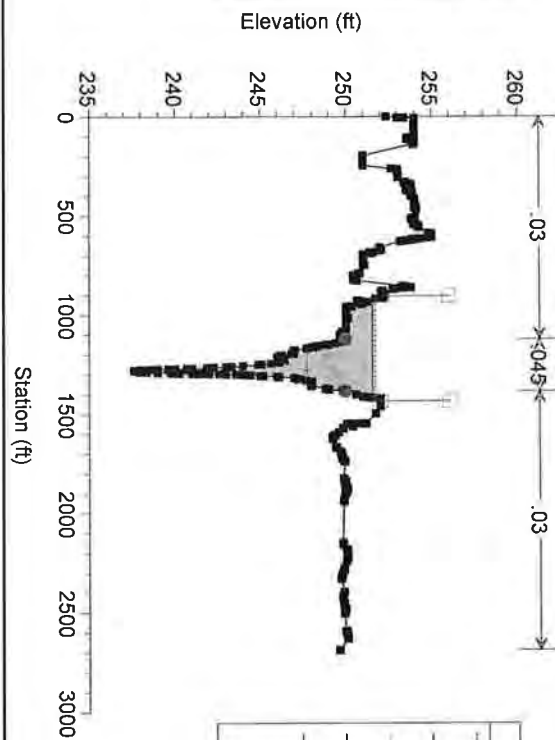
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 5063.9



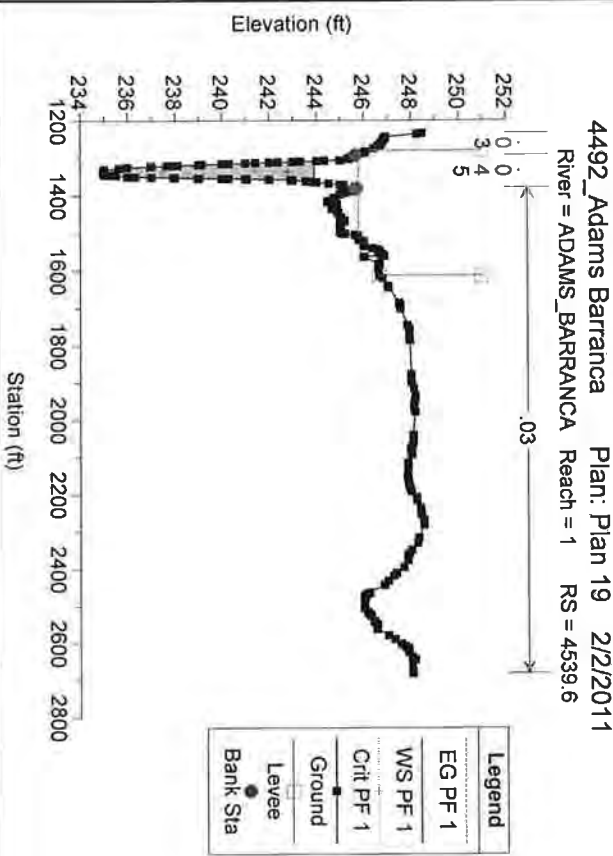
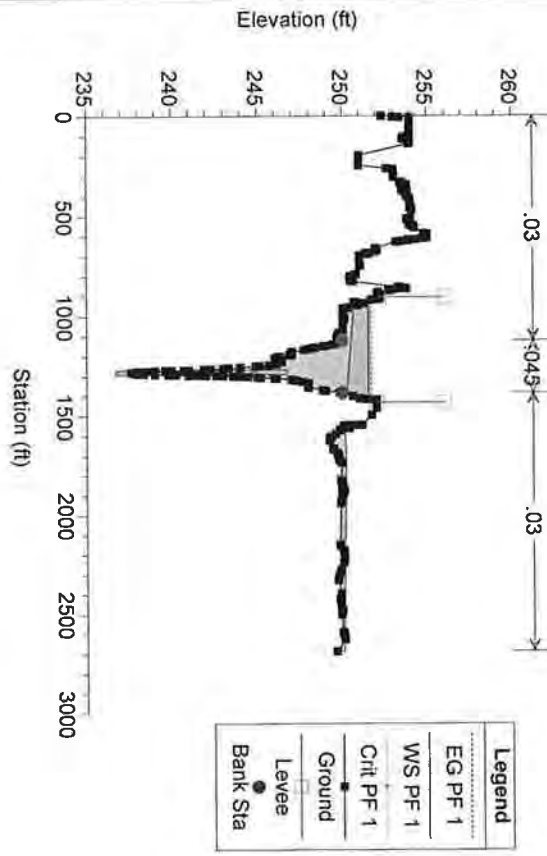
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4738.5



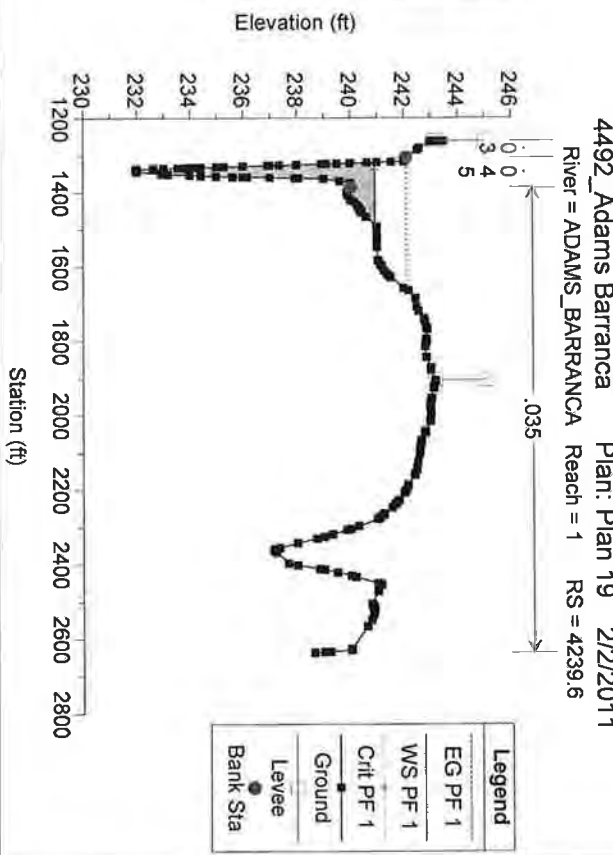
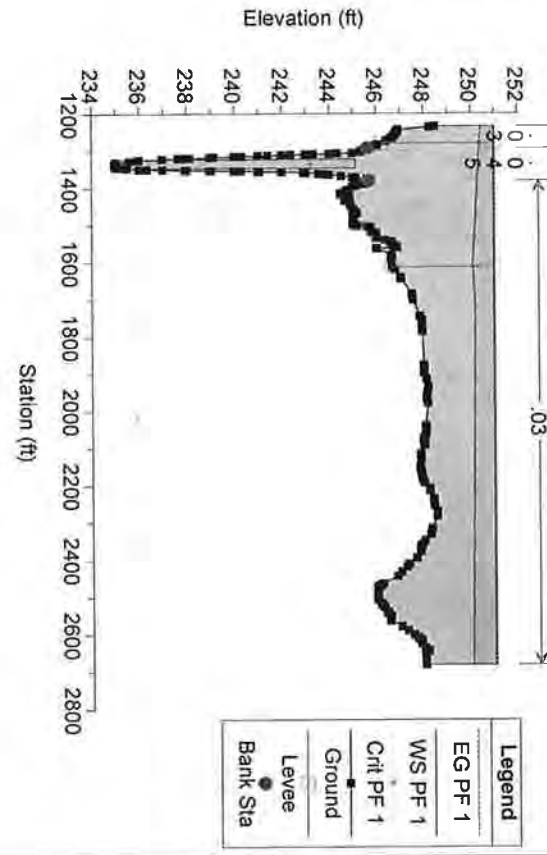
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4645.2



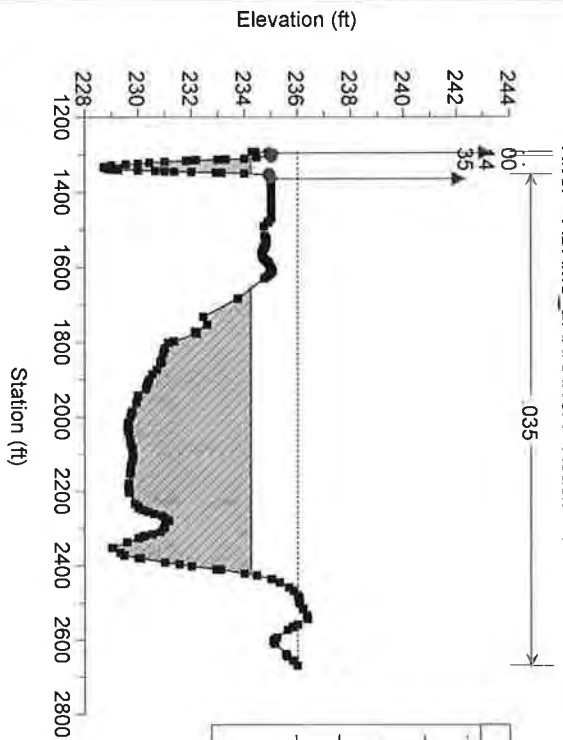
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4585 Culiv Telegraph Road



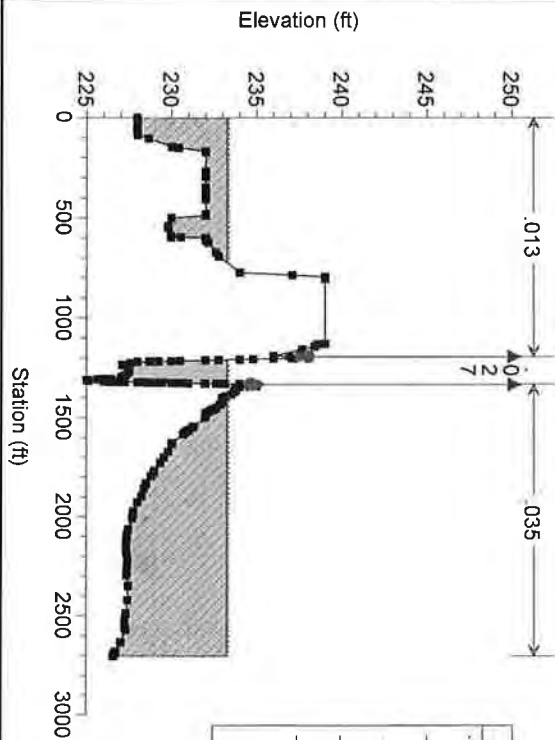
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 4585 Culiv Telegraph Road



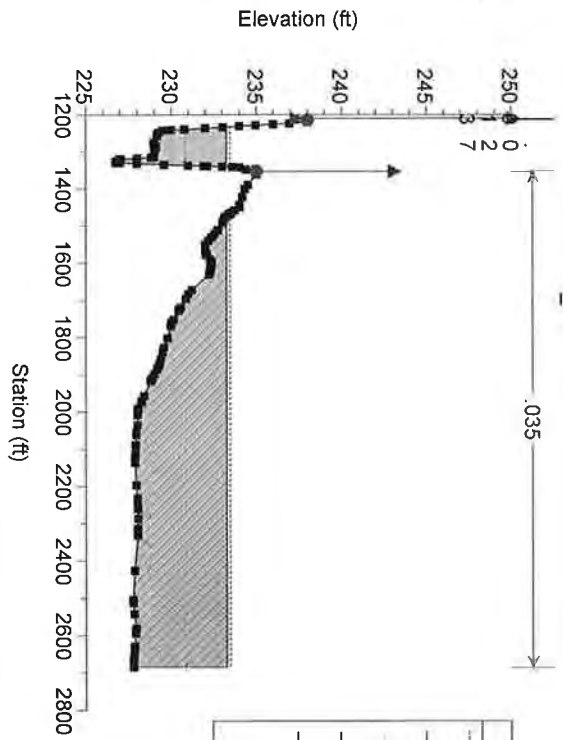
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 3821.2



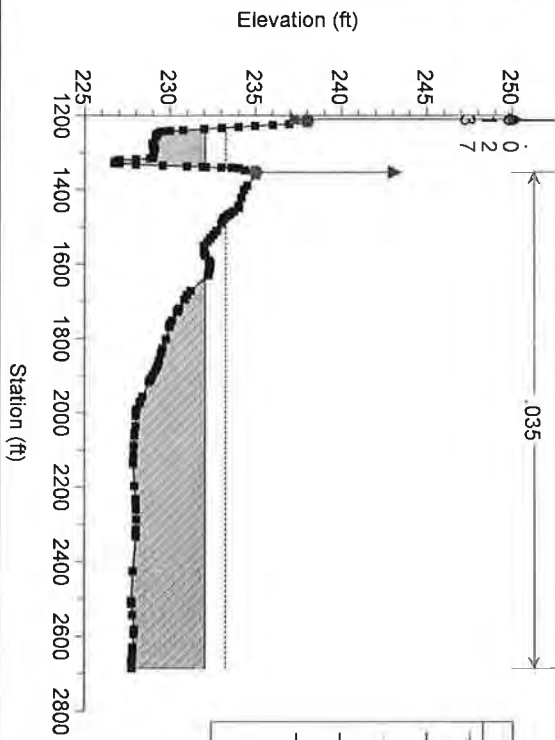
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 3525.2



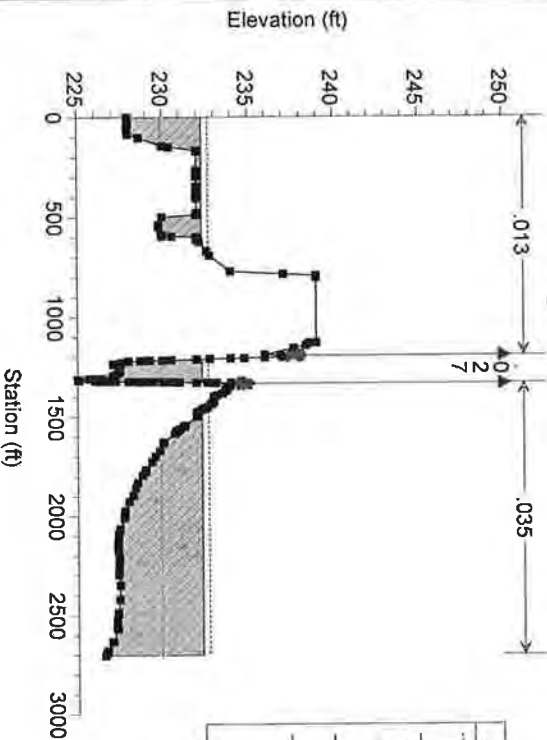
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 1 RS = 3689.1



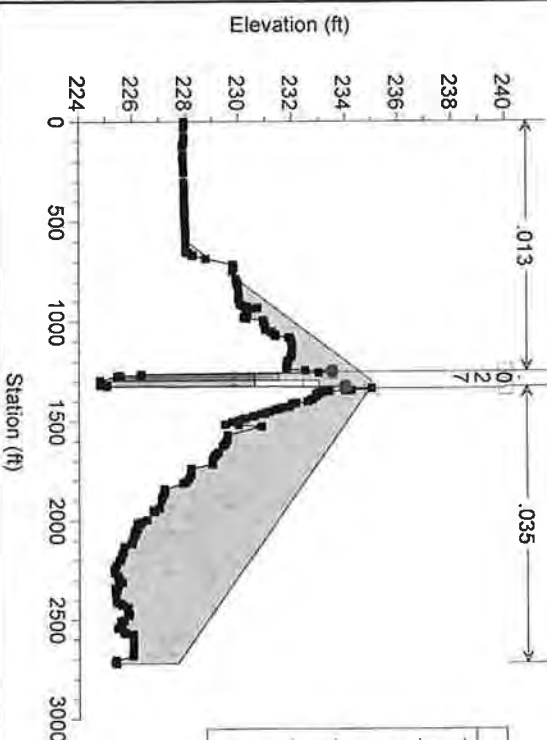
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3689.1



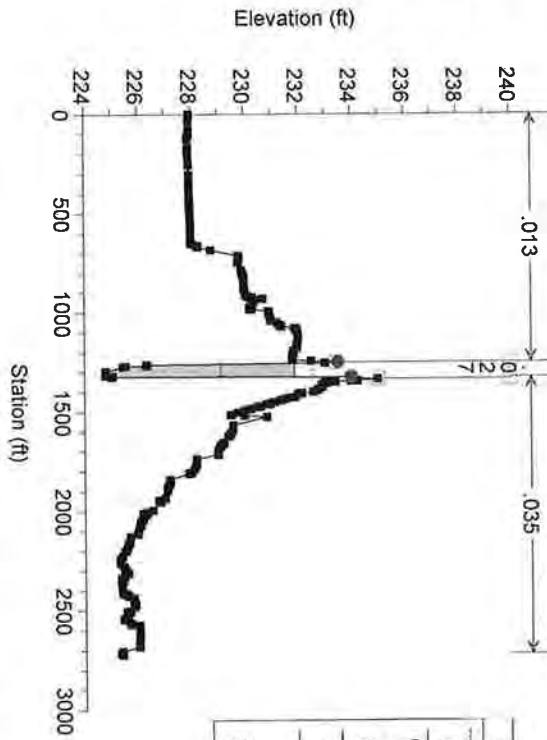
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3525.2



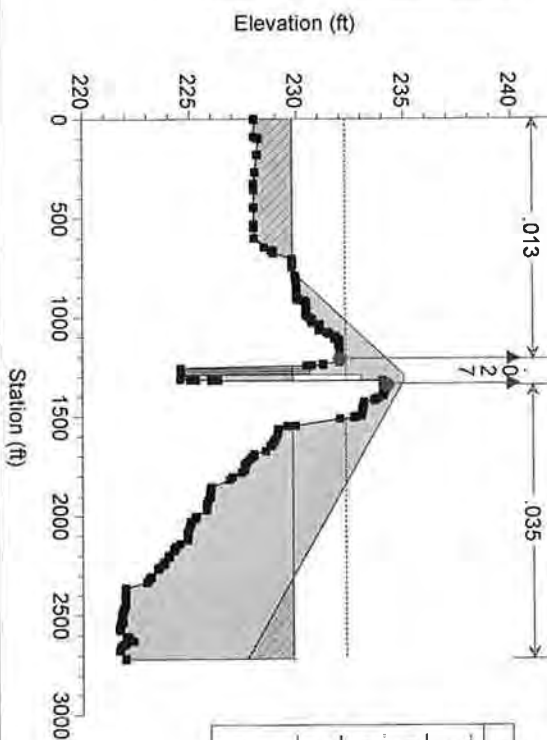
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3393 MO Railroad



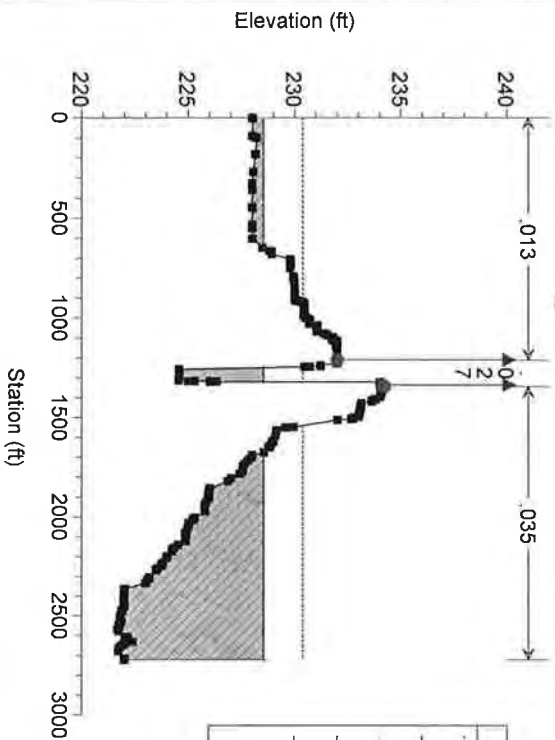
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3404.4



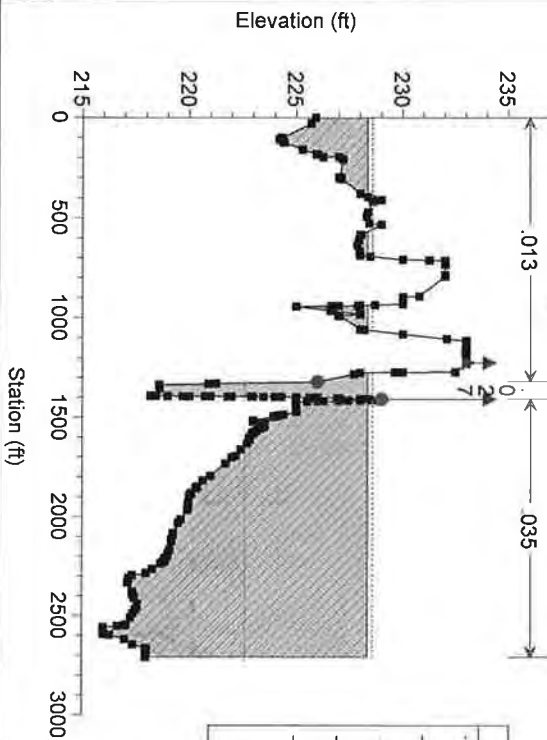
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3393 MO Railroad



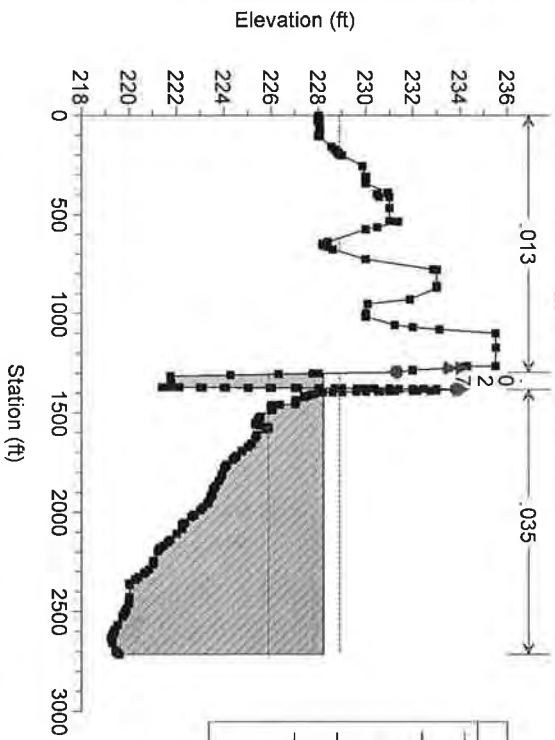
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3379.6



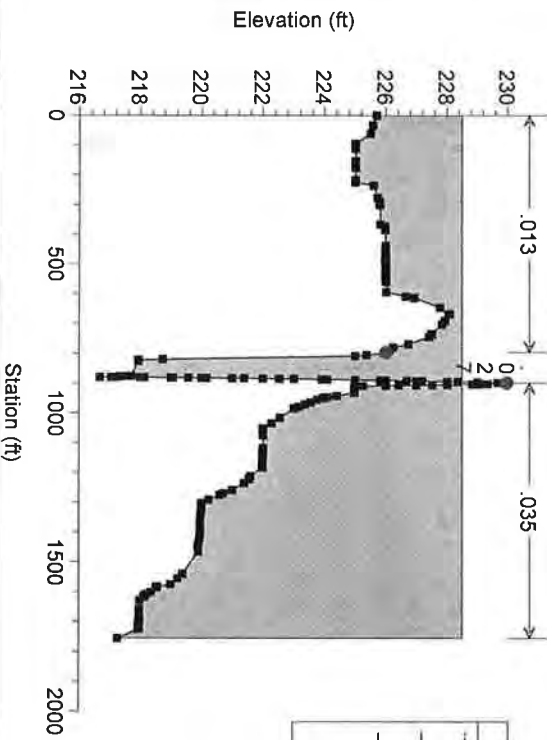
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2839.3



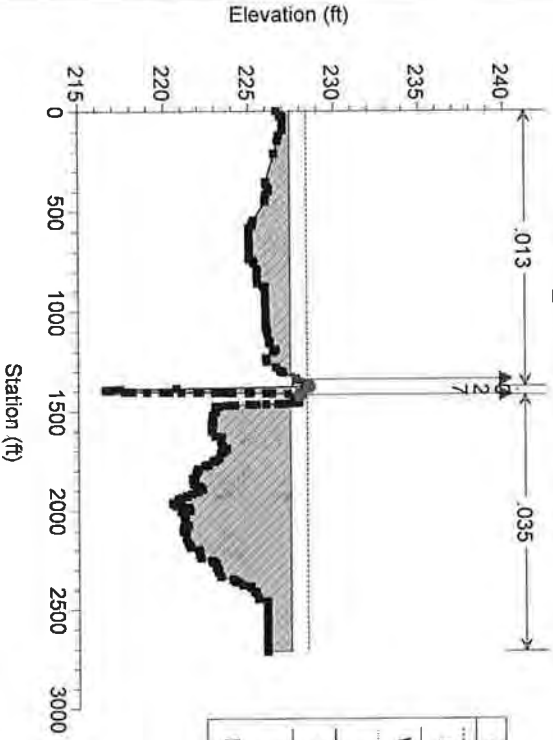
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 3128.6



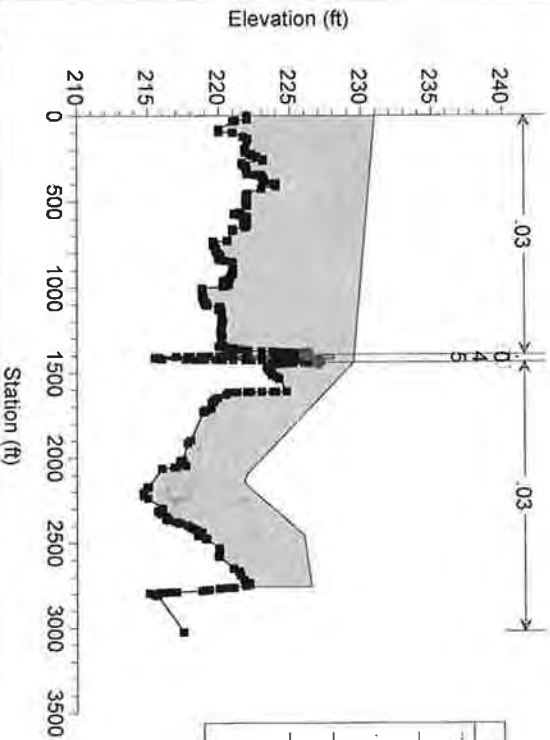
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2756



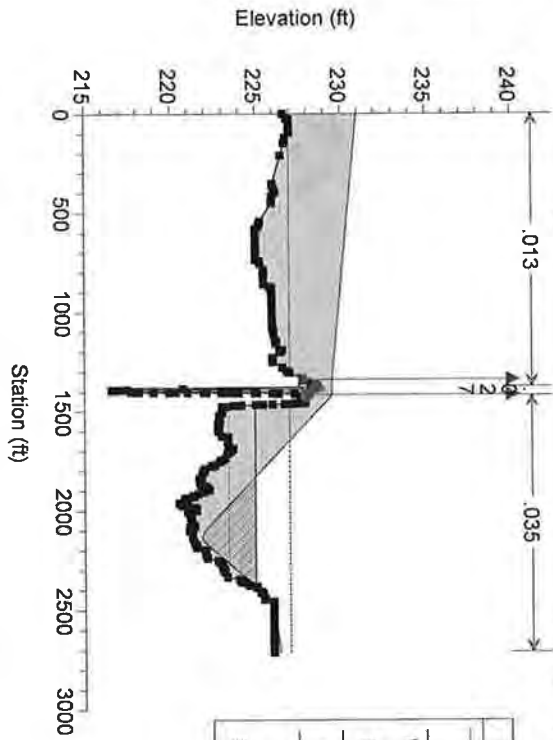
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2708.7



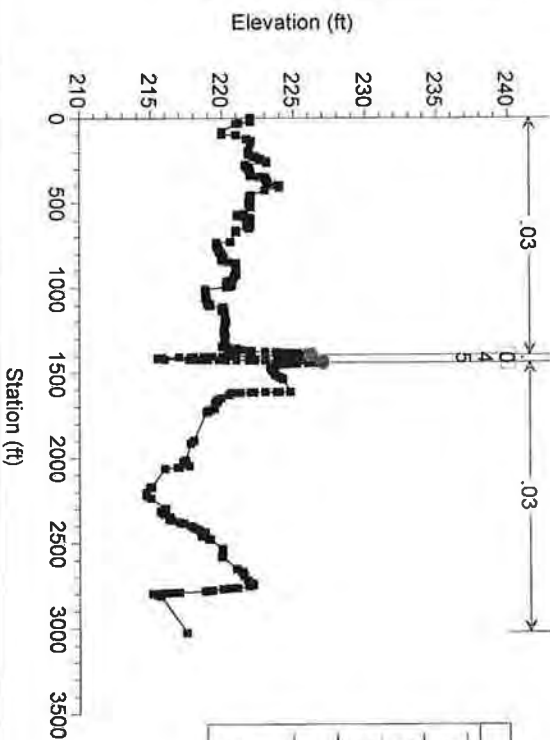
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2585 Culv highway 126



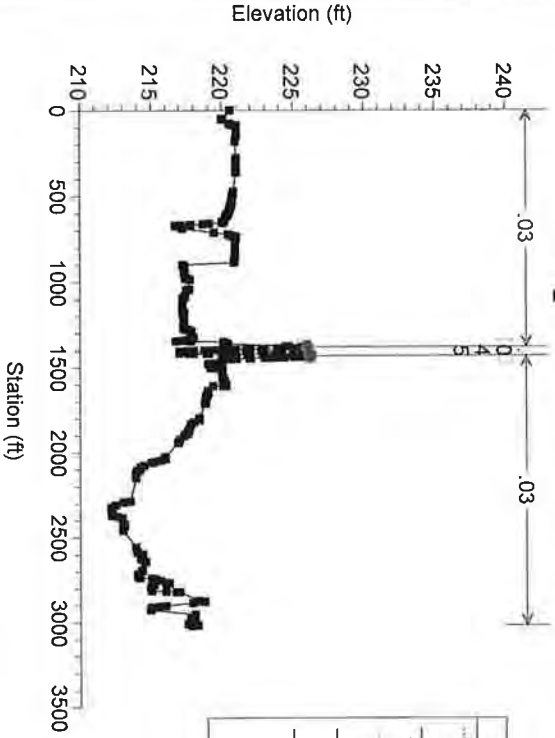
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2585 Culv highway 126



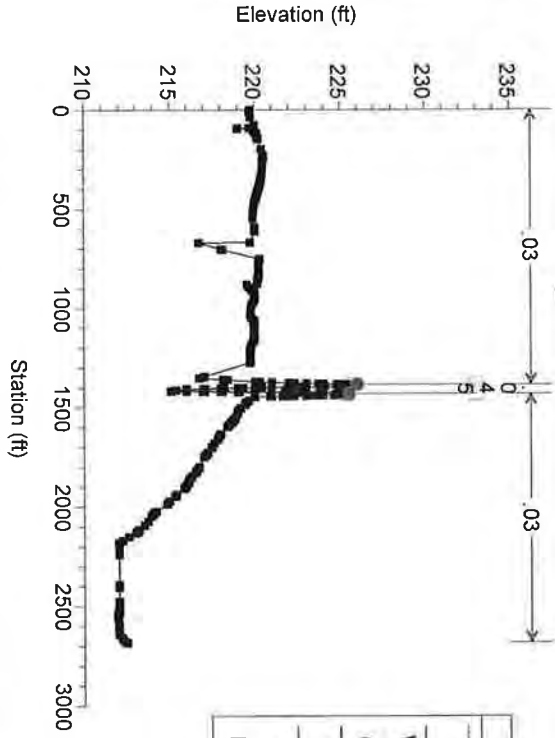
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2501.9



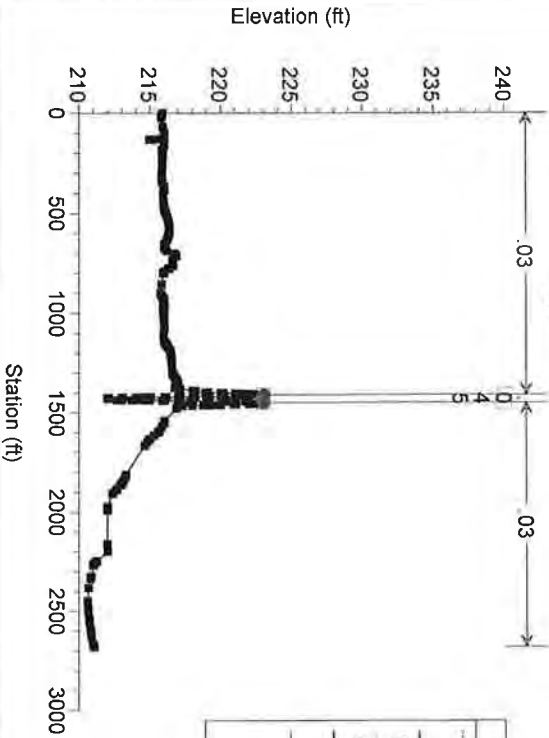
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2488.0



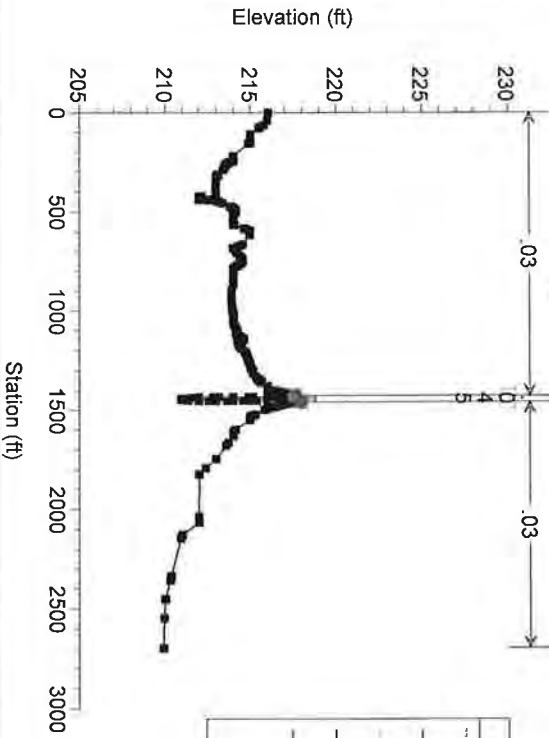
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2424.2



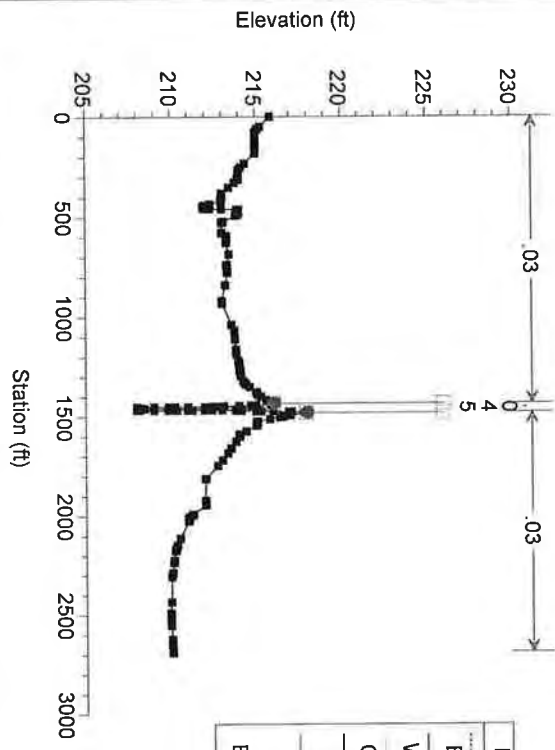
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 2096.2



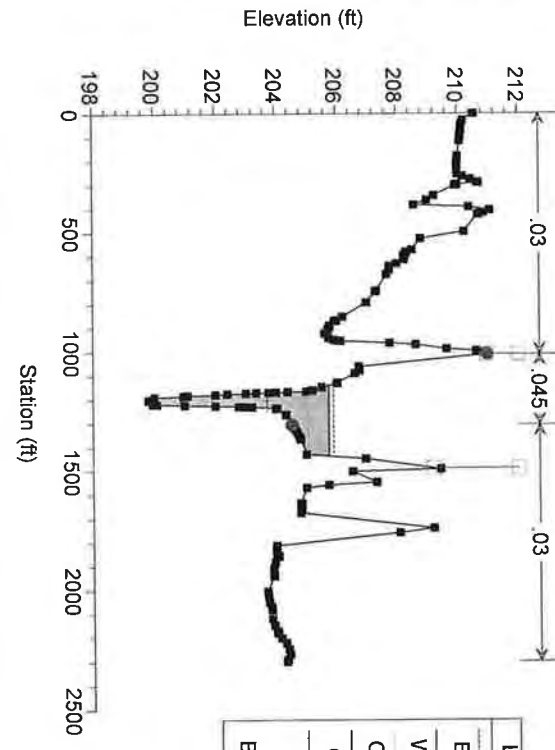
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 1972.4



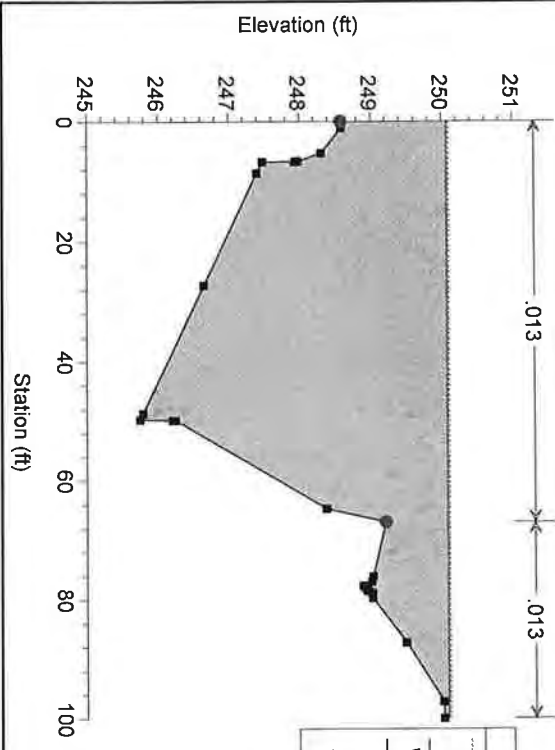
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 1818.2



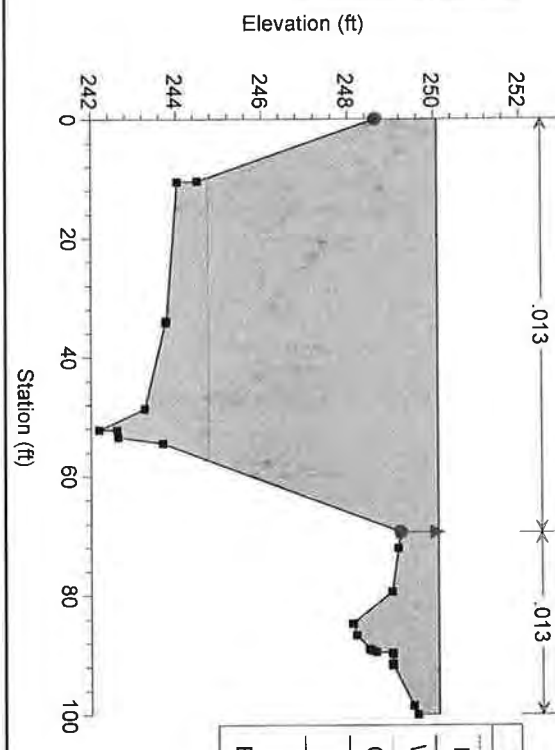
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = ADAMS_BARRANCA Reach = 2 RS = 204.7



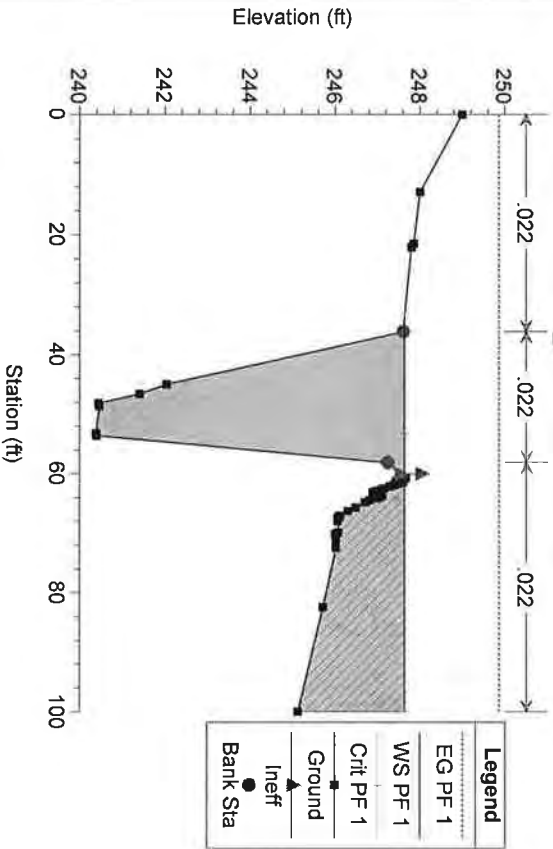
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 1250.1



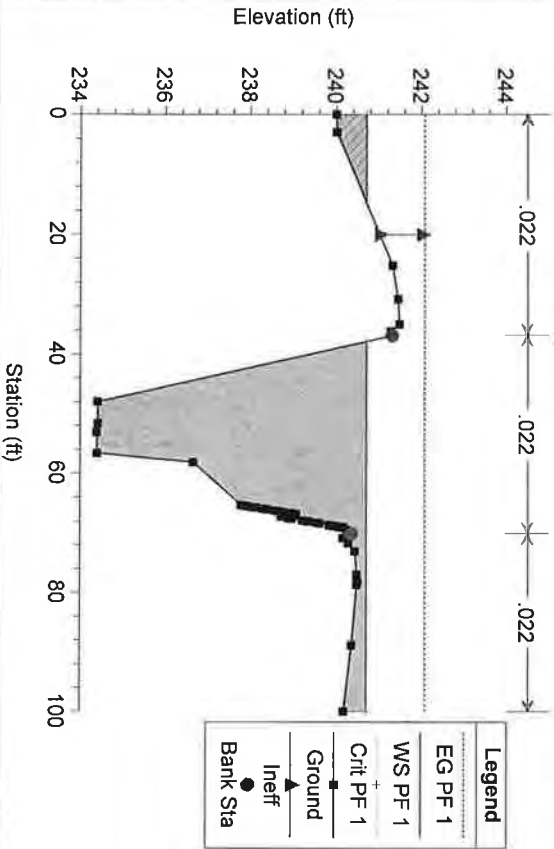
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 1050.1



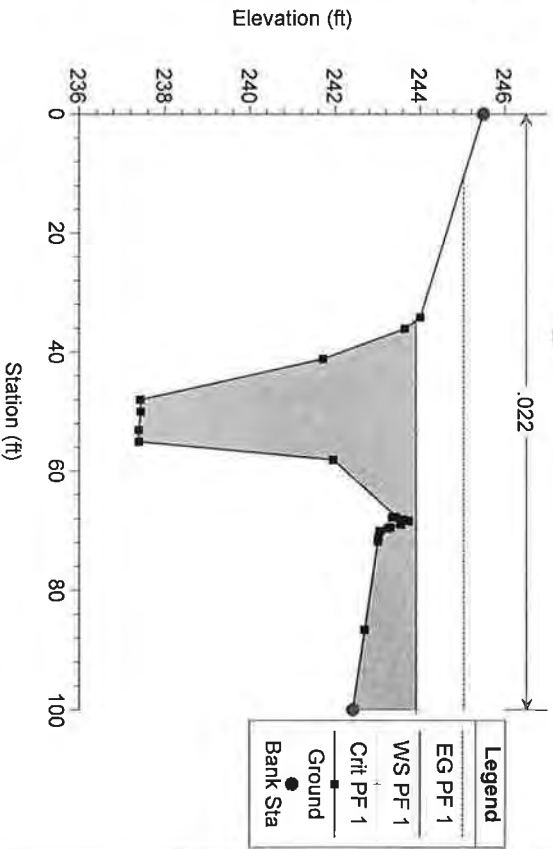
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 927.7



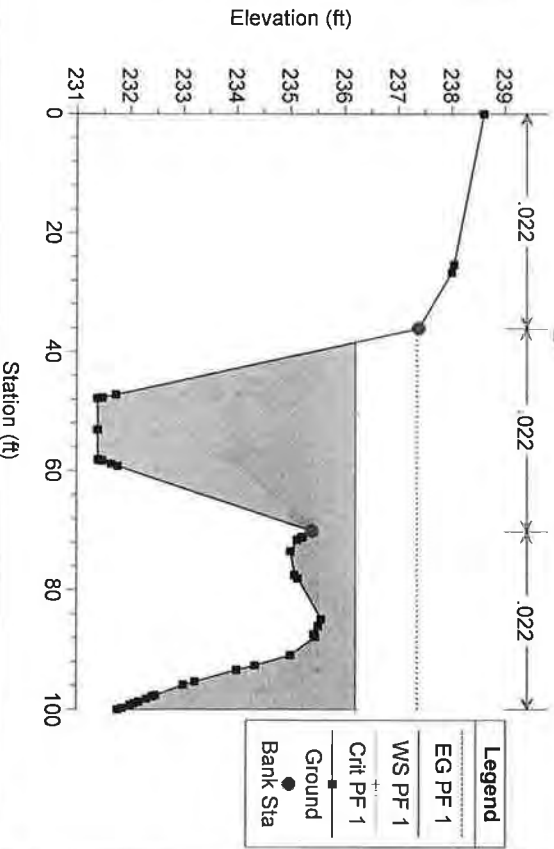
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 527.6



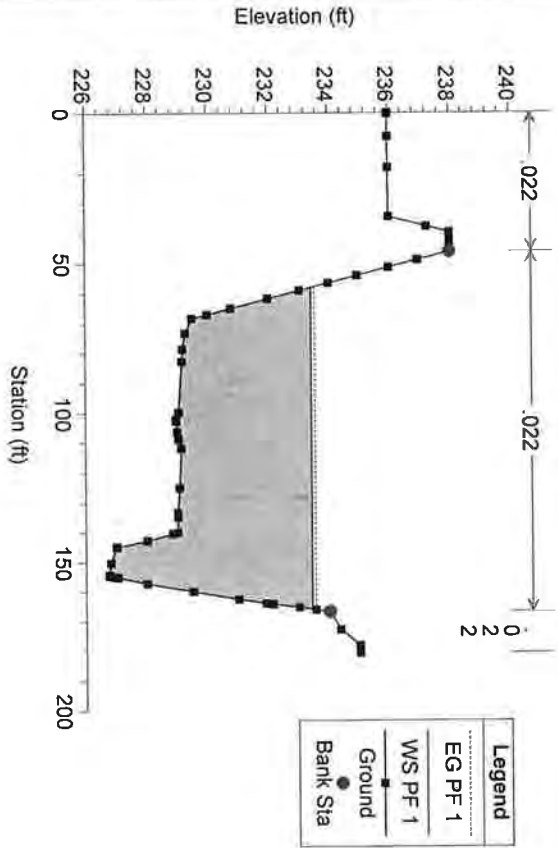
4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 727.6



4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 327.6



4492_Adams Barranca Plan: Plan 19 2/2/2011
 River = PROPOSED_CHANNEL Reach = 2 RS = 166.5

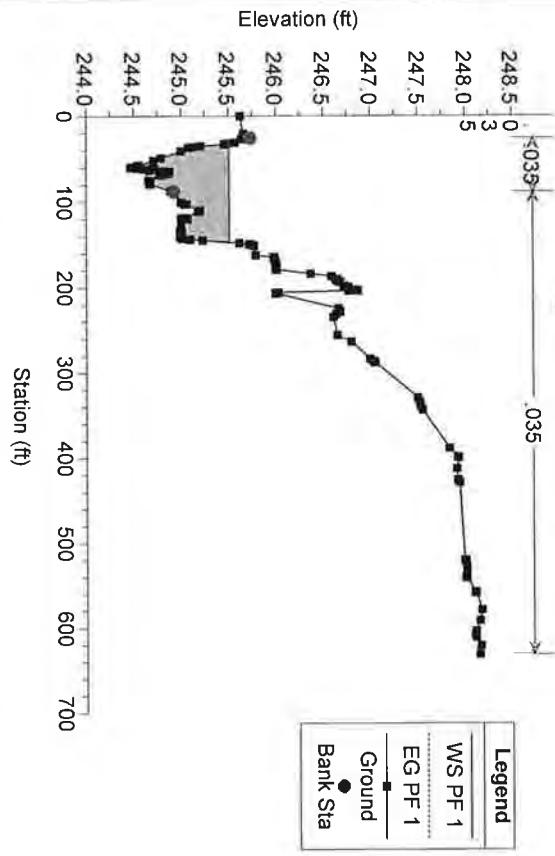


PROPOSED RIGHT OVER BANK

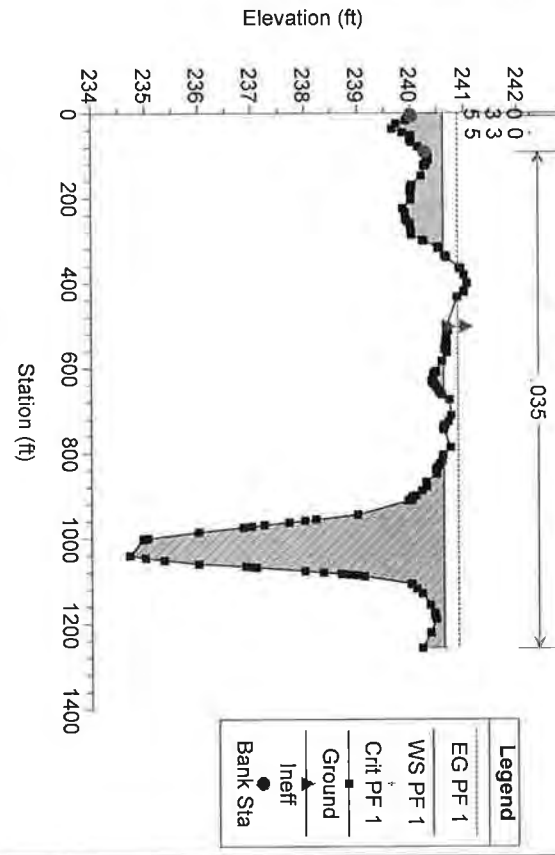
HEC-RAS Plan: Plan 22 River West Overflow Reach: 2 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
2	4966.8	PF 1	1.00	244.47	245.51		245.51	0.000000	0.02	66.82	115.22	0.00
2	4634.0	PF 1	729.00	239.66	240.62	240.62	240.88	0.020771	4.67	178.71	885.97	1.01
2	4222.5	PF 1	2032.00	234.99	230.52	230.52	230.99	0.018769		368.24	500.99	0.00
2	3948.3	PF 1	2032.00	231.02	229.86	229.86	230.31	0.018320		377.07	561.17	0.00
2	3739.0	PF 1	2032.00	228.61	229.11		229.24	0.005737	1.51	742.58	1078.83	0.47
2	3517.9	PF 1	2032.00	225.35	226.19	226.19	226.48	0.019644	5.12	480.61	834.15	1.01
2	3253.0	PF 1	2032.00	222.25	224.08		224.08	0.000104	0.63	2858.15	1410.49	0.08
2	2612.2	PF 1	2032.00	221.87	223.28	223.28	223.80	0.015524	6.01	363.01	366.12	0.96
2	2471.6	PF 1	2032.00	212.36	213.20	213.20	213.59	0.019917	4.51	408.49	542.12	0.98
2	284.2	PF 1	2084.00	203.69	205.75	204.71	205.78	0.000560	1.58	1613.43	1146.47	0.20

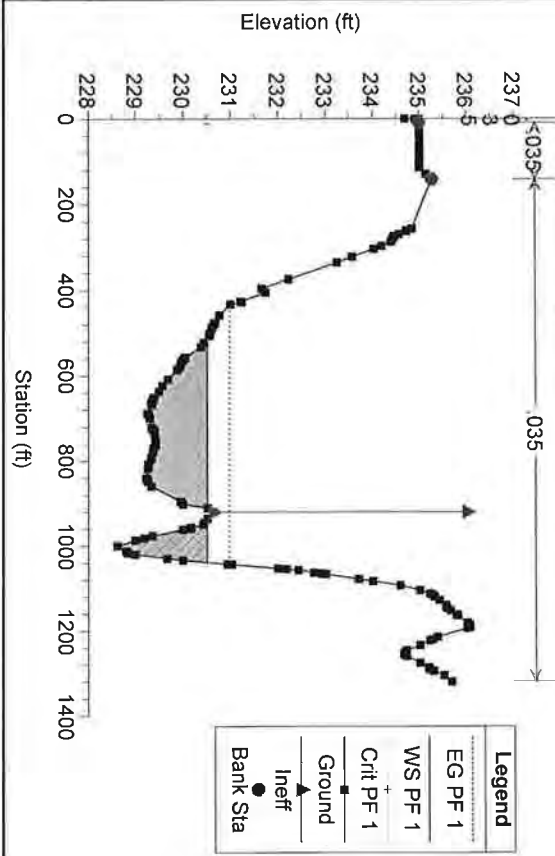
4492_Adams Barranca Plan: Plan 22 2/2/2011
 River = West_Overflow Reach = 2 RS = 4966.8



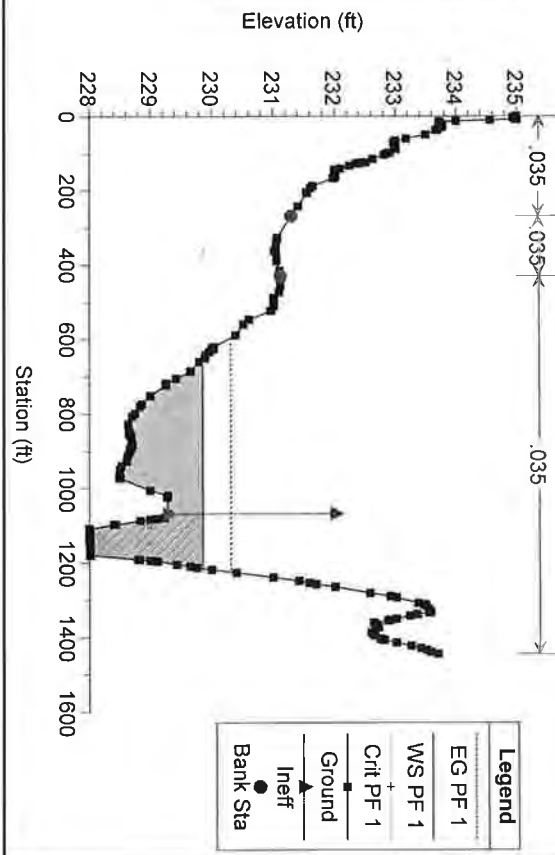
4492_Adams Barranca Plan: Plan 22 2/2/2011
 River = West_Overflow Reach = 2 RS = 4634.0



4492_Adams Barranca Plan: Plan 22 2/2/2011
 River = West_Overflow Reach = 2 RS = 4222.5

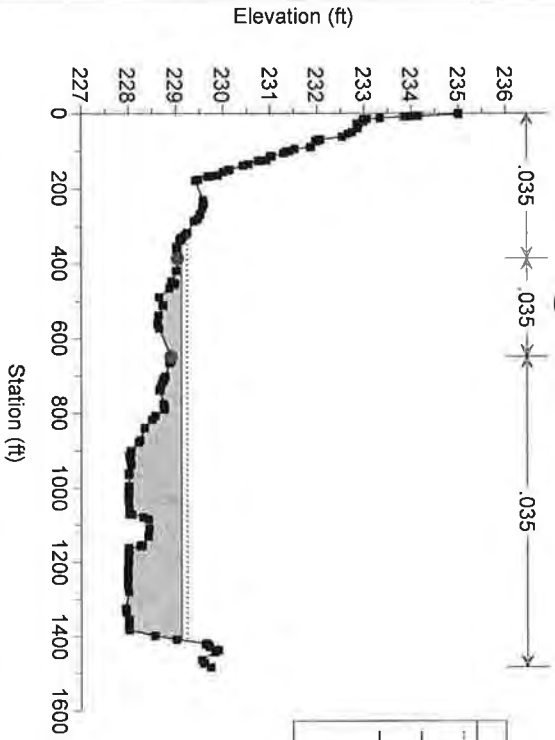


4492_Adams Barranca Plan: Plan 22 2/2/2011
 River = West_Overflow Reach = 2 RS = 3948.3



4492_Adams Barranca Plan: Plan 22 2/2/2011

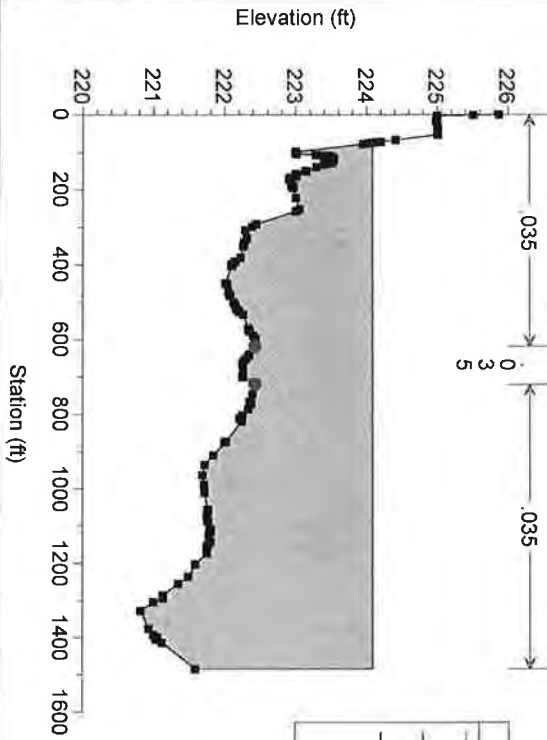
River = West_Overflow Reach = 2 RS = 3739.0



Legend	
EG PF 1	—
WS PF 1	—
Ground	●
Bank Sta	●

4492_Adams Barranca Plan: Plan 22 2/2/2011

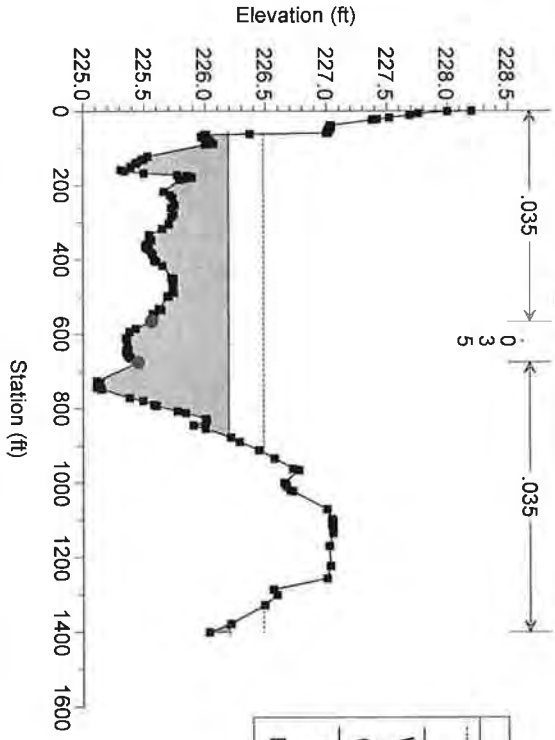
River = West_Overflow Reach = 2 RS = 3253.0



Legend	
EG PF 1	—
WS PF 1	—
Ground	●
Bank Sta	●

4492_Adams Barranca Plan: Plan 22 2/2/2011

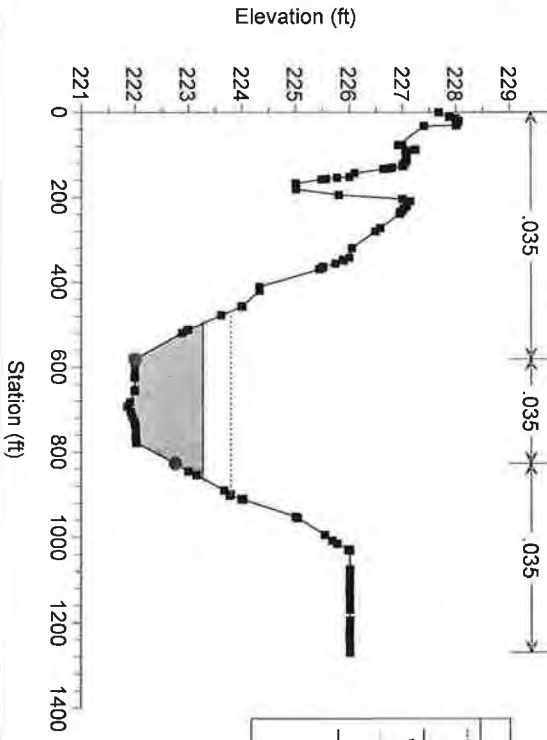
River = West_Overflow Reach = 2 RS = 3517.9



Legend	
EG PF 1	—
WS PF 1	—
Crit PF 1	+
Ground	●
Bank Sta	●

4492_Adams Barranca Plan: Plan 22 2/2/2011

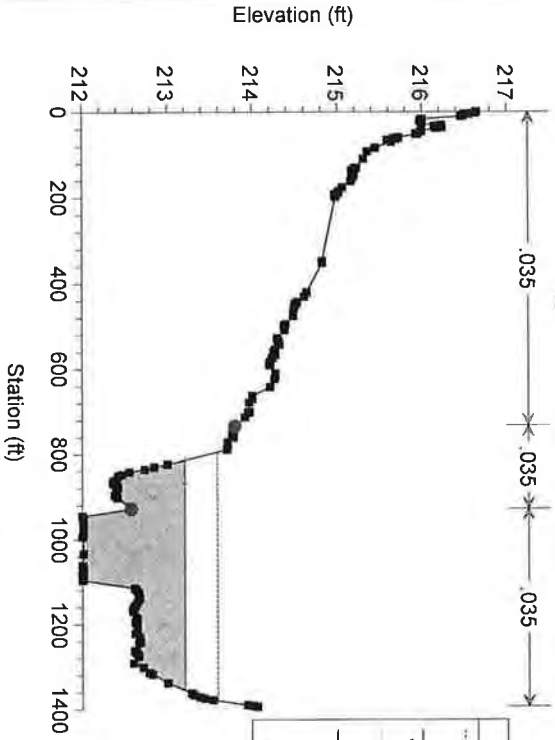
River = West_Overflow Reach = 2 RS = 2612.2



Legend	
EG PF 1	—
WS PF 1	—
Crit PF 1	+
Ground	●
Bank Sta	●

4492_Adams Barranca Plan: Plan 22 2/2/2011

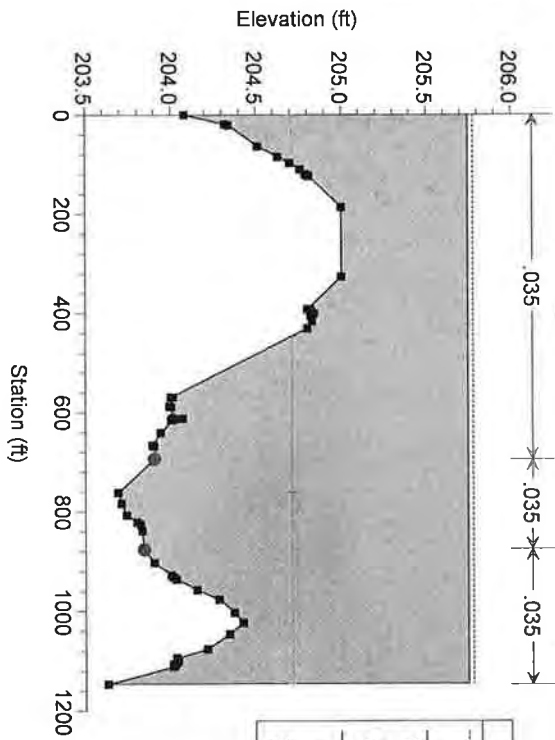
River = West_Overflow Reach = 2 RS = 2471.6



Legend	
-----	EG PF 1
-----	WS PF 1
-----	Crit PF 1
—■—	Ground
●	Bank Sta

4492_Adams Barranca Plan: Plan 22 2/2/2011

River = West_Overflow Reach = 2 RS = 284.2

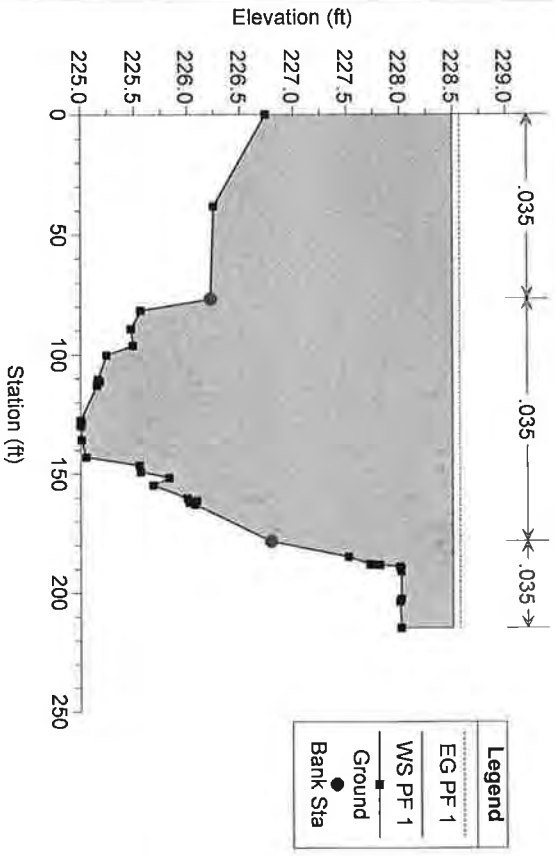


Legend	
-----	EG PF 1
-----	WS PF 1
-----	Crit PF 1
—■—	Ground
●	Bank Sta

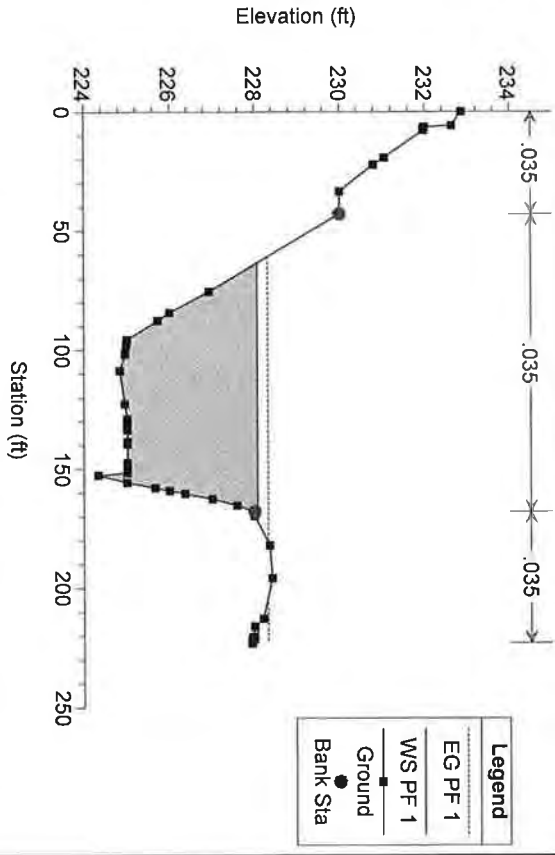
PROPOSED LEFT OVERTURN

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
1	3711.2	PF 1	1000.00	225.00	228.50		228.57	0.000667	2.27	491.28	214.93	0.23
1	3508.3	PF 1	1000.00	224.33	228.07		228.31	0.002602	3.91	256.74	117.11	0.44
1	3115.4	PF 1	1000.00	224.50	227.05		227.24	0.002775	3.57	283.90	148.13	0.44
1	2935.0	PF 1	1000.00	224.64	225.81	225.81	226.14	0.021320	4.59	218.08	342.74	1.01
1	2726.6	PF 1	1000.00	219.89	220.41	220.26	220.47	0.006373	1.59	517.48	1237.99	0.49
1	2302.0	PF 1	1000.00	215.99	216.31		216.43	0.017320	1.83	358.44	1032.89	0.74
1	1067.7	PF 1	1147.00	210.00	211.42	211.03	211.46	0.001918	1.75	739.10	1156.05	0.32
1	365.2	PF 1	1147.00	206.98	207.92	207.92	208.23	0.021610	4.47	256.42	423.53	1.01

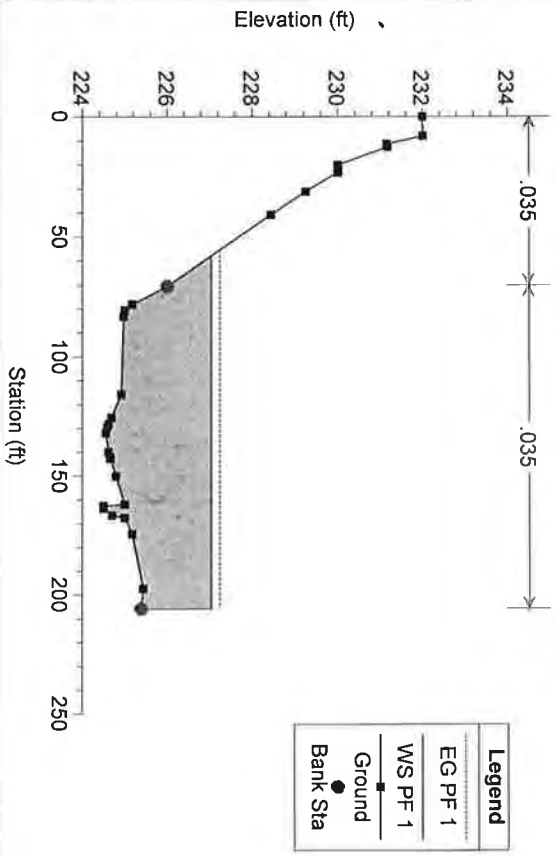
4492_Adams Barranca Plan: Plan 21 2/2/2011
 River = LOB-EastOverflow Reach = 1 RS = 3711.2



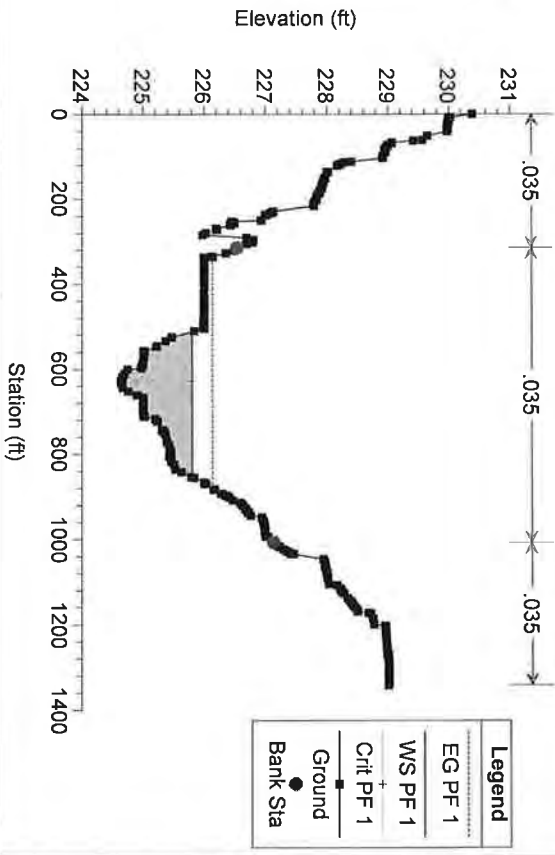
4492_Adams Barranca Plan: Plan 21 2/2/2011
 River = LOB-EastOverflow Reach = 1 RS = 3508.3



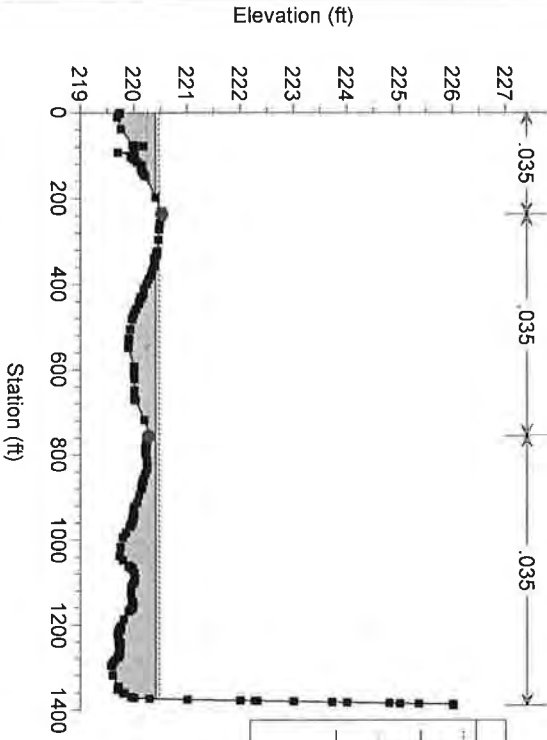
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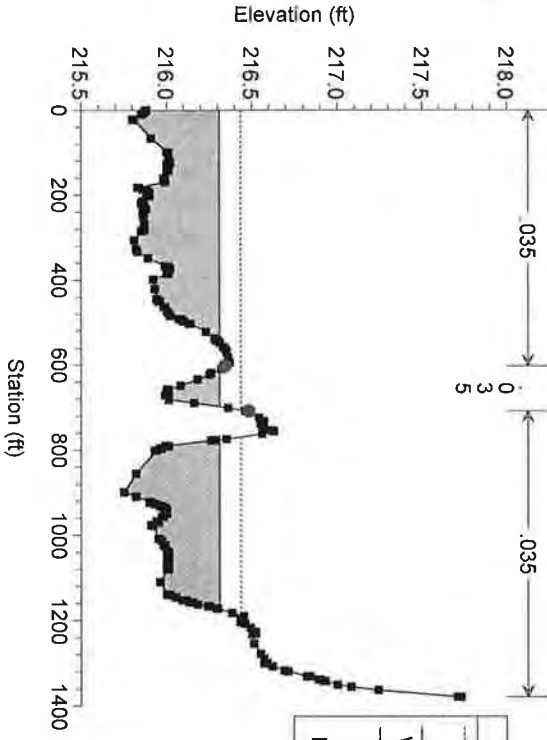
4492_Adams Barranca Plan: Plan 21 2/2/2011
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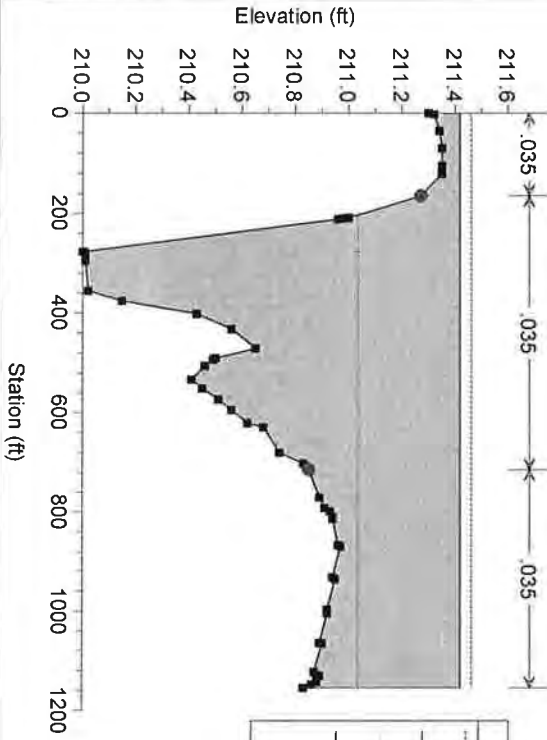
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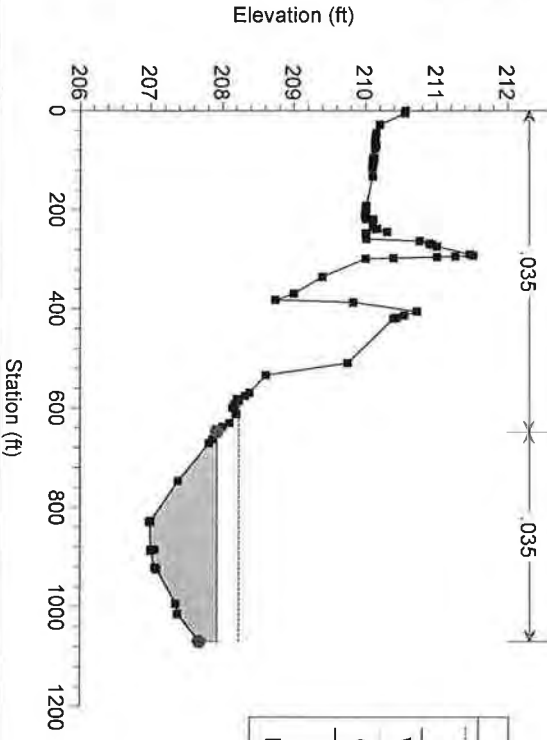
4492_Adams Barranca Plan: Plan 21 2/2/2011
 River = LOB-EastOverflow Reach = 1 RS = 2302.0

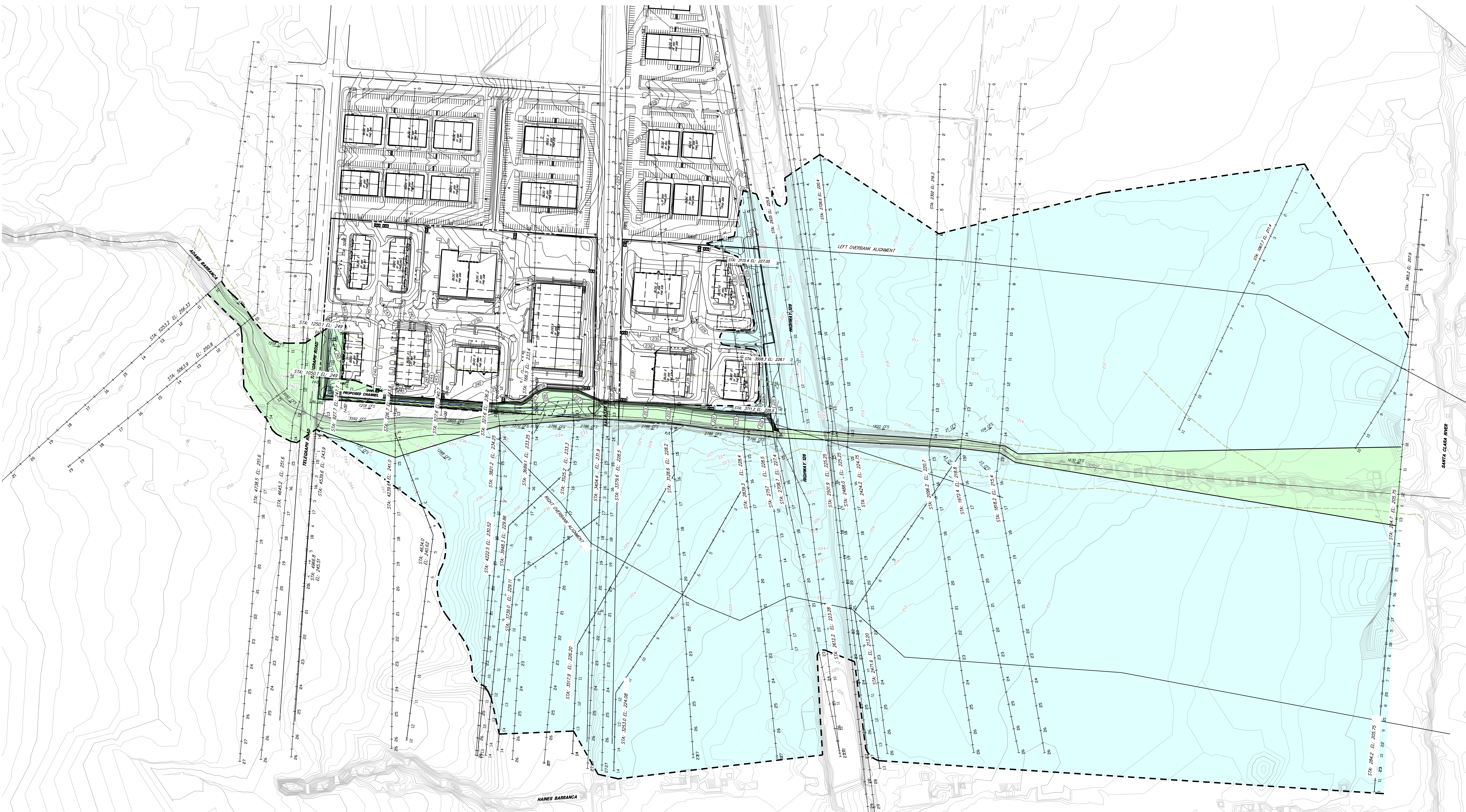


4492_Adams Barranca Plan: Plan 21 2/2/2011
 River = LOB-EastOverflow Reach = 1 RS = 1067.7



4492_Adams Barranca Plan: Plan 21 2/2/2011
 River = LOB-EastOverflow Reach = 1 RS = 365.2





- LEGEND**
- 100 YEAR FLOODPLAIN ZONE AO LIMITS (Q=4810 CFS)
 - 100 YEAR FLOODPLAIN ZONE AO
 - 100 YEAR CHANNEL FLOODZONE LIMITS
 - FEMA 100 YEAR FLOODPLAIN PER FIRM PANEL No. 0604130755C
 - EL 100 YEAR WATER SURFACE ELEVATION
 - CHANNEL WATER SURFACE LIMITS

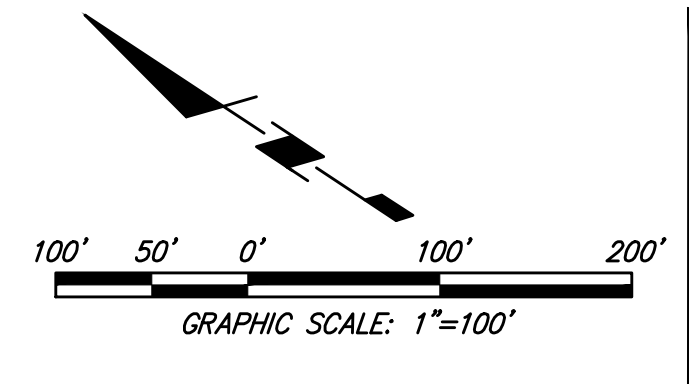
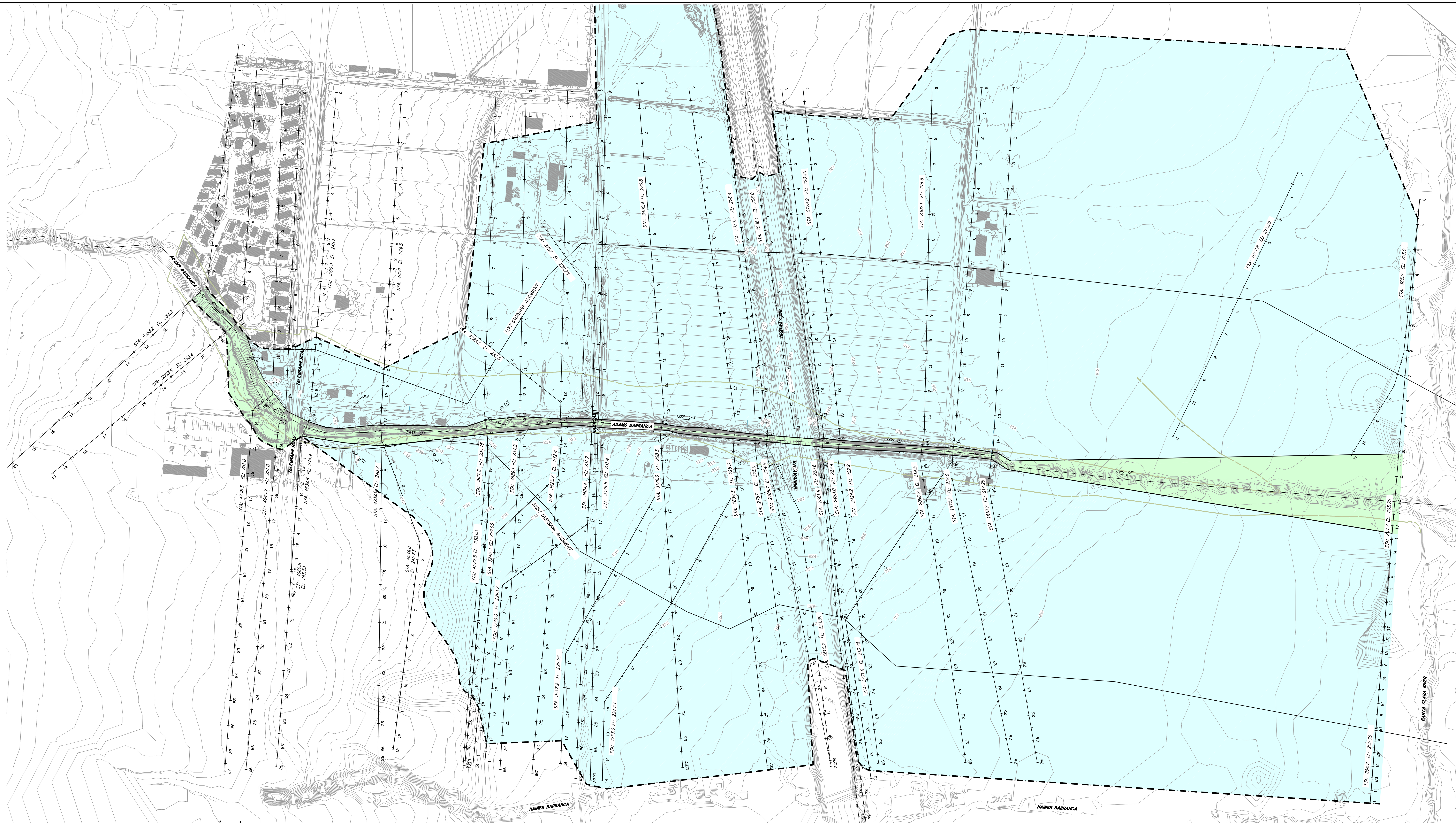


EXHIBIT B
PROPOSED FLOODPLAIN
FOR
ADAMS BARRANCA



- LEGEND**
- 100 YEAR FLOODPLAIN ZONE AO LIMITS (Q=4810 CFS)
 - 100 YEAR FLOODPLAIN ZONE AO
 - 100 YEAR CHANNEL FLOODZONE LIMITS
 - FEMA 100 YEAR FLOODPLAIN
 - PER FIRM PANEL No. 0504130755C
 - 100 YEAR WATER SURFACE ELEVATION
 - CHANNEL WATER SURFACE LIMITS

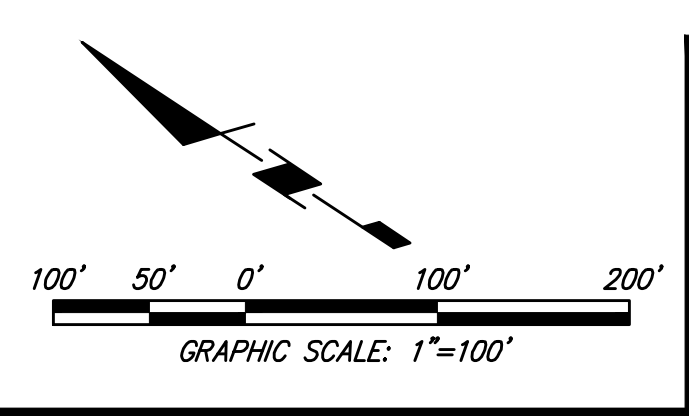


EXHIBIT A
EXISTING FLOODPLAIN
FOR
ADAMS BARRANCA
(LATERAL STRUCTURES AT TOP BANK)

Santa Paula West Business Park Santa Paula, CA

November 19, 2015

Prepared by:



***Santa Paula West Business Park
Preliminary Drainage Report***

Santa Paula, CA

Prepared for:

***McGaelic Group
&
Bender Realty Ltd***

November 2015

Prepared by:

**Jensen Design & Survey, Inc
1672 Donlon Street
Ventura, CA 93003**

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- A: Existing Hydrology Calculations
- B: Existing Hydrology Exhibit A
- C: Proposed Hydrology Calculations & Culvert Calculations
- D: Proposed Hydrology Exhibit B
- E: Existing FIRM & Soils Maps
- F: HEC-RAS Analysis Maps and Calculations

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

Introduction

The Santa Paula West project is a planned commercial and industrial development containing a mixture of industrial, research and development, retail, office and commercial uses. The Specific Plan project site is located just outside the limits, but within the sphere of influence, of the City of Santa Paula. The land use is currently agricultural. The property is bounded by industrial development on the east, Adams Barranca on the west, Telegraph Road to the north, and Highway 126 to the south. Splitting the northerly section of the specific plan area east/west is the railroad operated by the Ventura County Transportation Commission Railroad (VCTC). The property ranges in elevation from approximately 250 to 222 feet above mean sea level and generally slopes from the north to the south. The Regional Location Map is shown below as Figure 1.

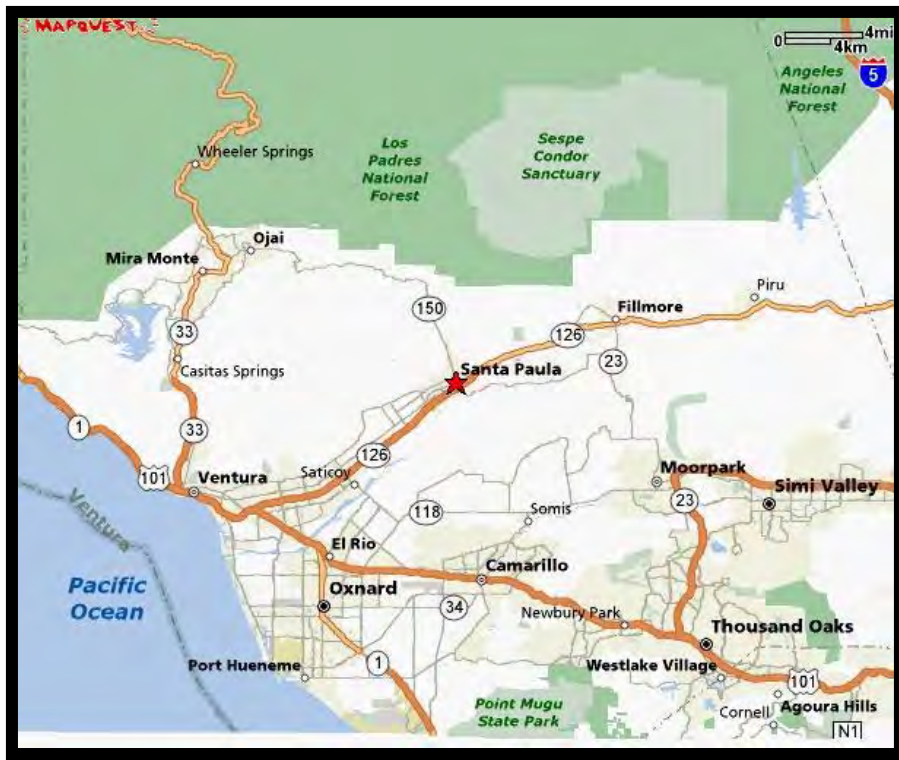


FIGURE 1 - REGIONAL LOCATION MAP

Project Description

The Santa Paula West Business Park Specific Plan encompasses approximately 58 acres of land in unincorporated Ventura County west of the City of Santa Paula. The proposed Specific Plan would permit the development of a variety of clean office, industrial and retail buildings ranging in size.

Access to the site is provided by Beckwith Road, Telegraph Road, and Faulkner Road. Figure 2 shows the project location.



FIGURE 2 – PROJECT LOCATION MAP

Purpose

This study provides an evaluation of the existing drainage conditions and the design of a preliminary storm drain system within the Santa Paula West Business Park Specific Plan project.

The general approach of the proposed condition is to maintain the existing drainage pattern without having adverse affects offsite.

Existing site conditions show that the project site is located in a floodplain, Zone A. Based on our analysis of Adams Canyon Barranca using flows generated by an Existing Condition study by Jensen Design & Survey reviewed and approved by the County of Ventura Watershed Protection District in December 2011 (see **Appendix A**), the floodplain limits currently shown by FEMA are inaccurate. This report also summarizes the flow information that will be used in Adams Barranca for a HEC-RAS analysis for a CLOMR/LOMR to be filed at a later date to modify the current FIRM maps.

Future site runoff will be conveyed through the project via surface drainage and underground structures connecting into the existing culverts under Highway 126. This report includes hydrologic analysis and supporting calculations to demonstrate how the project's contributions to stormwater runoff resulting from development will be controlled and match existing conditions at major outlet points.

Hydrology Methodology

The existing conditions of the Santa Paula West Business Park Specific Plan were determined according to the Ventura County Watershed Protection District 2010 Hydrology Manual, the City of Santa Paula Master Plan for Drainage, the County's Time of Concentration Calculator, and Hec-Ras.

- Soil Group Types 3 & 4 are used for drainage areas in this study
- Existing condition coefficients were obtained from Appendix A, Exhibit 6A of the 'VCWPD Hydrology Manual'.
- Proposed condition coefficients were obtained from Appendix A, Exhibit 6A of the 'VCWPD Hydrology Manual'.
- Time of Concentration (Tc) values were calculated with the Tc Calculator program for each drainage area.
- Water quality treatment will be flow based and volume based, according to current SQUIMP guidelines at the time of Tentative Map submittal. Various areas can be used

for treatment, infiltration, and detention that will meet or exceed the County's SQUIMP requirements according to the Ventura County Technical Manual.

Existing Drainage Conditions

The Santa Paula West Business Park site is located within the greater Santa Clara River watershed. The onsite drainage is a tributary to the Santa Clara River, and has been divided into four drainage areas: Adams Canyon Barranca (Area A), Todd Lane Drain (Area D), Highway 126 West culverts (Area B), and Highway 126 east culverts (Area C). The limits of the drainage subareas were determined by a flown aerial topo (NGVD 1929 datum) and a site visit. In performing the hydrology analysis for the existing condition, all of the drainage areas within the property limits were analyzed for a ten through a hundred year storm events. The subarea properties and the calculated runoff are shown in **Table 1 and in Appendix A**.

The 58 acre project site is currently used for agriculture and varies in land gradient sloping north to south with the railroad and the Highway being higher than adjacent grade and acting as dams. The railroad has two culverts (2-12" CMP and 1-24" CMP) to transport the onsite water from the north to the south, not including the crossing for Adams Barranca. These culverts are about 50% blocked with sediment and currently do not function at capacity. There are also four existing culverts of various sizes under Highway 126 that are blocked with sediment and do not function at capacity, causing ponding north of the Highway during storm events. The outlets of the culverts are on the south side of Highway 126 and drain through historic agricultural drainage channels ending in the Santa Clara River and do not connect to Adams Barranca.

A small portion of the property drains west into Adams Barranca (**Area A on Exhibit A**). Adams Barranca is a raised channel with the top of the channel being an average 2.0' higher than the adjacent grade on the property for approximately 480' extending north from HWY 126. This property is subject to flooding during a 100 year storm event from Adams Barranca, according to the current FIRM maps (Map Numbers 06111C0778E and 06111C0779E – **Appendix E**). A HEC-RAS analysis was completed using flow information from a VcRAT analysis completed by Jensen Design & Survey to support a change in the floodplain limits. A more detailed analysis will be completed at the Tentative Map level of review and will be coordinated with the County and City. The existing condition report for the flow rates used in the HEC-RAS analysis has been reviewed and approved by the County Watershed Protection District on December 6, 2011.

The Highway 126 westerly culverts (1-24" CMP, and 1-48"x24" Arch CMP), drainage area B, handle the flows from approximately 27.3 acres. Overflow from pipe inlet blockage travels

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

easterly to two other culverts under Highway 126 or farther east to the inlet at the end of Faulkner Road into a 72” RCP leading to Todd Lane Drain.

The Highway 126 easterly culverts (2–52”x30” Arch CMP), drainage areas C and D, handle the flows from approximately 31 acres. Overflow from pipe inlet blockage travels easterly to the inlet at the end of Faulkner Road into a 72” RCP leading to Todd Lane Drain.

The time of concentration for each overall drainage area within the property boundaries was calculated using VcRAT Time of Concentration calculator from Ventura County to obtain a time of concentration and a peak flow rate. That peak flow rate was used to calculate a cfs/acre which was then applied to each drainage subarea, respectively as shown in **Appendix A**.

The Santa Paula Master Storm Drain Plan shows 75% of the specific plan area to be draining to Todd Lane Drain. Todd Lane Drain has a maximum design capacity of 393 cfs in a 100 year storm. After an analysis of the onsite drainage patterns, Todd Lane Drain receives flows from the project site only in the event of blockage at the Highway 126 culverts.

Highway 126 westbound lane drains northerly through an asphalt down drain into Culvert 2. With the proposed improvements for the project, an inlet will need to be added to capture this flow and route it under the freeway per existing conditions.

The existing flow areas and peak flows for the existing condition are shown in Appendix A and Table 1.

Table 1A – Santa Paula West Business Park Specific Plan Existing Runoffs

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA	A	2.82	2.8	4.8	6.5
WEST 126 CULVERTS (2,8)	B1	16.4	14.0	23.5	30.4
	B2	10.88	9.3	15.6	20.2
	TOTAL	27.28	23.3	39.0	50.6
EAST 126 CULVERTS (5,6)	C1a	10.7	7.8	14.5	19.0
	C1b	4.1	3.0	5.5	7.3
	C1c	0.91	0.7	1.2	1.6
	C2	7.6	5.6	10.3	13.5
	D	7.26	7.9	14.0	19.6
	TOTAL	30.6	24.9	45.5	60.9

Proposed Drainage Conditions

The proposed grading and drainage (see **Appendix D, Exhibit B**) shows the site maintaining the flow pattern. The project has a slope of 3%. The site will be mostly fill in order to raise the buildings away from any flooding potential. Various catch basin locations and a local storm drain system, designed to current City of Santa Paula Standards will convey the stormwater to five different outlet points, as shown on **Exhibit B**. The storm drain system is a network of PVC pipe routed within the project site and flows by gravity. A parallel channel has been incorporated into plans to improve the Adams Barranca flooding condition, and will be further explained later in this report. No onsite stormwater will be directed to the Barranca.

The project will take advantage of planter areas throughout to allow for infiltration and treatment of rain water to comply with the County of Ventura MS4 permit. Before the stormwater leaves the site, it will be detained in small localized landscaped basins and three larger basins onsite to allow for infiltration and peak flow control per current MS4 standards at the time of Tentative Map submittal. Storm drain sizes and slopes will be determined once site layout is finalized at the Tentative Map level.

The five outlet points for onsite water discharge are Todd Lane Drain (Pipe 9), three existing culvert locations under Highway 126 (pipes 2,5,&8). Proposed condition stormwater discharge at each outlet point will not increase from the existing peak outflow (**Appendix C**), due to the implementation of detention basins. Preliminary calculations have been done to size the proposed detention basins, however a more detailed analysis will be required at the Tentative Map level, once the site layout is completed. There are two surface detention basins located on site and one subsurface detention basin located on the east end of the development (see **Appendix D, Exhibit B**).

Most of the existing condition drainage issues onsite are due to sediment build up in the existing storm drain pipes under Highway 126. By developing the site, undergrounding existing open inlet pipes at Highway 126, and providing a system for treatment and flow control, the site will not be exposed to sediment and the usual culvert blockage that can cause ponding north of Highway 126 will be eliminated.

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

The time of concentration for drainage areas C and D within the property boundaries was calculated using VcRAT Time of Concentration calculator from Ventura County to obtain a time of concentration and a peak flow rate for developed condition. The peak flow rate for these two areas was used to calculate a cfs/acre, which was then applied to each drainage subarea, respectively as shown in **Appendix C** and Table 2A. For area B the time of concentration was also calculated using VcRAT Time of Concentration calculator from Ventura County. Area B was subdivided into B1 and B2 to obtain a time of concentration for each subarea. This time was used to calculate a peak flow rate for the developed condition

Table 2A – Santa Paula West Business Park Specific Plan Proposed Runoffs

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA	A	2.5	2.7	3.4	3.8
WEST 126 CULVERTS (2)	B1a	8.5	19.0	28.9	35.5
	B1b	1.9	8.2	11.7	14.1
	B1c	7.6	17.7	27.8	34.6
	B1 Total	17.9	33.0	68.3	84.1
WEST 126 CULVERTS (8)	B2a	5.5	12.1	17.2	19.4
	B2b	4.0	13.4	16.4	18.4
	B2 Total	9.5	25.5	33.7	37.8
	TOTAL UNDETAINED	27.4	58.5	102.0	122.0
EAST 126 CULVERTS (5)	C1	15.7	32.7	52.7	59.8
	C2	9.2	19.3	31.1	35.3
	TOTAL	24.9	52.0	84.0	95.0
TODD LANE DRAIN	D	5.6	10.6	16.6	18.7

Table 2B – Santa Paula West Business Park Specific Plan Proposed Runoffs

(Includes Detention)

Watershed	Subarea	Area (ac.)	10-year	50-year	100-year
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)
ADAMS BARRANCA WEST 126 CULVERTS (2,8)	A	2.5	--	--	--
	B1 Total	17.9	11.8	21.2	20.5
	B2 Total	9.5	8.6	17.6	16.2
	B TOTAL	27.4	20.4	38.8	36.7
EAST 126 CULVERTS (5)	C TOTAL	24.9	26.8	41.7	46.0
TODD LANE DRAIN	D	5.6	10.6	16.6	18.7

Water Quality

Water quality measures for the Santa Paula West Business Park development will consist of Best Management Practices (BMPs) that are listed in the Ventura County Stormwater Quality Urban Impact Mitigation Plan (SQUIMP). This plan was devised to address storm water pollution for any new development and redevelopment. Stormwater treatment occurs onsite prior to stormwater leaving the site to existing drainage facilities. Water quality treatment will either be flow based, volume based, or a combination of the two according to SQUIMP guidelines. The following are some of the BMPs that may be utilized on our project.

Vegetated-swales will be designed into various parking landscape areas to convey and treat paved areas and allow stormwater capture for infiltration and evapotranspiration. These swales that generally have low velocities are used to mitigate concentration of nutrients by its contact with vegetation. Vegetated-swales could occur within each planter area designed within the project, providing cleansing of storm runoff prior to discharge into Adams Barranca and Santa Clara River.

Bio-filter inserts will be used in curb inlets to capture oil and grease, suspended solids, metals, gasoline, pesticides and pathogens. Also, storm drain inlets and catch basins will have proper signage and stenciling to discourage illegal dumping. Filters and signage will be checked and/or replaced annually.

SANTA PAULA WEST BUSINESS PARK PRELIMINARY DRAINAGE REPORT

For proposed development, two surface detention basins are located onsite north of the railroad at the center of the development and north of the highway at the center of the development in addition to one underground basin located east of Beckwith Drive just north of the highway. Localized detention basins will also be used throughout the site, such as landscape areas that are used to lag the discharge of stormwater. These areas will settle out and filter pollutants that are within the runoff on-site. The final sizing of the detention basins and landscape areas will be provided with the Tentative Map design.

The following table shows the volume required for each drainage area according to the SQUIMP guidelines and the Tentative Stormwater Permit for Ventura County as of the date of this report for water quality treatment. The Railroad Right of Way area is not included in the treatment volume requirements.

Table 3 – Santa Paula West Business Park Specific Plan Water Quality

Subarea	Drainage Area (acres)	Railroad Right of Way Area (acres)	Total Required Treatment Area (acres)	Volume Based Water Quality Required (ft ³)**
A	2.5	0.1	0.0	0.0
B1a	8.5	0.4	8.1	16563.4
B1b	1.9	0.0	1.9	3793.2
B1c	7.6	0.4	7.2	14634.7
B2a	5.5	0.4	5.1	10395.0
B2b	4.0	0.7	3.3	6807.0
C1	15.7	0.7	15.0	30556.5
C2	9.2	0.7	8.6	17501.6
D	5.6	0.6	4.9	10096.9
			Total Volume	110348.3

** Calculated using a 75% impervious area average

Used method in SQUIMP manual page 5-5 for calculations
(same value as a 0.75 in storm event as stated in new permit)

Adams Canyon Barranca Floodplain Analysis

Current FIRM maps dated January 20, 2010 show the westerly portion of the property within flood Zone A (See **Appendix E**). After a review of historic flooding, existing contours, and site features, the Flood Zone limits shown on the current FIRM maps are inaccurate. Using flows generated by a VcRAT study completed by Jensen Design & Survey adopted in December 2011 by the County of Ventura Watershed Protection District, a preliminary HEC-RAS River study of Adams Canyon Barranca was completed.

Adams Canyon Barranca’s current banks are earthen dikes created by past farm land owners in order to prevent flooding their crops. These dikes are about 2.0 feet above adjacent grade on both the east and west sides of the channel. The Barranca and the undercrossings at Highway 126, the Railroad, and Telegraph road are undersized for the 5,861 cfs flow.

Table 4 – Adams Barranca Existing Structures

	Type of Undercrossing	Approximate Capacity (cfs)
Telegraph Road	10’ H x 24’ W RCB	3,200
Railroad Crossing	8’ H x 28’ W Crossing	2,400
Highway 126	Double 12’ H x 10’ W	2,200

Multiple HEC-RAS analysis were completed to support our findings. A summary of the HEC-RAS plans and geometry files are in the **Appendix F**. The existing condition where the channel geometry is overtopped was modeled using lateral structures as weirs at the top of the existing bank to analyze the flow that has left the channel. Existing condition topography reflects that if water overtops the channel, it will leave the channel forever and head either east or west to Todd Barranca or Clow Road undercrossing, respectively. The flow rates that overtopped the bank on the west side of the Barranca were removed from the total design Q for the proposed condition analysis at each respective cross section. The summary of the flow rates that have overtopped the existing banks at certain locations is shown below and in **Appendix F**.

The breakout begins upstream of Telegraph Road, due to the lack of capacity in the Telegraph Road culvert. Therefore, the flows pond and overtop Telegraph Road as a sheet flow with a depth of approximately 1.5 feet. The northwest frontage of the proposed project extending from the main project entry west to the Barranca has been designed to handle 300 cfs within the parking lot between Telegraph Road and the proposed building. This overflow will be directed

into the proposed channel along the west property line, with a total of 2,637cfs, which totals the overflow from upstream of Telegraph Road on the east side of the Barranca.

The proposed condition will only occur if the property is developed. An 1,700 foot long parallel channel to Adams Canyon Barranca has been designed with a bottom width of 20' and a varying depth with 2:1 side slopes. The west side of the proposed channel adjacent to Adams Canyon Barranca will match the existing elevations until Adams Barranca reaches Hwy 1226. At this point a notch cut at the easterly channel banks is proposed to act as a weir. Flood flows will initially flow to the east into a widen channel through the frontage road and over the highway, as it did in the existing condition. Some flow will go back into Adams Barranca Creek at Hwy 126 however this will be controlled via a weir to prevent overtopping of the west bank therefore no impacts will occur on the west side of the Barranca.

The buildings are proposed at a minimum of 1.0' above the water surface elevation determined for the new channel to protect from flooding (See Exhibit B).

Conclusions

Based on the hydrology calculations done in accordance with the Ventura County Hydrology Manual and reflected in **Appendix C**, the proposed project improves existing drainage conditions and does not allow an increase in peak flow leaving the site. To improve existing conditions, the project drainage design includes an overflow channel, smaller localized detention basins, and surface treatment swales. Existing flow patterns will generally remain the same after the proposed condition. The existing downstream storm drain facilities are currently not operating at their design capacity for a 10-year storm event. The proposed improvements will alleviate this situation.

References

- Ventura County Watershed Protection District, December 2010, "Ventura County Hydrology Manual"
- Jensen Design & Survey, Inc. December 2011, "Adams Barranca Existing Condition Hydrology Study"

- FEMA Guidelines and Specifications for Flood Hazard Mapping Partners, Appendix H, April 2003
- FEMA National Flood Insurance Program Section 65.10, November 2008

APPENDIX A

Existing Hydrology Calculations

PAR01.4492
11/11/2015

**APPENDIX A
EXISTING CONDITION CALCULATIONS**

Flood Zone 2
Rainfall Zone K

Subarea	Area (acres)	Soil Type	10 yr Time of Concentration	50 yr Time of Concentration	100 yr Time of Concentration	q10 (cfs/ac)	q50 (cfs/ac)	q100 (cfs/ac)	Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	Storm Drain
<i>A Total</i>	2.82	3	27 min	19 min	14 min	0.99	1.72	2.31	2.8	4.8	6.5	Adams
B1	16.4	3,4	-	-	-	-	-	-	13.9	23.5	30.3	1
B2	10.88	4	-	-	-	-	-	-	9.2	15.6	20.1	2
<i>B Total</i>	27.28	3,4	30 min	23 min	18 min	0.85	1.43	1.85	23.3	39.0	50.6	2
C1a	10.7	3	-	-	-	-	-	-	7.8	14.5	19.0	7,4
C1b	4.1	4	-	-	-	-	-	-	3.0	5.5	7.3	3
C1c	0.91	4	-	-	-	-	-	-	0.7	1.2	1.6	4
C2	7.6	4	-	-	-	-	-	-	5.6	10.3	13.5	5
<i>C Total</i>	23.31	4	30 min	24 min	19 min	0.73	1.35	1.77	17.1	31.5	41.4	5
<i>D Total</i>	7.26	4	20 min	14 min	10 min	1.08	1.92	2.69	7.9	14.0	19.6	6
									TOTAL PEAK FLOW (cfs)			
									51.1	89.3	118.1	
						AVERAGE (cfs/ac)	0.91	1.61	2.16			
						cfs/ac from Peck Road Drain Hydrology Report*	1.1	1.7	2			

*Peck Road Drain Hydrology Report (Septmeber 6, 2007). Ventura County Watershed Protection District

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project: Santa Paula West 2
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed A

Name	Zone	Storm	Soil	Area (acres)	TC (min)
A	K	10	3.00	2.8 / 3	27.495 / 27
A	K	25	3.00	2.8 / 3	21.857 / 22
A	K	50	3.00	2.8 / 3	18.766 / 19
A	K	100	3.00	2.8 / 3	14.378 / 14

Watershed Name: Watershed A

Sub-Area Name: A
Computing Tc for all rainfall frequencies for sub-area A...

Tc for frequency = 10.00: 27.495 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 27.495 min. = 27 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.529
C Total: 0.649
Sum Q Segments (cfs): 2.79
Q Total (cfs): 2.79
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,649.69
Time of Concentration (min): 27.495

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 26.0075
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238
Contributing Area (acres): 2.53
Percent of Sub-Area (%): 90.0
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0192
Effective Slope: 0.0192
Q for Flow Path (cfs): 2.51
Avg Velocity (ft/s): 0.42
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.52
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.4873
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.28
Q Top (cfs): 2.51
Q Bottom (cfs): 2.79
Velocity Top (ft/s): 1.96
Velocity Bottom (ft/s): 2.04
Avg Velocity (ft/s): 2.00
Wave Velocity (ft/s): 3.25

Tc for frequency = 25.00: 21.857 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 21.857 min. = 22 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.868
C Total: 0.690
Sum Q Segments (cfs): 3.62
Q Total (cfs): 3.62
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,311.40
Time of Concentration (min): 21.857

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.4867
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238
Contributing Area (acres): 2.53
Percent of Sub-Area (%): 90.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0192
Effective Slope: 0.0192
Q for Flow Path (cfs): 3.26
Avg Velocity (ft/s): 0.53
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.67

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.3701
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.36
Q Top (cfs): 3.26
Q Bottom (cfs): 3.62
Velocity Top (ft/s): 2.14
Velocity Bottom (ft/s): 2.21
Avg Velocity (ft/s): 2.18
Wave Velocity (ft/s): 3.53

Tc for frequency = 50.00: 18.766 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 18.766 min. = 19 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.349
C Total: 0.733
Sum Q Segments (cfs): 4.84
Q Total (cfs): 4.84
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,125.94
Time of Concentration (min): 18.766

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 17.5137
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238
Contributing Area (acres): 2.53
Percent of Sub-Area (%): 90.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0192
Effective Slope: 0.0192
Q for Flow Path (cfs): 4.36
Avg Velocity (ft/s): 0.62
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.85

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.2519
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.48
Q Top (cfs): 4.36
Q Bottom (cfs): 4.84
Velocity Top (ft/s): 2.35
Velocity Bottom (ft/s): 2.43
Avg Velocity (ft/s): 2.39
Wave Velocity (ft/s): 3.86

Tc for frequency = 100.00: 14.378 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 14.378 min. = 14 min.

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 2.81
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.987
C Total: 0.776
Sum Q Segments (cfs): 6.52
Q Total (cfs): 6.52
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 862.65
Time of Concentration (min): 14.378

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 13.2318
Flow Type: Overland
Length (ft): 650
Top Elevation (ft): 250.5
Bottom Elevation (ft): 238
Contributing Area (acres): 2.53
Percent of Sub-Area (%): 90.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0192
Effective Slope: 0.0192
Q for Flow Path (cfs): 5.87
Avg Velocity (ft/s): 0.82
Passed Scour Check: YES
Scour Velocity (ft/sec): 3.01

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.1457
Flow Type: Channel
Length (ft): 290
Top Elevation (ft): 238
Bottom Elevation (ft): 230
Contributing Area (acres): 0.28
Percent of Sub-Area (%): 10.0
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0276
Q for Flow Path (cfs): 0.65
Q Top (cfs): 5.87
Q Bottom (cfs): 6.52
Velocity Top (ft/s): 2.57
Velocity Bottom (ft/s): 2.67
Avg Velocity (ft/s): 2.62
Wave Velocity (ft/s): 4.22

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project: Santa Paula West 2
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed B

Name	Zone	Storm	Soil	Area (acres)	TC (min)
B1	K	10	3.00	16.4 / 16	TC ERROR
B1	K	25	3.00	16.4 / 16	25.959 / 26
B1	K	50	3.00	16.4 / 16	22.588 / 23
B1	K	100	3.00	16.4 / 16	17.913 / 18

Watershed Name: Watershed B

Sub-Area Name: B1
Computing Tc for all rainfall frequencies for sub-area B1...

Tc for frequency = 10.00: 31.961 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 31.961 min. = 32 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B1
Total Area (ac): 16.4
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.410
C Total: 0.625
Sum Q Segments (cfs): 14.46
Q Total (cfs): 14.46
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,917.68
Time of Concentration (min): 31.961

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 26.4327
Flow Type: Overland
Length (ft): 670
Top Elevation (ft): 250.5
Bottom Elevation (ft): 235
Contributing Area (acres): 2.1
Percent of Sub-Area (%): 12.8
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0231
Effective Slope: 0.0231
Q for Flow Path (cfs): 1.85
Avg Velocity (ft/s): 0.42
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.59
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 5.4766
Flow Type: Channel
Length (ft): 920
Top Elevation (ft): 235
Bottom Elevation (ft): 226.5
Contributing Area (acres): 14.2
Percent of Sub-Area (%): 86.6
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0092
Q for Flow Path (cfs): 12.52
Q Top (cfs): 1.85
Q Bottom (cfs): 14.37
Velocity Top (ft/s): 1.23
Velocity Bottom (ft/s): 2.28
Avg Velocity (ft/s): 1.75
Wave Velocity (ft/s): 2.80
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0520
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 226.5
Bottom Elevation (ft): 226.3
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 24
Manning's N: 0.02
Map Slope: 0.0100
Q for Flow Path (cfs): 0.09
Q Top (cfs): 14.37

Q Bottom (cfs): 14.46
Avg Velocity (ft/s): 5.33
Wave Velocity (ft/s): 6.41

Tc for frequency = 25.00: 25.959 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 25.959 min. = 26 min.

SUB AREA INPUT DATA

Sub Area Name: B1
Total Area (ac): 16.4
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.726
C Total: 0.674
Sum Q Segments (cfs): 19.07
Q Total (cfs): 19.07
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,557.52
Time of Concentration (min): 25.959

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.8434
Flow Type: Overland
Length (ft): 670
Top Elevation (ft): 250.5
Bottom Elevation (ft): 235
Contributing Area (acres): 2.1
Percent of Sub-Area (%): 12.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0231
Effective Slope: 0.0231
Q for Flow Path (cfs): 2.44
Avg Velocity (ft/s): 0.54
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.75

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 5.0672
Flow Type: Channel
Length (ft): 920
Top Elevation (ft): 235
Bottom Elevation (ft): 226.5
Contributing Area (acres): 14.2
Percent of Sub-Area (%): 86.6
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0092
Q for Flow Path (cfs): 16.51
Q Top (cfs): 2.44
Q Bottom (cfs): 18.96
Velocity Top (ft/s): 1.35
Velocity Bottom (ft/s): 2.46
Avg Velocity (ft/s): 1.90
Wave Velocity (ft/s): 3.03
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0481
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 226.5
Bottom Elevation (ft): 226.3
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 27
Used Pipe Diameter (in): 27
Manning's N: 0.02
Map Slope: 0.0100
Q for Flow Path (cfs): 0.12
Q Top (cfs): 18.96
Q Bottom (cfs): 19.07
Avg Velocity (ft/s): 5.77
Wave Velocity (ft/s): 6.93

Tc for frequency = 50.00: 22.588 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 22.588 min. = 23 min.

SUB AREA INPUT DATA

Sub Area Name: B1
Total Area (ac): 16.4
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.118
C Total: 0.714
Sum Q Segments (cfs): 24.80
Q Total (cfs): 24.80
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,355.27
Time of Concentration (min): 22.588

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 17.8288
Flow Type: Overland
Length (ft): 670
Top Elevation (ft): 250.5
Bottom Elevation (ft): 235
Contributing Area (acres): 2.1
Percent of Sub-Area (%): 12.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0231
Effective Slope: 0.0231
Q for Flow Path (cfs): 3.18
Avg Velocity (ft/s): 0.63
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.91

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.7143
Flow Type: Channel
Length (ft): 920
Top Elevation (ft): 235
Bottom Elevation (ft): 226.5
Contributing Area (acres): 14.2
Percent of Sub-Area (%): 86.6
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0092
Q for Flow Path (cfs): 21.47
Q Top (cfs): 3.18
Q Bottom (cfs): 24.65
Velocity Top (ft/s): 1.46
Velocity Bottom (ft/s): 2.64
Avg Velocity (ft/s): 2.05
Wave Velocity (ft/s): 3.25
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0448
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 226.5
Bottom Elevation (ft): 226.3
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 30
Used Pipe Diameter (in): 30
Manning's N: 0.02
Map Slope: 0.0100
Q for Flow Path (cfs): 0.15
Q Top (cfs): 24.65
Q Bottom (cfs): 24.80
Avg Velocity (ft/s): 6.14
Wave Velocity (ft/s): 7.44

Tc for frequency = 100.00: 17.913 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 17.913 min. = 18 min.

SUB AREA INPUT DATA

Sub Area Name: B1
Total Area (ac): 16.4
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 3.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.623
C Total: 0.754
Sum Q Segments (cfs): 32.42
Q Total (cfs): 32.42
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,074.79
Time of Concentration (min): 17.913

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 13.4989
Flow Type: Overland
Length (ft): 670
Top Elevation (ft): 250.5
Bottom Elevation (ft): 235
Contributing Area (acres): 2.1
Percent of Sub-Area (%): 12.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0231
Effective Slope: 0.0231
Q for Flow Path (cfs): 4.15
Avg Velocity (ft/s): 0.83
Passed Scour Check: YES
Scour Velocity (ft/sec): 3.10

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.3722
Flow Type: Channel
Length (ft): 920
Top Elevation (ft): 235
Bottom Elevation (ft): 226.5
Contributing Area (acres): 14.2
Percent of Sub-Area (%): 86.6
Bottom Width (ft): 5
Side Slope (H:V): 5
Manning's N: 0.04
Map Slope: 0.0092
Q for Flow Path (cfs): 28.07
Q Top (cfs): 4.15
Q Bottom (cfs): 32.23
Velocity Top (ft/s): 1.59
Velocity Bottom (ft/s): 2.84
Avg Velocity (ft/s): 2.22
Wave Velocity (ft/s): 3.51
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0421
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 226.5
Bottom Elevation (ft): 226.3
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.6
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 33
Used Pipe Diameter (in): 33
Manning's N: 0.02
Map Slope: 0.0100
Q for Flow Path (cfs): 0.20
Q Top (cfs): 32.23
Q Bottom (cfs): 32.42
Avg Velocity (ft/s): 6.60
Wave Velocity (ft/s): 7.93

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project: Santa Paula West 2
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed C

Name	Zone	Storm	Soil	Area (acres)	TC (min)
C	K	10	4.00	23.3 / 23	TC ERROR
C	K	25	4.00	23.3 / 23	27.150 / 27
C	K	50	4.00	23.3 / 23	23.859 / 24
C	K	100	4.00	23.3 / 23	19.399 / 19

Watershed Name: Watershed C

Sub-Area Name: C
Computing Tc for all rainfall frequencies for sub-area C...

Tc for frequency = 10.00: 32.925 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 32.925 min. = 33 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: C
Total Area (ac): 23.31
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.387
C Total: 0.523
Sum Q Segments (cfs): 16.90
Q Total (cfs): 16.90
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,975.52
Time of Concentration (min): 32.925

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 24.2017
Flow Type: Overland
Length (ft): 600
Top Elevation (ft): 251
Bottom Elevation (ft): 241
Contributing Area (acres): 0.46
Percent of Sub-Area (%): 2.0
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0167
Effective Slope: 0.0167
Q for Flow Path (cfs): 0.33
Avg Velocity (ft/s): 0.41
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.61
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.7087
Flow Type: Natural Channel
Length (ft): 885
Top Elevation (ft): 241
Bottom Elevation (ft): 225
Contributing Area (acres): 3.53
Percent of Sub-Area (%): 15.1
Overland Type: Valley
Map Slope: 0.0181
Effective Slope: 0.0181
Q for Flow Path (cfs): 2.56
Q Top (cfs): 0.33
Q Bottom (cfs): 2.89
Velocity Top (ft/s): 1.67
Velocity Bottom (ft/s): 2.50
Avg Velocity (ft/s): 2.09
Wave Velocity (ft/s): 3.13
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0477
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 12
Used Pipe Diameter (in): 12
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.07
Q Top (cfs): 2.89
Q Bottom (cfs): 2.97

Avg Velocity (ft/s): 5.56

Wave Velocity (ft/s): 6.99

DATA FOR FLOW PATH 4

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 1.3586

Flow Type: Natural Channel

Length (ft): 140

Top Elevation (ft): 224.8

Bottom Elevation (ft): 224.3

Contributing Area (acres): 0.91

Percent of Sub-Area (%): 3.9

Overland Type: Valley

Map Slope: 0.0036

Effective Slope: 0.0036

Q for Flow Path (cfs): 0.66

Q Top (cfs): 2.97

Q Bottom (cfs): 3.63

Velocity Top (ft/s): 1.12

Velocity Bottom (ft/s): 1.17

Avg Velocity (ft/s): 1.14

Wave Velocity (ft/s): 1.72

DATA FOR FLOW PATH 5

Flow Path Name: FlowPath

FLOW PATH TRAVEL TIME (min): 0.3184

Flow Type: Pipe

Length (ft): 50

Top Elevation (ft): 224.2

Bottom Elevation (ft): 224

Contributing Area (acres): 10.7

Percent of Sub-Area (%): 45.9

Initial Pipe Diameter (in): 24

Calculated Pipe Diameter (in): 36

Used Pipe Diameter (in): 36

Manning's N: 0.04

Map Slope: 0.0040

Q for Flow Path (cfs): 7.76

Q Top (cfs): 3.63

Q Bottom (cfs): 11.38

Avg Velocity (ft/s): 1.98

Wave Velocity (ft/s): 2.62

DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.2903
Flow Type: Natural Channel
Length (ft): 475
Top Elevation (ft): 224
Bottom Elevation (ft): 220.6
Contributing Area (acres): 7.61
Percent of Sub-Area (%): 32.6
Overland Type: Valley
Map Slope: 0.0072
Effective Slope: 0.0072
Q for Flow Path (cfs): 5.52
Q Top (cfs): 11.38
Q Bottom (cfs): 16.90
Velocity Top (ft/s): 2.19
Velocity Bottom (ft/s): 2.42
Avg Velocity (ft/s): 2.30
Wave Velocity (ft/s): 3.46

Tc for frequency = 25.00: 27.150 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 27.150 min. = 27 min.

SUB AREA INPUT DATA

Sub Area Name: C
Total Area (ac): 23.31
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.695
C Total: 0.600
Sum Q Segments (cfs): 23.70
Q Total (cfs): 23.70
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,628.98
Time of Concentration (min): 27.150

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 19.0565
Flow Type: Overland
Length (ft): 600
Top Elevation (ft): 251
Bottom Elevation (ft): 241
Contributing Area (acres): 0.46
Percent of Sub-Area (%): 2.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0167
Effective Slope: 0.0167
Q for Flow Path (cfs): 0.47
Avg Velocity (ft/s): 0.52
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.70

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.4030
Flow Type: Natural Channel
Length (ft): 885
Top Elevation (ft): 241
Bottom Elevation (ft): 225
Contributing Area (acres): 3.53
Percent of Sub-Area (%): 15.1
Overland Type: Valley
Map Slope: 0.0181
Effective Slope: 0.0181
Q for Flow Path (cfs): 3.59
Q Top (cfs): 0.47
Q Bottom (cfs): 4.06
Velocity Top (ft/s): 1.76
Velocity Bottom (ft/s): 2.70
Avg Velocity (ft/s): 2.23
Wave Velocity (ft/s): 3.35
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0414
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 15
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.10
Q Top (cfs): 4.06
Q Bottom (cfs): 4.16
Avg Velocity (ft/s): 6.10
Wave Velocity (ft/s): 8.06
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.2577

Flow Type: Natural Channel
Length (ft): 140
Top Elevation (ft): 224.8
Bottom Elevation (ft): 224.3
Contributing Area (acres): 0.91
Percent of Sub-Area (%): 3.9
Overland Type: Valley
Map Slope: 0.0036
Effective Slope: 0.0036
Q for Flow Path (cfs): 0.93
Q Top (cfs): 4.16
Q Bottom (cfs): 5.08
Velocity Top (ft/s): 1.21
Velocity Bottom (ft/s): 1.27
Avg Velocity (ft/s): 1.24
Wave Velocity (ft/s): 1.86
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.2974
Flow Type: Pipe
Length (ft): 50
Top Elevation (ft): 224.2
Bottom Elevation (ft): 224
Contributing Area (acres): 10.7
Percent of Sub-Area (%): 45.9
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 39
Used Pipe Diameter (in): 39
Manning's N: 0.04
Map Slope: 0.0040
Q for Flow Path (cfs): 10.88
Q Top (cfs): 5.08
Q Bottom (cfs): 15.96
Avg Velocity (ft/s): 2.15
Wave Velocity (ft/s): 2.80
DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 2.0937
Flow Type: Natural Channel
Length (ft): 475
Top Elevation (ft): 224
Bottom Elevation (ft): 220.6

Contributing Area (acres): 7.61
Percent of Sub-Area (%): 32.6
Overland Type: Valley
Map Slope: 0.0072
Effective Slope: 0.0072
Q for Flow Path (cfs): 7.74
Q Top (cfs): 15.96
Q Bottom (cfs): 23.70
Velocity Top (ft/s): 2.39
Velocity Bottom (ft/s): 2.65
Avg Velocity (ft/s): 2.52
Wave Velocity (ft/s): 3.78

Tc for frequency = 50.00: 23.859 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 23.859 min. = 24 min.

SUB AREA INPUT DATA

Sub Area Name: C
Total Area (ac): 23.31
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.070
C Total: 0.653
Sum Q Segments (cfs): 31.52
Q Total (cfs): 31.52
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,431.53
Time of Concentration (min): 23.859

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 16.2876
Flow Type: Overland
Length (ft): 600
Top Elevation (ft): 251
Bottom Elevation (ft): 241
Contributing Area (acres): 0.46
Percent of Sub-Area (%): 2.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0167
Effective Slope: 0.0167
Q for Flow Path (cfs): 0.62
Avg Velocity (ft/s): 0.61
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.79

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 4.1495
Flow Type: Natural Channel
Length (ft): 885
Top Elevation (ft): 241
Bottom Elevation (ft): 225
Contributing Area (acres): 3.53
Percent of Sub-Area (%): 15.1
Overland Type: Valley
Map Slope: 0.0181
Effective Slope: 0.0181
Q for Flow Path (cfs): 4.77
Q Top (cfs): 0.62
Q Bottom (cfs): 5.40
Velocity Top (ft/s): 1.85
Velocity Bottom (ft/s): 2.89
Avg Velocity (ft/s): 2.37
Wave Velocity (ft/s): 3.55
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0411
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 15
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.14
Q Top (cfs): 5.40
Q Bottom (cfs): 5.53
Avg Velocity (ft/s): 6.52
Wave Velocity (ft/s): 8.12
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.1756

Flow Type: Natural Channel
Length (ft): 140
Top Elevation (ft): 224.8
Bottom Elevation (ft): 224.3
Contributing Area (acres): 0.91
Percent of Sub-Area (%): 3.9
Overland Type: Valley
Map Slope: 0.0036
Effective Slope: 0.0036
Q for Flow Path (cfs): 1.23
Q Top (cfs): 5.53
Q Bottom (cfs): 6.76
Velocity Top (ft/s): 1.29
Velocity Bottom (ft/s): 1.36
Avg Velocity (ft/s): 1.32
Wave Velocity (ft/s): 1.98
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.2679
Flow Type: Pipe
Length (ft): 50
Top Elevation (ft): 224.2
Bottom Elevation (ft): 224
Contributing Area (acres): 10.7
Percent of Sub-Area (%): 45.9
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 48
Used Pipe Diameter (in): 48
Manning's N: 0.04
Map Slope: 0.0040
Q for Flow Path (cfs): 14.47
Q Top (cfs): 6.76
Q Bottom (cfs): 21.23
Avg Velocity (ft/s): 2.31
Wave Velocity (ft/s): 3.11
DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.9372
Flow Type: Natural Channel
Length (ft): 475
Top Elevation (ft): 224
Bottom Elevation (ft): 220.6

Contributing Area (acres): 7.61
Percent of Sub-Area (%): 32.6
Overland Type: Valley
Map Slope: 0.0072
Effective Slope: 0.0072
Q for Flow Path (cfs): 10.29
Q Top (cfs): 21.23
Q Bottom (cfs): 31.52
Velocity Top (ft/s): 2.58
Velocity Bottom (ft/s): 2.87
Avg Velocity (ft/s): 2.72
Wave Velocity (ft/s): 4.09

Tc for frequency = 100.00: 19.399 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 19.399 min. = 19 min.

SUB AREA INPUT DATA

Sub Area Name: C
Total Area (ac): 23.31
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.552
C Total: 0.696
Sum Q Segments (cfs): 41.37
Q Total (cfs): 41.37
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,163.95
Time of Concentration (min): 19.399

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 12.2905
Flow Type: Overland
Length (ft): 600
Top Elevation (ft): 251
Bottom Elevation (ft): 241
Contributing Area (acres): 0.46
Percent of Sub-Area (%): 2.0
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0167
Effective Slope: 0.0167
Q for Flow Path (cfs): 0.82
Avg Velocity (ft/s): 0.81
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.88

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 3.9126
Flow Type: Natural Channel
Length (ft): 885
Top Elevation (ft): 241
Bottom Elevation (ft): 225
Contributing Area (acres): 3.53
Percent of Sub-Area (%): 15.1
Overland Type: Valley
Map Slope: 0.0181
Effective Slope: 0.0181
Q for Flow Path (cfs): 6.27
Q Top (cfs): 0.82
Q Bottom (cfs): 7.08
Velocity Top (ft/s): 1.94
Velocity Bottom (ft/s): 3.08
Avg Velocity (ft/s): 2.51
Wave Velocity (ft/s): 3.77
DATA FOR FLOW PATH 3

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0411
Flow Type: Pipe
Length (ft): 20
Top Elevation (ft): 225.4
Bottom Elevation (ft): 224.8
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 0.4
Initial Pipe Diameter (in): 12
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 15
Manning's N: 0.02
Map Slope: 0.0300
Q for Flow Path (cfs): 0.18
Q Top (cfs): 7.08
Q Bottom (cfs): 7.26
Avg Velocity (ft/s): 6.75
Wave Velocity (ft/s): 8.12
DATA FOR FLOW PATH 4

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.1000

Flow Type: Natural Channel
Length (ft): 140
Top Elevation (ft): 224.8
Bottom Elevation (ft): 224.3
Contributing Area (acres): 0.91
Percent of Sub-Area (%): 3.9
Overland Type: Valley
Map Slope: 0.0036
Effective Slope: 0.0036
Q for Flow Path (cfs): 1.62
Q Top (cfs): 7.26
Q Bottom (cfs): 8.87
Velocity Top (ft/s): 1.38
Velocity Bottom (ft/s): 1.45
Avg Velocity (ft/s): 1.41
Wave Velocity (ft/s): 2.12
DATA FOR FLOW PATH 5

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.2590
Flow Type: Pipe
Length (ft): 50
Top Elevation (ft): 224.2
Bottom Elevation (ft): 224
Contributing Area (acres): 10.7
Percent of Sub-Area (%): 45.9
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 48
Used Pipe Diameter (in): 48
Manning's N: 0.04
Map Slope: 0.0040
Q for Flow Path (cfs): 18.99
Q Top (cfs): 8.87
Q Bottom (cfs): 27.87
Avg Velocity (ft/s): 2.47
Wave Velocity (ft/s): 3.22
DATA FOR FLOW PATH 6

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.7960
Flow Type: Natural Channel
Length (ft): 475
Top Elevation (ft): 224
Bottom Elevation (ft): 220.6

Contributing Area (acres): 7.61
Percent of Sub-Area (%): 32.6
Overland Type: Valley
Map Slope: 0.0072
Effective Slope: 0.0072
Q for Flow Path (cfs): 13.51
Q Top (cfs): 27.87
Q Bottom (cfs): 41.37
Velocity Top (ft/s): 2.78
Velocity Bottom (ft/s): 3.10
Avg Velocity (ft/s): 2.94
Wave Velocity (ft/s): 4.41

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project: Santa Paula West 2
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed D

Name	Zone	Storm	Soil	Area (acres)	TC (min)
D	K	10	4.00	7.3 / 7	20.297 / 20
D	K	25	4.00	7.3 / 7	16.006 / 16
D	K	50	4.00	7.3 / 7	13.691 / 14
D	K	100	4.00	7.3 / 7	10.309 / 10

Watershed Name: Watershed D

Sub-Area Name: D
Computing Tc for all rainfall frequencies for sub-area D...

Tc for frequency = 10.00: 20.297 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 20.297 min. = 20 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 7.26
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 1.770
C Total: 0.612
Sum Q Segments (cfs): 7.86
Q Total (cfs): 7.86
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 1,217.80
Time of Concentration (min): 20.297

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 20.2164
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 5.95
Avg Velocity (ft/s): 0.40
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.74
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0802
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 1.91
Q Top (cfs): 5.95
Q Bottom (cfs): 7.86
Velocity Top (ft/s): 3.96
Velocity Bottom (ft/s): 4.35
Avg Velocity (ft/s): 4.16
Wave Velocity (ft/s): 6.23

Tc for frequency = 25.00: 16.006 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 16.006 min. = 16 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 7.26
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.183
C Total: 0.663
Sum Q Segments (cfs): 10.51
Q Total (cfs): 10.51
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 960.35
Time of Concentration (min): 16.006

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 15.9330
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 7.96
Avg Velocity (ft/s): 0.51
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.83

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0728
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 2.55
Q Top (cfs): 7.96
Q Bottom (cfs): 10.51
Velocity Top (ft/s): 4.37
Velocity Bottom (ft/s): 4.79
Avg Velocity (ft/s): 4.58
Wave Velocity (ft/s): 6.87

Tc for frequency = 50.00: 13.691 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 13.691 min. = 14 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 7.26
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 2.717
C Total: 0.707
Sum Q Segments (cfs): 13.95
Q Total (cfs): 13.95
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 821.46
Time of Concentration (min): 13.691

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 13.6247
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 10.57
Avg Velocity (ft/s): 0.60
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.96

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0663
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 3.38
Q Top (cfs): 10.57
Q Bottom (cfs): 13.95
Velocity Top (ft/s): 4.80
Velocity Bottom (ft/s): 5.26
Avg Velocity (ft/s): 5.03
Wave Velocity (ft/s): 7.55

Tc for frequency = 100.00: 10.309 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 10.309 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: D
Total Area (ac): 7.26
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Undeveloped
Soil Type: 4.00
Percent Impervious: 0
SUB AREA OUTPUT

Intensity (in/hr): 3.570
C Total: 0.755
Sum Q Segments (cfs): 19.56
Q Total (cfs): 19.56
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 618.52
Time of Concentration (min): 10.309

DATA FOR FLOW PATH 1

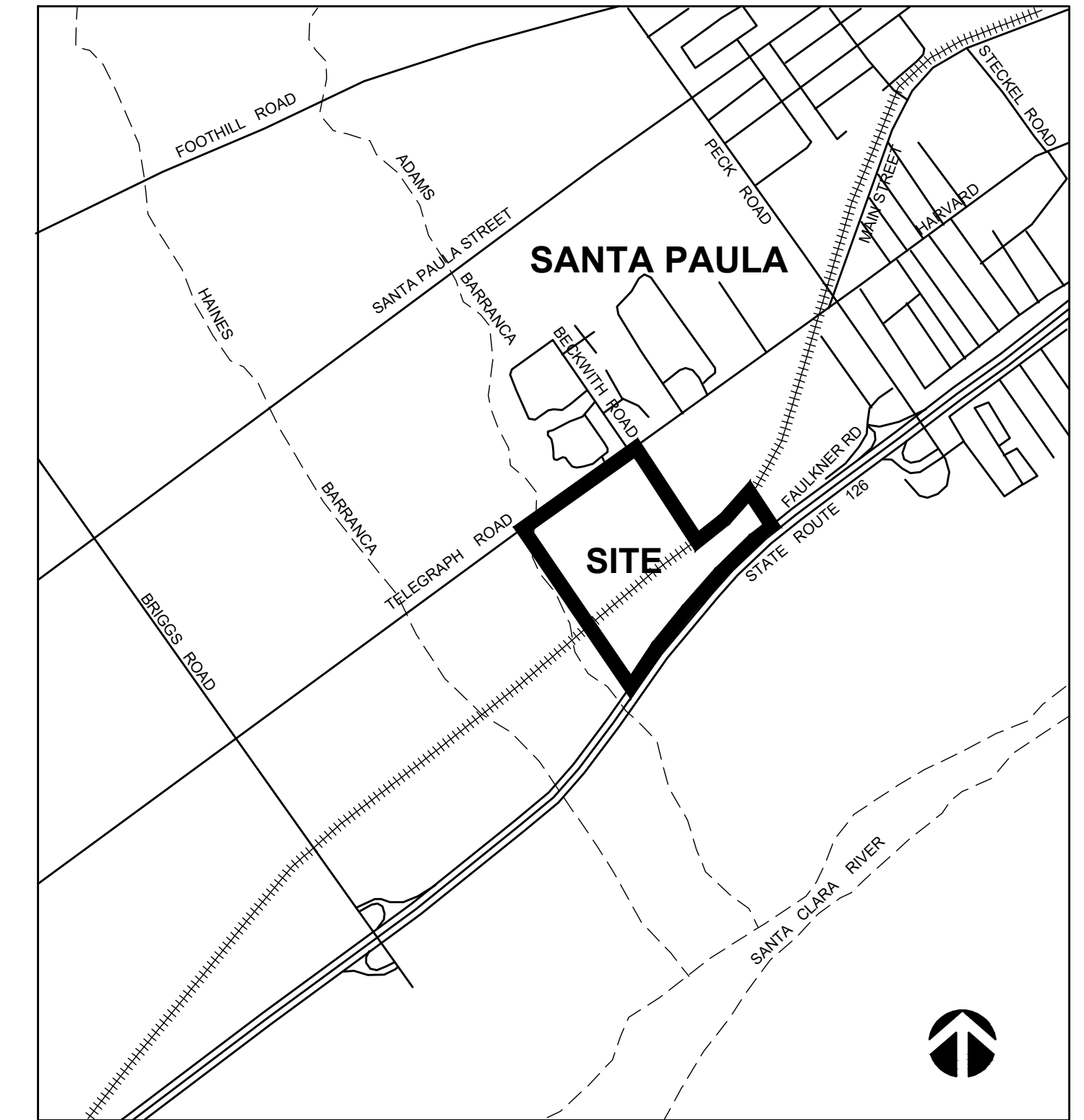
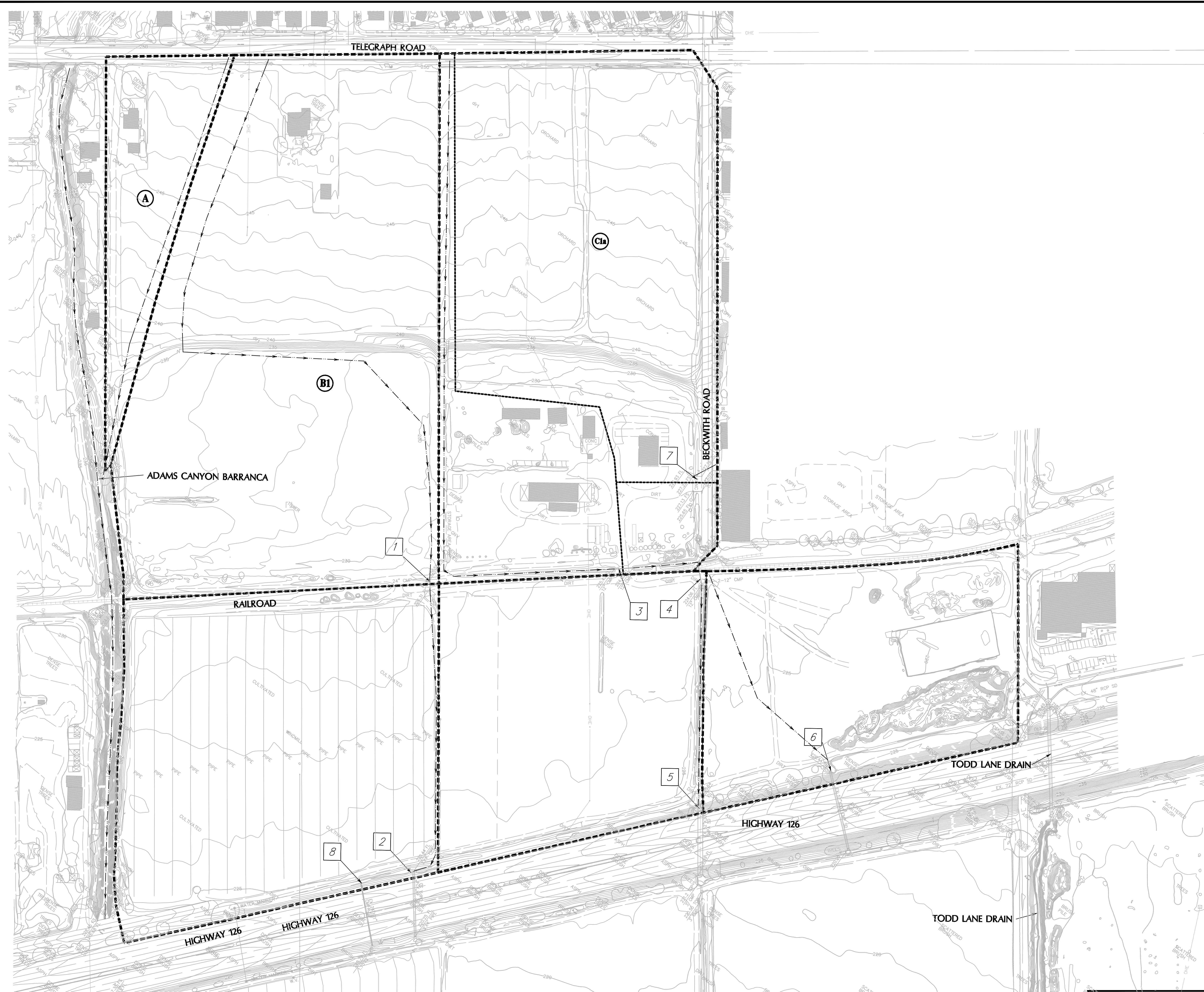
Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 10.2494
Flow Type: Overland
Length (ft): 490
Top Elevation (ft): 226
Bottom Elevation (ft): 223
Contributing Area (acres): 5.5
Percent of Sub-Area (%): 75.8
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0061
Effective Slope: 0.0061
Q for Flow Path (cfs): 14.82
Avg Velocity (ft/s): 0.80
Passed Scour Check: YES
Scour Velocity (ft/sec): 2.13

DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.0592
Flow Type: Natural Channel
Length (ft): 30
Top Elevation (ft): 226
Bottom Elevation (ft): 220.4
Contributing Area (acres): 1.76
Percent of Sub-Area (%): 24.2
Overland Type: Mountain
Map Slope: 0.1867
Effective Slope: 0.1527
Q for Flow Path (cfs): 4.74
Q Top (cfs): 14.82
Q Bottom (cfs): 19.56
Velocity Top (ft/s): 5.37
Velocity Bottom (ft/s): 5.89
Avg Velocity (ft/s): 5.63
Wave Velocity (ft/s): 8.44

APPENDIX B

Existing Hydrology Exhibit A



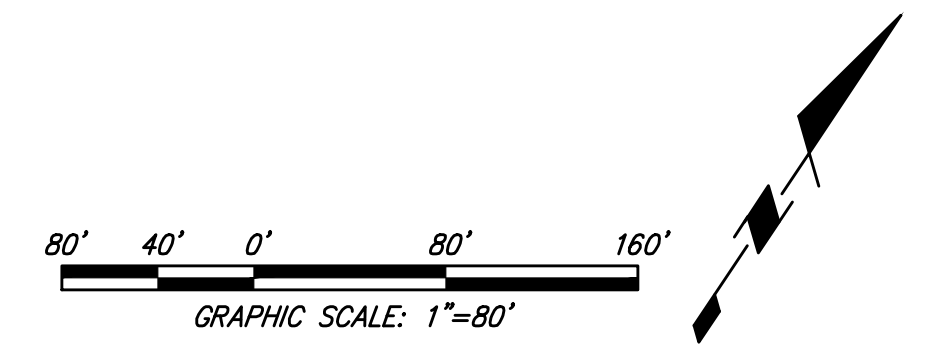
VICINITY MAP
NOT TO SCALE

DRAINAGE AREA CALCULATIONS

Watershed	Subarea	Area (ac.)	100-year			
			Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	
ADAMS BARRANCA	A	2.82	2.8	4.8	6.5	
	WEST 126 CULVERTS (2,8)	B1	16.4	14.0	23.5	30.4
	B2	10.88	9.3	15.6	20.2	
	TOTAL	27.28	23.3	39.0	50.6	
EAST 126 CULVERTS (5,6)	C1a	10.7	7.8	14.5	19.0	
	C1b	4.1	3.0	5.5	7.3	
	C1c	0.91	0.7	1.2	1.6	
	C2	7.6	5.6	10.3	13.5	
	D	7.26	7.9	14.0	19.6	
	TOTAL	30.6	24.9	45.5	60.9	

LEGEND

- DRAINAGE AREA LIMITS
- EXISTING STORM DRAIN
- DRAINAGE AREA
- PIPE NUMBER
- FLOW PATH
- PROPERTY BOUNDARY
- SUBDRAINAGE AREA LIMITS



JENSEN DESIGN & SURVEY, INC.
 1672 DONLON STREET
 VENTURA, CALIF. 93003
 PHONE 805/654-6977
 FAX 805/654-6979
 www.jenscivil.com

SCALE: 1" = 80'
 DATE: Nov 19, 2015
 J.N.:
 DWG. NAME: 4492_EX-01_HYDRO.dwg

EXISTING HYDROLOGY FOR SANTA PAULA WEST (North of 126)
 North of Highway 126
 City of Santa Paula
 COUNTY OF VENTURA STATE OF CALIFORNIA

EXHIBIT A
 1 OF 1

\\P:\4492\Eng\Exhibits\Hydrology Reference\4492_EX-01_HYDRO.dwg Nov 19, 2015, 9:07am Apacoc

APPENDIX C

Proposed Hydrology Calculations

PAR01.4492
11/17/2015

APPENDIX C PROPOSED CONDITION CALCULATIONS

Flood Zone 2
Rainfall Zone K

Subarea	Area (acres)	Soil Type	10 yr Time of Concentration (min)	50 yr Time of Concentration (min)	100 yr Time of Concentration (min)	q10 (cfs/ac)	q50 (cfs/ac)	q100 (cfs/ac)	Q10 (cfs)	Q50 (cfs)	Q100 (cfs)	Storm Drain
A	2.49	3	30	30	30	1.08	1.37	1.51	2.7	3.4	3.8	Adams
B1a	8.47	3	10	7	6	2.24	3.41	4.19	19.0	28.9	35.5	-
B1b	1.86	3	10	8	7	4.41	6.27	7.57	8.2	11.7	14.1	-
B1c	7.55	4	9	6	5	2.35	3.67	4.58	17.7	27.8	34.6	-
<i>B1 Total</i>	17.88	3,4	-	-	-	-	-	-	33	68.3	84.1	<i>Basin, 2</i>
B2a	5.49	4	10	8	8	2.21	3.14	3.54	12.1	17.2	19.4	-
B2b	4.04	4	5	5	5	3.32	4.06	4.55	13.4	16.4	18.4	-
<i>B2 Total</i>	9.53	4	-	-	-	-	-	-	25.5	33.7	37.8	<i>Basin, 8</i>
C1	15.65	3,4	-	-	-	-	-	-	32.7	52.7	59.8	-
C2	9.24	4	-	-	-	-	-	-	19.3	31.2	35.3	-
<i>C Total</i>	24.89	3,4	11	7	7	2.09	3.37	3.82	52	84	95	<i>Basin, 5</i>
D	5.59	4	13	9	9	1.90	2.96	3.34	10.6	16.6	18.7	9
<i>E(take out)</i>	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL PEAK FLOW (cfs)**									135.7	205.9	239.5	
AVERAGE (cfs/ac)						2.45	3.53	4.14				
cfs/ac from City of Santa Paula Storm Drain Master Plan***						1.8	2.7	3.2				

APPENDIX C HIGHWAY 126 CULVERT CALCULATIONS

EXISTING CONDITION CULVERT DATA SUMMARY

Pipe Number	Size (span x rise)	Invert in	Invert out	Length	slope	headwater	Culvert Master (cfs)	Equivalent Pipe Dimensions for Culvert Program
2	48"x24"	220.44	220.25	140	0.001	225	33.7	43"x27"
5	52"x30"	220.64	219.69	150	0.006	225	49.5	50"x31"
6	52"x30"	220.44	220.25	172	0.001	225	43.2	50"x31"
8	24"x21"	222.25	220.79	140	0.010	225	15.2	used a 24" cmp
9	Currently no water is directed there in the existing condition, but the City of Santa Paula master plan has the majority of the onsite water planned and sized to go to Todd Lane Drain							

EXISTING CONDITION ROUTING TO CULVERTS

(proposed condition not to exceed peak flows)

Pipe Number	Existing Subarea	Area (ac)	Q10 (cfs)	Q100 (cfs)
2	(B1 + B2)/2	13.64	11.65	25.30
8	(B1 + B2)/2	13.64	11.65	25.30
5	C1a+C1b+C1c+C2	23.22	17.07	41.37
6	D	7.26	7.86	19.56
Adams	A	2.82	2.8	6.5

PROPOSED CONDITION ROUTING TO CULVERTS

Existing Condition Pipe Number	Proposed Condition Pipe Number	Proposed Subarea	Area (ac)	Q10 (cfs)	Q100 (cfs)
2	2	B1	17.88	11.80	20.10
8	8	B2	9.53	8.6	16.2
5,6	5	C	24.89354	26.80	46.00

**APPENDIX C:
DETENTION BASIN CALCULATIONS**

Detention Basin	Contributing Subarea	Basin Volume (cf)	Outflow Pipe Location	Peak Inflow to Basin 10 year (cfs)	Peak Outflow 10 year (cfs)	Peak Inflow to Basin 50 year (cfs)	Peak Outflow 50 year (cfs)	Peak Inflow to Basin 100 year (cfs)	Peak Outflow 100 year (cfs)
1	B1 - 17.88 ac	163,525	2	43.9	11.8	66.8	21.1	82.5	20.1
2	B2 - 9.53 ac	104,136	8	25.4	8.6	33.7	17.6	37.91	16.2
3	C - 24.89 ac	78,200	5	52	26.8	84	41.7	95	46

PROPOSED CONDITION WATER QUALITY REQUIREMENTS

Subarea	Drainage Area (acres)	Railroad Right of Way Area (acres)	Total Required Treatment Area (acres)	Volume Based Water Quality Required (ft³)**
A	2.5	0.1	0.0	0.0
B1a	8.5	0.4	8.1	16563.4
B1b	1.9	0.0	1.9	3793.2
B1c	7.6	0.4	7.2	14634.7
B2a	5.5	0.4	5.1	10395.0
B2b	4.0	0.7	3.3	6807.0
C1	15.7	0.7	15.0	30556.5
C2	9.2	0.7	8.6	17501.6
D	5.6	0.6	4.9	10096.9
			Total Volume	110348.3

** Calculated using a 75% impervious area average
 Used method in SQUIMP manual page 5-5 for calculations
 (same value as a 0.75 in storm event as stated in new permit)

VENTURA COUNTY WATERSHED PROTECTION DISTRICT
TIME OF CONCENTRATION
TC Program Version: 2.6.2008.11
Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed A

Name	Zone	Storm	Soil	Area (acres)	TC (min)
A	K	10	4.00	1.8 / 2	TC ERROR
A	K	25	4.00	1.8 / 2	TC ERROR
A	K	50	4.00	1.8 / 2	TC ERROR
A	K	100	4.00	1.8 / 2	TC ERROR

Watershed Name: Watershed A

Sub-Area Name: A
Computing Tc for all rainfall frequencies for sub-area A...

Tc for frequency = 10.00: 68.003 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 68.003 min. = 68 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.8
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 0.991
C Total: 0.771
Sum Q Segments (cfs): 1.37
Q Total (cfs): 1.37
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 4,080.19
Time of Concentration (min): 68.003

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 1.0498
Flow Type: Overland
Length (ft): 33
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 5.6
Overland Type: Mountain
Development Type: Industrial

Map Slope: 0.0606
Effective Slope: 0.0606
Q for Flow Path (cfs): 0.08
Avg Velocity (ft/s): 0.52
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 66.9535
Flow Type: Channel
Length (ft): 1799
Top Elevation (ft): 248
Bottom Elevation (ft): 220
Contributing Area (acres): 1.7
Percent of Sub-Area (%): 94.4
Bottom Width (ft): 10
Side Slope (H:V): 2
Manning's N: 0.2
Map Slope: 0.0156
Q for Flow Path (cfs): 1.30
Q Top (cfs): 0.08
Q Bottom (cfs): 1.37
Velocity Top (ft/s): 0.14
Velocity Bottom (ft/s): 0.41
Avg Velocity (ft/s): 0.27
Wave Velocity (ft/s): 0.45

Tc for frequency = 25.00: 63.764 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 63.764 min. = 64 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.8
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 1.145
C Total: 0.791
Sum Q Segments (cfs): 1.63
Q Total (cfs): 1.63
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 3,825.82
Time of Concentration (min): 63.764

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.8519
Flow Type: Overland
Length (ft): 33
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 5.6
Overland Type: Mountain
Development Type: Industrial
Map Slope: 0.0606
Effective Slope: 0.0606
Q for Flow Path (cfs): 0.09
Avg Velocity (ft/s): 0.65
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 62.9118
Flow Type: Channel
Length (ft): 1799
Top Elevation (ft): 248
Bottom Elevation (ft): 220
Contributing Area (acres): 1.7
Percent of Sub-Area (%): 94.4
Bottom Width (ft): 10
Side Slope (H:V): 2
Manning's N: 0.2
Map Slope: 0.0156
Q for Flow Path (cfs): 1.54
Q Top (cfs): 0.09
Q Bottom (cfs): 1.63
Velocity Top (ft/s): 0.15
Velocity Bottom (ft/s): 0.44
Avg Velocity (ft/s): 0.29
Wave Velocity (ft/s): 0.48

Tc for frequency = 50.00: 60.187 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 60.187 min. = 60 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.8
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 1.309
C Total: 0.812
Sum Q Segments (cfs): 1.91
Q Total (cfs): 1.91
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 3,611.22
Time of Concentration (min): 60.187

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.5500
Flow Type: Overland
Length (ft): 33
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 5.6
Overland Type: Mountain
Development Type: Industrial
Map Slope: 0.0606
Effective Slope: 0.0606
Q for Flow Path (cfs): 0.11
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 59.6370
Flow Type: Channel
Length (ft): 1799
Top Elevation (ft): 248
Bottom Elevation (ft): 220
Contributing Area (acres): 1.7
Percent of Sub-Area (%): 94.4
Bottom Width (ft): 10
Side Slope (H:V): 2
Manning's N: 0.2
Map Slope: 0.0156
Q for Flow Path (cfs): 1.81
Q Top (cfs): 0.11
Q Bottom (cfs): 1.91
Velocity Top (ft/s): 0.15
Velocity Bottom (ft/s): 0.46
Avg Velocity (ft/s): 0.31
Wave Velocity (ft/s): 0.50

Tc for frequency = 100.00: 56.998 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 56.998 min. = 57 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: A
Total Area (ac): 1.8
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 1.483
C Total: 0.834
Sum Q Segments (cfs): 2.23
Q Total (cfs): 2.23
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 3,419.86
Time of Concentration (min): 56.998

DATA FOR FLOW PATH 1

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 0.5500
Flow Type: Overland
Length (ft): 33
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.1
Percent of Sub-Area (%): 5.6
Overland Type: Mountain
Development Type: Industrial
Map Slope: 0.0606
Effective Slope: 0.0606
Q for Flow Path (cfs): 0.12
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: FlowPath
FLOW PATH TRAVEL TIME (min): 56.4477
Flow Type: Channel
Length (ft): 1799
Top Elevation (ft): 248
Bottom Elevation (ft): 220
Contributing Area (acres): 1.7
Percent of Sub-Area (%): 94.4
Bottom Width (ft): 10
Side Slope (H:V): 2
Manning's N: 0.2
Map Slope: 0.0156
Q for Flow Path (cfs): 2.10
Q Top (cfs): 0.12
Q Bottom (cfs): 2.23
Velocity Top (ft/s): 0.16
Velocity Bottom (ft/s): 0.49
Avg Velocity (ft/s): 0.33
Wave Velocity (ft/s): 0.53

VENTURA COUNTY WATERSHED PROTECTION DISTRICT

TIME OF CONCENTRATION

TC Program Version: 2.6.2008.11

Project:

Date: 12:00:00 AM

Engineer: Kinsey Hensley

Consultant:

 S U M M A R Y O F C O M P U T A T I O N S

Watershed Name: Watershed B

Name	Zone	Storm	Soil	Area (acres)	TC (min)
B1a	K	10	3.00	8.5 / 8	9.681 / 10
B1a	K	25	3.00	8.5 / 8	8.250 / 8
B1a	K	50	3.00	8.5 / 8	6.980 / 7
B1a	K	100	3.00	8.5 / 8	5.893 / 6
B1b	K	10	3.00	3.7 / 4	10.032 / 10
B1b	K	25	3.00	3.7 / 4	9.768 / 10
B1b	K	50	3.00	3.7 / 4	7.961 / 8
B1b	K	100	3.00	3.7 / 4	7.130 / 7
B1c	K	10	4.00	7.6 / 8	8.505 / 9
B1c	K	25	4.00	7.6 / 8	7.256 / 7
B1c	K	50	4.00	7.6 / 8	5.583 / 6
B1c	K	100	4.00	7.6 / 8	TC ERROR
B2a	K	10	4.00	5.5 / 5	10.228 / 10
B2a	K	25	4.00	5.5 / 5	9.985 / 10
B2a	K	50	4.00	5.5 / 5	7.749 / 8
B2a	K	100	4.00	5.5 / 5	7.580 / 8
B2b	K	10	4.00	4.0 / 4	5.231 / 5
B2b	K	25	4.00	4.0 / 4	TC ERROR
B2b	K	50	4.00	4.0 / 4	TC ERROR
B2b	K	100	4.00	4.0 / 4	TC ERROR

Watershed Name: Watershed B

Sub-Area Name: Bla
Computing Tc for all rainfall frequencies for sub-area Bla...

Tc for frequency = 10.00: 9.681 Minutes
DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 9.681 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: Bla
Total Area (ac): 8.45
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.524
C Total: 0.889
Sum Q Segments (cfs): 18.96
Q Total (cfs): 18.96
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 580.87
Time of Concentration (min): 9.681

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 5.8531
Flow Type: Overland
Length (ft): 144
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.6
Overland Type: Valley
Development Type: Undeveloped

Map Slope: 0.0139
Effective Slope: 0.0139
Q for Flow Path (cfs): 0.11
Avg Velocity (ft/s): 0.41
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.25
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.9057
Flow Type: Street
Length (ft): 315.5
Top Elevation (ft): 248
Bottom Elevation (ft): 244
Contributing Area (acres): 2
Percent of Sub-Area (%): 23.7
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0127
Q for Flow Path (cfs): 4.49
Q Top (cfs): 0.11
Q Bottom (cfs): 4.60
Velocity Top (ft/s): 1.04
Velocity Bottom (ft/s): 2.64
Avg Velocity (ft/s): 1.84
Wave Velocity (ft/s): 2.76
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.9224
Flow Type: Pipe
Length (ft): 809.9
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.4
Percent of Sub-Area (%): 75.7
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0198
Q for Flow Path (cfs): 14.36
Q Top (cfs): 4.60
Q Bottom (cfs): 18.96

Avg Velocity (ft/s): 5.20
Wave Velocity (ft/s): 7.02

Tc for frequency = 25.00: 8.250 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 8.250 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: Bla
Total Area (ac): 8.45
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.191
C Total: 0.901
Sum Q Segments (cfs): 24.29
Q Total (cfs): 24.29
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 495.02
Time of Concentration (min): 8.250

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 4.6079
Flow Type: Overland
Length (ft): 144
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.6
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0139
Effective Slope: 0.0139
Q for Flow Path (cfs): 0.14
Avg Velocity (ft/s): 0.52
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.29

DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.7907
Flow Type: Street
Length (ft): 315.5
Top Elevation (ft): 248
Bottom Elevation (ft): 244
Contributing Area (acres): 2
Percent of Sub-Area (%): 23.7
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0127
Q for Flow Path (cfs): 5.75
Q Top (cfs): 0.14
Q Bottom (cfs): 5.89
Velocity Top (ft/s): 1.10
Velocity Bottom (ft/s): 2.81
Avg Velocity (ft/s): 1.96
Wave Velocity (ft/s): 2.94
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.8517
Flow Type: Pipe
Length (ft): 809.9
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.4
Percent of Sub-Area (%): 75.7
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0198
Q for Flow Path (cfs): 18.40
Q Top (cfs): 5.89
Q Bottom (cfs): 24.29
Avg Velocity (ft/s): 5.54
Wave Velocity (ft/s): 7.29

Tc for frequency = 50.00: 6.980 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 6.980 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: Bla
Total Area (ac): 8.45
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.771
C Total: 0.908
Sum Q Segments (cfs): 28.92
Q Total (cfs): 28.92
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 418.78
Time of Concentration (min): 6.980

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.9380
Flow Type: Overland
Length (ft): 144
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.6
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0139
Effective Slope: 0.0139
Q for Flow Path (cfs): 0.17
Avg Velocity (ft/s): 0.61
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.32

DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.7137
Flow Type: Street
Length (ft): 315.5
Top Elevation (ft): 248
Bottom Elevation (ft): 244
Contributing Area (acres): 2
Percent of Sub-Area (%): 23.7
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0127
Q for Flow Path (cfs): 6.85
Q Top (cfs): 0.17
Q Bottom (cfs): 7.02
Velocity Top (ft/s): 1.15
Velocity Bottom (ft/s): 2.94
Avg Velocity (ft/s): 2.05
Wave Velocity (ft/s): 3.07
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.3278
Flow Type: Pipe
Length (ft): 809.9
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.4
Percent of Sub-Area (%): 75.7
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0198
Q for Flow Path (cfs): 21.91
Q Top (cfs): 7.02
Q Bottom (cfs): 28.92
Avg Velocity (ft/s): 7.56
Wave Velocity (ft/s): 10.17

Tc for frequency = 100.00: 5.893 Minutes

DATA FOR SUB AREA 1

SUB AREA TIME OF CONCENTRATION: 5.893 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: Bla
Total Area (ac): 8.45
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.590
C Total: 0.914
Sum Q Segments (cfs): 35.45
Q Total (cfs): 35.45
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 353.61
Time of Concentration (min): 5.893

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 2.9683
Flow Type: Overland
Length (ft): 144
Top Elevation (ft): 250
Bottom Elevation (ft): 248
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.6
Overland Type: Valley
Development Type: Undeveloped
Map Slope: 0.0139
Effective Slope: 0.0139
Q for Flow Path (cfs): 0.21
Avg Velocity (ft/s): 0.81
Passed Scour Check: YES
Scour Velocity (ft/sec): 1.35

DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.6282
Flow Type: Street
Length (ft): 315.5
Top Elevation (ft): 248
Bottom Elevation (ft): 244
Contributing Area (acres): 2
Percent of Sub-Area (%): 23.7
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0127
Q for Flow Path (cfs): 8.39
Q Top (cfs): 0.21
Q Bottom (cfs): 8.60
Velocity Top (ft/s): 1.21
Velocity Bottom (ft/s): 3.09
Avg Velocity (ft/s): 2.15
Wave Velocity (ft/s): 3.23
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.2970
Flow Type: Pipe
Length (ft): 809.9
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.4
Percent of Sub-Area (%): 75.7
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0198
Q for Flow Path (cfs): 26.85
Q Top (cfs): 8.60
Q Bottom (cfs): 35.45
Avg Velocity (ft/s): 7.96
Wave Velocity (ft/s): 10.41

Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: Blb
Computing Tc for all rainfall frequencies for sub-area Blb...

Tc for frequency = 10.00: 10.032 Minutes
DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 10.032 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: Blb
Total Area (ac): 3.65
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.524
C Total: 0.889
Sum Q Segments (cfs): 8.19
Q Total (cfs): 8.19
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 601.92
Time of Concentration (min): 10.032

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.2000
Flow Type: Overland
Length (ft): 96
Top Elevation (ft): 251
Bottom Elevation (ft): 250
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.4

Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0104
Effective Slope: 0.0104
Q for Flow Path (cfs): 0.11
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 5.0210
Flow Type: Street
Length (ft): 849.9
Top Elevation (ft): 250
Bottom Elevation (ft): 237
Contributing Area (acres): 1.2
Percent of Sub-Area (%): 32.9
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0153
Q for Flow Path (cfs): 2.69
Q Top (cfs): 0.11
Q Bottom (cfs): 2.81
Velocity Top (ft/s): 1.21
Velocity Bottom (ft/s): 2.55
Avg Velocity (ft/s): 1.88
Wave Velocity (ft/s): 2.82
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.8109
Flow Type: Pipe
Length (ft): 353.5
Top Elevation (ft): 237
Bottom Elevation (ft): 228
Contributing Area (acres): 2.4
Percent of Sub-Area (%): 65.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0255
Q for Flow Path (cfs): 5.39
Q Top (cfs): 2.81

Q Bottom (cfs): 8.19
Avg Velocity (ft/s): 2.41
Wave Velocity (ft/s): 3.25

Tc for frequency = 25.00: 9.768 Minutes

DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 9.768 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: Blb
Total Area (ac): 3.65
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.806
C Total: 0.894
Sum Q Segments (cfs): 9.16
Q Total (cfs): 9.16
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 586.10
Time of Concentration (min): 9.768

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.0969
Flow Type: Overland
Length (ft): 96
Top Elevation (ft): 251
Bottom Elevation (ft): 250
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.4
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0104
Effective Slope: 0.0104
Q for Flow Path (cfs): 0.13
Avg Velocity (ft/s): 0.52
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 4.8924
Flow Type: Street
Length (ft): 849.9
Top Elevation (ft): 250
Bottom Elevation (ft): 237
Contributing Area (acres): 1.2
Percent of Sub-Area (%): 32.9
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0153
Q for Flow Path (cfs): 3.01
Q Top (cfs): 0.13
Q Bottom (cfs): 3.14
Velocity Top (ft/s): 1.24
Velocity Bottom (ft/s): 2.62
Avg Velocity (ft/s): 1.93
Wave Velocity (ft/s): 2.90
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.7791
Flow Type: Pipe
Length (ft): 353.5
Top Elevation (ft): 237
Bottom Elevation (ft): 228
Contributing Area (acres): 2.4
Percent of Sub-Area (%): 65.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0255
Q for Flow Path (cfs): 6.02
Q Top (cfs): 3.14
Q Bottom (cfs): 9.16
Avg Velocity (ft/s): 2.49
Wave Velocity (ft/s): 3.31

Tc for frequency = 50.00: 7.961 Minutes

DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 7.961 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: Blb
Total Area (ac): 3.65
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.525
C Total: 0.905
Sum Q Segments (cfs): 11.65
Q Total (cfs): 11.65
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 477.63
Time of Concentration (min): 7.961

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.6000
Flow Type: Overland
Length (ft): 96
Top Elevation (ft): 251
Bottom Elevation (ft): 250
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.4
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0104
Effective Slope: 0.0104
Q for Flow Path (cfs): 0.16
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 4.6269
Flow Type: Street
Length (ft): 849.9
Top Elevation (ft): 250
Bottom Elevation (ft): 237
Contributing Area (acres): 1.2
Percent of Sub-Area (%): 32.9
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0153
Q for Flow Path (cfs): 3.83
Q Top (cfs): 0.16
Q Bottom (cfs): 3.99
Velocity Top (ft/s): 1.31
Velocity Bottom (ft/s): 2.77
Avg Velocity (ft/s): 2.04
Wave Velocity (ft/s): 3.06
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.7336
Flow Type: Pipe
Length (ft): 353.5
Top Elevation (ft): 237
Bottom Elevation (ft): 228
Contributing Area (acres): 2.4
Percent of Sub-Area (%): 65.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0255
Q for Flow Path (cfs): 7.66
Q Top (cfs): 3.99
Q Bottom (cfs): 11.65
Avg Velocity (ft/s): 2.63
Wave Velocity (ft/s): 3.40

Tc for frequency = 100.00: 7.130 Minutes

DATA FOR SUB AREA 2

SUB AREA TIME OF CONCENTRATION: 7.130 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: Blb
Total Area (ac): 3.65
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 3.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.226
C Total: 0.911
Sum Q Segments (cfs): 14.06
Q Total (cfs): 14.06
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 427.81
Time of Concentration (min): 7.130

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.6000
Flow Type: Overland
Length (ft): 96
Top Elevation (ft): 251
Bottom Elevation (ft): 250
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.4
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0104
Effective Slope: 0.0104
Q for Flow Path (cfs): 0.19
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 4.4291
Flow Type: Street
Length (ft): 849.9
Top Elevation (ft): 250
Bottom Elevation (ft): 237
Contributing Area (acres): 1.2
Percent of Sub-Area (%): 32.9
Street Width (ft): 40
Curb Height (in): 6
Map Slope: 0.0153
Q for Flow Path (cfs): 4.62
Q Top (cfs): 0.19
Q Bottom (cfs): 4.81
Velocity Top (ft/s): 1.37
Velocity Bottom (ft/s): 2.89
Avg Velocity (ft/s): 2.13
Wave Velocity (ft/s): 3.20
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.1010
Flow Type: Pipe
Length (ft): 353.5
Top Elevation (ft): 237
Bottom Elevation (ft): 228
Contributing Area (acres): 2.4
Percent of Sub-Area (%): 65.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0255
Q for Flow Path (cfs): 9.24
Q Top (cfs): 4.81
Q Bottom (cfs): 14.06
Avg Velocity (ft/s): 3.98
Wave Velocity (ft/s): 5.35

Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: Blc
Computing Tc for all rainfall frequencies for sub-area Blc...

Tc for frequency = 10.00: 8.505 Minutes
DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 8.505 min. = 9 min.

SUB AREA INPUT DATA

Sub Area Name: Blc
Total Area (ac): 7.55
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.680
C Total: 0.876
Sum Q Segments (cfs): 17.73
Q Total (cfs): 17.73
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 510.28
Time of Concentration (min): 8.505

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.2067
Flow Type: Overland
Length (ft): 96.2
Top Elevation (ft): 248
Bottom Elevation (ft): 247.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.7

Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0052
Effective Slope: 0.0052
Q for Flow Path (cfs): 0.12
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.5930
Flow Type: Street
Length (ft): 251.9
Top Elevation (ft): 247.5
Bottom Elevation (ft): 244
Contributing Area (acres): 1.17
Percent of Sub-Area (%): 15.5
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0139
Q for Flow Path (cfs): 2.75
Q Top (cfs): 0.12
Q Bottom (cfs): 2.87
Velocity Top (ft/s): 1.09
Velocity Bottom (ft/s): 2.43
Avg Velocity (ft/s): 1.76
Wave Velocity (ft/s): 2.64
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 3.7049
Flow Type: Pipe
Length (ft): 1267
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.33
Percent of Sub-Area (%): 83.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0126
Q for Flow Path (cfs): 14.87
Q Top (cfs): 2.87

Q Bottom (cfs): 17.73
Avg Velocity (ft/s): 4.28
Wave Velocity (ft/s): 5.70

Tc for frequency = 25.00: 7.256 Minutes

DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 7.256 min. = 7 min.

SUB AREA INPUT DATA

Sub Area Name: Blc
Total Area (ac): 7.55
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.454
C Total: 0.890
Sum Q Segments (cfs): 23.21
Q Total (cfs): 23.21
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 435.35
Time of Concentration (min): 7.256

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.1325
Flow Type: Overland
Length (ft): 96.2
Top Elevation (ft): 248
Bottom Elevation (ft): 247.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.7
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0052
Effective Slope: 0.0052
Q for Flow Path (cfs): 0.15
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.4888
Flow Type: Street
Length (ft): 251.9
Top Elevation (ft): 247.5
Bottom Elevation (ft): 244
Contributing Area (acres): 1.17
Percent of Sub-Area (%): 15.5
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0139
Q for Flow Path (cfs): 3.60
Q Top (cfs): 0.15
Q Bottom (cfs): 3.75
Velocity Top (ft/s): 1.16
Velocity Bottom (ft/s): 2.60
Avg Velocity (ft/s): 1.88
Wave Velocity (ft/s): 2.82
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.6346
Flow Type: Pipe
Length (ft): 1267
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.33
Percent of Sub-Area (%): 83.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0126
Q for Flow Path (cfs): 19.46
Q Top (cfs): 3.75
Q Bottom (cfs): 23.21
Avg Velocity (ft/s): 5.93
Wave Velocity (ft/s): 8.02

Tc for frequency = 50.00: 5.583 Minutes

DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 5.583 min. = 6 min.

SUB AREA INPUT DATA

Sub Area Name: Blc
Total Area (ac): 7.55
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.100
C Total: 0.897
Sum Q Segments (cfs): 27.76
Q Total (cfs): 27.76
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 334.98
Time of Concentration (min): 5.583

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.6033
Flow Type: Overland
Length (ft): 96.2
Top Elevation (ft): 248
Bottom Elevation (ft): 247.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.7
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0052
Effective Slope: 0.0052
Q for Flow Path (cfs): 0.18
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.4232
Flow Type: Street
Length (ft): 251.9
Top Elevation (ft): 247.5
Bottom Elevation (ft): 244
Contributing Area (acres): 1.17
Percent of Sub-Area (%): 15.5
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0139
Q for Flow Path (cfs): 4.30
Q Top (cfs): 0.18
Q Bottom (cfs): 4.49
Velocity Top (ft/s): 1.22
Velocity Bottom (ft/s): 2.72
Avg Velocity (ft/s): 1.97
Wave Velocity (ft/s): 2.95
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.5566
Flow Type: Pipe
Length (ft): 1267
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.33
Percent of Sub-Area (%): 83.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 24
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0126
Q for Flow Path (cfs): 23.28
Q Top (cfs): 4.49
Q Bottom (cfs): 27.76
Avg Velocity (ft/s): 6.22
Wave Velocity (ft/s): 8.26

Tc for frequency = 100.00: 4.843 Minutes

DATA FOR SUB AREA 3

SUB AREA TIME OF CONCENTRATION: 4.843 min. = 5 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: Blc
Total Area (ac): 7.55
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 5.100
C Total: 0.904
Sum Q Segments (cfs): 34.81
Q Total (cfs): 34.81
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 290.60
Time of Concentration (min): 4.843

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.6033
Flow Type: Overland
Length (ft): 96.2
Top Elevation (ft): 248
Bottom Elevation (ft): 247.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.7
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0052
Effective Slope: 0.0052
Q for Flow Path (cfs): 0.23
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.3445
Flow Type: Street
Length (ft): 251.9
Top Elevation (ft): 247.5
Bottom Elevation (ft): 244
Contributing Area (acres): 1.17
Percent of Sub-Area (%): 15.5
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0139
Q for Flow Path (cfs): 5.39
Q Top (cfs): 0.23
Q Bottom (cfs): 5.62
Velocity Top (ft/s): 1.29
Velocity Bottom (ft/s): 2.88
Avg Velocity (ft/s): 2.08
Wave Velocity (ft/s): 3.12
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.8955
Flow Type: Pipe
Length (ft): 1267
Top Elevation (ft): 244
Bottom Elevation (ft): 228
Contributing Area (acres): 6.33
Percent of Sub-Area (%): 83.8
Initial Pipe Diameter (in): 30
Calculated Pipe Diameter (in): 27
Used Pipe Diameter (in): 30
Manning's N: 0.011
Map Slope: 0.0126
Q for Flow Path (cfs): 29.18
Q Top (cfs): 5.62
Q Bottom (cfs): 34.81
Avg Velocity (ft/s): 8.38
Wave Velocity (ft/s): 11.14

Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: B2a
Computing Tc for all rainfall frequencies for sub-area B2a...

Tc for frequency = 10.00: 10.228 Minutes
DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 10.228 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
Total Area (ac): 5.49
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.524
C Total: 0.873
Sum Q Segments (cfs): 12.10
Q Total (cfs): 12.10
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 613.69
Time of Concentration (min): 10.228

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.1633
Flow Type: Overland
Length (ft): 94.9
Top Elevation (ft): 233
Bottom Elevation (ft): 232.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.9

Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0053
Effective Slope: 0.0053
Q for Flow Path (cfs): 0.11
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 6.0670
Flow Type: Street
Length (ft): 427.6
Top Elevation (ft): 232.5
Bottom Elevation (ft): 232
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 48.3
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0012
Q for Flow Path (cfs): 5.84
Q Top (cfs): 0.11
Q Bottom (cfs): 5.95
Velocity Top (ft/s): 0.42
Velocity Bottom (ft/s): 1.15
Avg Velocity (ft/s): 0.78
Wave Velocity (ft/s): 1.17
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.9978
Flow Type: Pipe
Length (ft): 357.4
Top Elevation (ft): 232
Bottom Elevation (ft): 220.5
Contributing Area (acres): 2.79
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0322
Q for Flow Path (cfs): 6.15
Q Top (cfs): 5.95

Q Bottom (cfs): 12.10
Avg Velocity (ft/s): 4.66
Wave Velocity (ft/s): 5.97

Tc for frequency = 25.00: 9.985 Minutes

DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 9.985 min. = 10 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
Total Area (ac): 5.49
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 2.806
C Total: 0.879
Sum Q Segments (cfs): 13.54
Q Total (cfs): 13.54
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 599.10
Time of Concentration (min): 9.985

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 3.0898
Flow Type: Overland
Length (ft): 94.9
Top Elevation (ft): 233
Bottom Elevation (ft): 232.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.9
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0053
Effective Slope: 0.0053
Q for Flow Path (cfs): 0.12
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 5.8974
Flow Type: Street
Length (ft): 427.6
Top Elevation (ft): 232.5
Bottom Elevation (ft): 232
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 48.3
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0012
Q for Flow Path (cfs): 6.54
Q Top (cfs): 0.12
Q Bottom (cfs): 6.66
Velocity Top (ft/s): 0.43
Velocity Bottom (ft/s): 1.18
Avg Velocity (ft/s): 0.81
Wave Velocity (ft/s): 1.21
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.9978
Flow Type: Pipe
Length (ft): 357.4
Top Elevation (ft): 232
Bottom Elevation (ft): 220.5
Contributing Area (acres): 2.79
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 15
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0322
Q for Flow Path (cfs): 6.88
Q Top (cfs): 6.66
Q Bottom (cfs): 13.54
Avg Velocity (ft/s): 4.75
Wave Velocity (ft/s): 5.97

Tc for frequency = 50.00: 7.749 Minutes

DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 7.749 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
Total Area (ac): 5.49
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.525
C Total: 0.891
Sum Q Segments (cfs): 17.24
Q Total (cfs): 17.24
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 464.97
Time of Concentration (min): 7.749

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.5817
Flow Type: Overland
Length (ft): 94.9
Top Elevation (ft): 233
Bottom Elevation (ft): 232.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.9
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0053
Effective Slope: 0.0053
Q for Flow Path (cfs): 0.16
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 5.5497
Flow Type: Street
Length (ft): 427.6
Top Elevation (ft): 232.5
Bottom Elevation (ft): 232
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 48.3
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0012
Q for Flow Path (cfs): 8.32
Q Top (cfs): 0.16
Q Bottom (cfs): 8.48
Velocity Top (ft/s): 0.46
Velocity Bottom (ft/s): 1.25
Avg Velocity (ft/s): 0.86
Wave Velocity (ft/s): 1.28
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.6181
Flow Type: Pipe
Length (ft): 357.4
Top Elevation (ft): 232
Bottom Elevation (ft): 220.5
Contributing Area (acres): 2.79
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0322
Q for Flow Path (cfs): 8.76
Q Top (cfs): 8.48
Q Bottom (cfs): 17.24
Avg Velocity (ft/s): 7.35
Wave Velocity (ft/s): 9.64

Tc for frequency = 100.00: 7.580 Minutes

DATA FOR SUB AREA 4

SUB AREA TIME OF CONCENTRATION: 7.580 min. = 8 min.

SUB AREA INPUT DATA

Sub Area Name: B2a
Total Area (ac): 5.49
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.953
C Total: 0.895
Sum Q Segments (cfs): 19.43
Q Total (cfs): 19.43
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 454.83
Time of Concentration (min): 7.580

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 1.5817
Flow Type: Overland
Length (ft): 94.9
Top Elevation (ft): 233
Bottom Elevation (ft): 232.5
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 0.9
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0053
Effective Slope: 0.0053
Q for Flow Path (cfs): 0.18
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 5.3852
Flow Type: Street
Length (ft): 427.6
Top Elevation (ft): 232.5
Bottom Elevation (ft): 232
Contributing Area (acres): 2.65
Percent of Sub-Area (%): 48.3
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0012
Q for Flow Path (cfs): 9.38
Q Top (cfs): 0.18
Q Bottom (cfs): 9.56
Velocity Top (ft/s): 0.47
Velocity Bottom (ft/s): 1.29
Avg Velocity (ft/s): 0.88
Wave Velocity (ft/s): 1.32
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 0.6136
Flow Type: Pipe
Length (ft): 357.4
Top Elevation (ft): 232
Bottom Elevation (ft): 220.5
Contributing Area (acres): 2.79
Percent of Sub-Area (%): 50.8
Initial Pipe Diameter (in): 24
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 24
Manning's N: 0.011
Map Slope: 0.0322
Q for Flow Path (cfs): 9.87
Q Top (cfs): 9.56
Q Bottom (cfs): 19.43
Avg Velocity (ft/s): 7.52
Wave Velocity (ft/s): 9.71

Project:
Date: 12:00:00 AM
Engineer: Kinsey Hensley
Consultant:

Sub-Area Name: B2b
Computing Tc for all rainfall frequencies for sub-area B2b...

Tc for frequency = 10.00: 5.231 Minutes
DATA FOR SUB AREA 5

SUB AREA TIME OF CONCENTRATION: 5.231 min. = 5 min.

SUB AREA INPUT DATA

Sub Area Name: B2b
Total Area (ac): 4.04
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 10
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 3.720
C Total: 0.893
Sum Q Segments (cfs): 13.42
Q Total (cfs): 13.42
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 313.86
Time of Concentration (min): 5.231

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 0.9767
Flow Type: Overland
Length (ft): 29.3
Top Elevation (ft): 231.5
Bottom Elevation (ft): 231.25
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.2

Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0085
Effective Slope: 0.0085
Q for Flow Path (cfs): 0.17
Avg Velocity (ft/s): 0.50
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.8694
Flow Type: Street
Length (ft): 149.1
Top Elevation (ft): 231.25
Bottom Elevation (ft): 231
Contributing Area (acres): 1.37
Percent of Sub-Area (%): 33.9
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0017
Q for Flow Path (cfs): 4.55
Q Top (cfs): 0.17
Q Bottom (cfs): 4.72
Velocity Top (ft/s): 0.53
Velocity Bottom (ft/s): 1.24
Avg Velocity (ft/s): 0.89
Wave Velocity (ft/s): 1.33
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 2.3849
Flow Type: Pipe
Length (ft): 389.8
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2.62
Percent of Sub-Area (%): 64.9
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 18
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0128
Q for Flow Path (cfs): 8.70
Q Top (cfs): 4.72

Q Bottom (cfs): 13.42
Avg Velocity (ft/s): 2.11
Wave Velocity (ft/s): 2.72

Tc for frequency = 25.00: 4.380 Minutes

DATA FOR SUB AREA 5

SUB AREA TIME OF CONCENTRATION: 4.380 min. = 4 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B2b
Total Area (ac): 4.04
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 25
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 4.275
C Total: 0.898
Sum Q Segments (cfs): 15.52
Q Total (cfs): 15.52
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 262.79
Time of Concentration (min): 4.380

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 0.9488
Flow Type: Overland
Length (ft): 29.3
Top Elevation (ft): 231.5
Bottom Elevation (ft): 231.25
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.2
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0085
Effective Slope: 0.0085
Q for Flow Path (cfs): 0.19
Avg Velocity (ft/s): 0.51
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.8024
Flow Type: Street
Length (ft): 149.1
Top Elevation (ft): 231.25
Bottom Elevation (ft): 231
Contributing Area (acres): 1.37
Percent of Sub-Area (%): 33.9
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0017
Q for Flow Path (cfs): 5.26
Q Top (cfs): 0.19
Q Bottom (cfs): 5.45
Velocity Top (ft/s): 0.55
Velocity Bottom (ft/s): 1.28
Avg Velocity (ft/s): 0.92
Wave Velocity (ft/s): 1.38
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.6286
Flow Type: Pipe
Length (ft): 389.8
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2.62
Percent of Sub-Area (%): 64.9
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0128
Q for Flow Path (cfs): 10.06
Q Top (cfs): 5.45
Q Bottom (cfs): 15.52
Avg Velocity (ft/s): 3.00
Wave Velocity (ft/s): 3.99

Tc for frequency = 50.00: 3.786 Minutes

DATA FOR SUB AREA 5

SUB AREA TIME OF CONCENTRATION: 3.786 min. = 4 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B2b
Total Area (ac): 4.04
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 50
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 5.160
C Total: 0.904
Sum Q Segments (cfs): 18.85
Q Total (cfs): 18.85
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 227.14
Time of Concentration (min): 3.786

DATA FOR FLOW PATH 1

Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 0.4883
Flow Type: Overland
Length (ft): 29.3
Top Elevation (ft): 231.5
Bottom Elevation (ft): 231.25
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.2
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0085
Effective Slope: 0.0085
Q for Flow Path (cfs): 0.23
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.7164
Flow Type: Street
Length (ft): 149.1
Top Elevation (ft): 231.25
Bottom Elevation (ft): 231
Contributing Area (acres): 1.37
Percent of Sub-Area (%): 33.9
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0017
Q for Flow Path (cfs): 6.39
Q Top (cfs): 0.23
Q Bottom (cfs): 6.63
Velocity Top (ft/s): 0.58
Velocity Bottom (ft/s): 1.35
Avg Velocity (ft/s): 0.97
Wave Velocity (ft/s): 1.45
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.5811
Flow Type: Pipe
Length (ft): 389.8
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2.62
Percent of Sub-Area (%): 64.9
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0128
Q for Flow Path (cfs): 12.22
Q Top (cfs): 6.63
Q Bottom (cfs): 18.85
Avg Velocity (ft/s): 3.15
Wave Velocity (ft/s): 4.11

Tc for frequency = 100.00: 3.798 Minutes

DATA FOR SUB AREA 5

SUB AREA TIME OF CONCENTRATION: 3.798 min. = 4 min. ** TC ERROR **

SUB AREA INPUT DATA

Sub Area Name: B2b
Total Area (ac): 4.04
Flood Zone: 2
Rainfall Zone: K
Storm Frequency (years): 100
Development Type: Industrial
Soil Type: 4.00
Percent Impervious: 70
SUB AREA OUTPUT

Intensity (in/hr): 5.100
C Total: 0.904
Sum Q Segments (cfs): 18.62
Q Total (cfs): 18.62
Sum Percent Area (%): 100.0
Sum of Flow Path Travel Times (sec): 227.90
Time of Concentration (min): 3.798

DATA FOR FLOW PATH 1

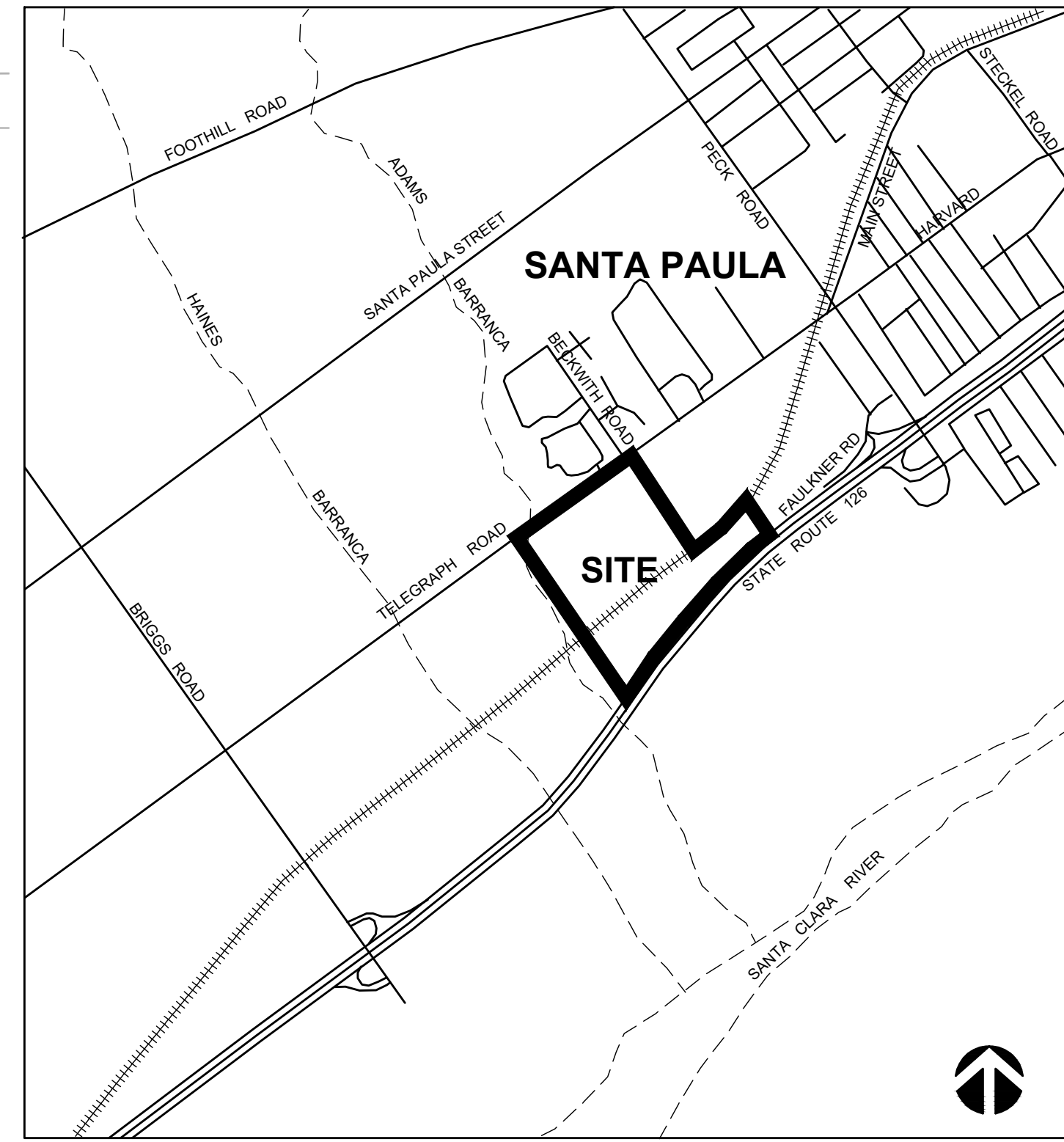
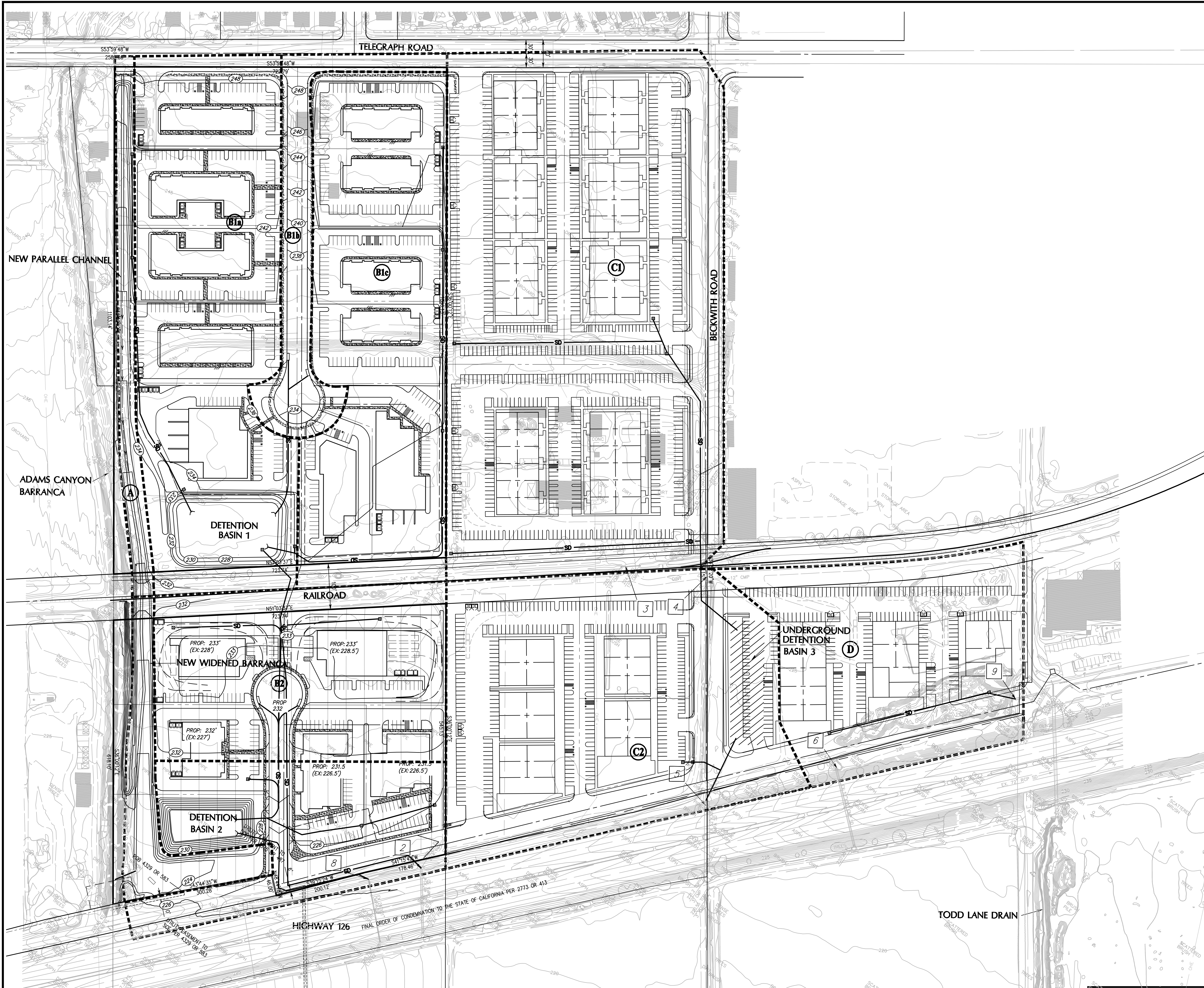
Flow Path Name: Overland
FLOW PATH TRAVEL TIME (min): 0.4883
Flow Type: Overland
Length (ft): 29.3
Top Elevation (ft): 231.5
Bottom Elevation (ft): 231.25
Contributing Area (acres): 0.05
Percent of Sub-Area (%): 1.2
Overland Type: Valley
Development Type: Industrial
Map Slope: 0.0085
Effective Slope: 0.0085
Q for Flow Path (cfs): 0.23
Avg Velocity (ft/s): 1.00
Passed Scour Check: N/A
DATA FOR FLOW PATH 2

Flow Path Name: Street
FLOW PATH TRAVEL TIME (min): 1.7215
Flow Type: Street
Length (ft): 149.1
Top Elevation (ft): 231.25
Bottom Elevation (ft): 231
Contributing Area (acres): 1.37
Percent of Sub-Area (%): 33.9
Street Width (ft): 32
Curb Height (in): 6
Map Slope: 0.0017
Q for Flow Path (cfs): 6.32
Q Top (cfs): 0.23
Q Bottom (cfs): 6.55
Velocity Top (ft/s): 0.58
Velocity Bottom (ft/s): 1.34
Avg Velocity (ft/s): 0.96
Wave Velocity (ft/s): 1.44
DATA FOR FLOW PATH 3

Flow Path Name: Pipe
FLOW PATH TRAVEL TIME (min): 1.5885
Flow Type: Pipe
Length (ft): 389.8
Top Elevation (ft): 231
Bottom Elevation (ft): 226
Contributing Area (acres): 2.62
Percent of Sub-Area (%): 64.9
Initial Pipe Diameter (in): 36
Calculated Pipe Diameter (in): 21
Used Pipe Diameter (in): 36
Manning's N: 0.011
Map Slope: 0.0128
Q for Flow Path (cfs): 12.08
Q Top (cfs): 6.55
Q Bottom (cfs): 18.62
Avg Velocity (ft/s): 3.13
Wave Velocity (ft/s): 4.09

APPENDIX D

Proposed Hydrology Exhibit B



VICINITY MAP
NOT TO SCALE

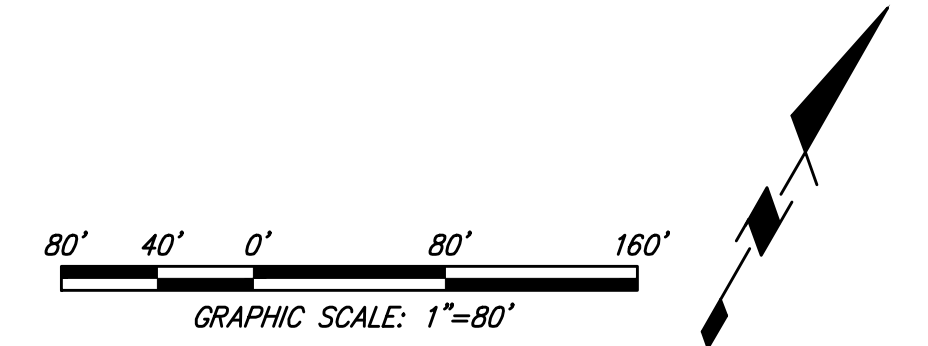
DRAINAGE AREA CALCULATIONS (non-detained)

Watershed	Subarea	Area (ac.)	10-year Q10 (cfs)	50-year Q50 (cfs)	100-year Q100 (cfs)
ADAMS BARRANCA	A	2.5	2.7	3.4	3.8
WEST 126 CULVERTS (2)	B1a	8.5	19.0	28.9	35.5
	B1b	1.9	8.2	11.7	14.1
	B1c	7.6	17.7	27.8	34.6
B1 Total		17.9	33.0	68.3	84.1
WEST 126 CULVERTS (8)	B2a	5.5	12.1	17.2	19.4
	B2b	4.0	13.4	16.4	18.4
B2 Total		9.5	25.5	33.7	37.8
TOTAL UNDETAILED		27.4	58.5	102.0	122.0
EAST 126 CULVERTS (5)	C1	15.7	32.7	52.7	59.8
	C2	9.2	19.3	31.1	35.3
TOTAL		24.9	52.0	84.0	95.0
TODD LANE DRAIN	D	5.6	10.6	16.6	18.7

DRAINAGE AREA CALCULATIONS (detained)

Watershed	Subarea	Area (ac.)	10-year Q10 (cfs)	50-year Q50 (cfs)	100-year Q100 (cfs)
ADAMS BARRANCA	A	2.5	-	-	-
WEST 126 CULVERTS (2)	B1 Total	17.9	11.8	21.2	20.5
	B2 Total	9.5	8.6	17.6	15.2
B TOTAL		27.4	20.4	38.8	35.7
EAST 126 CULVERTS (5)	C TOTAL	24.9	26.8	41.7	46.0
TODD LANE DRAIN	D	5.6	10.6	16.6	18.7

- LEGEND**
- DRAINAGE AREA LIMITS
 - EXISTING STORM DRAIN
 - STORM DRAIN INLET
 - STORM DRAIN
 - PROPOSED CONTOUR
 - TREATMENT/INFILTRATION/DETENTION AREA
 - DRAINAGE AREA
 - PIPE NUMBER



<p>JENSEN DESIGN & SURVEY, INC. www.jdscivil.com</p>	<p>1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979</p>	<p>PROPOSED HYDROLOGY FOR SANTA PAULA WEST (NORTH OF 126)</p> <p>City of Santa Paula</p>	<p>EXHIBIT B</p> <p>1 OF 1</p>
	<p>SCALE: 1" = 80'</p> <p>DATE: Nov 19, 2015</p>		

COUNTY OF VENTURA STATE OF CALIFORNIA

C:\PARR\4492\Eng\Exhibits\Hydrology Reference\4492_PRR-01_HYDRO.dwg Nov 19, 2015, 11:48am kpcoc

APPENDIX E

Existing FIRM Maps & Soils Maps

JOINS PANEL 0776

6230000 FT

119°05'37.5"

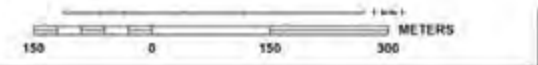
34°20'37.5"



County
Areas

... in the Flood Insurance Study Report for this jurisdiction.

Insurance is available in this community, contact your Insur-
ance Agent for more information. For the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0778E

FIRM
FLOOD INSURANCE RATE MAP
VENTURA COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 778 OF 1275
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0778	E
VENTURA COUNTY	060413	0778	E

Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
06111C0778E

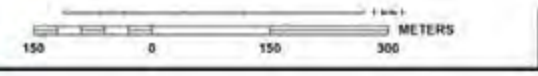
EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Insurance is available in this community, contact your Insurance Agent or the National Flood Insurance Program at 1-800-638-6620.



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0779E

FIRM
FLOOD INSURANCE RATE MAP
VENTURA COUNTY,
CALIFORNIA
AND INCORPORATED AREAS

PANEL 779 OF 1275
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SANTA PAULA, CITY OF	060420	0779	E
VENTURA COUNTY	060413	0779	E

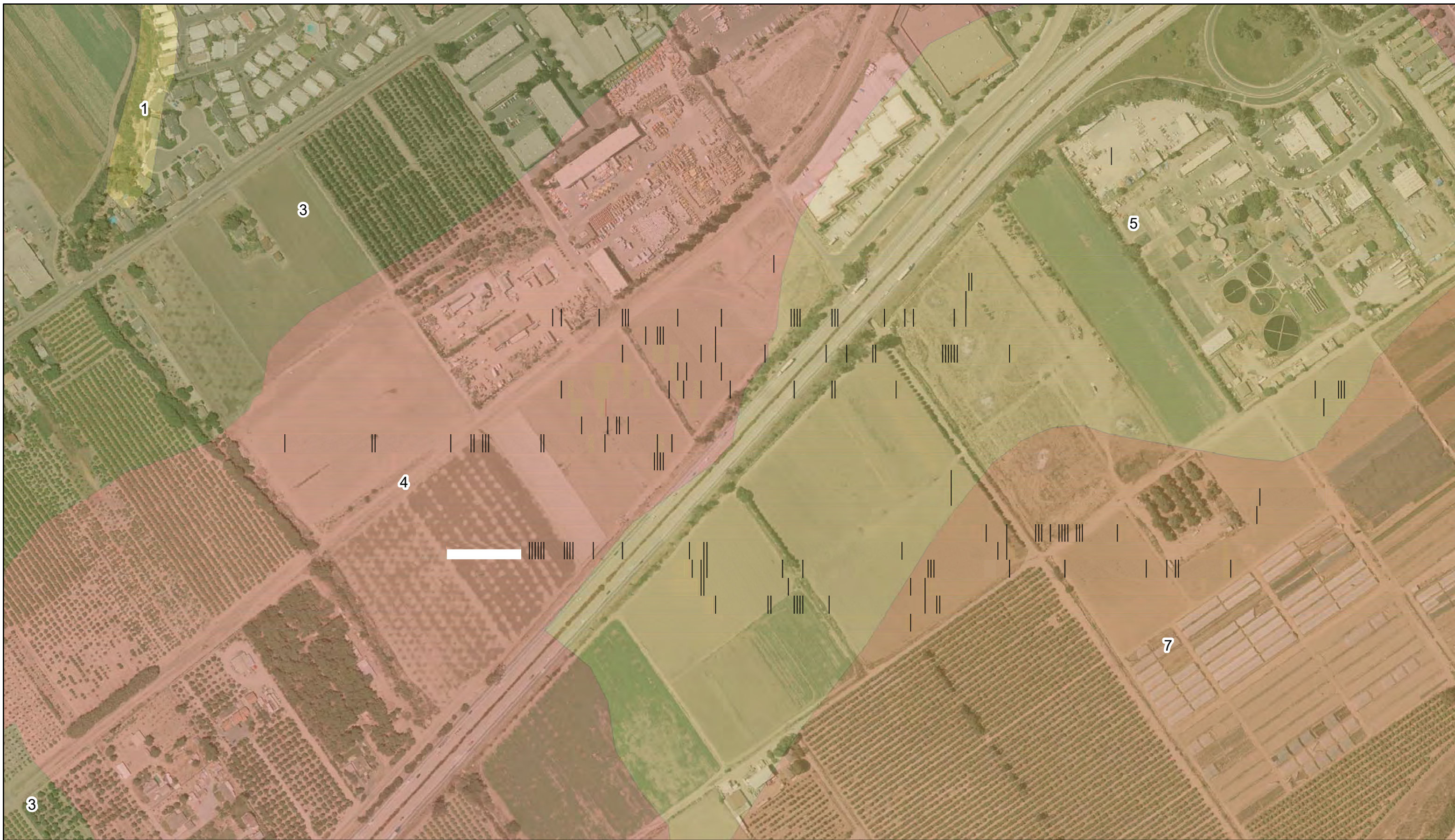
Notice to User: The Map Number shown below should be used when placing map orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06111C0779E

EFFECTIVE DATE
JANUARY 20, 2010

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Prepared by: Jensen Design & Survey Inc.

Parcel boundaries on this exhibit are a graphical representation only. They should not be used in place of record boundary information and/or field survey data and do not accurately define property boundaries.

SOIL TYPE MAP

1 inch equals 300 feet



APPENDIX F

Adams Barranca HEC-RAS Analysis Maps and Calculations

Adams Canyon – Hydraulic Analysis Report

Introduction

Adams Canyon is located in the unincorporated areas of Ventura County, California. The study was performed for 1.2 miles of the stream. The extent of the stream is from the confluence with the Santa Clara River and continuing upstream to 1,600 ft north of Telegraph Road. The channel is earthen. The entire study reach area is agricultural. There are three bridges in the study extent namely East Telegraph Road, Union Pacific Railroad and Highway 126. The stream was a natural channel consisting of minor vegetation.

Structure Data

The structure information for East Telegraph Road and Union Pacific Railroad is obtained from the field reconnaissance and information provided by CalTrans and record drawings from the County. The information was incorporated in this analysis.

	Model Type
Telegraph Road	Culvert
Railroad	Bridge
Highway 126	Two Culverts

Terrain Data

A flown aerial topo was generated by Central Coast Mapping in March 2007 with an assumed horizontal datum and a vertical datum of NGVD 29. The data from the flown aerial was re-projected to “*State Plane California V FIPS 0405 Feet*” and raised 2.39’ to convert the data to NAD 1983 horizontal datum and “*NAVD 88*” vertical datum.

LIDAR data was provided by Ventura County. The data was in the form of mass points (each point was attributed with latitude, longitude and elevation), with a horizontal datum of NAD 1983 with projection of “*State Plane California V FIPS 0405 Feet*” and the vertical datum is “*NAVD 88*”.

These two data sources were used to generate a surface with 1’ and 5’ contour intervals in Civil3D.

Streamline and Flow Paths

- Streamline was generated using the flowline of the Adams Barranca.
- Overland Flowpaths were generated following the west and east side of the bank contours and path of travel for the overflow water.
- Lateral structure elevations were determined by topography

Cross Section Generation

Cross-sections geometry was extracted from the terrain. Each cross-section was oriented such that it is normal to the floodplain.

Manning’s Roughness Coefficient (n) Calculations

Manning’s coefficient values were determined for each cross section using the Cowan (1956) procedure outlined in “Guide for Selecting Manning’s Roughness Coefficients for Natural Channels and Floodplains” (Authors: G.J. Arcement and V.R. Schneider, USGS Water supply Paper 2339). Photographs taken during field reconnaissance were used in conjunction with the aerial images to estimate Manning’s coefficients for the channel portion of the cross section. For overbank areas, land-use classification data was developed from the aerial imagery. Polygons were digitized for different landuses, which were attributed with the corresponding Manning’s n values. Manning’s n value of 0.045 was used for the main channel and between 0.03 and 0.035 for the overbanks. See attached computation table (Attachment 1).

Boundary Conditions

For a downstream WS Elevation in SC River from FIRM 06111C0779E, we used 208.25 on the 88 datum.

Discharge Point Locations

Discharges for the Adams Barranca vary depending on the source. Ventura County Watershed Protection District current adopted flow rate is from the HSPF Model of 6,880 cfs. A revised discharges was provided by VCWPD in Appendix L Ventura Design Storm by Mark Banduraga of 5,150 cfs. A separate VcRAT analysis was completed by Jensen Design & Survey using aerial reduction totaling 5,861cfs. The varying discharges are shown in the table below:

	100-Year
HSPF Model	
VCWPD	6,880
HMS Model	
VCWPD	5,150
JDS Model	5,861

For this analysis we used a peak flow of 5,861.

HEC-RAS Project – Existing

- **PLANS:** The name of the project is 4492_Adams Barranca.prj
 - **Adams Canyon**
 - **Plan With Embankment (p01, g01, f01)**
 - **Right Overbank**
 - **Adams Canyon Right Overbank Profile (p04, g02, f03)**
 - **Left Overbank**
 - **Adams Canyon Left Overbank Profile (p03, g04, f02)**

Discharges in the main stream were reduced using lateral structures for the with Embankment Plan with lateral structures(Plan 1) and balanced appropriately with the right and left overbank as shown in the table below for the **EXISTING** condition:

LOB_RS	100-YR
5246	2191
3370	101

ROB_RS	100-YR
5221.1	1359
3525.7	1297

Methodology Existing Condition

Plan 1: With Embankment Plan with lateral structures

- Levees were modeled using lateral structures in accordance with the Levee Analysis and Mapping Procedures released by FEMA in 2013 which outlines different modeling approaches for non-accredited levees.
 - Lateral structures were used to establish breaches in areas where the levees had a steep slope towards the landward side of the floodplain.
 - In areas where the levees were gradually sloping and potential for failures is lower the mapping was done by assuming the levees were topographic feature that did not impede flow.
- Flow in the main channel was reduced by optimizing the lateral structures.

Plan 2: Right overbank

- An overbank flowline was delineated using 1 foot contours on the right (west) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the right side of Plan 1.

Plan 3: Left overbank

- An overbank flowline was delineated using 1 foot contours on the left (east) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the left side of Plan 1.

HEC-RAS Project – Proposed

- PLANS: The name of the project is 4492_Adams Barranca.prj
 - **Proposed Adams Canyon - Plan With Embankment Main channel Overbank**
 - **A flood control condition to capture overflow of the east banks and diverted to a parallel channel. Weir cut into Adams Barranca at the southerly end between section 2929.25 and 3159.25. (p06, g03, f05)**

- **Right Overbank**
 - **Adams Canyon Right Overbank Profile (p07, g05, f06) (used same alignment and sections as existing condition)**
- **Left Overbank**
 - **Adams Canyon Left Overbank Profile (p03, g04, f02)**
 - **Flow line taken along proposed parallel channel**

Discharges in the main stream were reduced using lateral structures balanced appropriately with the right and left overbank as shown in the table below for the **PROPOSED** condition:

LOB_RS	100-YR
5246	2177
3370	460

ROB_RS	100-YR
5221.1	1348
3525.7	855

Methodology Proposed Condition

Plan 4: Proposed Geometry

- It was observed on the Existing condition (Plan 1) that a break out of 2,178cfs occurred upstream of Telegraph Road and Traveled over telegraph Road to the frontage of the project site. We have designed this overflow condition to be captured in the parking lot and diverted to the west and then to the south in a parallel channel. The proposed buildings are protected from the 100 year water surface elevation.
- Additional break out of 187.3cfs occurs just North of Hwy 126.
- A flow file was created based on the assumption that at the beginning of the new channel (easterly end) the flow rate would start at 300 cfs. Then it would increase to the full 2178 cfs at the northwesterly property corner before heading south.
- The proposed channel that will handle overflows from the main channel in the 100yr event. It runs parallel to the property between Telegraph road and Hwy 126. At the Hwy the proposed overflow channel wraps to the east along Faulkner Road. Overflow will pond in Faulkner Rd and up to the Culdesac.
- A notch cut at the easterly channel banks between stations 2929.25 and 3159.25; This cut will act as a weir, flood flows will initially flow to the east into a widen channel through the frontage road and over the highway, as it did in the existing condition. Some flow will go back into Adams Barranca Creek at Hwy 126 however this will be controlled via a weir to prevent overtopping of the west bank therefore no impacts will occur on the west side of the Barranca .

Plan 5: Right overbank

- An overbank flowline was delineated using 1 foot contours on the right (west) overbank
- The cross-sections were taken parallel to the contours in the overflow area
- The flow rates were determined using the overflow from the lateral structures on the right side of Plan 4.

Plan 6: Left overbank

- An overbank flowline was delineated using 1 foot contours on the left (east) overbank following the flowline of the proposed flood control channel.
- The cross-sections were taken parallel to the contours in the overflow area
- A lower portion as observed along Hwy 126 on the east side of the channel between stations 2895.24 and 2684.37.
- The flow rates were determined using the overflow from the lateral structures on the left side of Plan 4.

Mapping

BFEs for the right overbank are obtained from Plan # 2 & #5

BFEs for the left overbank are obtained from Plan # 3 & #6

Table 3-1 Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
A. Natural Streams			
1. Main Channels			
a. Clean, straight, full, no rifts or deep pools	0.025	0.030	0.033
b. Same as above, but more stones and weeds	0.030	0.035	0.040
c. Clean, winding, some pools and shoals	0.033	0.040	0.045
d. Same as above, but some weeds and stones	0.035	0.045	0.050
e. Same as above, lower stages, more ineffective slopes and sections	0.040	0.048	0.055
f. Same as "d" but more stones	0.045	0.050	0.060
g. Sluggish reaches, weedy, deep pools	0.050	0.070	0.080
h. Very weedy reaches, deep pools, or floodways with heavy stands of timber and brush	0.070	0.100	0.150
2. Flood Plains			
a. Pasture no brush	0.025	0.030	0.035
1. Short grass	0.030	0.035	0.050
2. High grass			
b. Cultivated areas	0.020	0.030	0.040
1. No crop	0.025	0.035	0.045
2. Mature row crops	0.030	0.040	0.050
3. Mature field crops			
c. Brush	0.035	0.050	0.070
1. Scattered brush, heavy weeds	0.035	0.050	0.060
2. Light brush and trees, in winter	0.040	0.060	0.080
3. Light brush and trees, in summer	0.045	0.070	0.110
4. Medium to dense brush, in winter	0.070	0.100	0.160
5. Medium to dense brush, in summer			
d. Trees	0.030	0.040	0.050
1. Cleared land with tree stumps, no sprouts	0.050	0.060	0.080
2. Same as above, but heavy sprouts	0.080	0.100	0.120
3. Heavy stand of timber, few down trees, little undergrowth, flow below branches	0.100	0.120	0.160
4. Same as above, but with flow into branches			
5. Dense willows, summer, straight	0.110	0.150	0.200
3. Mountain Streams, no vegetation in channel, banks usually steep, with trees and brush on banks submerged			
a. Bottom: gravels, cobbles, and few boulders	0.030	0.040	0.050
b. Bottom: cobbles with large boulders	0.040	0.050	0.070

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
<i>C. Excavated or Dredged Channels</i>			
1. Earth, straight and uniform			
a. Clean, recently completed	0.016	0.018	0.020
b. Clean, after weathering	0.018	0.022	0.025
c. Gravel, uniform section, clean	0.022	0.025	0.030
d. With short grass, few weeds	0.022	0.027	0.033
2. Earth, winding and sluggish			
a. No vegetation	0.023	0.025	0.030
b. Grass, some weeds	0.025	0.030	0.033
c. Dense weeds or aquatic plants in deep channels	0.030	0.035	0.040
d. Earth bottom and rubble side	0.028	0.030	0.035
e. Stony bottom and weedy banks	0.025	0.035	0.040
f. Cobble bottom and clean sides	0.030	0.040	0.050
3. Dragline-excavated or dredged			
a. No vegetation	0.025	0.028	0.033
b. Light brush on banks	0.035	0.050	0.060
4. Rock cuts			
a. Smooth and uniform	0.025	0.035	0.040
b. Jagged and irregular	0.035	0.040	0.050
5. Channels not maintained, weeds and brush			
a. Clean bottom, brush on sides	0.040	0.050	0.080
b. Same as above, highest stage of flow	0.045	0.070	0.110
c. Dense weeds, high as flow depth	0.050	0.080	0.120
d. Dense brush, high stage	0.080	0.100	0.140

Other sources that include pictures of selected streams as a guide to n value determination are available (Fasken, 1963; Barnes, 1967; and Hicks and Mason, 1991). In general, these references provide color photos with tables of calibrated n values for a range of flows.

Although there are many factors that affect the selection of the n value for the channel, some of the most important factors are the type and size of materials that compose the bed and banks of a channel, and the shape of the channel. Cowan (1956) developed a procedure for estimating the effects of these factors to determine the value of Manning's n of a channel. In Cowan's procedure, the value of n is computed by the following equation:

Table 3-1 (Continued) Manning's 'n' Values

Type of Channel and Description	Minimum	Normal	Maximum
B. Lined or Built-Up Channels			
1. Concrete			
a. Trowel finish	0.011	0.013	0.015
b. Float Finish	0.013	0.015	0.016
c. Finished, with gravel bottom	0.015	0.017	0.020
d. Unfinished	0.014	0.017	0.020
e. Gunitite, good section	0.016	0.019	0.023
f. Gunitite, wavy section	0.018	0.022	0.025
g. On good excavated rock	0.017	0.020	
h. On irregular excavated rock	0.022	0.027	
2. Concrete bottom float finished with sides of:			
a. Dressed stone in mortar	0.015	0.017	0.020
b. Random stone in mortar	0.017	0.020	0.024
c. Cement rubble masonry, plastered	0.016	0.020	0.024
d. Cement rubble masonry	0.020	0.025	0.030
e. Dry rubble on riprap	0.020	0.030	0.035
3. Gravel bottom with sides of:			
a. Formed concrete	0.017	0.020	0.025
b. Random stone in mortar	0.020	0.023	0.026
c. Dry rubble or riprap	0.023	0.033	0.036
4. Brick			
a. Glazed	0.011	0.013	0.015
b. In cement mortar	0.012	0.015	0.018
5. Metal			
a. Smooth steel surfaces	0.011	0.012	0.014
b. Corrugated metal	0.021	0.025	0.030
6. Asphalt			
a. Smooth	0.013	0.013	
b. Rough	0.016	0.016	
7. Vegetal lining			
	0.030		0.500

HEC-RAS Plan: Ex River: AdamsBarranca Reach: Reach1 Profile: PF 1

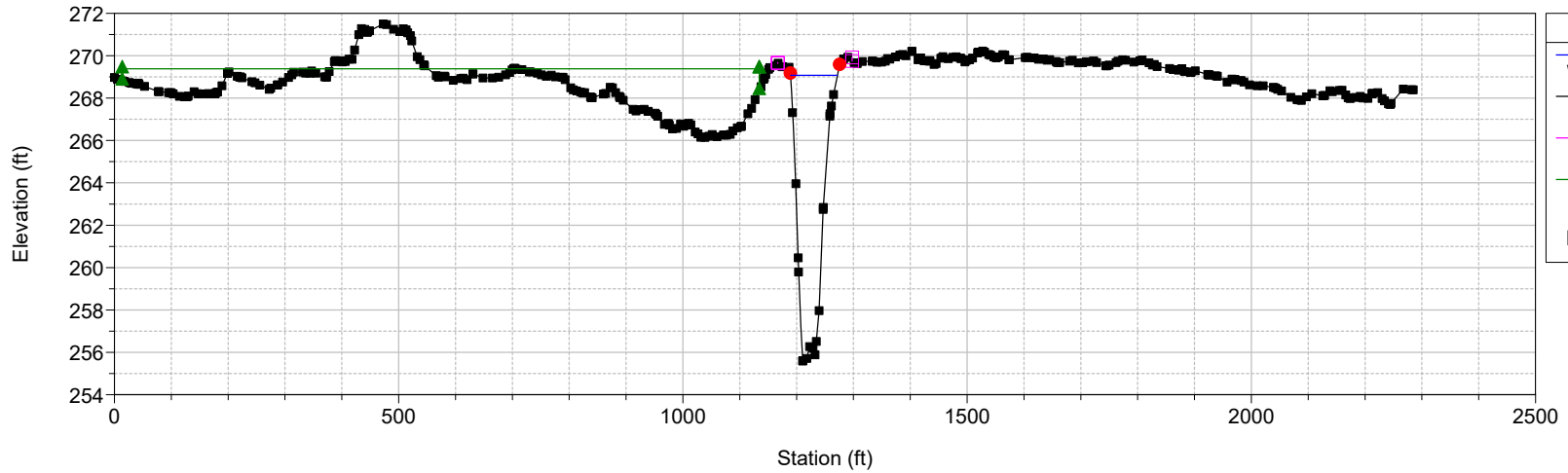
Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach1	6475.816	PF 1	5861.00	255.59	269.07	265.60	270.40	0.005718	9.24	634.64	82.48	0.59
Reach1	6235.479	PF 1	5861.00	252.92	264.88	264.48	268.10	0.015115	14.39	407.16	54.89	0.93
Reach1	5984.647	PF 1	5861.00	250.34	263.62	263.40	264.92	0.007116	10.60	1203.58	409.16	0.64
Reach1	5737.684	PF 1	5861.00	248.36	261.73	261.73	263.08	0.008277	10.12	1057.11	774.57	0.73
Reach1	5491.663	PF 1	5861.00	246.27	259.26	257.43	260.62	0.011788	9.82	915.48	570.72	0.61
Reach1	5246.089	PF 1	5861.00	244.00	256.85	255.82	257.55	0.011981	6.91	1041.28	926.22	0.59
Reach1	5246 Tele_East		Lat Struct									
Reach1	5221.13 Tele_West		Lat Struct									
Reach1	5201.42	PF 1	5620.44	243.34	256.22		256.82	0.021821	6.23	910.19	258.94	0.57
Reach1	5156.75	PF 1	5426.83	242.68	255.28		255.86	0.020709	6.16	906.50	265.07	0.55
Reach1	5112.09	PF 1	5208.80	242.02	254.28		254.92	0.021019	6.46	818.18	219.68	0.57
Reach1	5022.76	PF 1	4659.60	240.69	252.46		253.04	0.020352	6.01	774.98	196.87	0.51
Reach1	4978.1	PF 1	4193.18	240.03	251.79		252.26	0.013677	5.48	777.79	180.61	0.46
Reach1	4933.43	PF 1	3463.33	239.37	251.43		251.79	0.006938	4.73	735.11	137.60	0.35
Reach1	4888.77	PF 1	2731.26	238.71	251.21		251.45	0.006514	3.93	699.91	121.48	0.28
Reach1	4826.612	PF 1	2336.91	238.31	251.19		251.42	0.000116	3.89	609.42	115.72	0.28
Reach1	4808.237	PF 1	2327.94	238.64	251.23	245.03	251.39	0.197676	3.18	731.81	242.56	0.31
Reach1	4775.879 Teleraph		Culvert									
Reach1	4739.053	PF 1	2327.94	237.53	243.80	243.80	246.69	0.001960	13.65	170.54	29.94	1.01
Reach1	4673.858	PF 1	2327.94	235.63	244.58		245.70	0.007092	8.52	273.11	46.56	0.62
Reach1	4495.546	PF 1	2327.94	234.23	242.88	241.46	244.23	0.009456	9.32	249.79	46.26	0.71
Reach1	4247.987	PF 1	2327.94	232.68	241.31	239.80	241.89	0.007697	6.12	382.53	237.19	0.79
Reach1	3997.28	PF 1	2327.94	230.86	238.31	237.43	239.49	0.011533	8.78	272.86	83.79	0.77
Reach1	3823.969	PF 1	2327.94	228.87	236.71	236.71	238.15	0.019287	9.64	241.38	83.23	1.00
Reach1	3656.055	PF 1	2327.94	227.64	235.73	235.71	235.73	0.000004	0.12	8573.16	1633.56	0.01
Reach1	3574.137 RRxing		Bridge									
Reach1	3547.872	PF 1	2327.94	226.87	234.77	234.77	234.77	0.000014	0.33	7197.04	1655.55	0.03
Reach1	3525.703 Hwy_West		Lat Struct									
Reach1	3372.434	PF 1	2100.00	225.62	232.19	232.19	234.00	0.008824	11.10	210.99	68.45	0.87
Reach1	3370 Hwy_East		Lat Struct									
Reach1	3020.276	PF 1	988.87	221.79	228.69	228.61	230.10	0.010997	9.82	109.83	40.23	0.88
Reach1	2929.252	PF 1	976.92	220.63	227.20	227.20	228.92	0.014586	10.52	93.09	28.65	0.99
Reach1	2895.24	PF 1	976.92	219.12	227.20	222.51	227.24	0.000340	1.79	688.19	1805.68	0.12
Reach1	2773.995 HWy126		Culvert									
Reach1	2684.378	PF 1	976.92	218.04	226.01	221.91	226.38	0.000217	4.88	200.22	30.14	0.33
Reach1	2485.067	PF 1	976.92	216.26	225.57	223.28	226.23	0.005841	6.51	152.82	35.01	0.52
Reach1	2247.204	PF 1	976.92	215.34	221.77	221.77	223.64	0.023137	11.00	88.83	23.67	1.00
Reach1	1997.363	PF 1	976.92	210.82	217.84	216.97	218.94	0.013457	8.42	116.06	32.31	0.78
Reach1	1747.714	PF 1	976.92	208.97	215.13	214.07	216.04	0.009789	7.68	127.27	32.53	0.68
Reach1	1498.684	PF 1	976.92	207.32	213.27	212.00	213.92	0.006950	6.63	158.27	1103.70	0.58
Reach1	1250.347	PF 1	976.92	204.47	211.35	209.75	212.13	0.007288	7.10	137.62	30.45	0.59
Reach1	1001.841	PF 1	976.92	202.27	209.75	208.09	210.39	0.006427	6.43	152.44	47.06	0.56
Reach1	748.9206	PF 1	976.92	200.99	208.76		209.08	0.003720	4.59	212.89	64.81	0.43

HEC-RAS Plan: Ex River: AdamsBarranca Reach: Reach1 Profile: PF 1 (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach1	502.0116	PF 1	976.92	199.59	208.05	204.71	208.36	0.002317	4.46	219.13	42.83	0.35
Reach1	249.222	PF 1	976.92	199.26	208.25	201.77	208.25	0.000022	0.54	2221.21	514.17	0.04

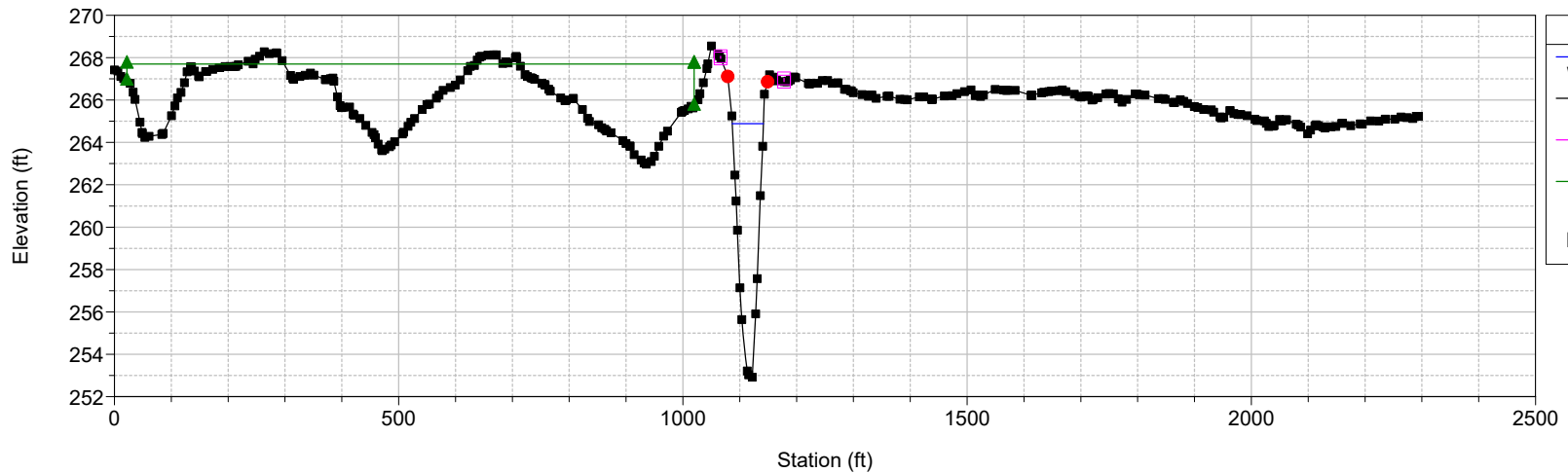
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 6475.816



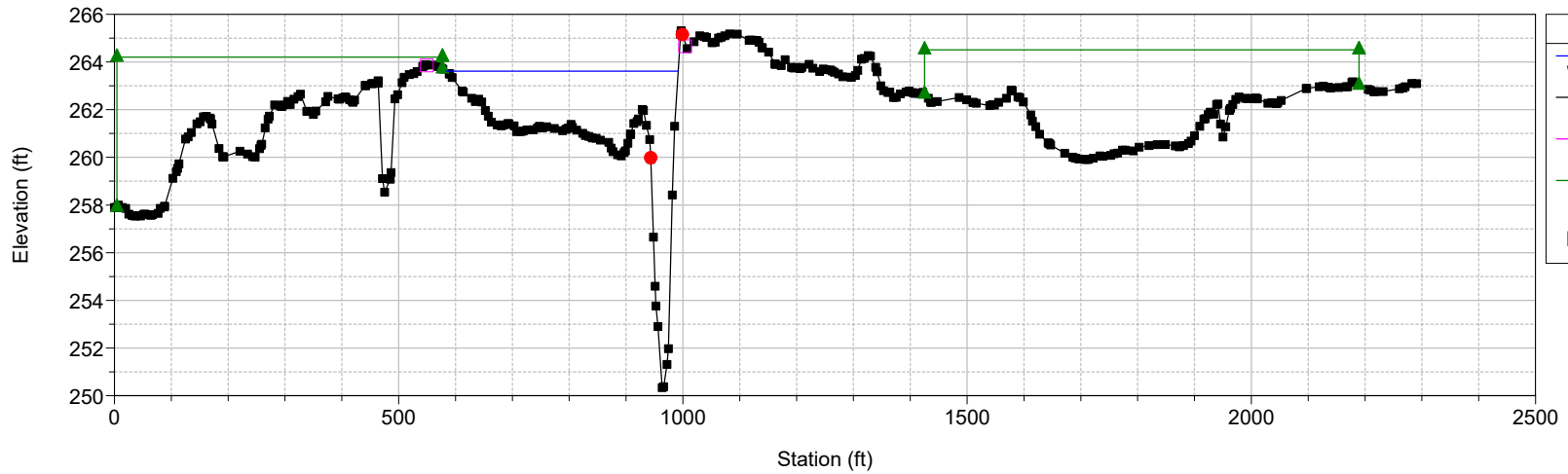
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 6235.479



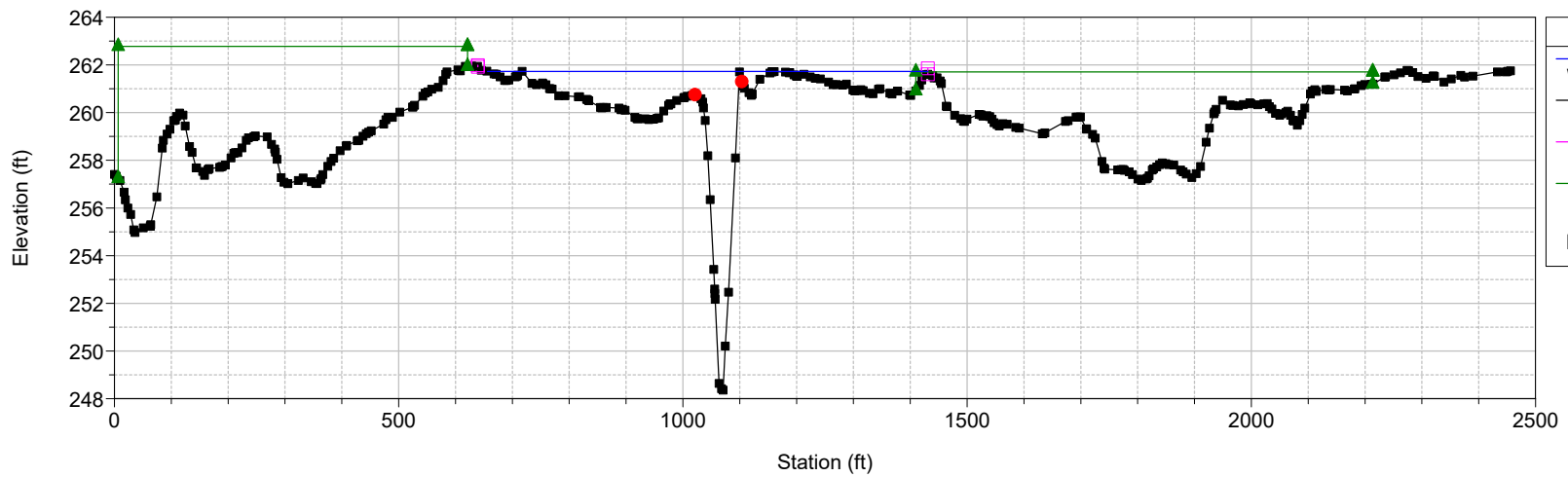
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5984.647



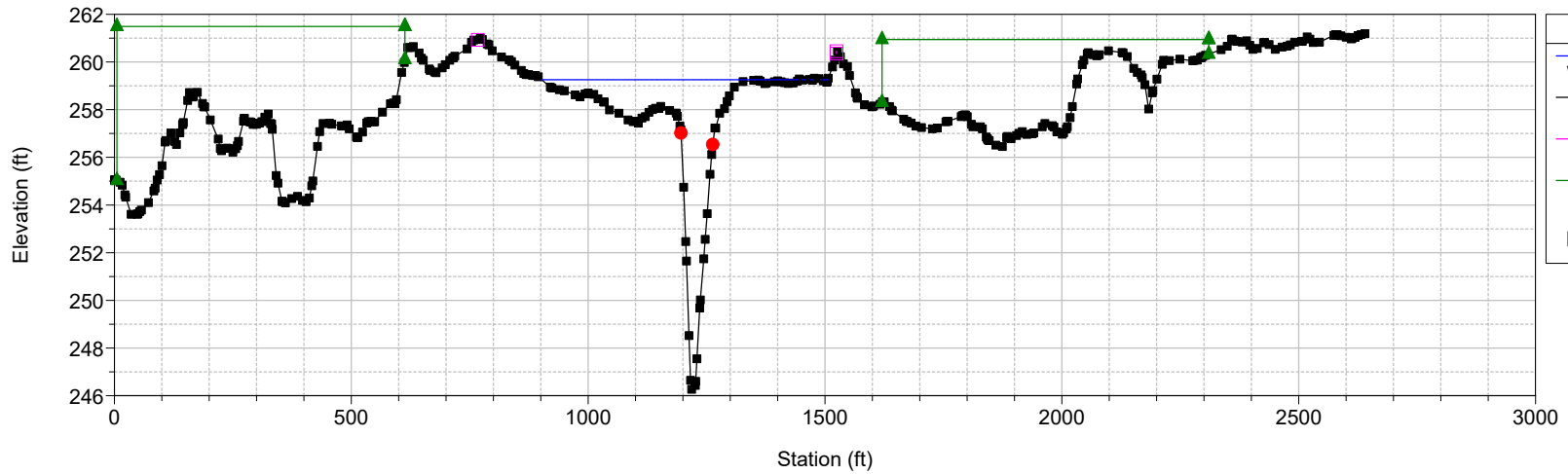
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5737.684



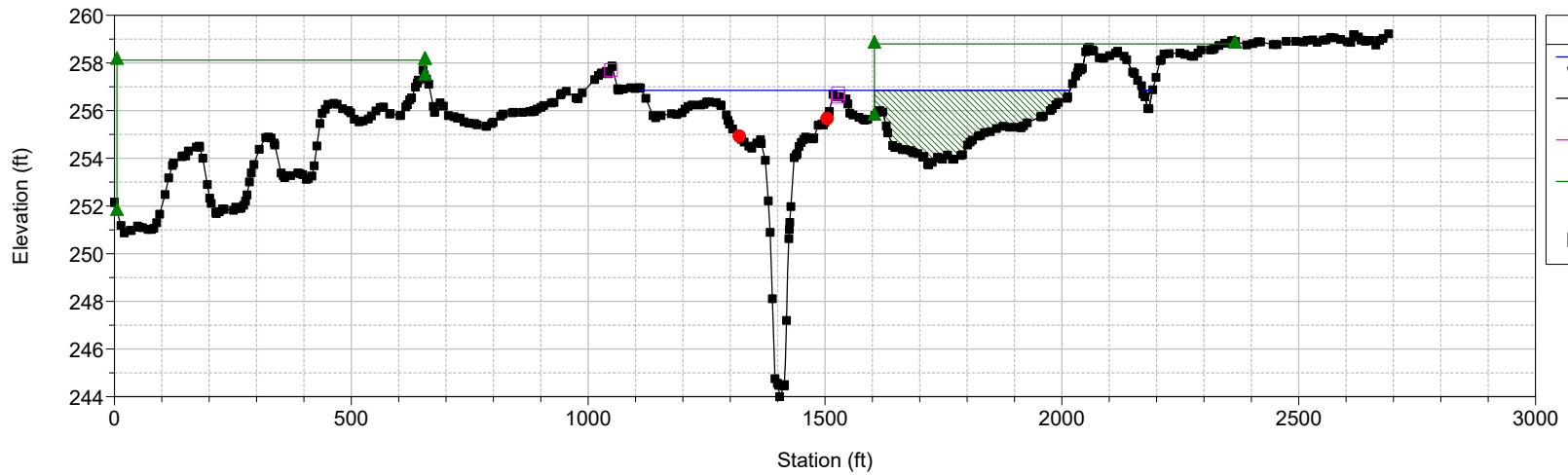
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5491.663



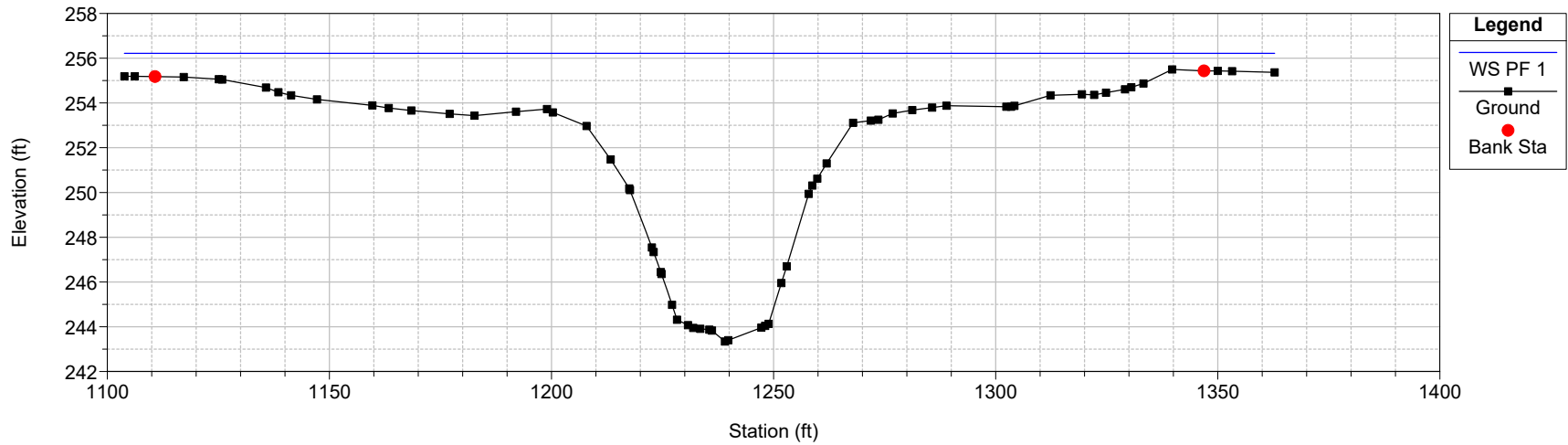
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5246.089



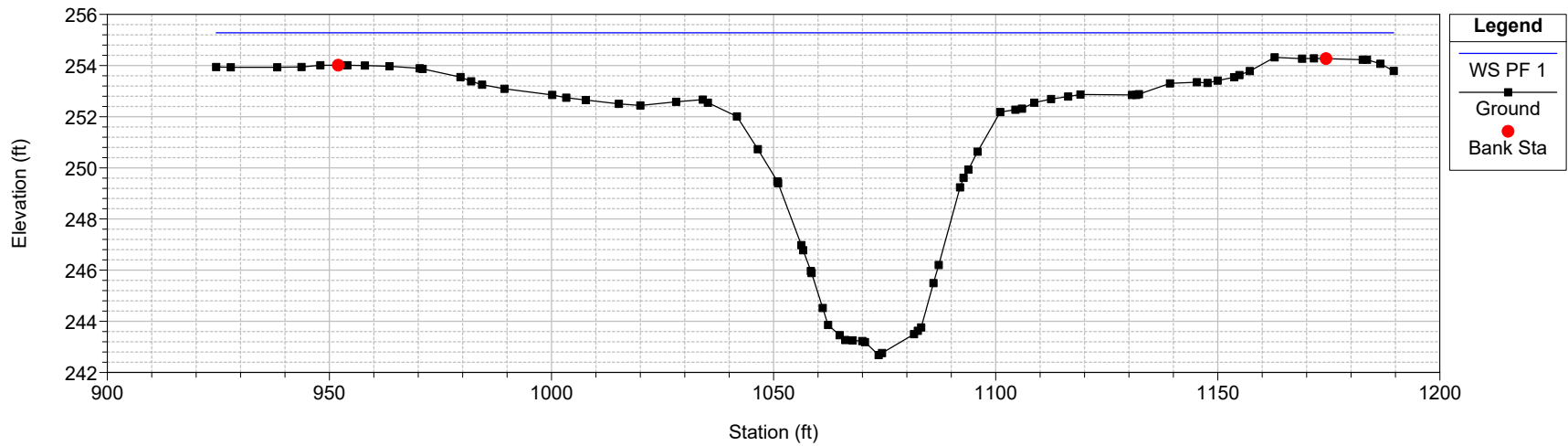
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5201.42



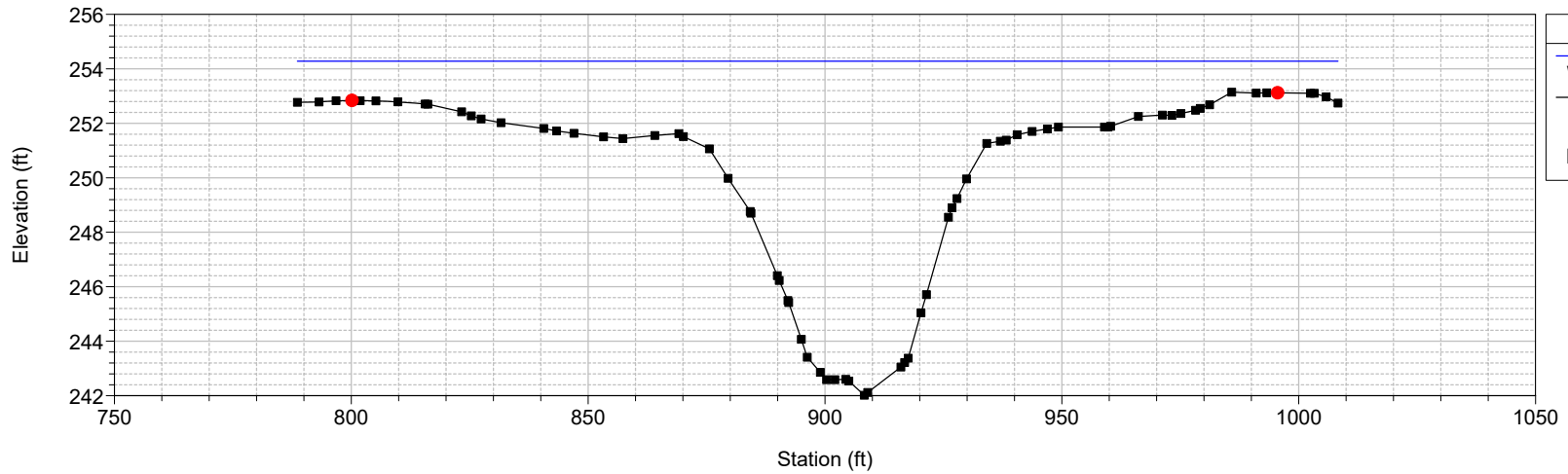
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5156.75



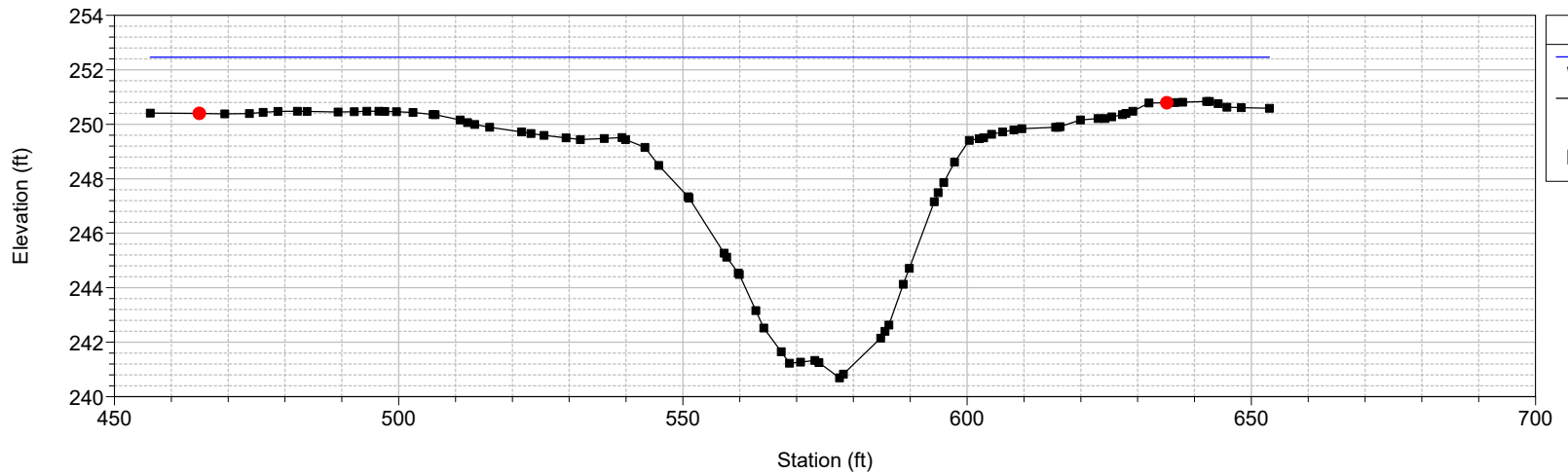
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 5112.09



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

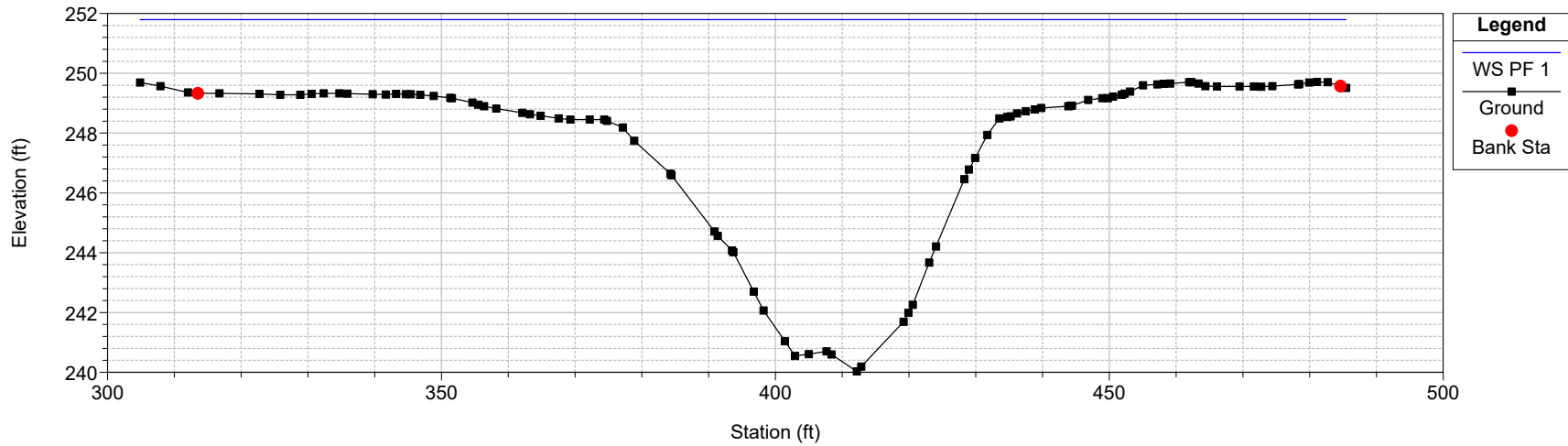
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River = AdamsBarranca Reach = Reach1 RS = 5022.76



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles

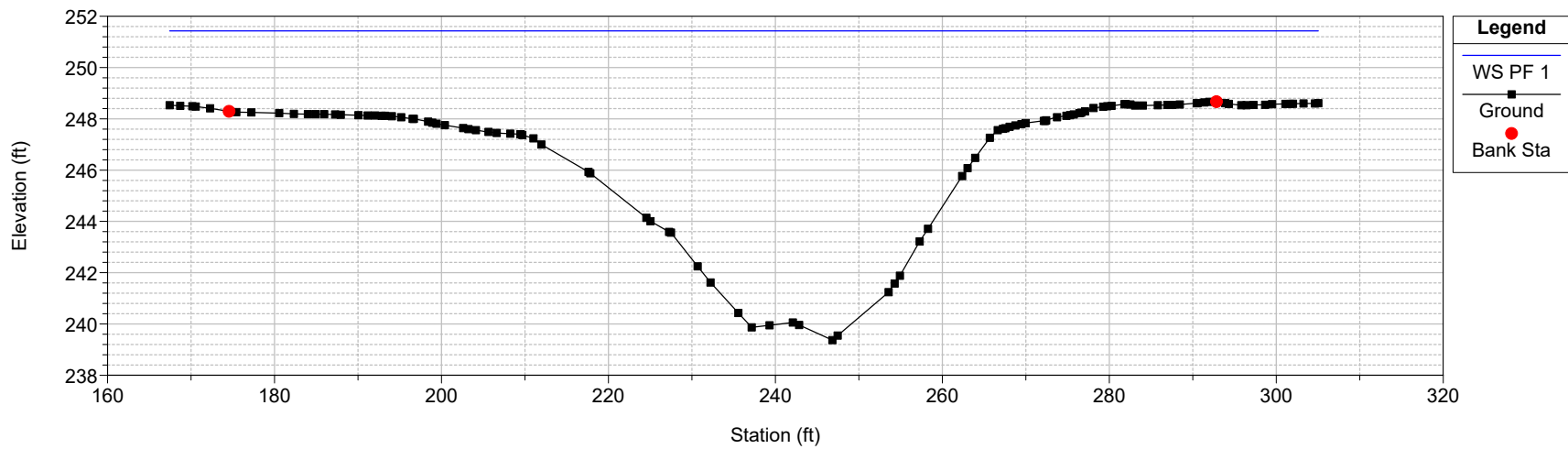
River = AdamsBarranca Reach = Reach1 RS = 4978.1



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

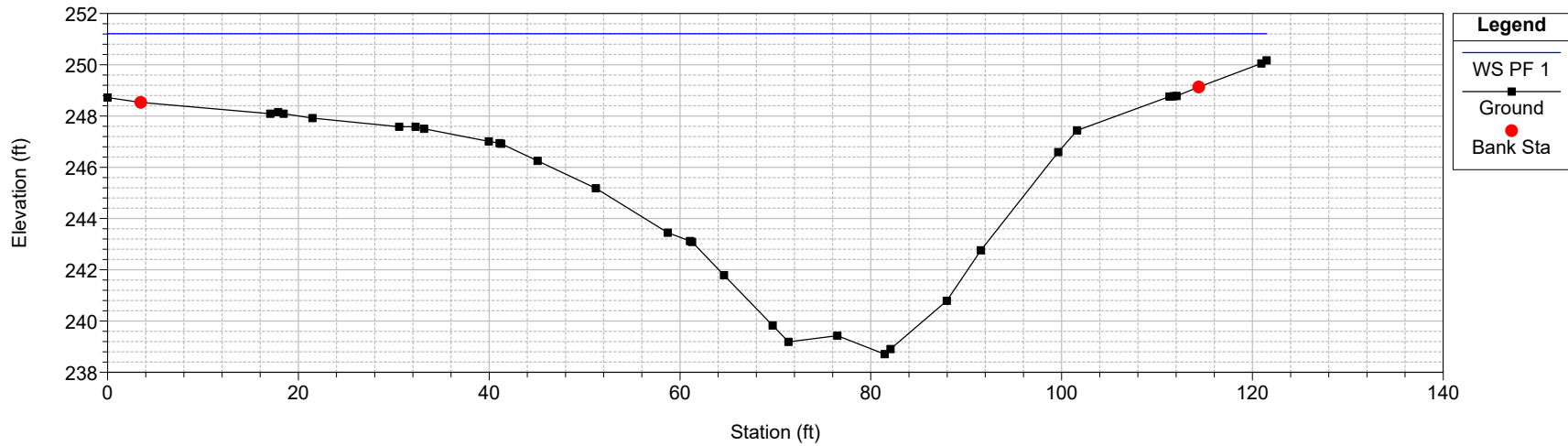
Geom: AdamsExisting Flow: Ex_Profiles

River = AdamsBarranca Reach = Reach1 RS = 4933.43



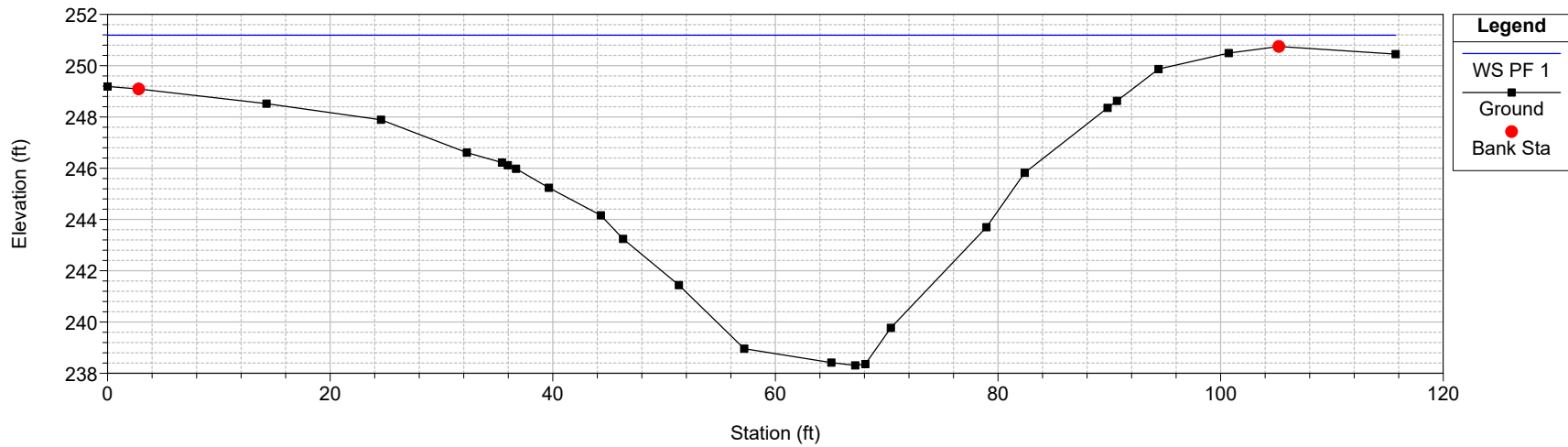
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4888.77



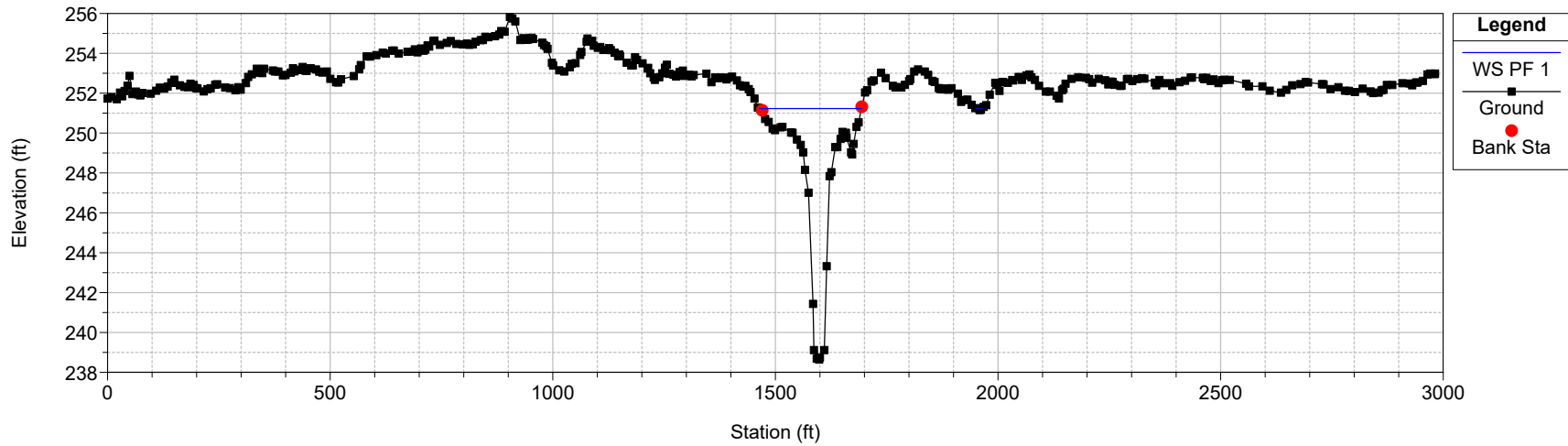
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4826.612



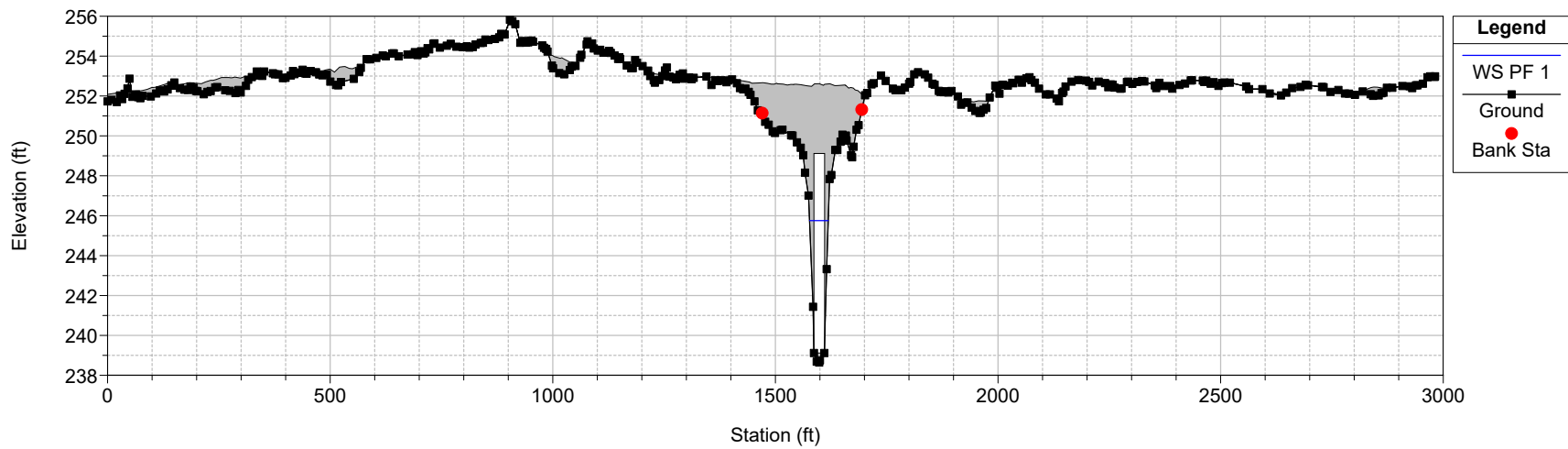
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4808.237



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

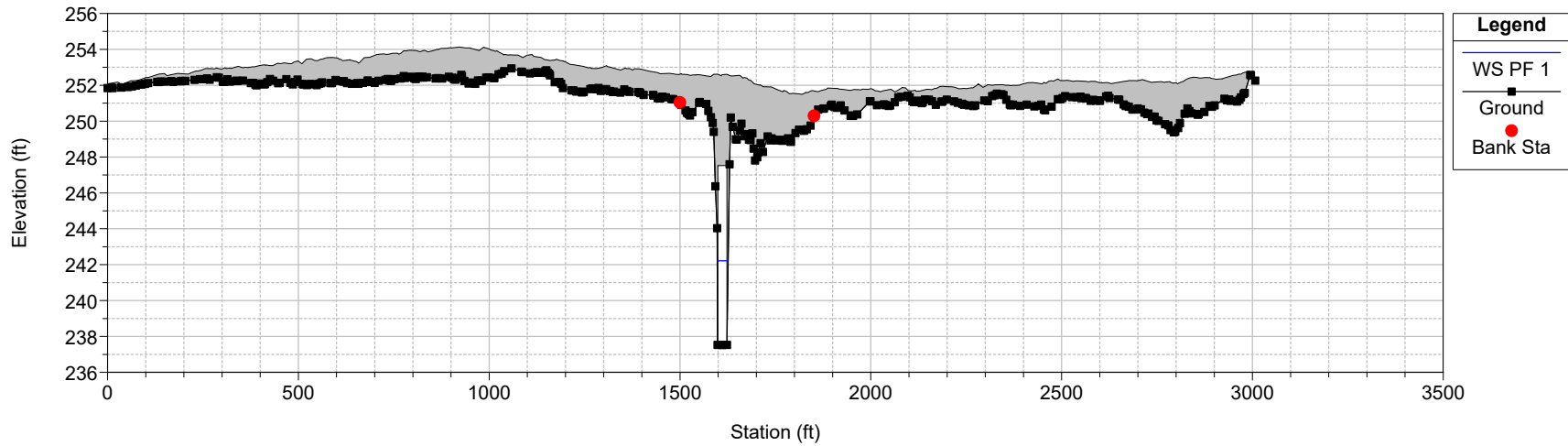
Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4775.879 Culv



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles

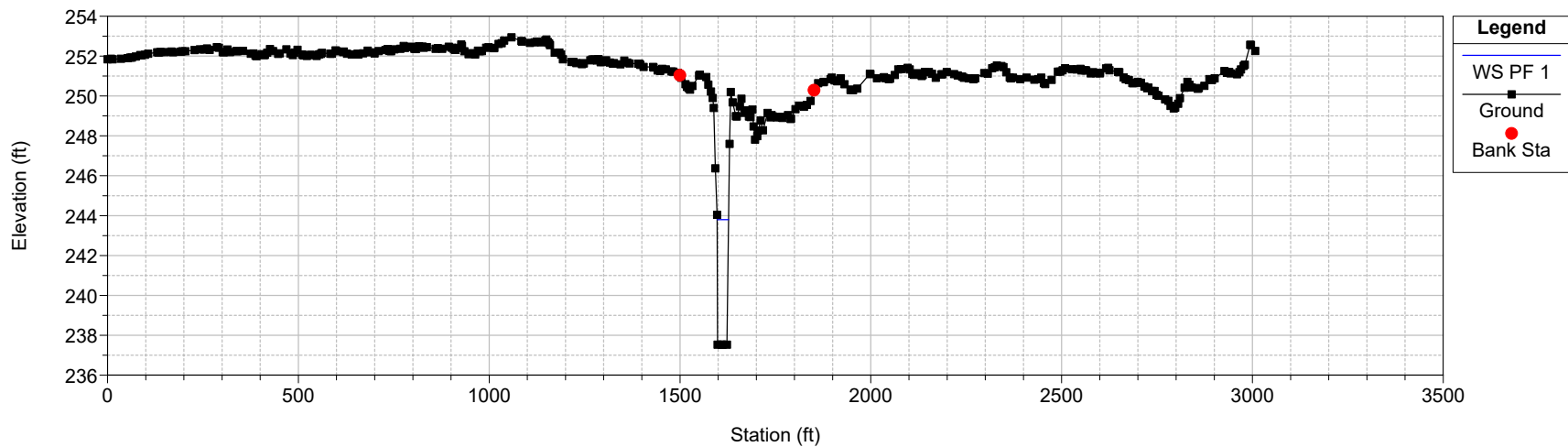
River = AdamsBarranca Reach = Reach1 RS = 4775.879 Culv



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

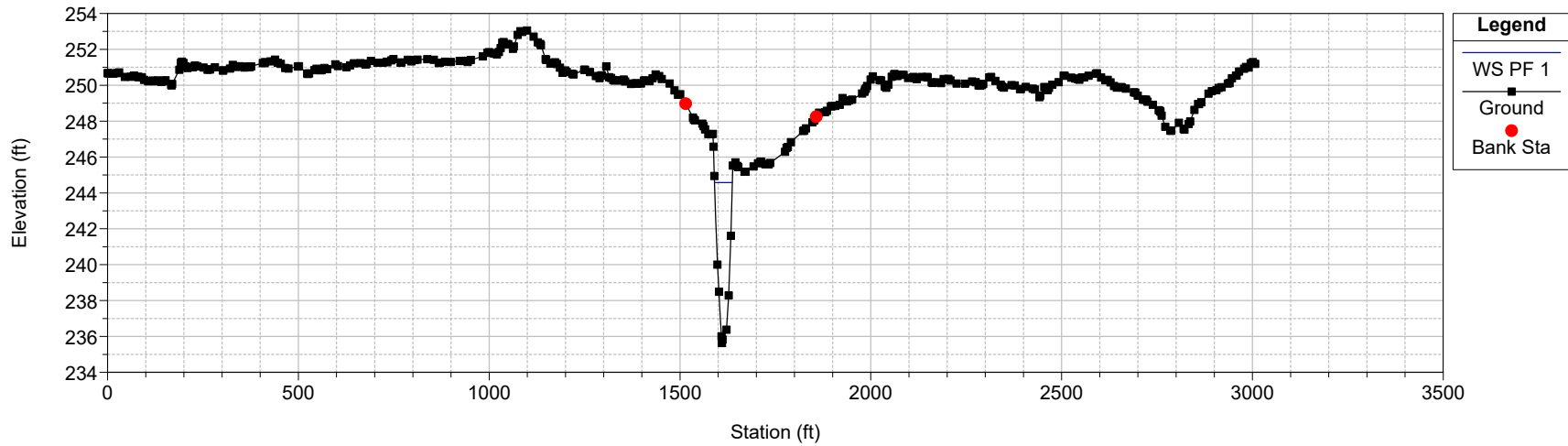
Geom: AdamsExisting Flow: Ex_Profiles

River = AdamsBarranca Reach = Reach1 RS = 4739.053



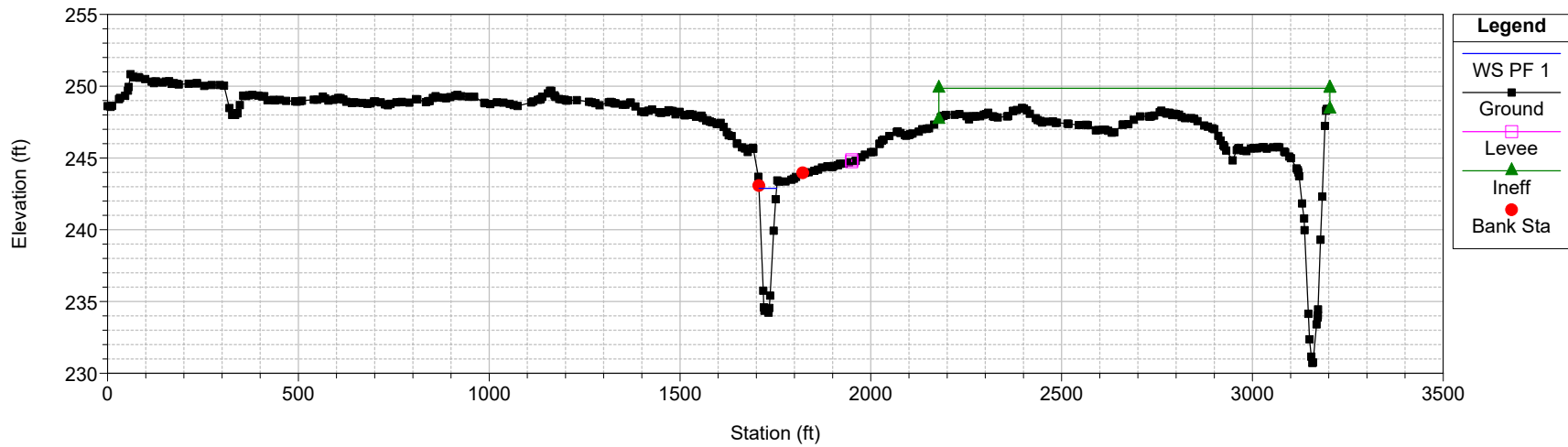
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4673.858



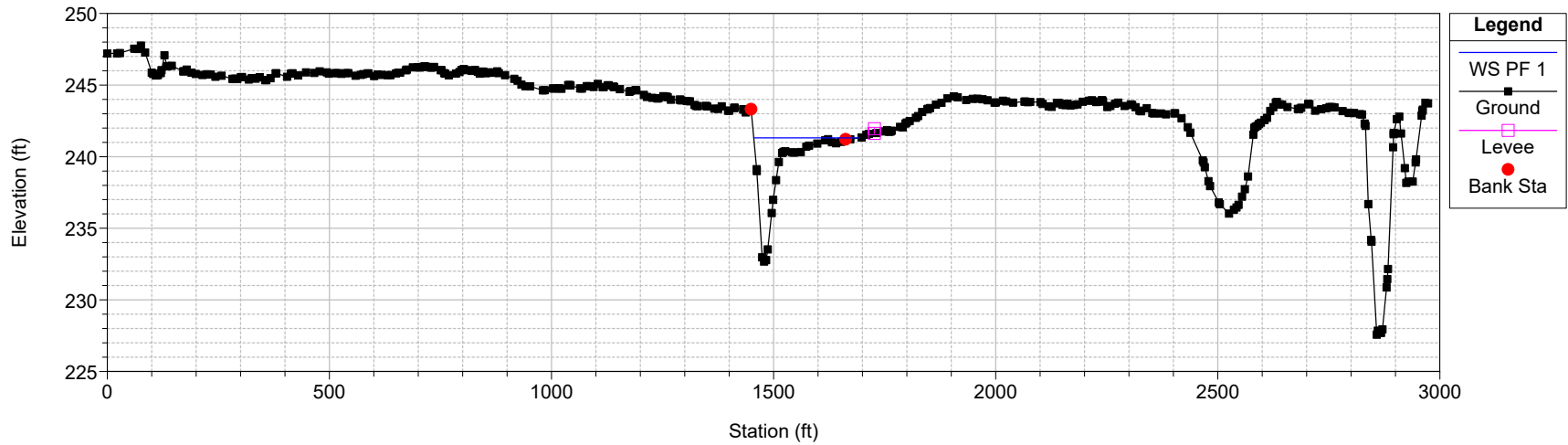
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4495.546



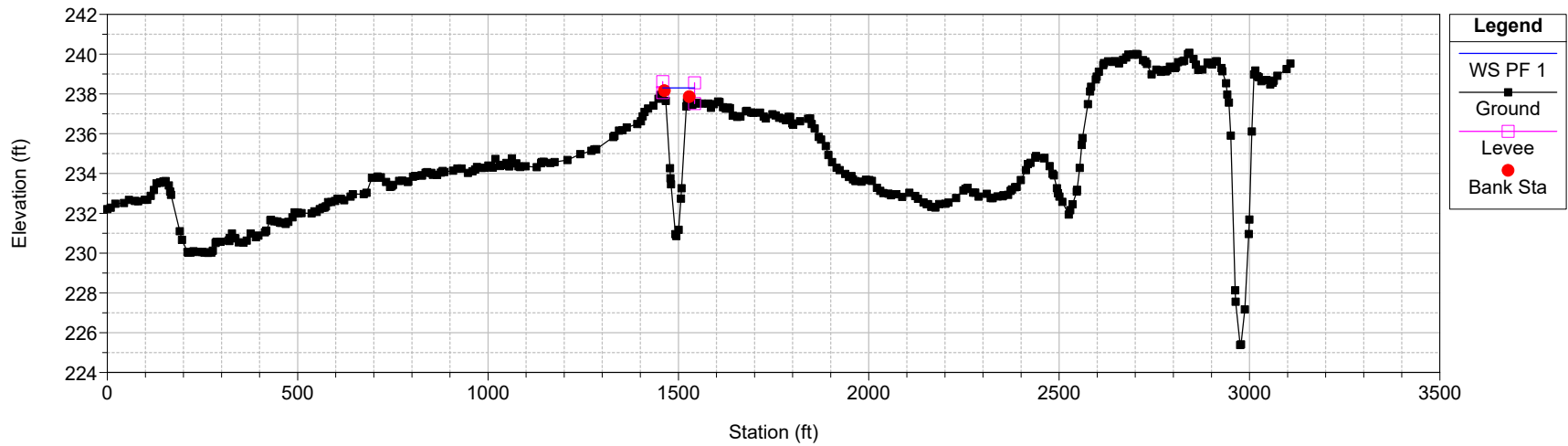
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4247.987



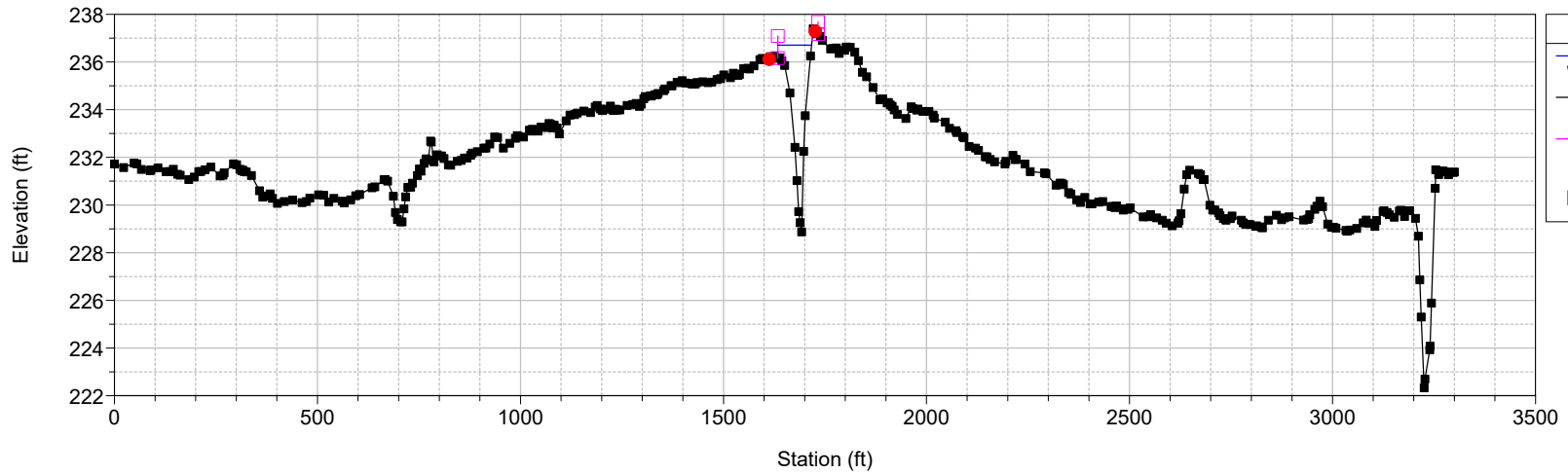
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3997.28



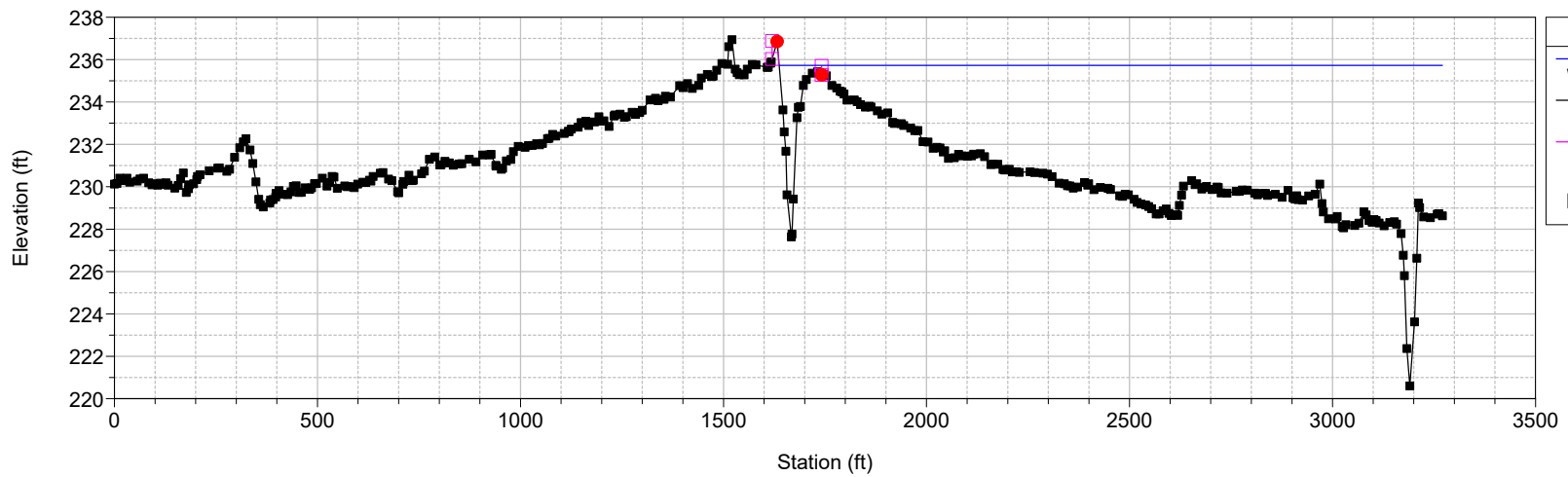
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3823.969



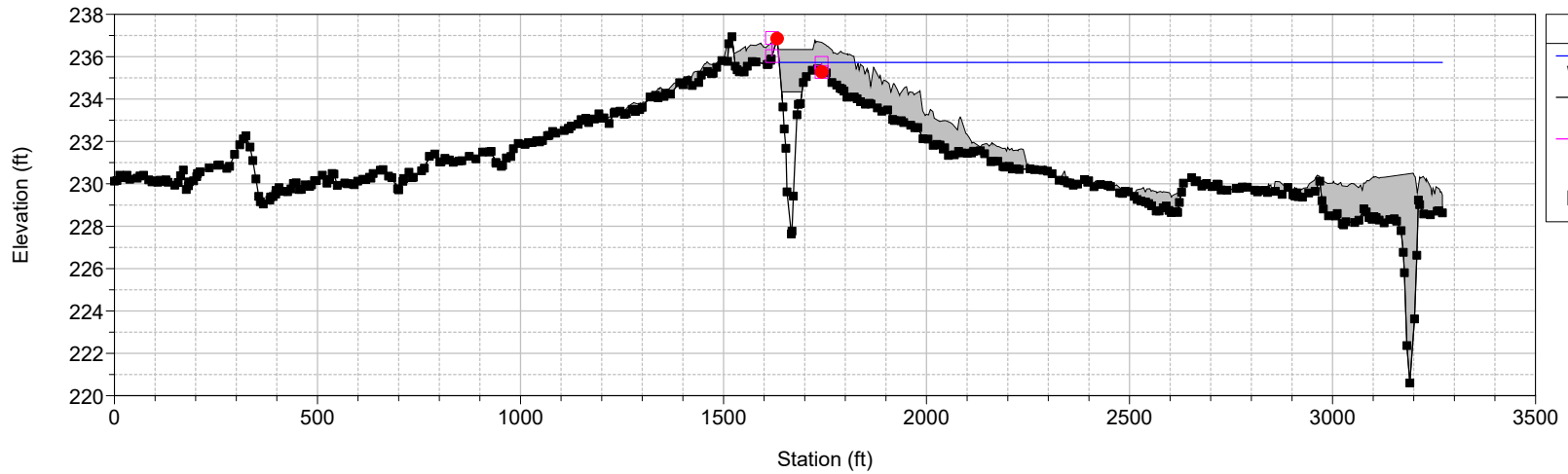
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3656.055



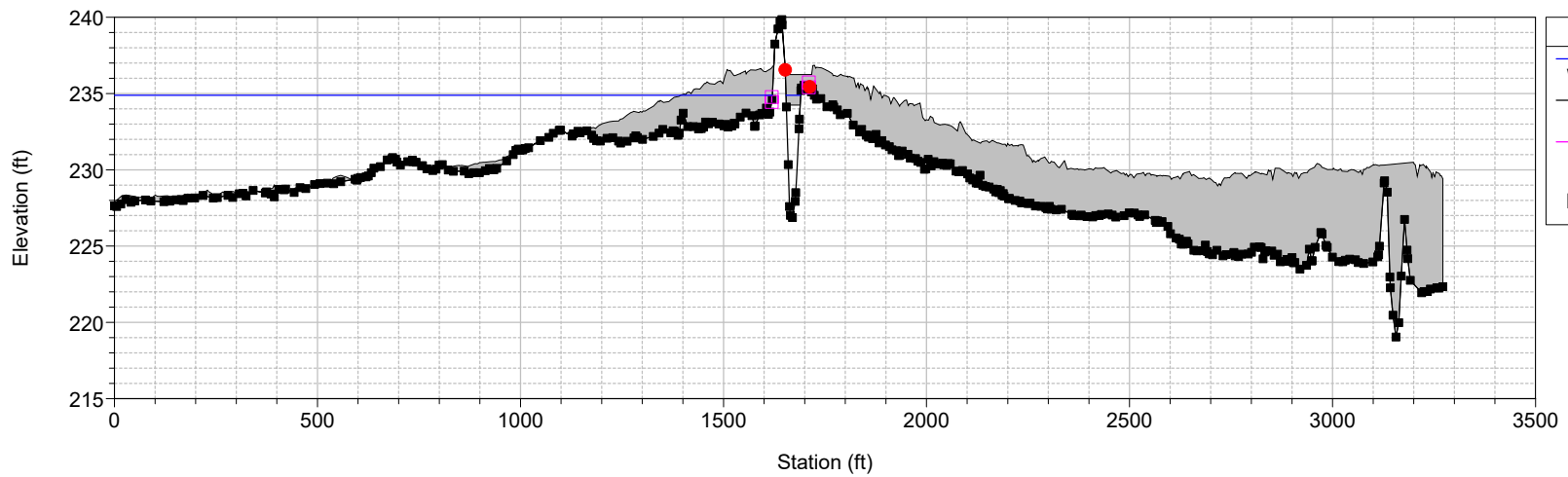
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3574.137 BR



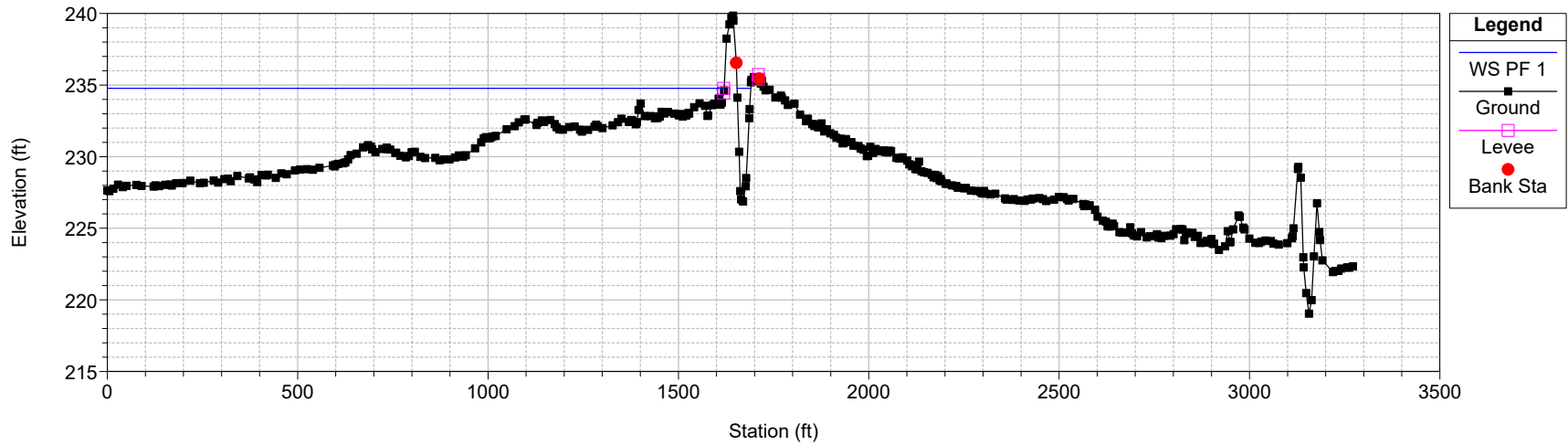
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3574.137 BR



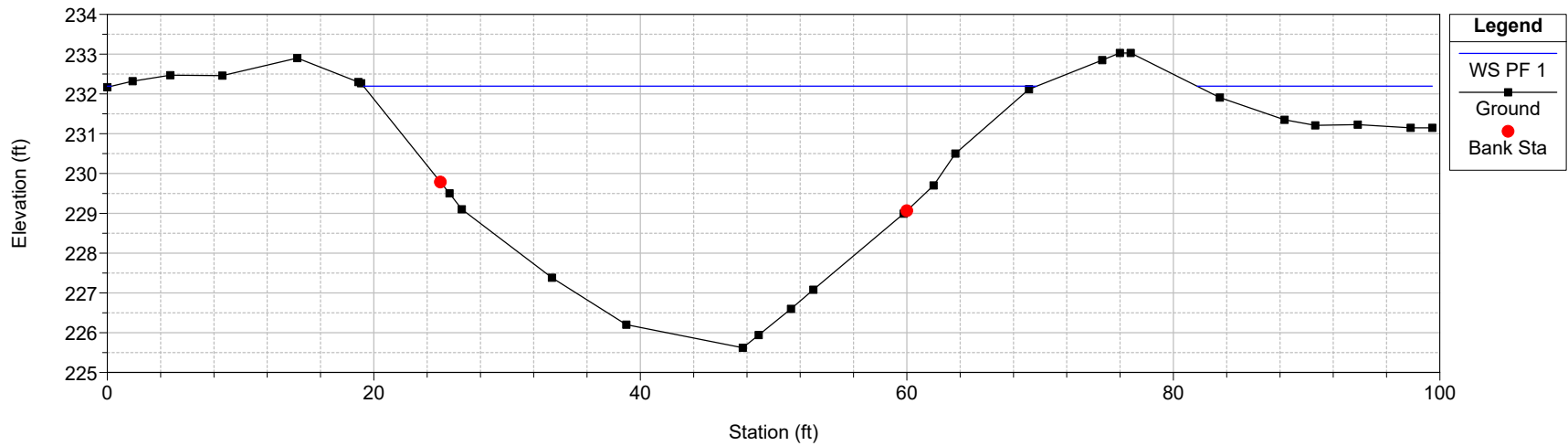
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3547.872



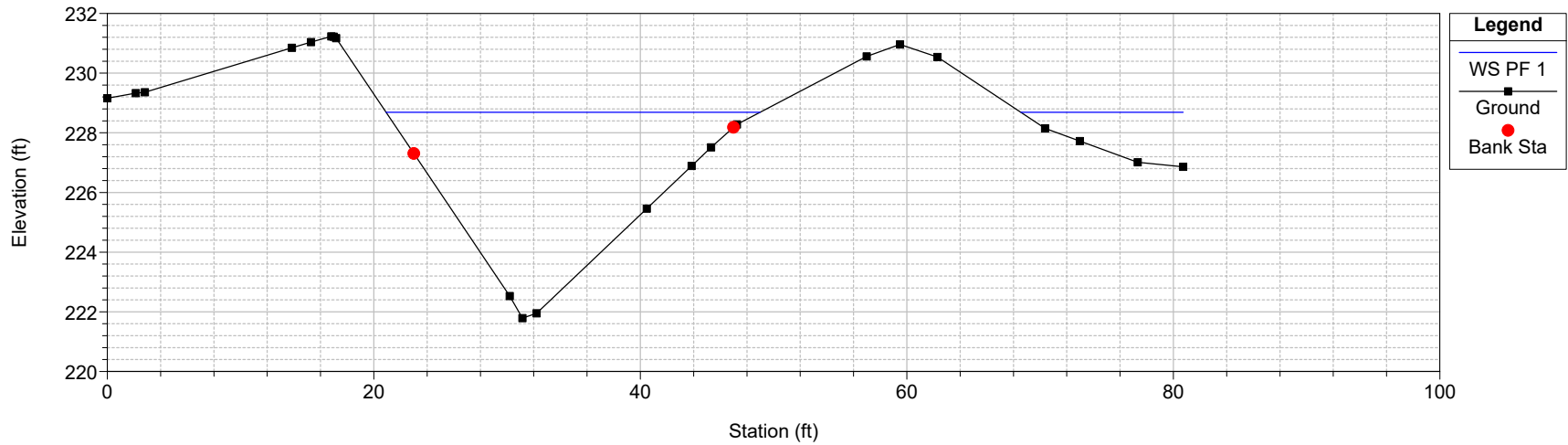
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3372.434



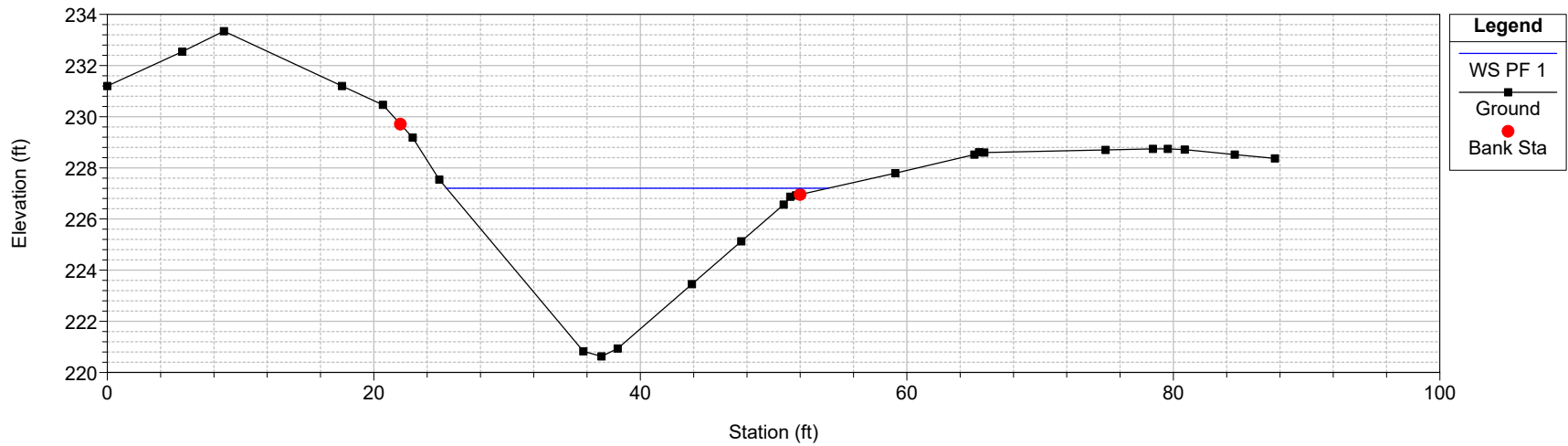
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 3020.276



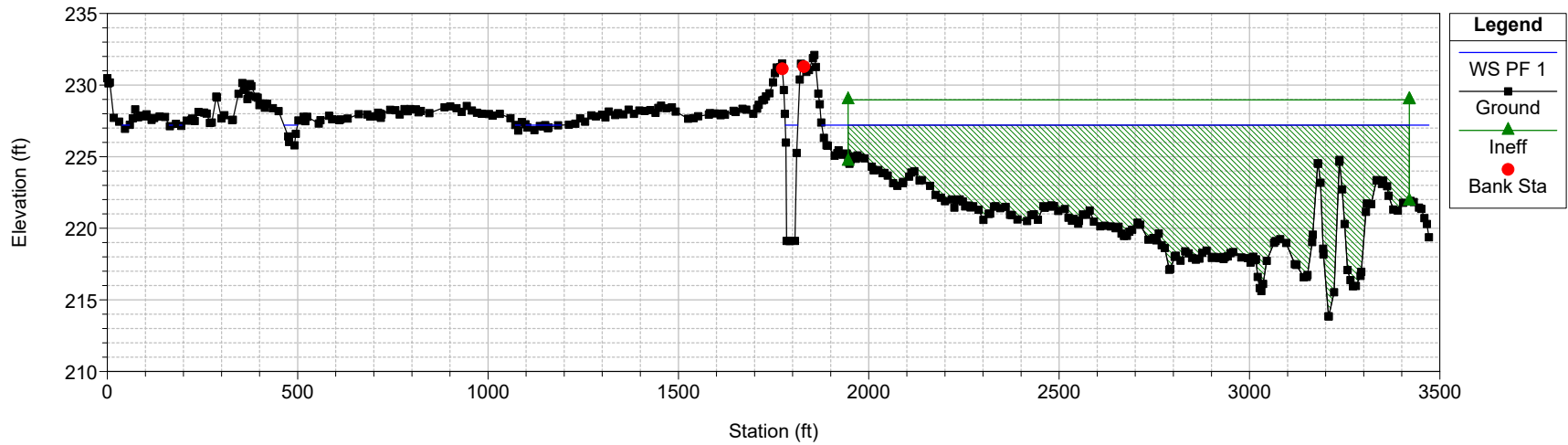
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2929.252



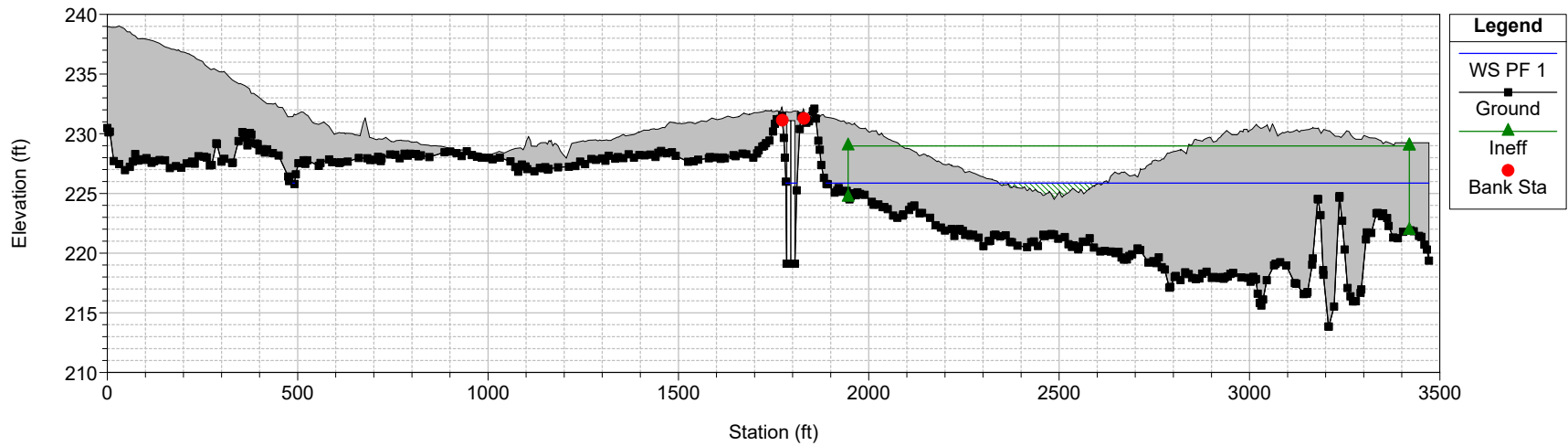
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2895.24



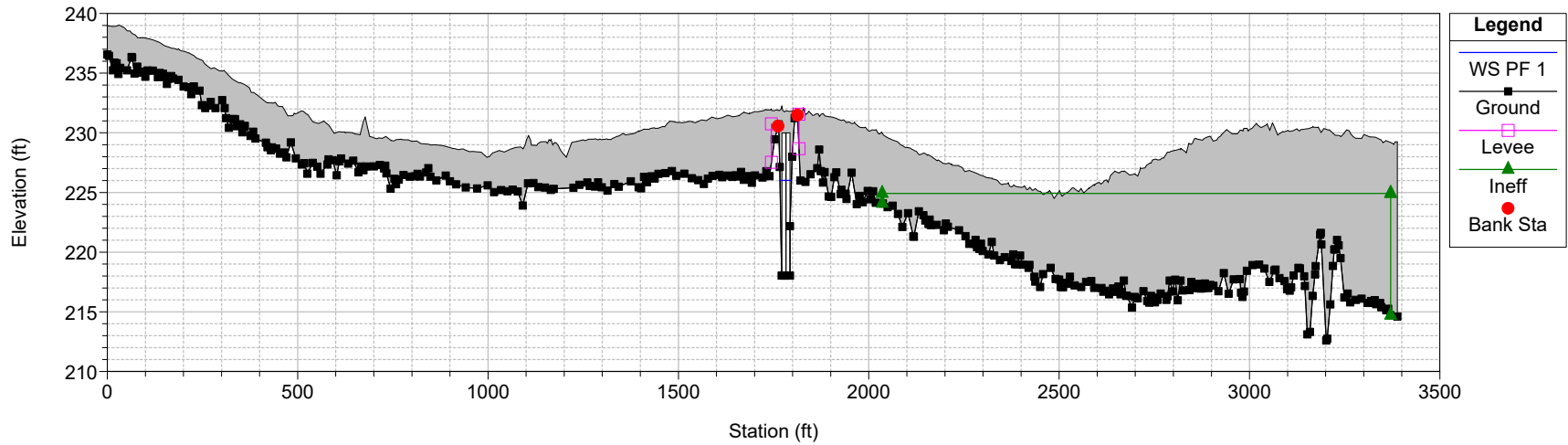
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2773.995 Culv



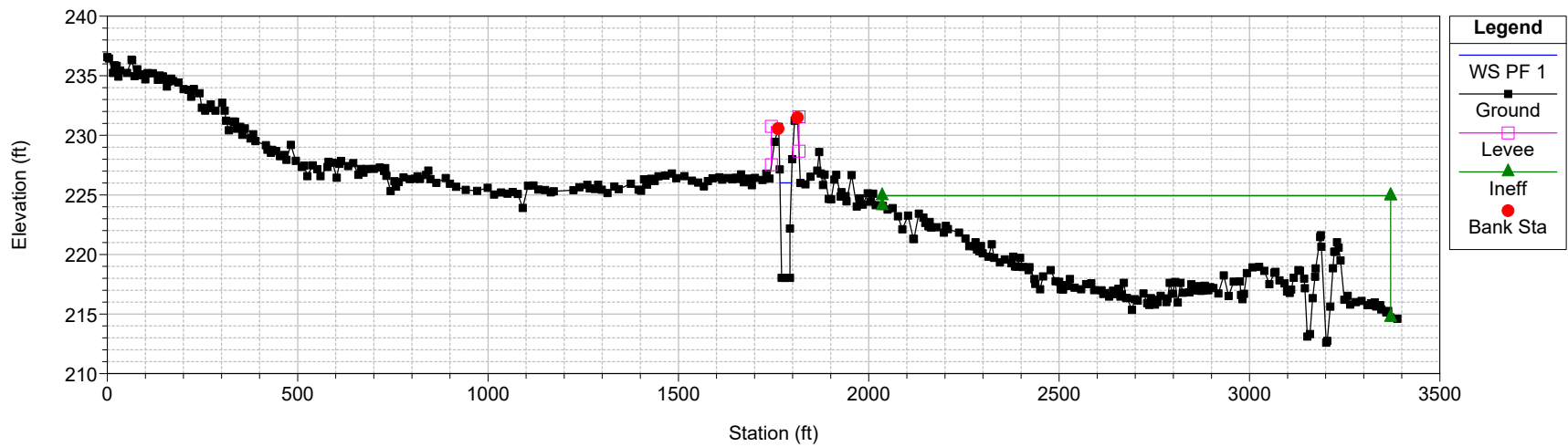
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2773.995 Culv



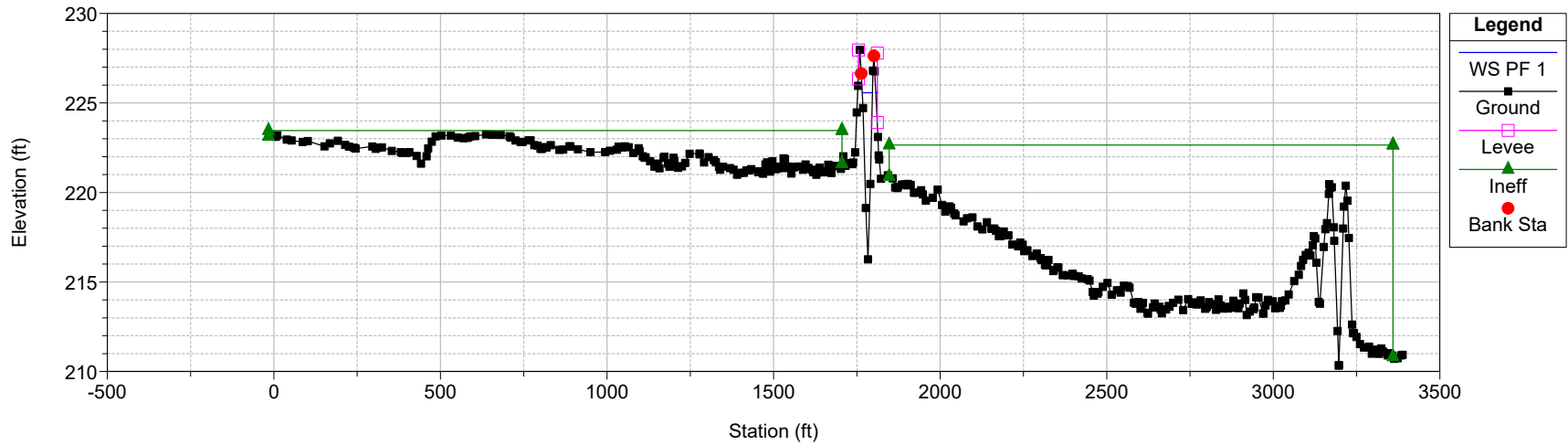
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2684.378



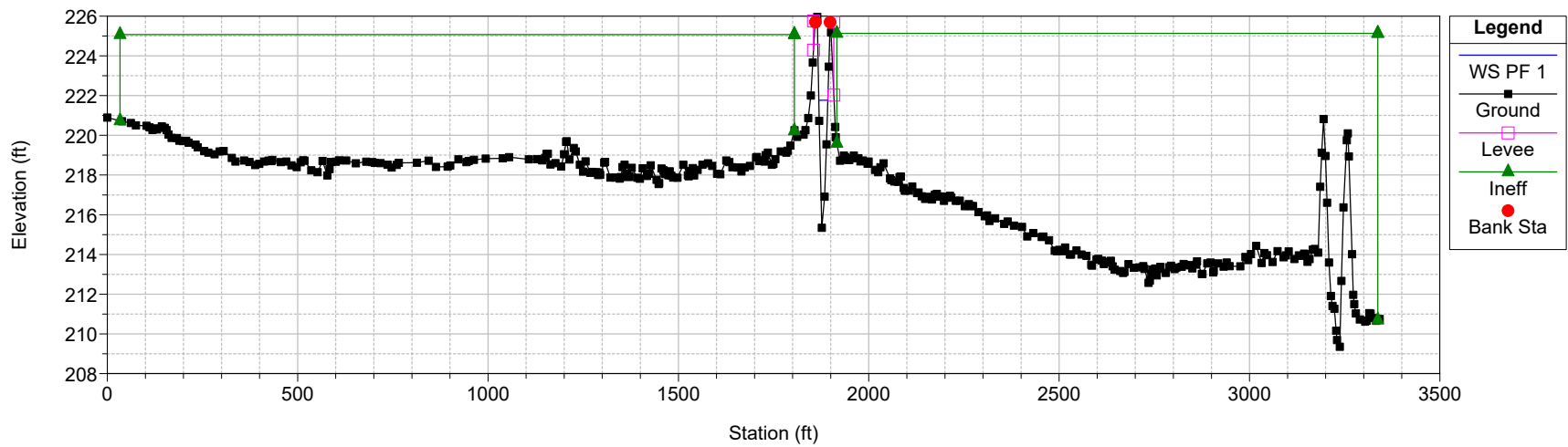
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2485.067



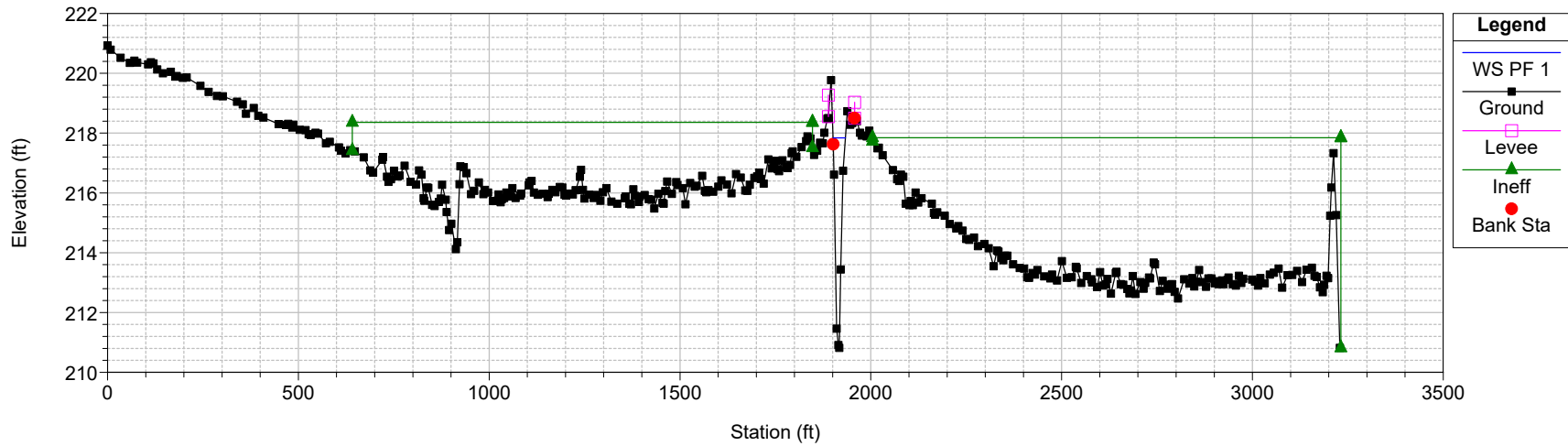
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 2247.204



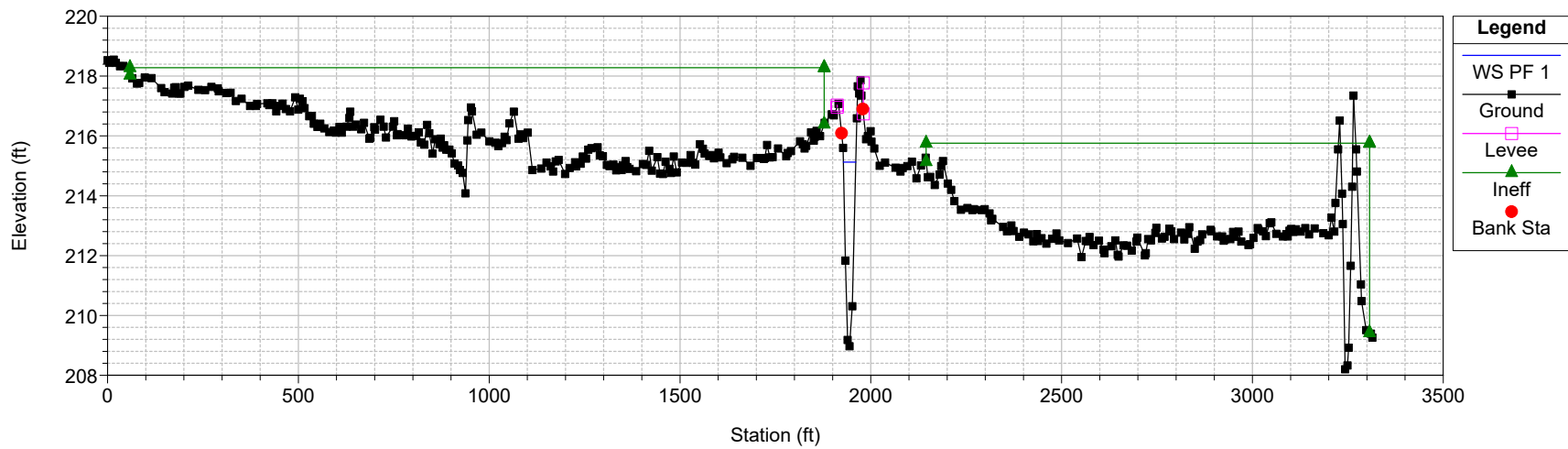
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 1997.363



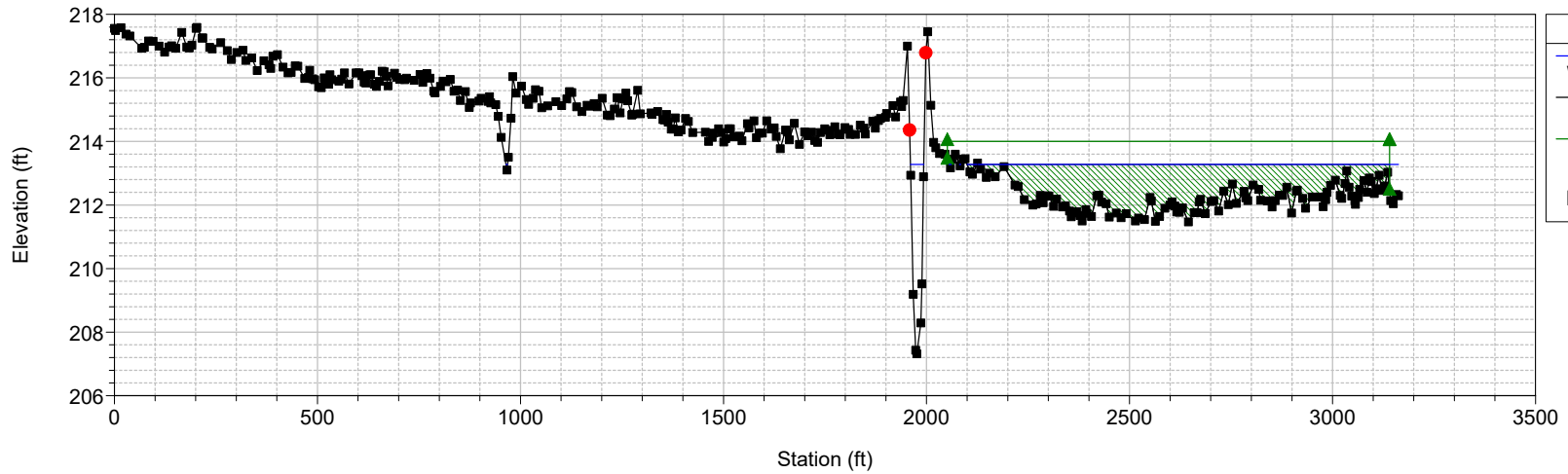
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 1747.714



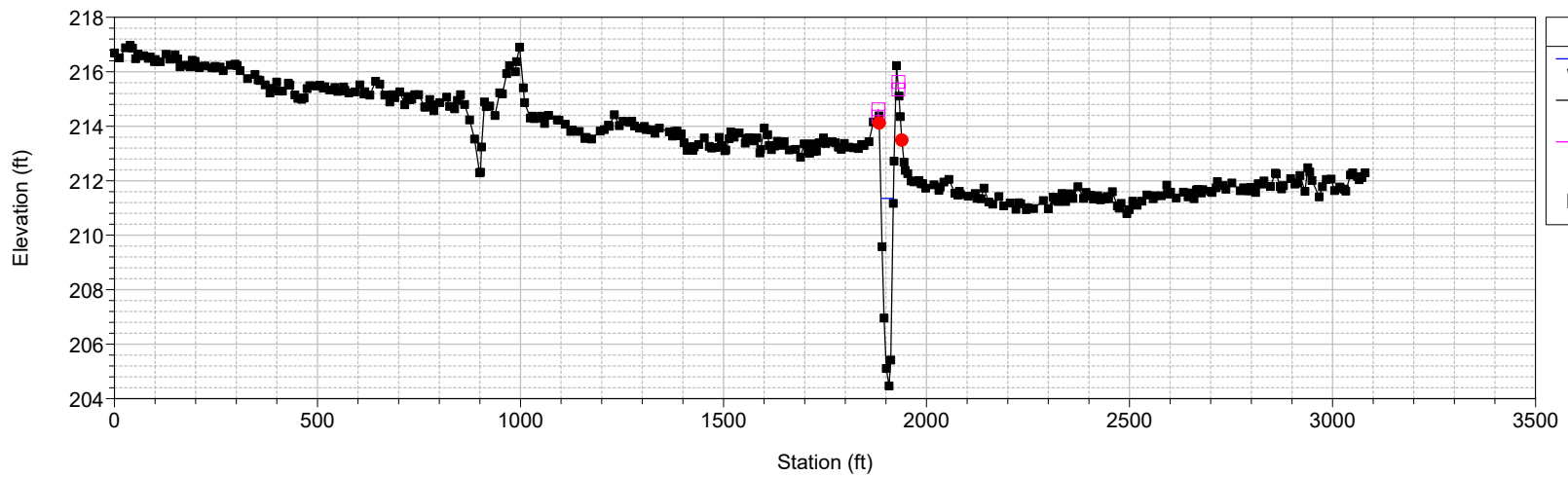
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 1498.684



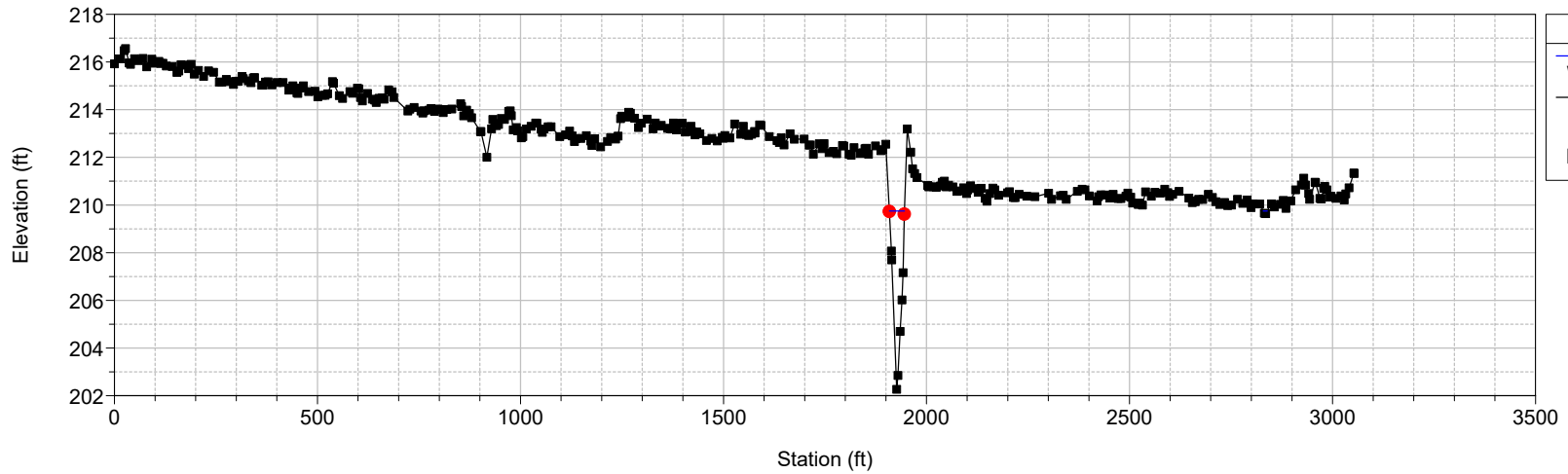
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 1250.347



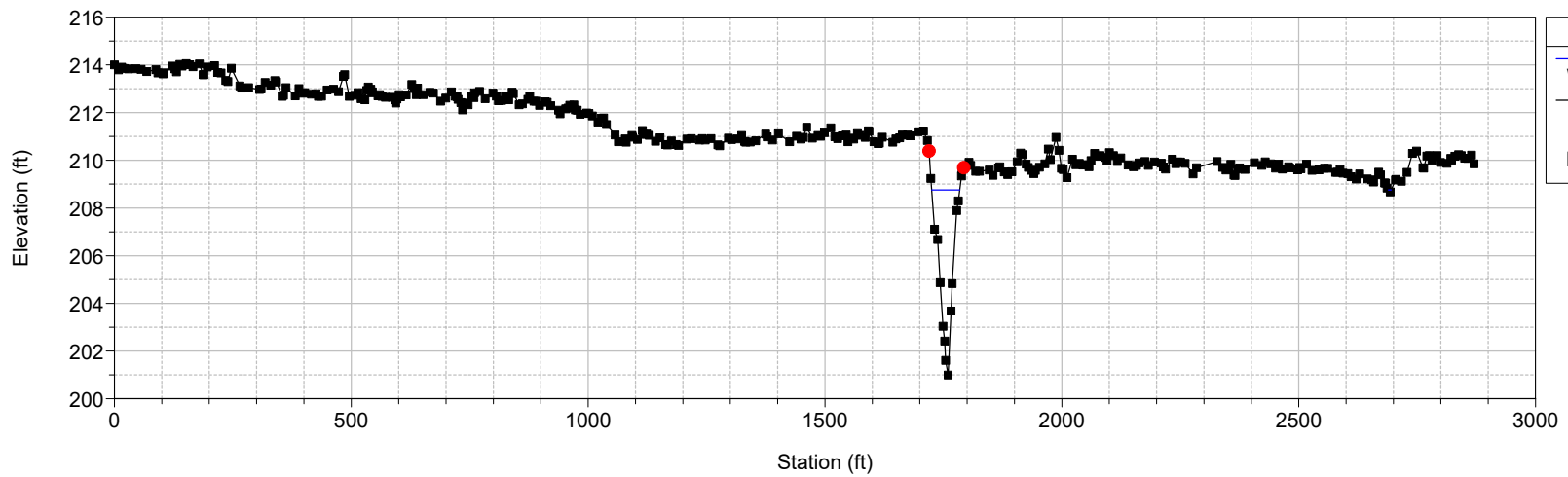
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 1001.841



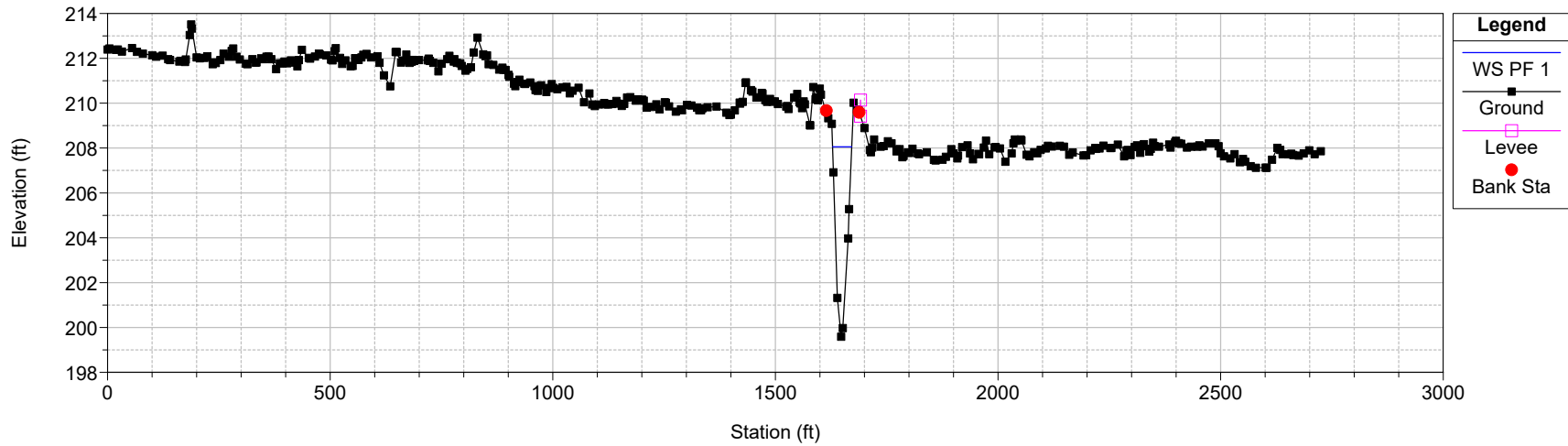
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 748.9206



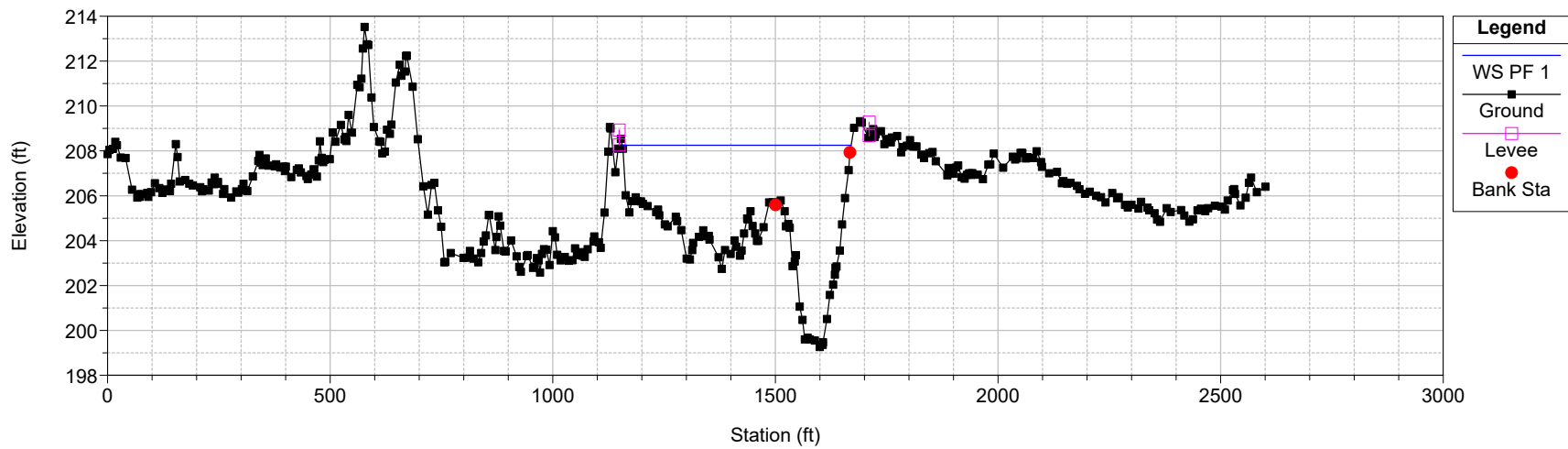
4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 502.0116



4492_AdamsBarranca Plan: Ex_AdamsBarranca 11/17/2015

Geom: AdamsExisting Flow: Ex_Profiles
River = AdamsBarranca Reach = Reach1 RS = 249.222



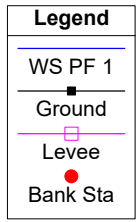
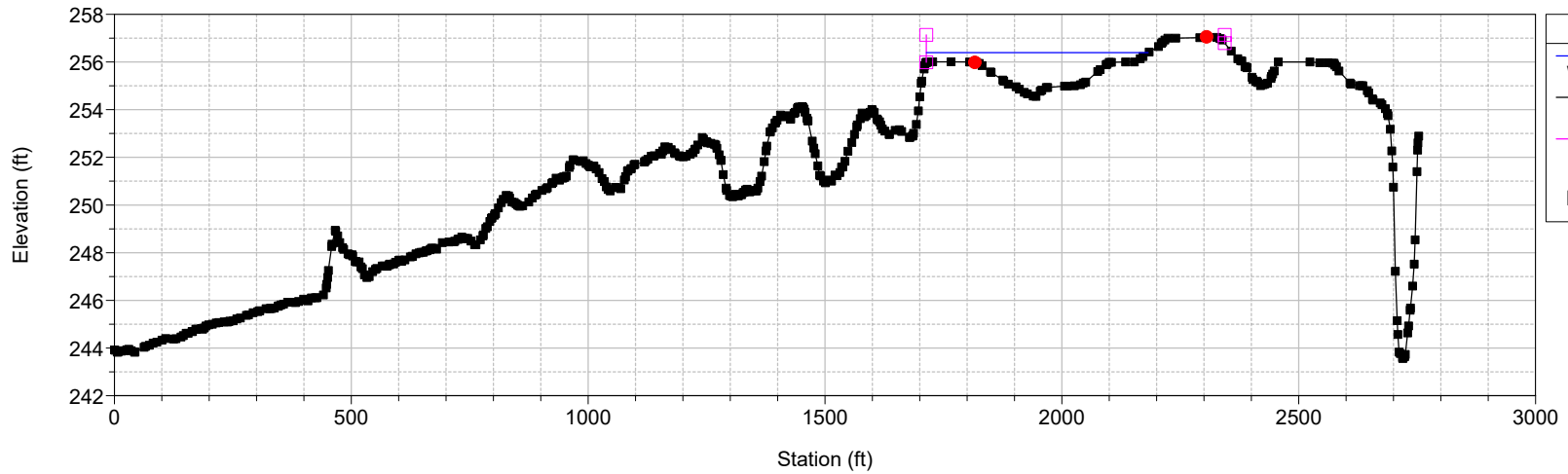
HEC-RAS Plan: East(LOB) River: AdamsBarranca Reach: EastFL Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
EastFL	5518.35	PF 1	2191.00	254.56	256.39	256.39	256.86	0.236921	5.61	409.61	468.35	0.98
EastFL	5352.199	PF 1	2191.00	252.61	252.67	252.67	252.78	0.009636	0.10	828.20	302.81	0.11
EastFL	5244.774	PF 1	2191.00	250.68	251.20	251.20	251.25	0.000750	0.41	1363.51	978.84	0.13
EastFL	5082.262	PF 1	2191.00	246.97	249.09	249.09	249.33	0.010247	2.27	771.91	1322.88	0.56
EastFL	4891.063	PF 1	2191.00	245.00	245.79	245.79	245.91	0.001535	0.74	828.35	360.19	0.20
EastFL	4629.338	PF 1	2191.00	233.74	235.64	235.24	235.86	0.010501	3.73	586.93	506.43	0.61
EastFL	4334.644	PF 1	2191.00	229.15	231.33	231.33	231.75	0.018102	5.23	418.89	477.65	0.98
EastFL	3941.169	PF 1	2292.00	227.41	229.18	228.51	229.22	0.003079	1.57	1458.47	1436.88	0.27
EastFL	3703.737	PF 1	2292.00	223.00	229.13	225.00	229.14	0.000108	0.60	3801.90	2605.01	0.09
EastFL	3442.721	PF 1	2292.00	227.00	228.60	228.60	229.02	0.002575	5.17	442.94	525.55	0.99
EastFL	3212.693	PF 1	2292.00	220.95	222.55	222.19	222.70	0.007369	3.05	753.18	933.58	0.60
EastFL	2929.015	PF 1	2292.00	217.93	219.18	219.18	219.53	0.019272	4.77	480.41	584.48	0.93
EastFL	2309.66	PF 1	2292.00	213.72	217.25	216.22	217.28	0.000738	1.37	1671.00	1253.99	0.21
EastFL	1672.838	PF 1	2292.00	212.39	213.90	213.90	214.21	0.030775	4.29	522.71	799.76	0.95
EastFL	909.8247	PF 1	2292.00	208.29	211.22	210.17	211.27	0.001000	1.79	1246.62	740.10	0.25

4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

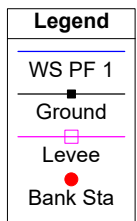
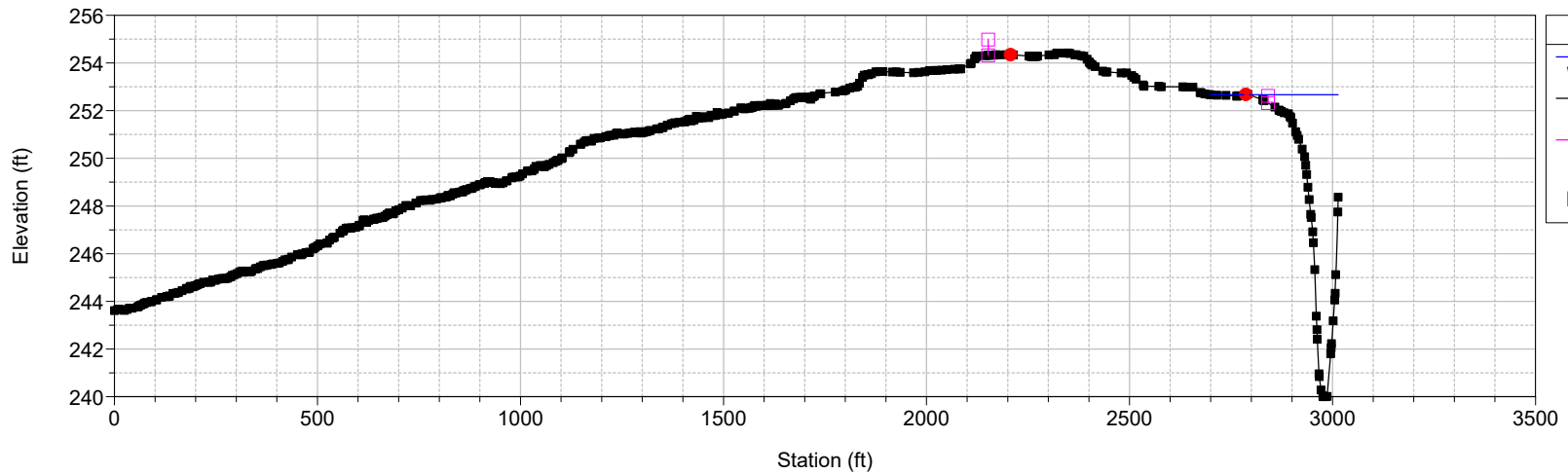
River = AdamsBarranca Reach = EastFL RS = 5518.35



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

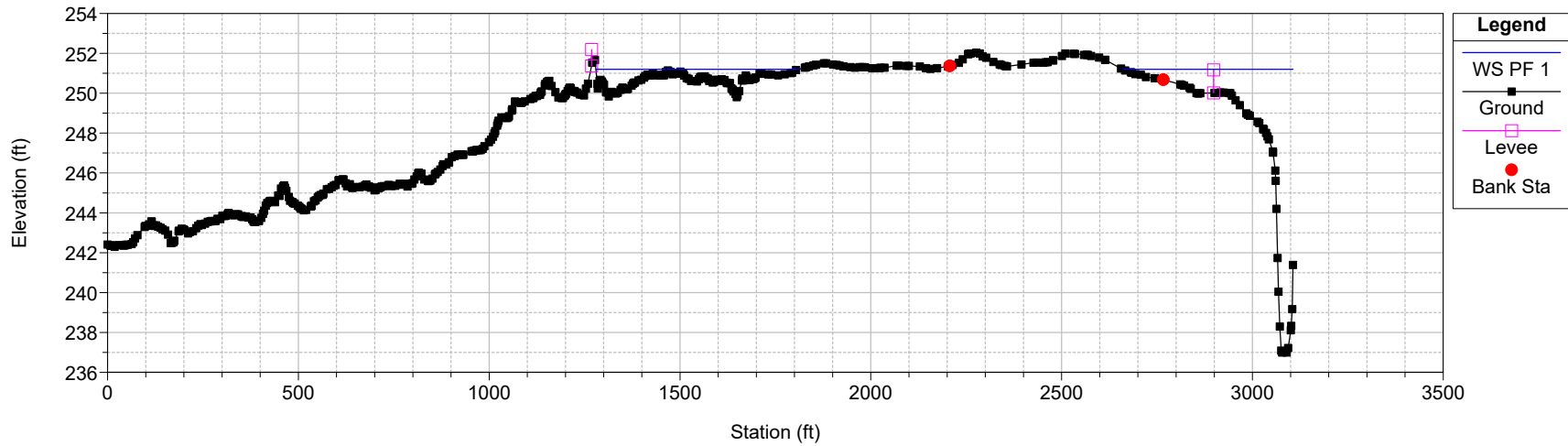
River = AdamsBarranca Reach = EastFL RS = 5352.199



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

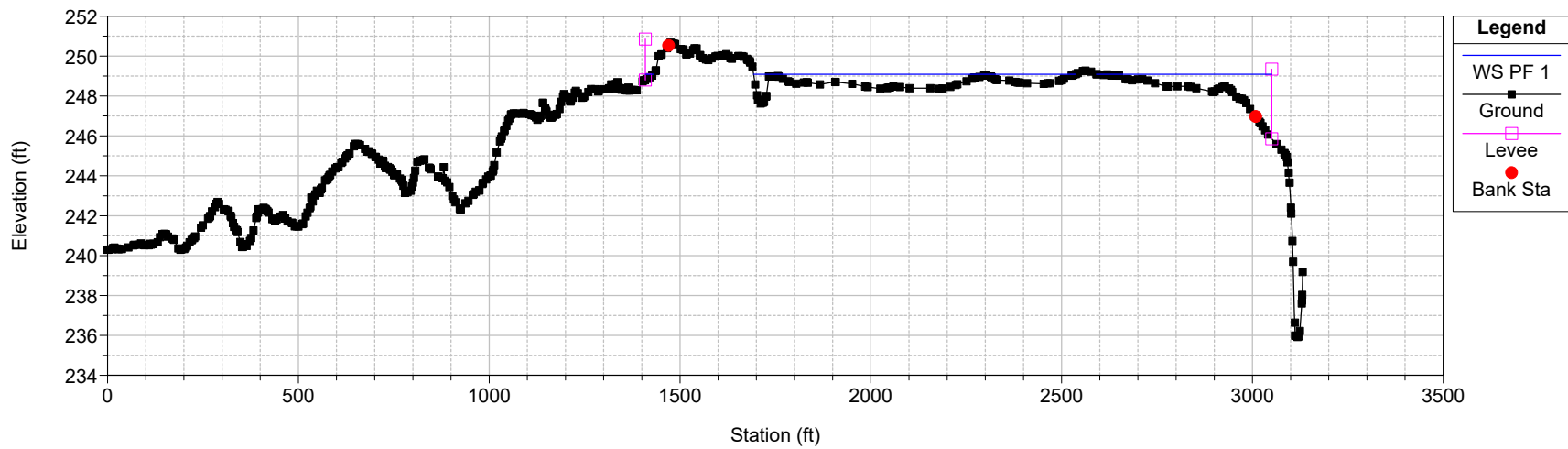
River = AdamsBarranca Reach = EastFL RS = 5244.774



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

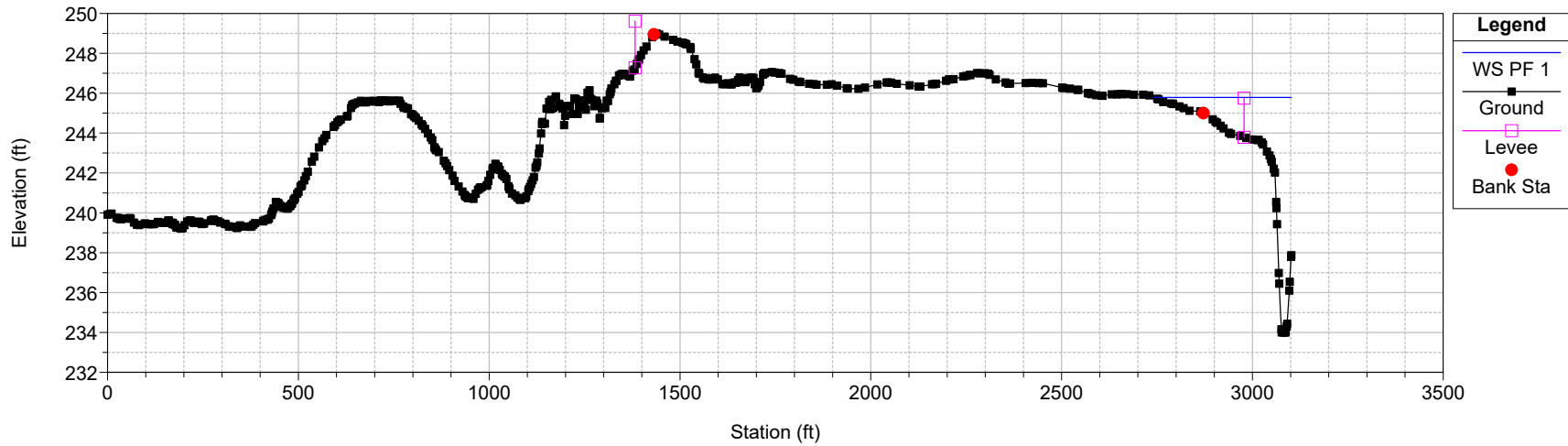
River = AdamsBarranca Reach = EastFL RS = 5082.262



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

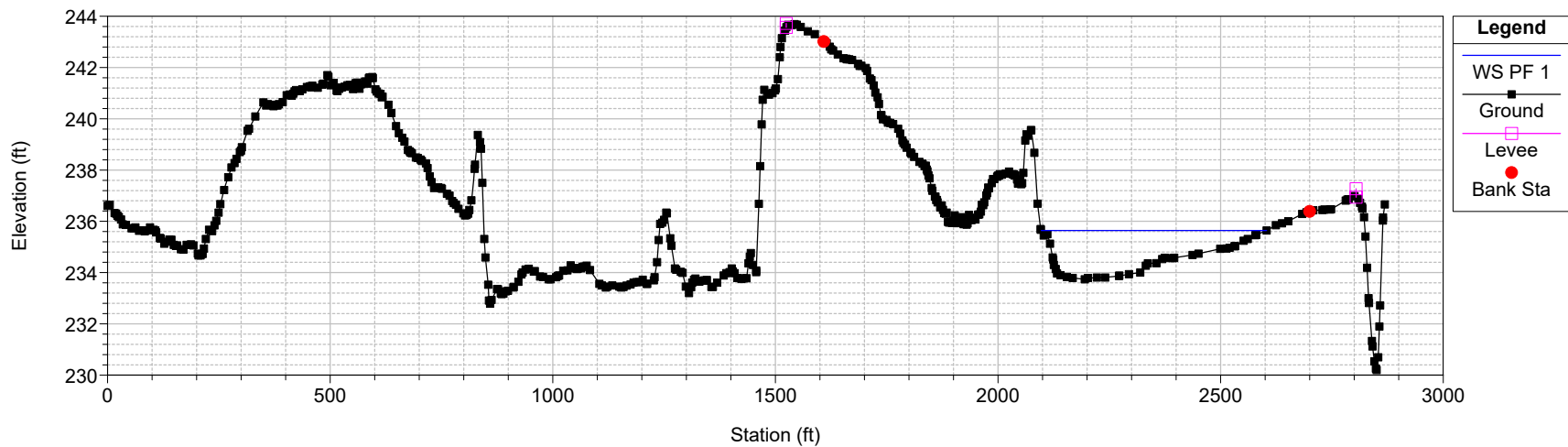
River = AdamsBarranca Reach = EastFL RS = 4891.063



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

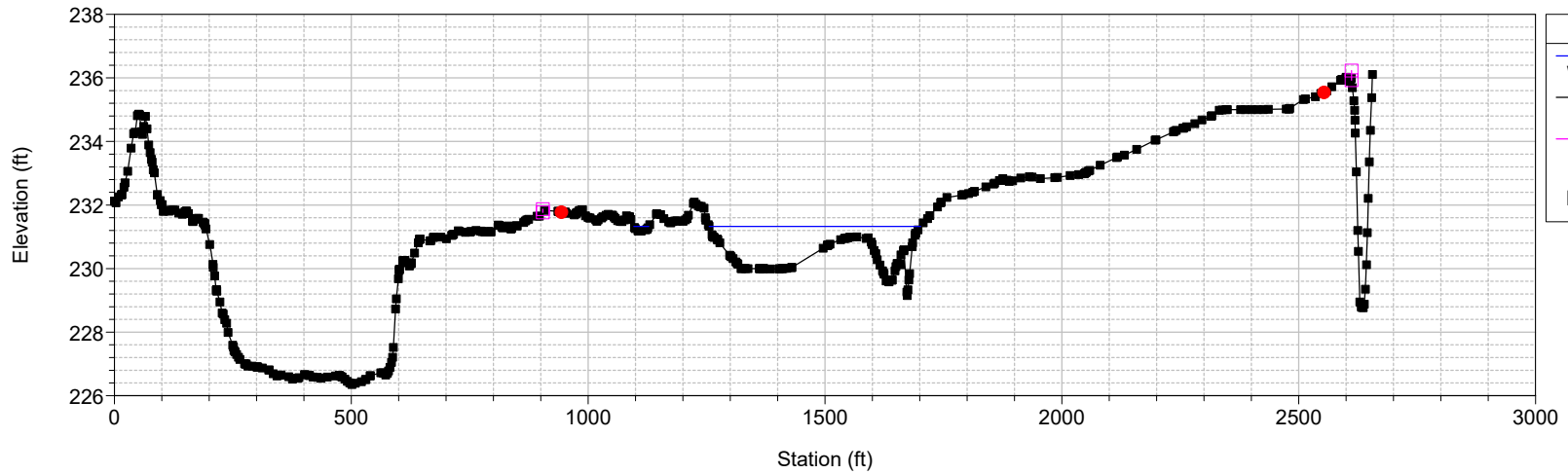
River = AdamsBarranca Reach = EastFL RS = 4629.338



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

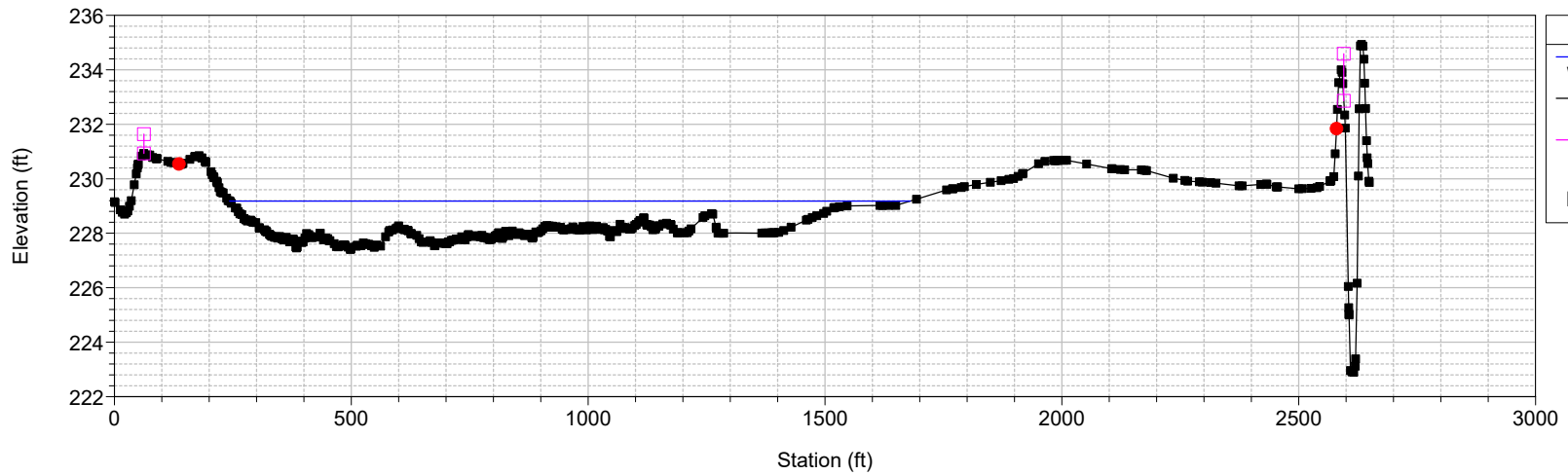
River = AdamsBarranca Reach = EastFL RS = 4334.644



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

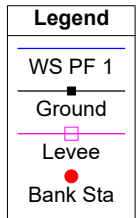
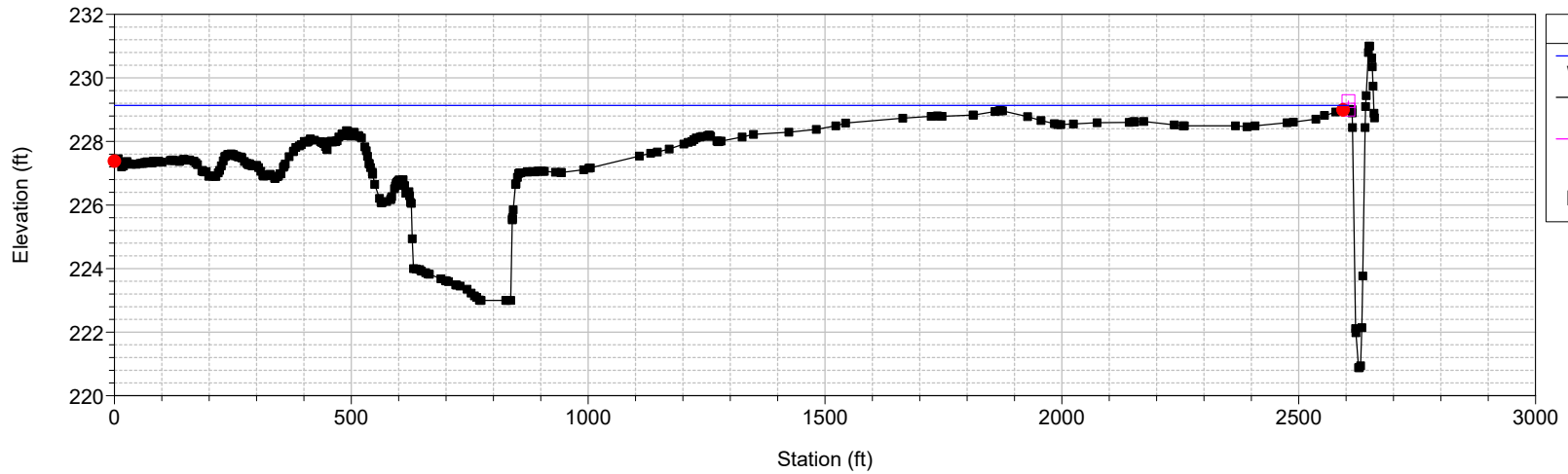
River = AdamsBarranca Reach = EastFL RS = 3941.169



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

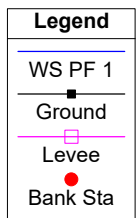
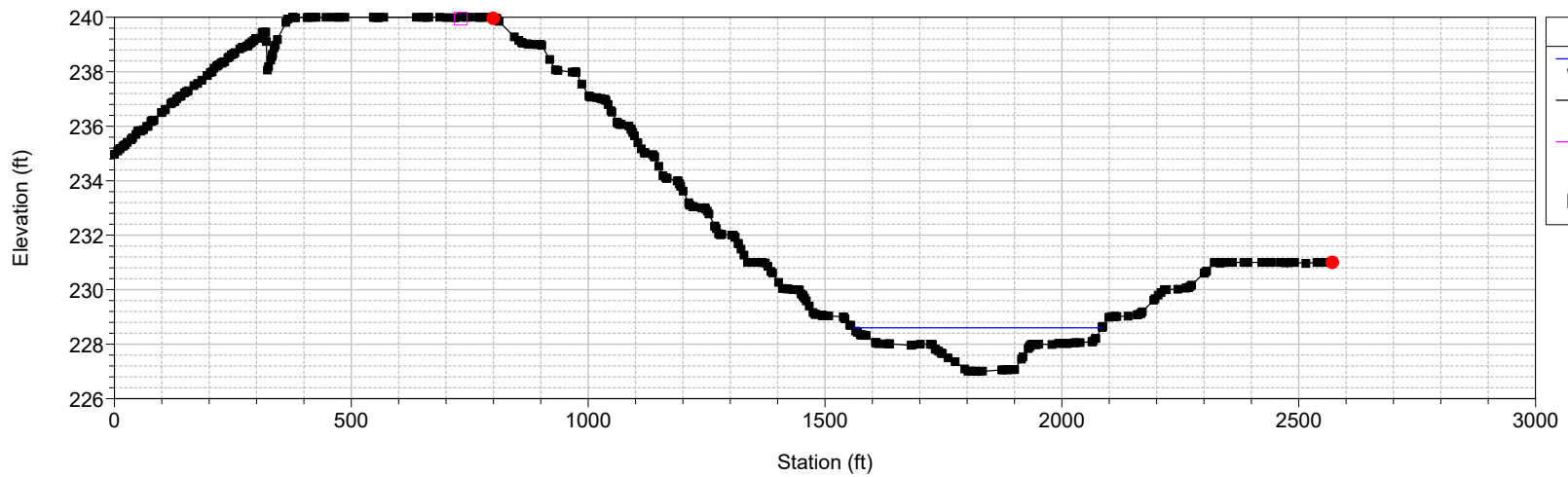
River = AdamsBarranca Reach = EastFL RS = 3703.737



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

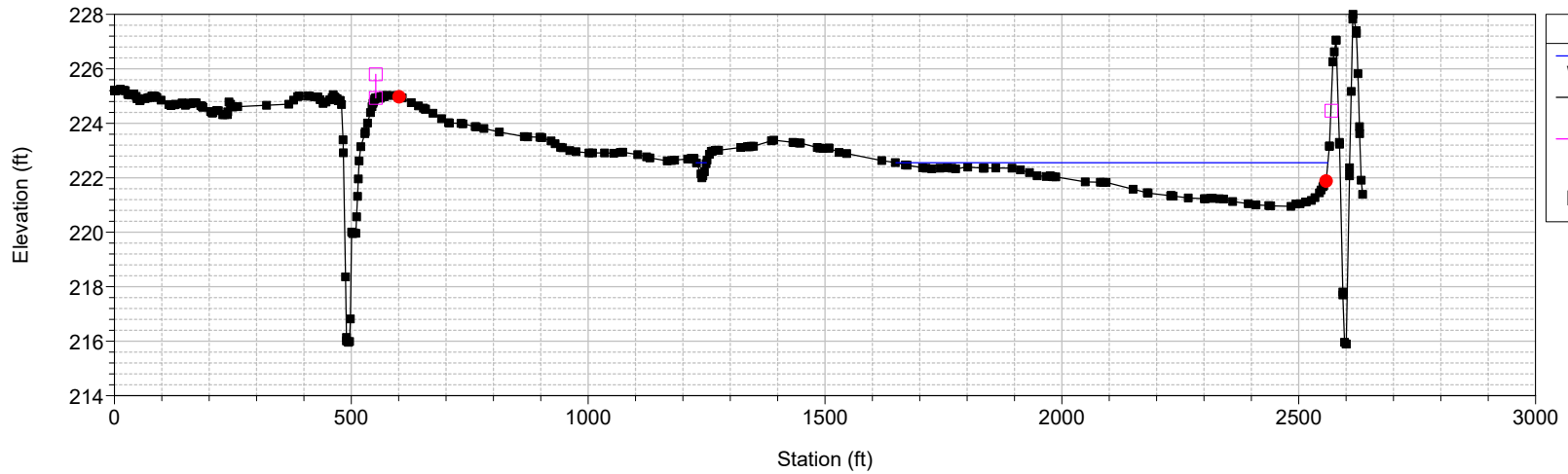
River = AdamsBarranca Reach = EastFL RS = 3442.721



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

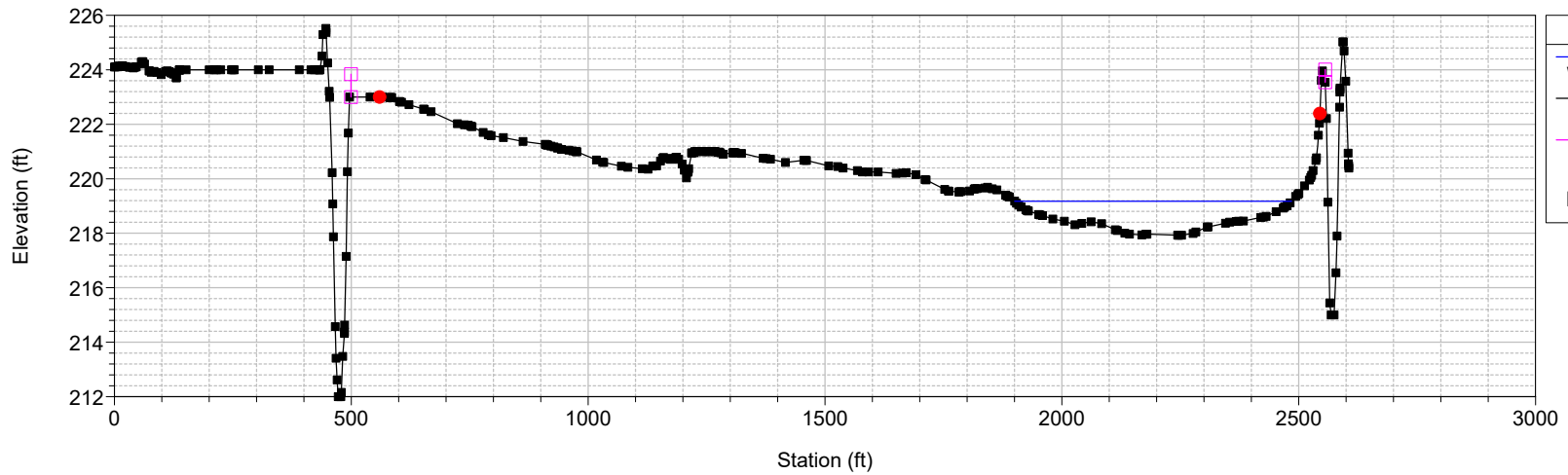
River = AdamsBarranca Reach = EastFL RS = 3212.693



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

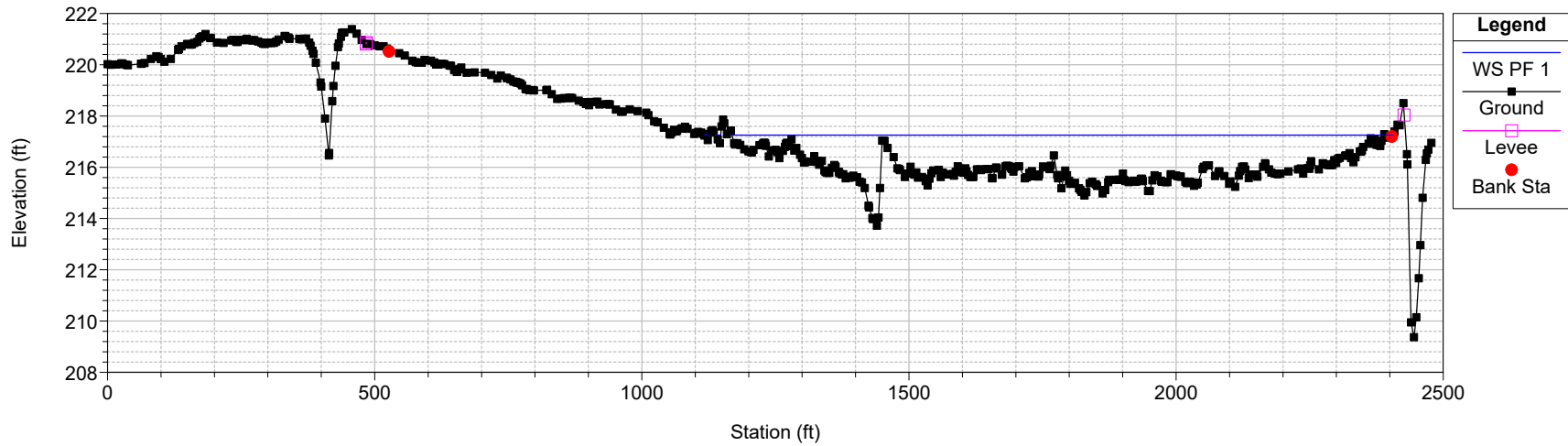
River = AdamsBarranca Reach = EastFL RS = 2929.015



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

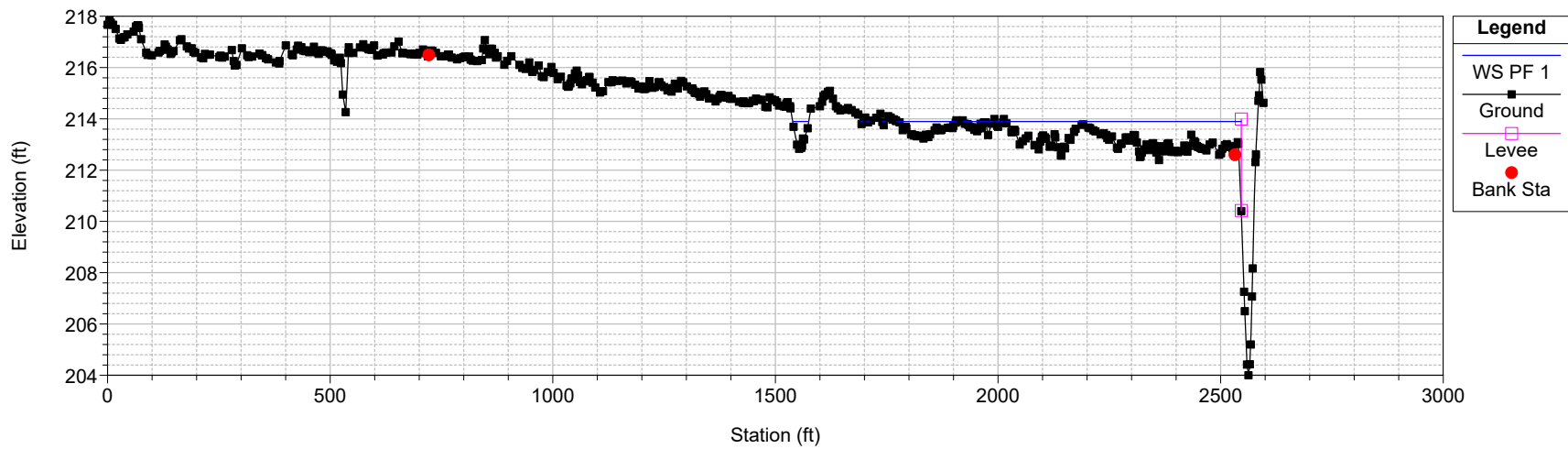
River = AdamsBarranca Reach = EastFL RS = 2309.66



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

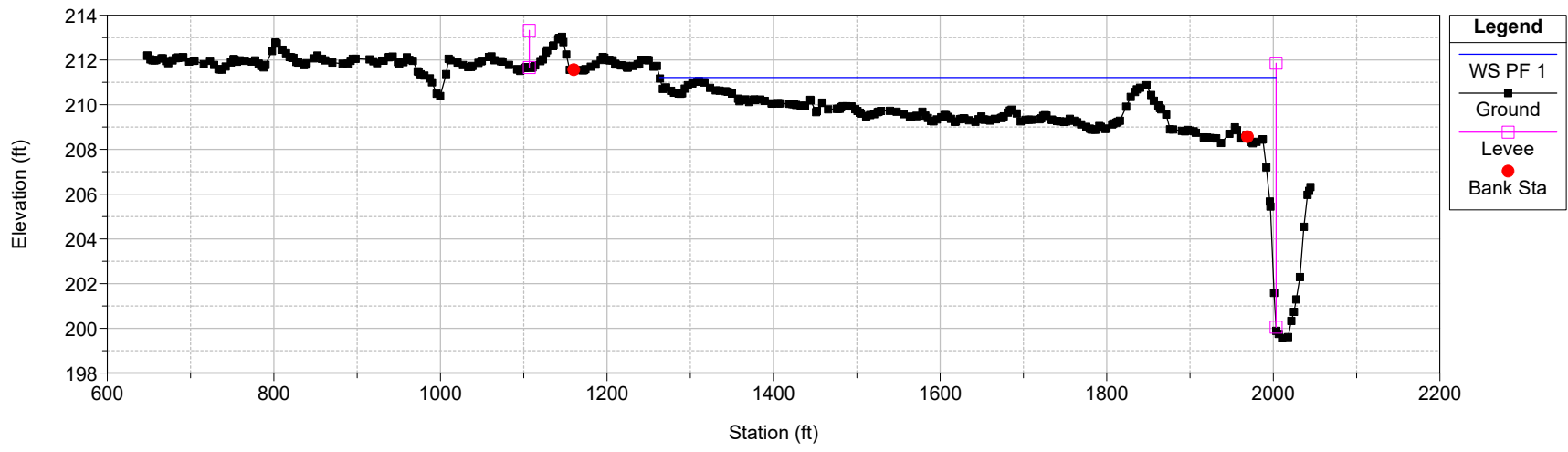
River = AdamsBarranca Reach = EastFL RS = 1672.838



4492_AdamsBarranca Plan: Ex_EastOvebank_Adams 11/17/2015

Geom: AdamsExisting_EastOverbank Flow: Ex_ProfilesEastOverbank

River = AdamsBarranca Reach = EastFL RS = 909.8247



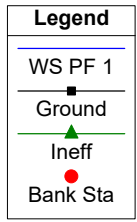
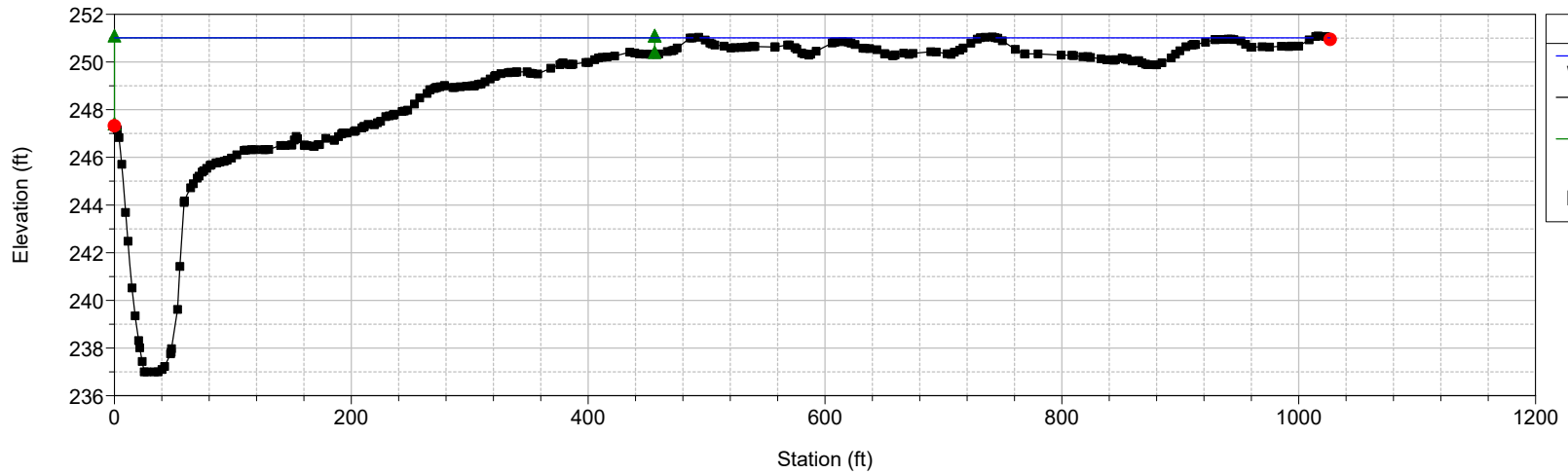
HEC-RAS Plan: ROB River: AdamsBarranca Reach: ROB Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
ROB	4876.64	PF 1	1359.00	237.00	251.01	251.01	251.02	0.000058	0.66	2067.35	994.77	0.08
ROB	4369.222	PF 1	1359.00	234.00	242.54		242.75	0.003313	3.70	366.82	225.38	0.51
ROB	4130.314	PF 1	1359.00	233.00	242.57	242.57	242.58	0.000172	0.93	1469.12	720.39	0.11
ROB	4014.771	PF 1	1359.00	231.97	236.15	236.15	236.60	0.018617	5.41	251.41	318.63	1.00
ROB	3871.933	PF 1	1359.00	228.94	231.82	231.54	232.06	0.007642	3.88	350.40	611.56	0.66
ROB	3800.783	PF 1	1359.00	227.98	231.48	230.95	231.62	0.004478	3.10	438.55	901.74	0.51
ROB	3592.327	PF 1	2656.00	226.85	230.46	230.46	230.60	0.005163	2.96	896.68	958.88	0.53
ROB	3269.723	PF 1	2656.00	221.00	227.91	224.40	227.92	0.000059	0.66	4031.73	1435.10	0.07
ROB	2837.474	PF 1	2656.00	218.22	227.91	221.52	227.91	0.000008	0.36	7340.28	1375.16	0.03
ROB	2537.857	PF 1	2656.00	225.08	227.33	227.33	227.85	0.002466	5.75	461.63	452.00	1.00
ROB	2157.755	PF 1	2656.00	212.65	215.20	214.50	215.32	0.002720	2.74	970.72	712.50	0.41
ROB	1945.575	PF 1	2656.00	211.33	214.62	214.07	214.71	0.002959	2.49	1067.25	968.74	0.41
ROB	1526.76	PF 1	2656.00	208.00	213.42	212.91	213.50	0.002820	2.29	1160.33	1163.75	0.40
ROB	1028.893	PF 1	2656.00	203.26	212.14	211.54	212.21	0.002381	2.16	1231.19	1195.79	0.37
ROB	549.033	PF 1	2656.00	200.74	209.34	209.34	209.61	0.021869	4.20	631.65	1215.05	1.00
ROB	272.1645	PF 1	2656.00	199.75	208.33	207.11	208.37	0.001000	1.63	1625.66	1312.25	0.25

4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

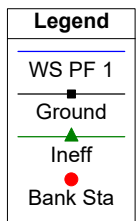
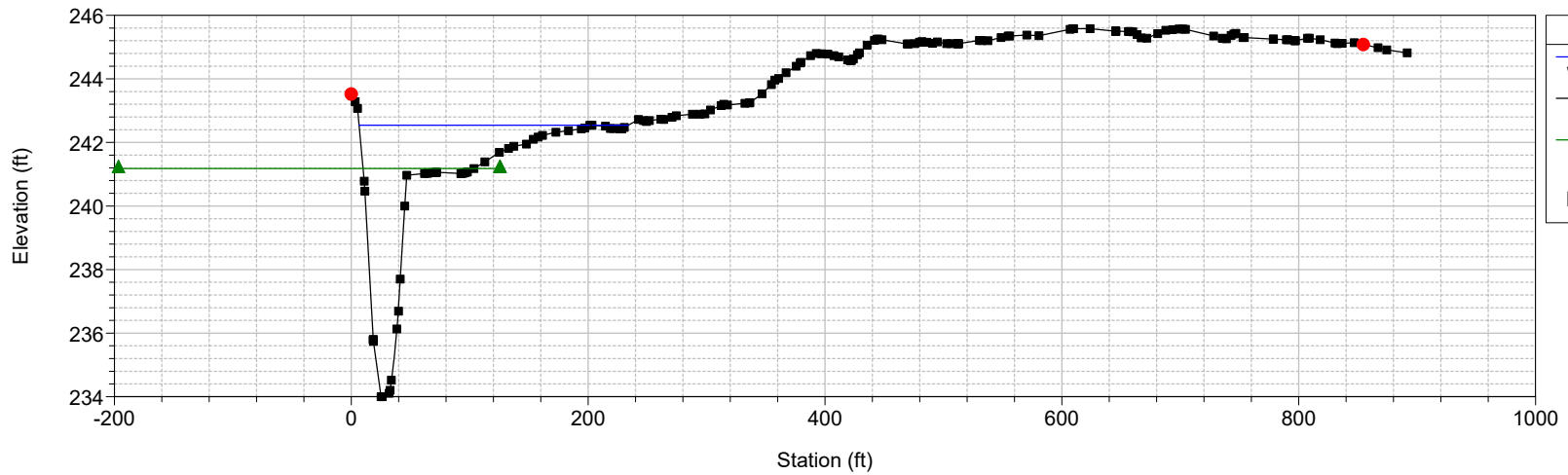
River = AdamsBarranca Reach = ROB RS = 4876.64



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

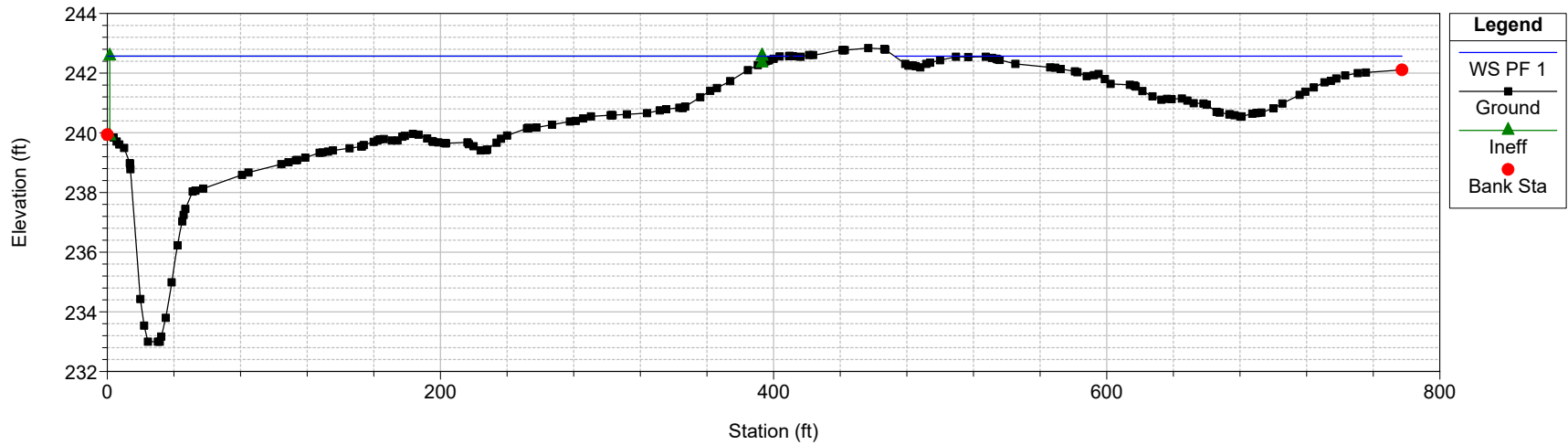
River = AdamsBarranca Reach = ROB RS = 4369.222



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

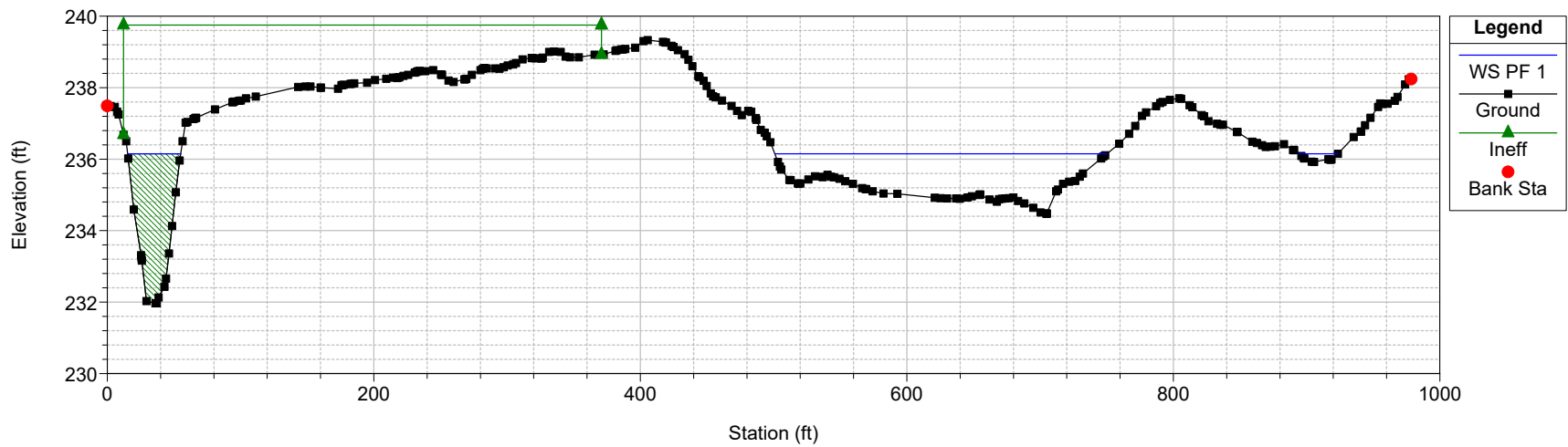
River = AdamsBarranca Reach = ROB RS = 4130.314



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

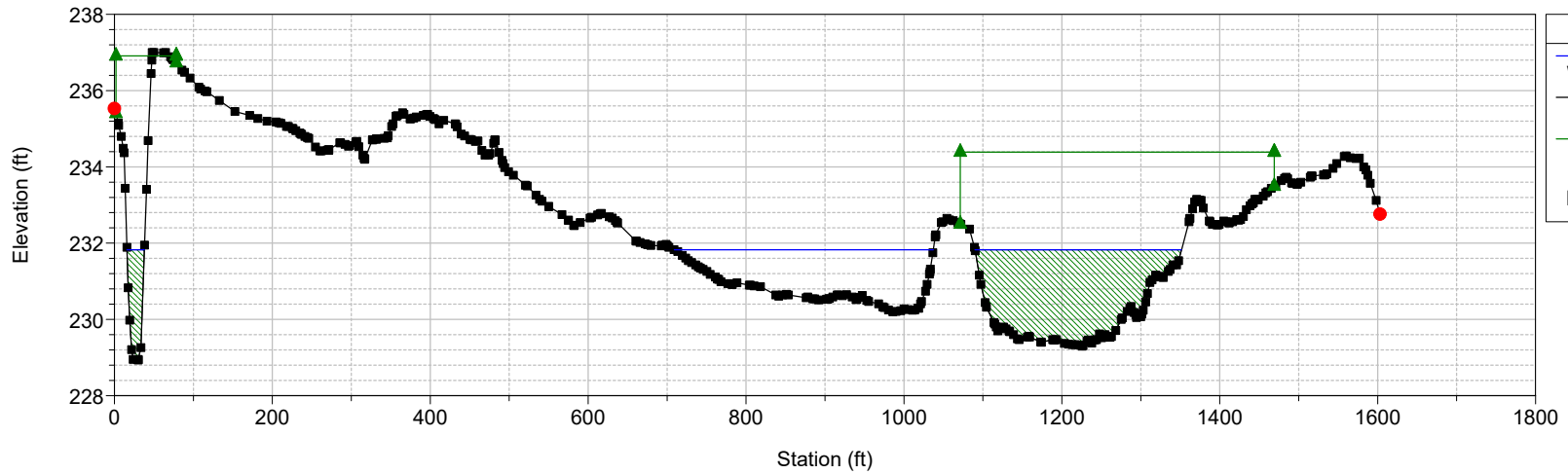
River = AdamsBarranca Reach = ROB RS = 4014.771



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

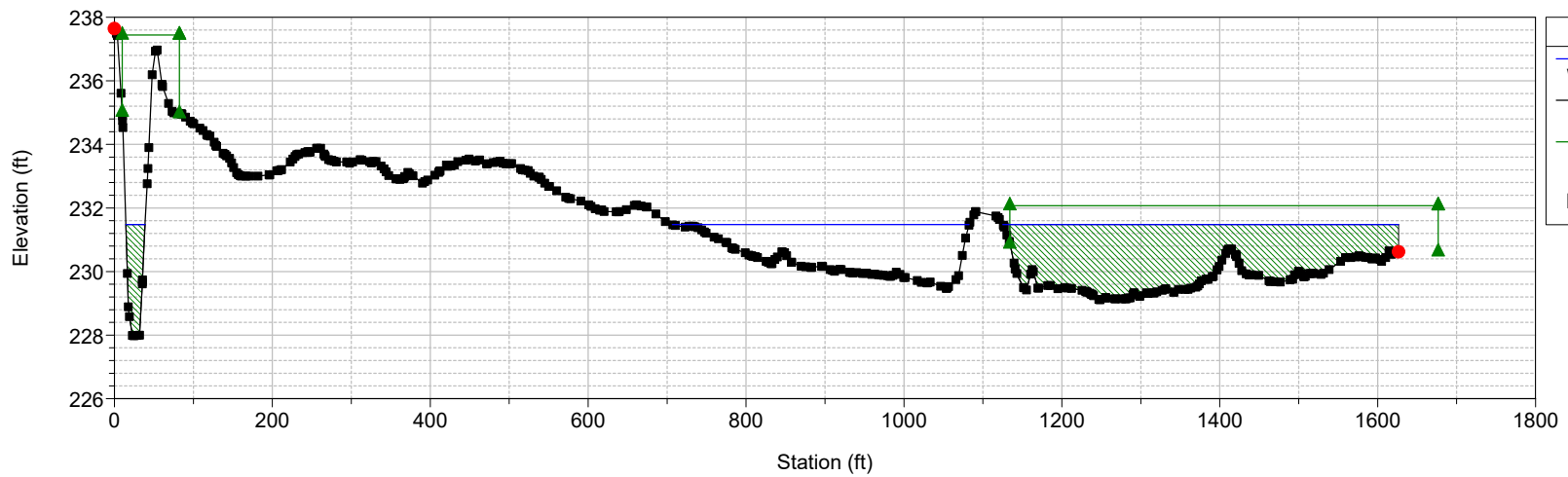
River = AdamsBarranca Reach = ROB RS = 3871.933



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

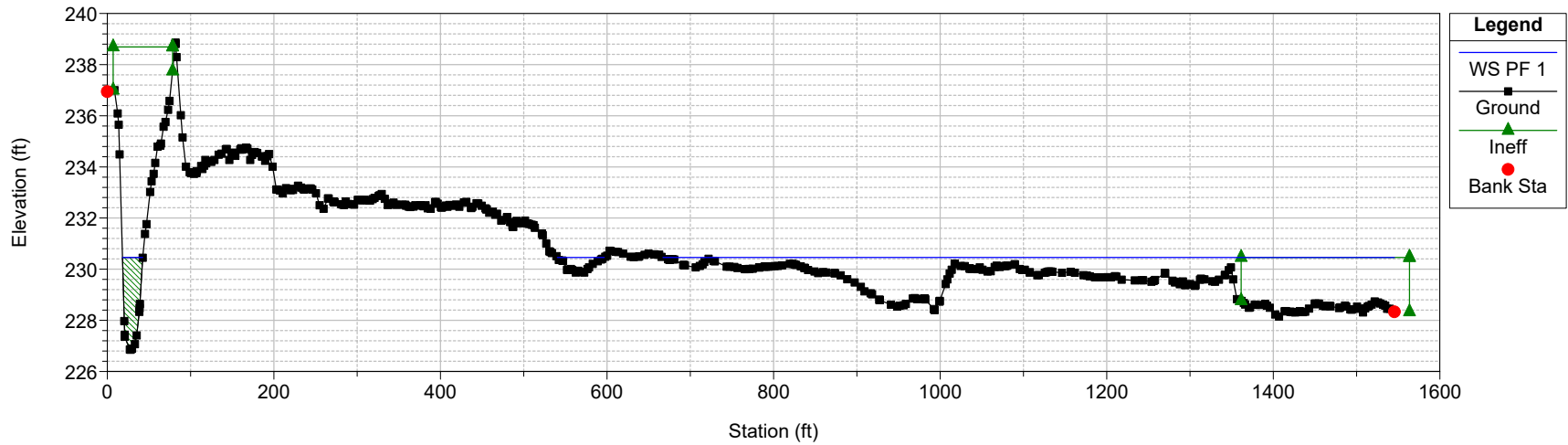
River = AdamsBarranca Reach = ROB RS = 3800.783



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

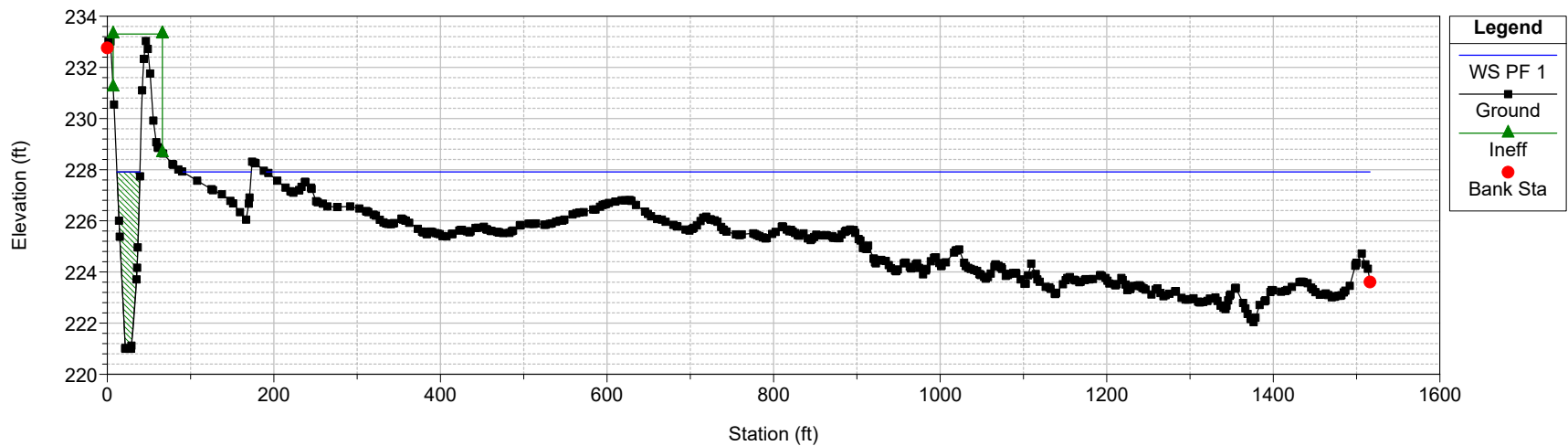
River = AdamsBarranca Reach = ROB RS = 3592.327



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

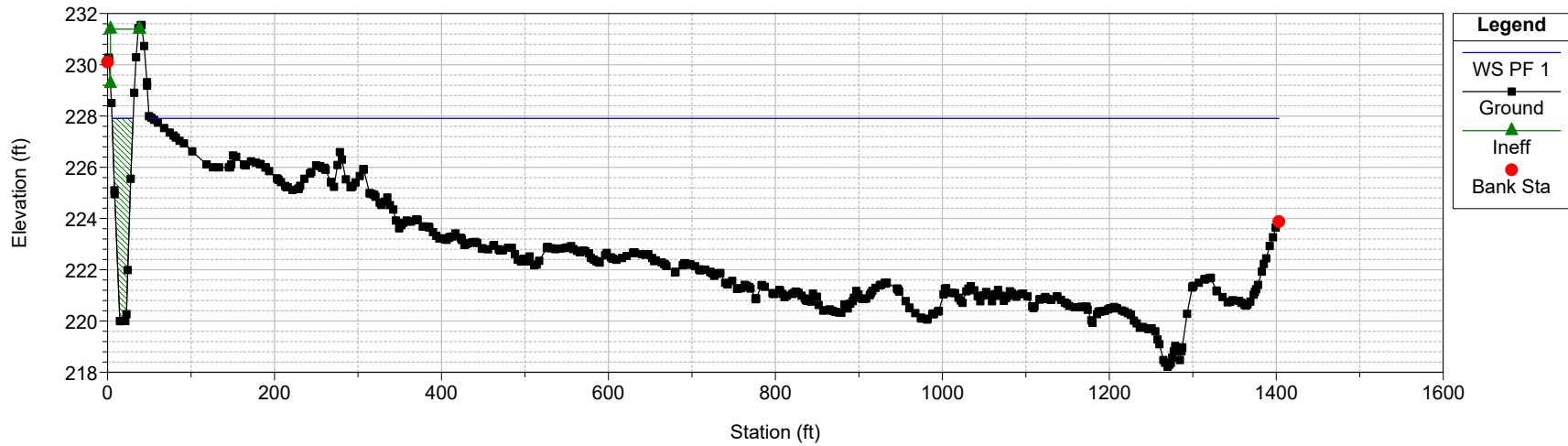
River = AdamsBarranca Reach = ROB RS = 3269.723



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

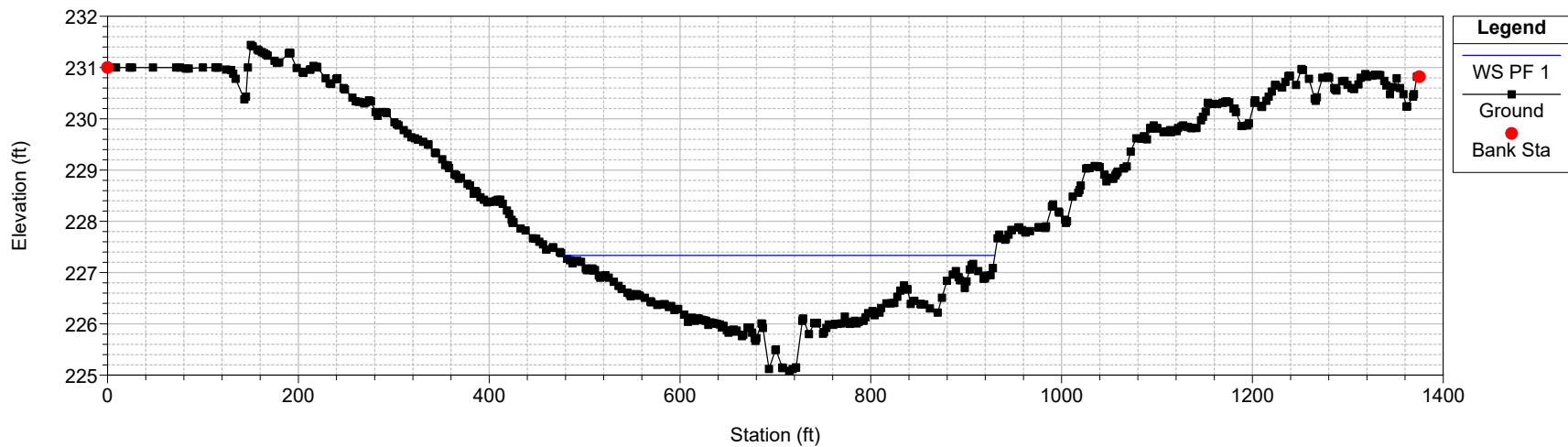
River = AdamsBarranca Reach = ROB RS = 2837.474



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

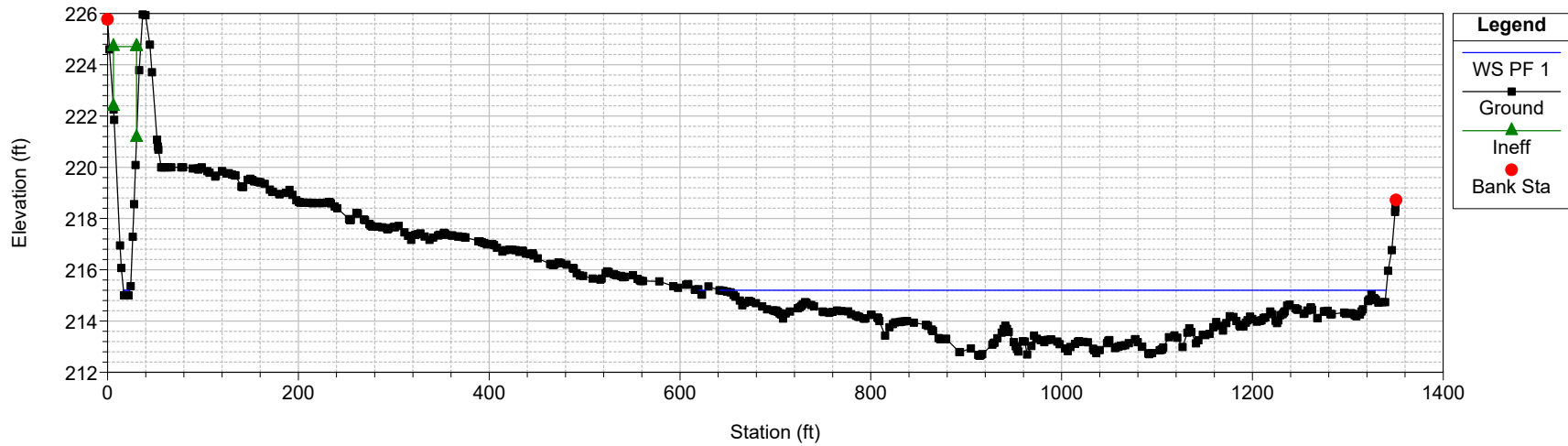
River = AdamsBarranca Reach = ROB RS = 2537.857



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

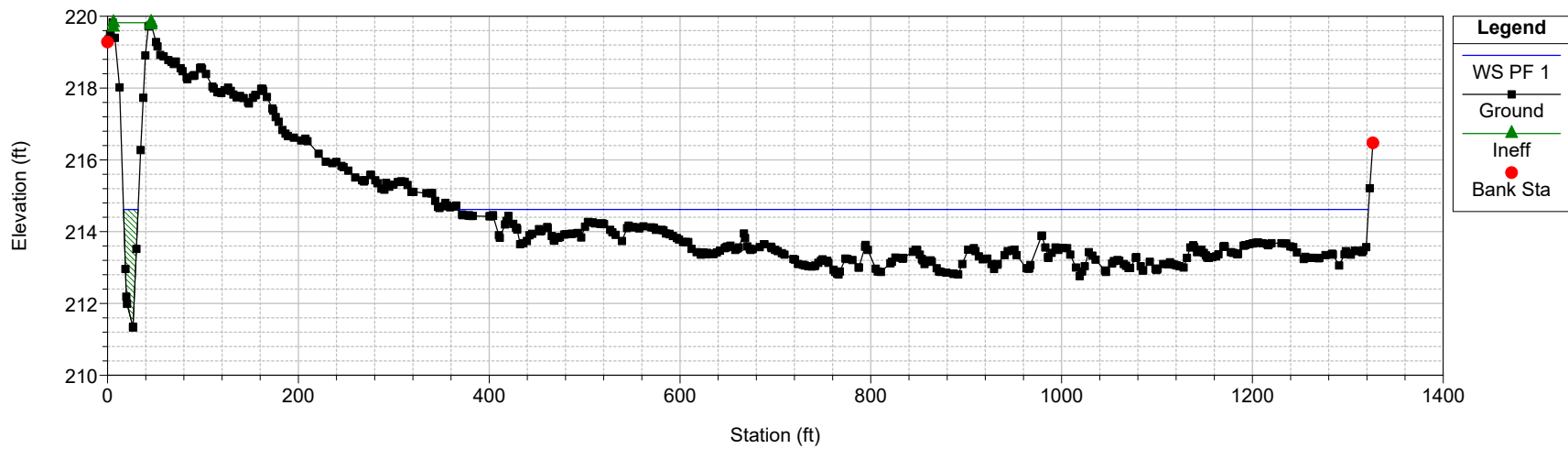
River = AdamsBarranca Reach = ROB RS = 2157.755



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

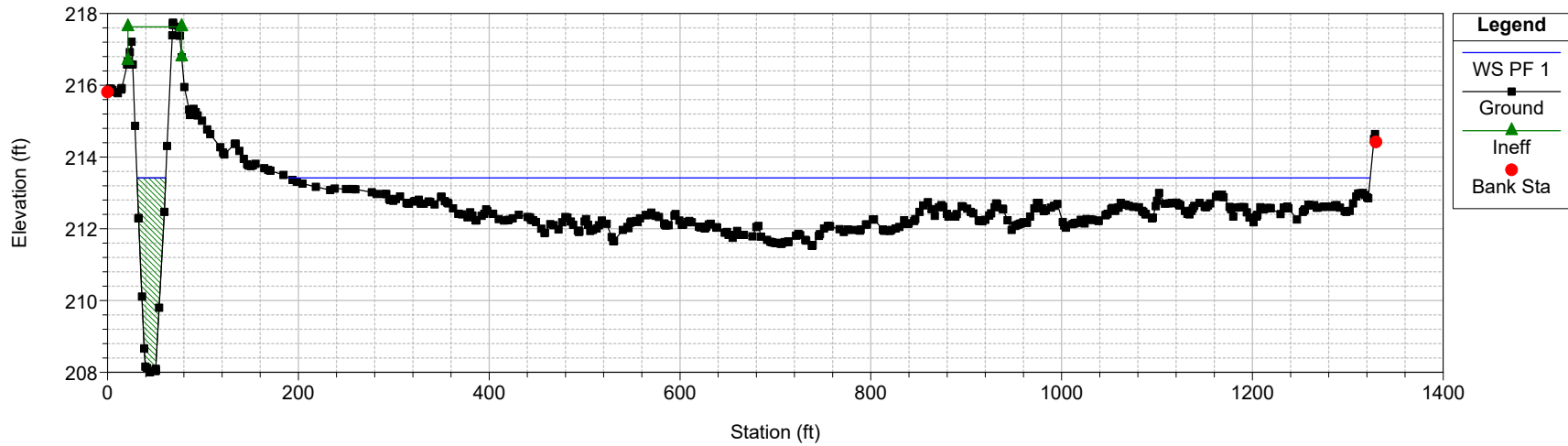
River = AdamsBarranca Reach = ROB RS = 1945.575



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

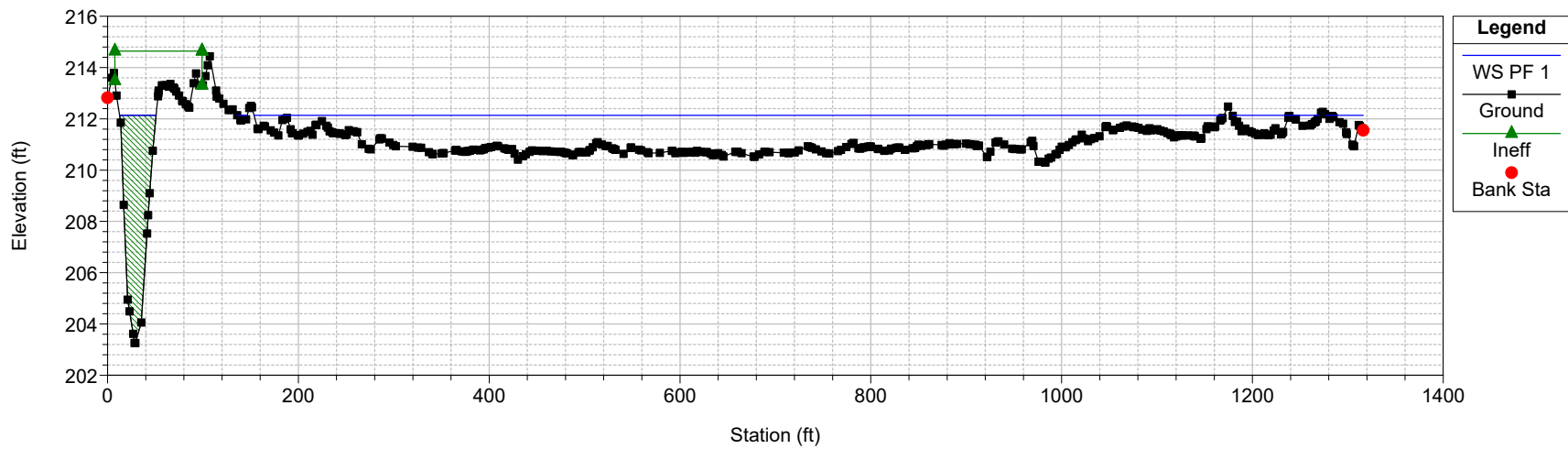
River = AdamsBarranca Reach = ROB RS = 1526.76



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

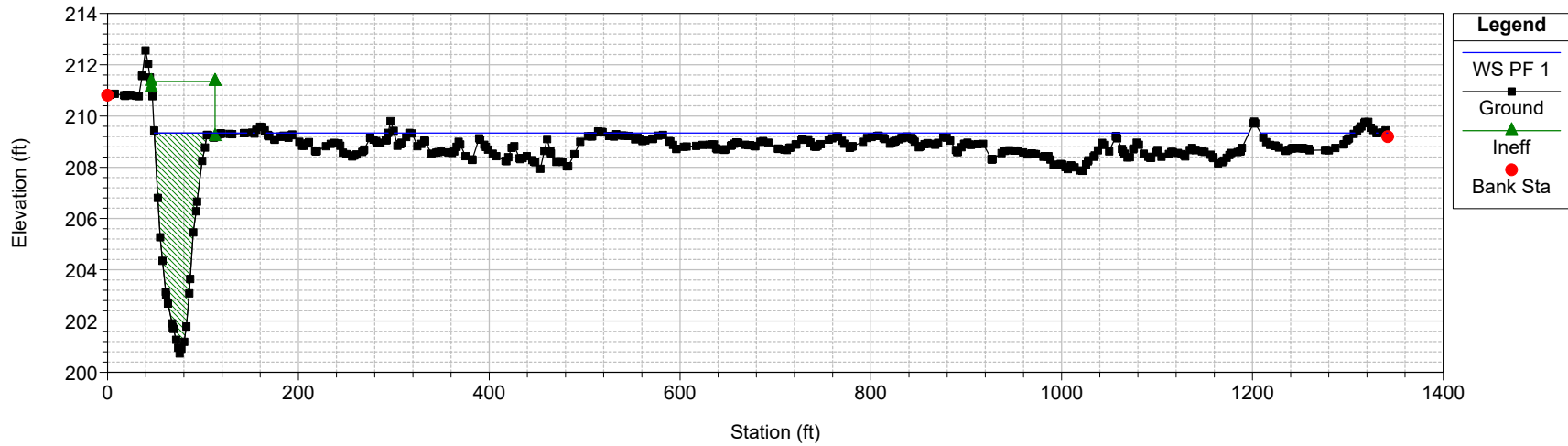
River = AdamsBarranca Reach = ROB RS = 1028.893



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

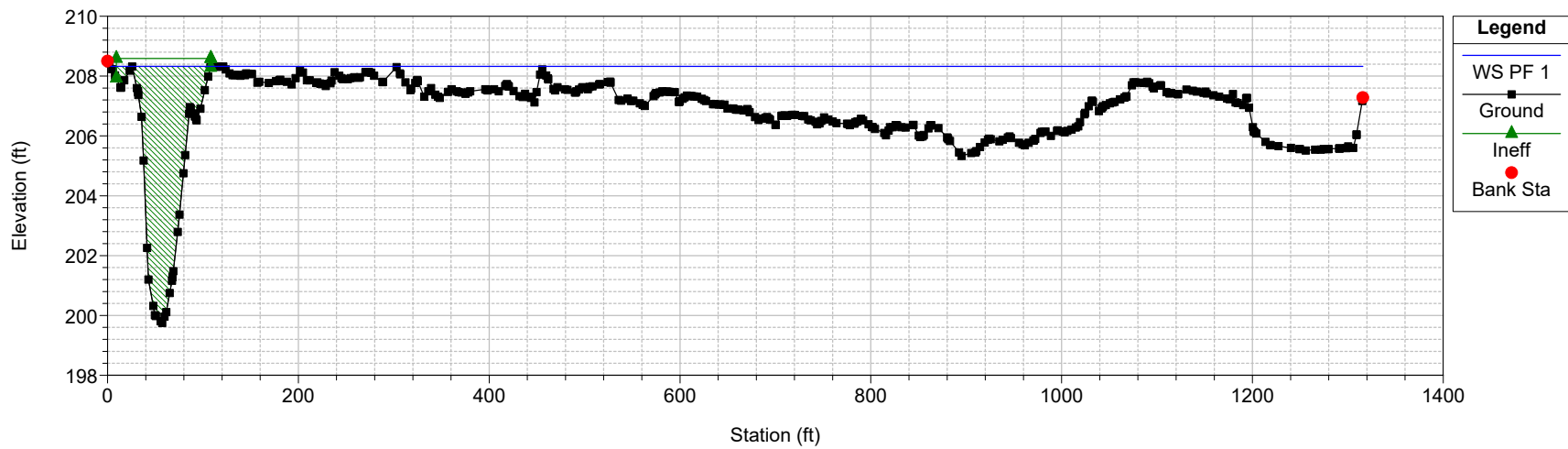
River = AdamsBarranca Reach = ROB RS = 549.033



4492_AdamsBarranca Plan: Ex_WestOvebank_Adams 11/17/2015

Geom: AdamsExisting_WestOverbank Flow: Ex_ProfilesWestOverbank

River = AdamsBarranca Reach = ROB RS = 272.1645



HEC-RAS Plan: prop River: AdamsBarranca Reach: Reach1 Profile: PF 1

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach1	6475.816	PF 1	5861.00	255.59	269.07	265.60	270.40	0.005718	9.24	634.64	82.48	0.59
Reach1	6235.479	PF 1	5861.00	252.92	264.88	264.48	268.10	0.015115	14.39	407.16	54.89	0.93
Reach1	5984.647	PF 1	5861.00	250.34	263.62	263.40	264.92	0.007116	10.60	1203.57	409.16	0.64
Reach1	5737.684	PF 1	5861.00	248.36	261.73	261.73	263.08	0.008277	10.12	1057.11	774.57	0.73
Reach1	5491.663	PF 1	5861.00	246.27	259.26	257.43	260.62	0.011731	9.80	919.14	577.34	0.61
Reach1	5246.089	PF 1	5861.00	244.00	256.84	255.82	257.54	0.012104	6.93	1036.35	925.60	0.60
Reach1	5246 Tele_East		Lat Struct									
Reach1	5221.13 Tele_West		Lat Struct									
Reach1	5201.42	PF 1	5605.92	243.34	256.21		256.81	0.021972	6.23	906.83	258.94	0.57
Reach1	5156.75	PF 1	5399.83	242.68	255.26		255.84	0.020898	6.16	901.07	265.07	0.56
Reach1	5112.09	PF 1	5168.68	242.02	254.25		254.89	0.021159	6.45	812.63	219.68	0.57
Reach1	5022.76	PF 1	4603.68	240.69	252.44		253.01	0.020220	5.97	770.88	196.87	0.51
Reach1	4978.1	PF 1	4137.01	240.03	251.79		252.24	0.013382	5.42	776.57	180.61	0.45
Reach1	4933.43	PF 1	3411.42	239.37	251.43		251.78	0.006709	4.66	735.89	137.60	0.34
Reach1	4888.77	PF 1	2693.30	238.71	251.22		251.45	0.006286	3.87	701.53	121.48	0.28
Reach1	4826.612	PF 1	2334.55	238.31	251.20		251.43	0.000115	3.88	610.47	115.72	0.28
Reach1	4808.237	PF 1	2330.25	238.64	251.24	245.02	251.40	0.196426	3.18	733.92	244.53	0.31
Reach1	4775.879 Teleraph		Culvert									
Reach1	4739.053	PF 1	2330.25	237.53	244.47		246.69	0.001364	11.94	195.11	31.69	0.85
Reach1	4673.858	PF 1	2330.25	235.63	245.33	242.54	246.12	0.004226	7.15	341.49	90.26	0.49
Reach1	4495.546	PF 1	2330.25	234.23	242.47	242.17	244.65	0.016189	11.87	197.75	39.99	0.91
Reach1	4247.987	PF 1	2330.25	232.68	241.04	240.45	241.90	0.006289	7.95	358.98	169.47	0.59
Reach1	3997.28	PF 1	2330.25	230.86	238.03	238.03	239.57	0.013701	10.22	249.58	83.79	0.85
Reach1	3823.969	PF 1	2330.25	228.87	237.06	234.12	237.06	0.000009	0.28	8286.51	1732.86	0.02
Reach1	3656.055	PF 1	2330.25	227.64	237.06	233.35	237.06	0.000001	0.08	20227.59	3270.56	0.01
Reach1	3574.137 RRxing		Bridge									
Reach1	3547.872	PF 1	2330.25	226.88	234.54	234.54	236.83	0.019991	12.14	191.90	42.00	1.00
Reach1	3525.703 Hwy_West		Lat Struct									
Reach1	3454.093	PF 1	2146.18	226.05	234.70	223.42	234.70	0.000002	0.12	12790.54	1553.11	0.01
Reach1	3372.434	PF 1	1708.86	225.19	232.34	232.34	234.48	0.013768	11.74	145.51	33.93	1.00
Reach1	3370 Hwy_East		Lat Struct									
Reach1	3230.667	PF 1	1482.69	222.00	229.47	229.47	231.88	0.022826	12.46	119.03	24.65	1.00
Reach1	3089.225	PF 1	1481.73	220.99	228.25	224.85	228.38	0.000965	2.92	507.88	102.45	0.23
Reach1	3020.276	PF 1	1363.66	220.83	227.58		228.22	0.004152	6.30	213.32	49.44	0.55
Reach1	2929.252	PF 1	1027.13	220.00	226.94		227.75	0.006448	7.40	148.49	54.62	0.69
Reach1	2895.24	PF 1	1027.13	219.12	227.12	223.23	227.48	0.002490	4.84	212.01	33.62	0.34
Reach1	2773.995 HWy126		Culvert									
Reach1	2684.378	PF 1	1027.13	218.04	226.19	222.04	226.57	0.000222	4.99	205.68	30.41	0.34
Reach1	2485.067	PF 1	1027.13	216.26	225.75	223.42	226.42	0.005866	6.58	159.28	36.23	0.52
Reach1	2247.204	PF 1	1027.13	215.34	221.91	221.91	223.83	0.023010	11.12	92.33	24.05	1.00
Reach1	1997.363	PF 1	1027.13	210.82	218.00	217.16	219.11	0.013323	8.48	121.30	33.65	0.78
Reach1	1747.714	PF 1	1027.13	208.97	215.23	214.20	216.19	0.010093	7.87	130.55	32.88	0.70
Reach1	1498.684	PF 1	1027.13	207.32	213.44	212.52	214.07	0.006657	6.59	168.19	1134.41	0.57

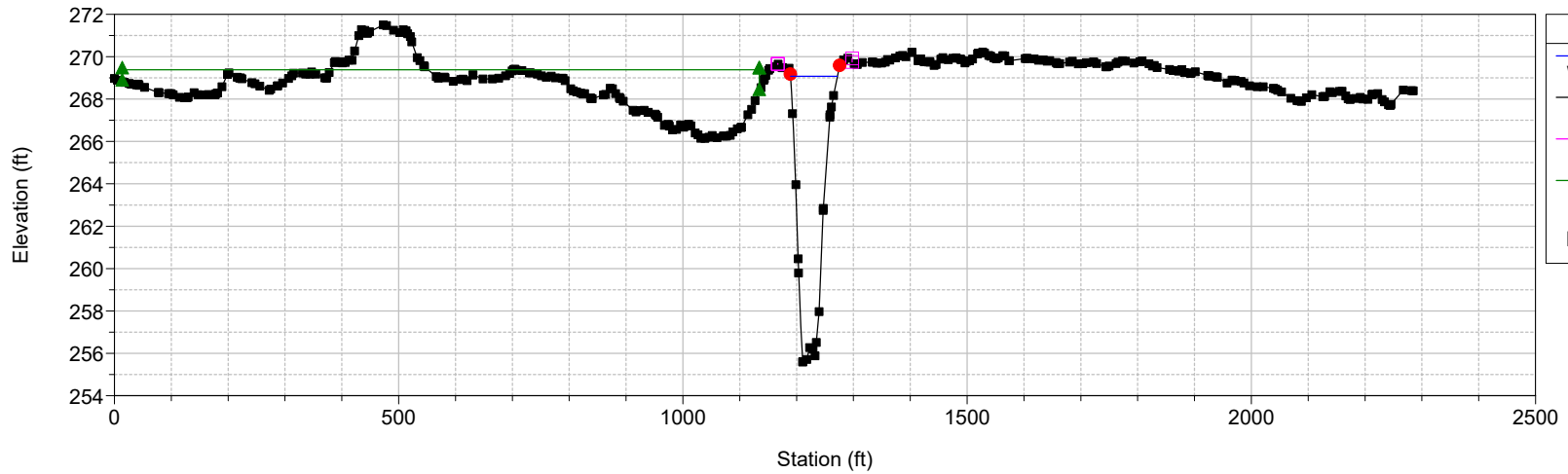
HEC-RAS Plan: prop River: AdamsBarranca Reach: Reach1 Profile: PF 1 (Continued)

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach1	1250.347	PF 1	1027.13	204.47	211.48	209.88	212.30	0.007443	7.25	141.65	30.81	0.60
Reach1	1001.841	PF 1	1027.13	202.27	209.85	208.21	210.52	0.006540	6.60	157.50	53.95	0.57
Reach1	748.9206	PF 1	1027.13	200.99	208.81		209.16	0.003960	4.76	216.39	68.66	0.44
Reach1	502.0116	PF 1	1027.13	199.59	208.03	204.83	208.38	0.002592	4.71	218.16	42.74	0.37
Reach1	249.222	PF 1	1027.13	199.26	208.25	201.84	208.25	0.000024	0.56	2221.21	514.17	0.04

4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

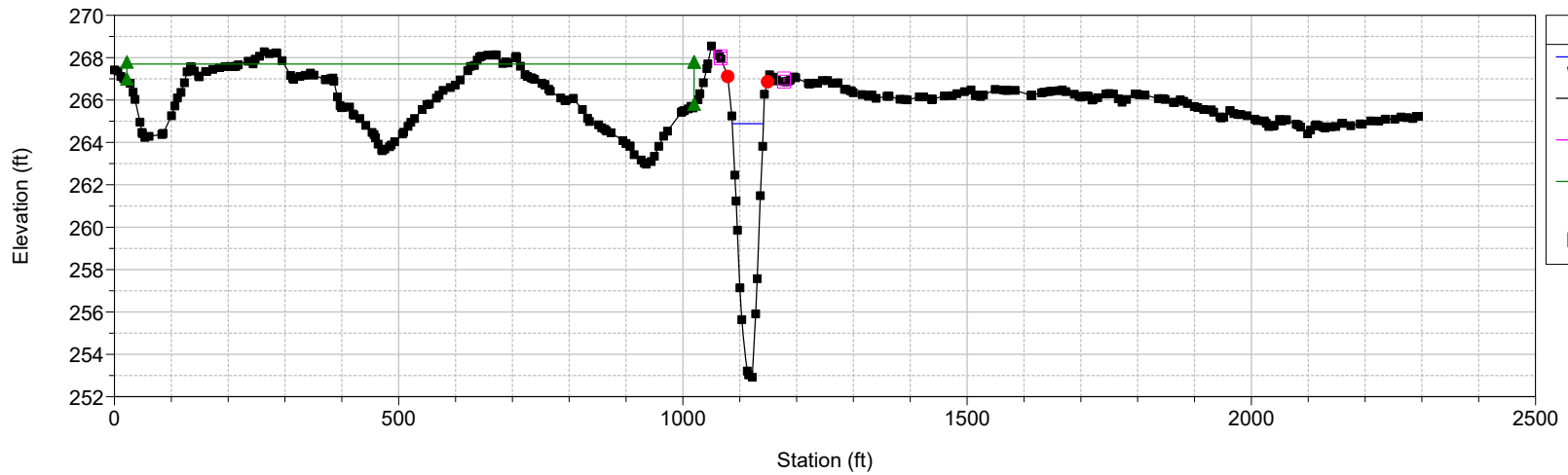
River = AdamsBarranca Reach = Reach1 RS = 6475.816



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

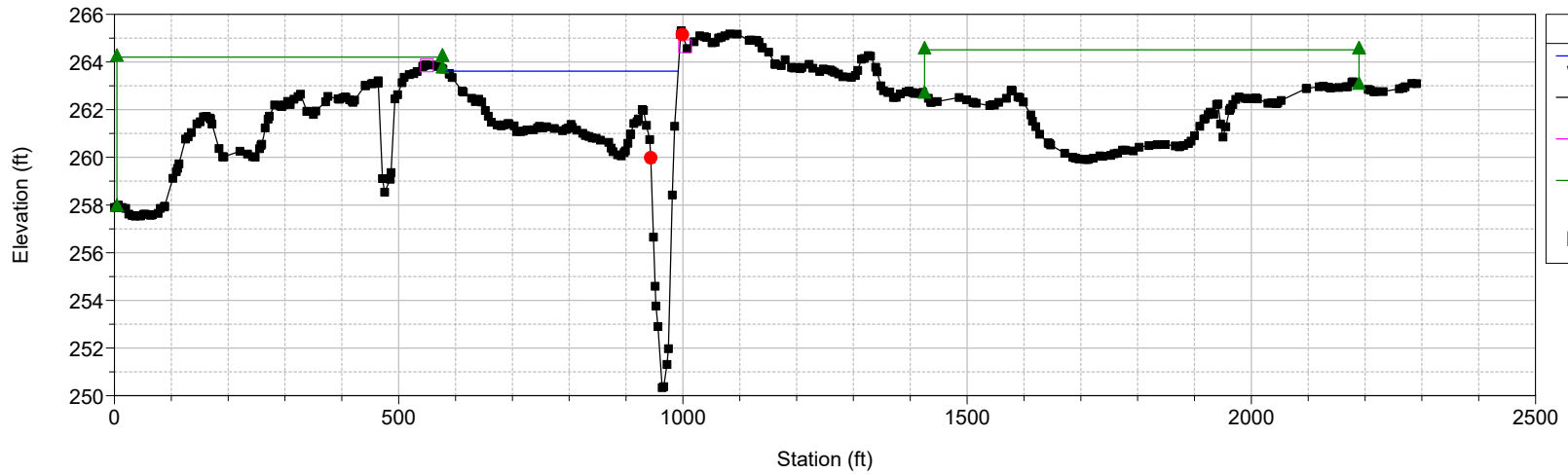
River = AdamsBarranca Reach = Reach1 RS = 6235.479



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

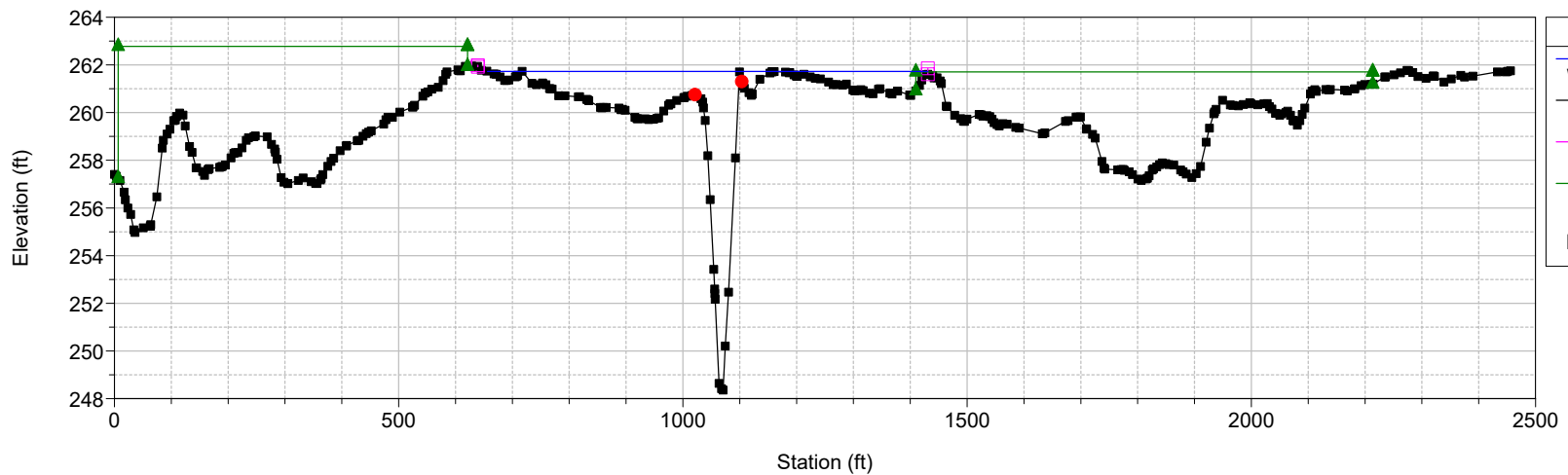
River = AdamsBarranca Reach = Reach1 RS = 5984.647



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

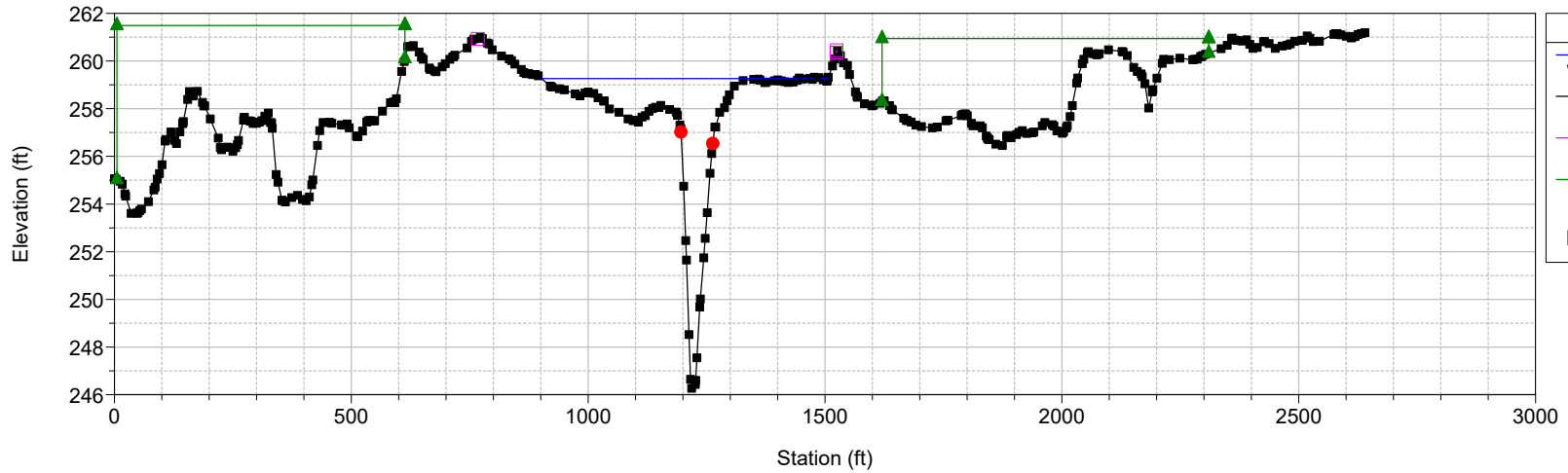
River = AdamsBarranca Reach = Reach1 RS = 5737.684



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

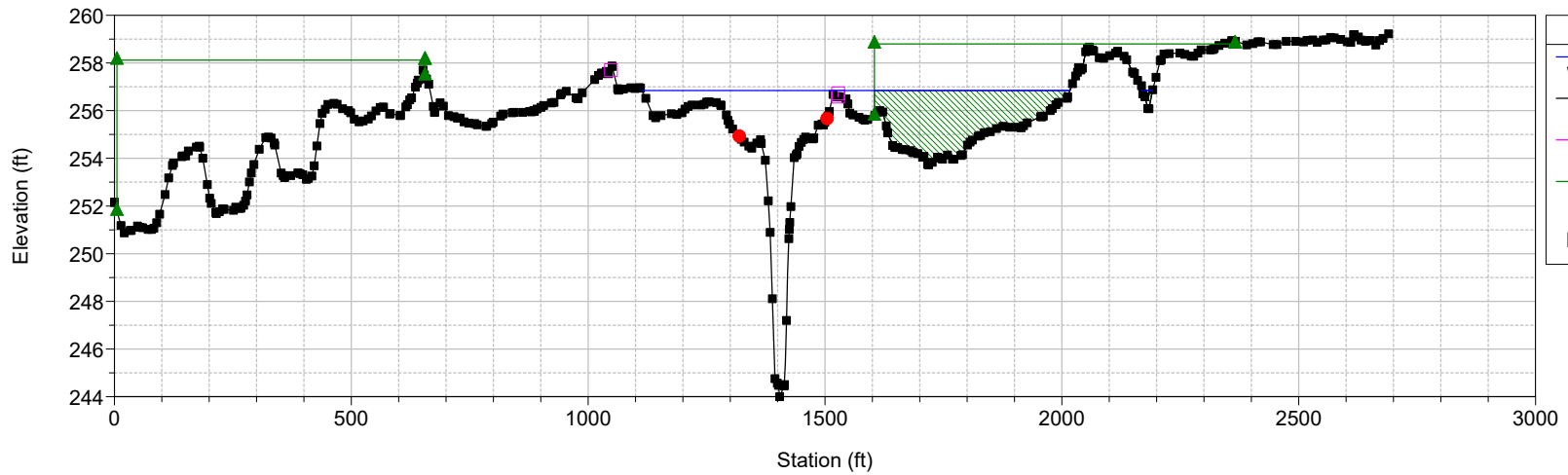
River = AdamsBarranca Reach = Reach1 RS = 5491.663



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

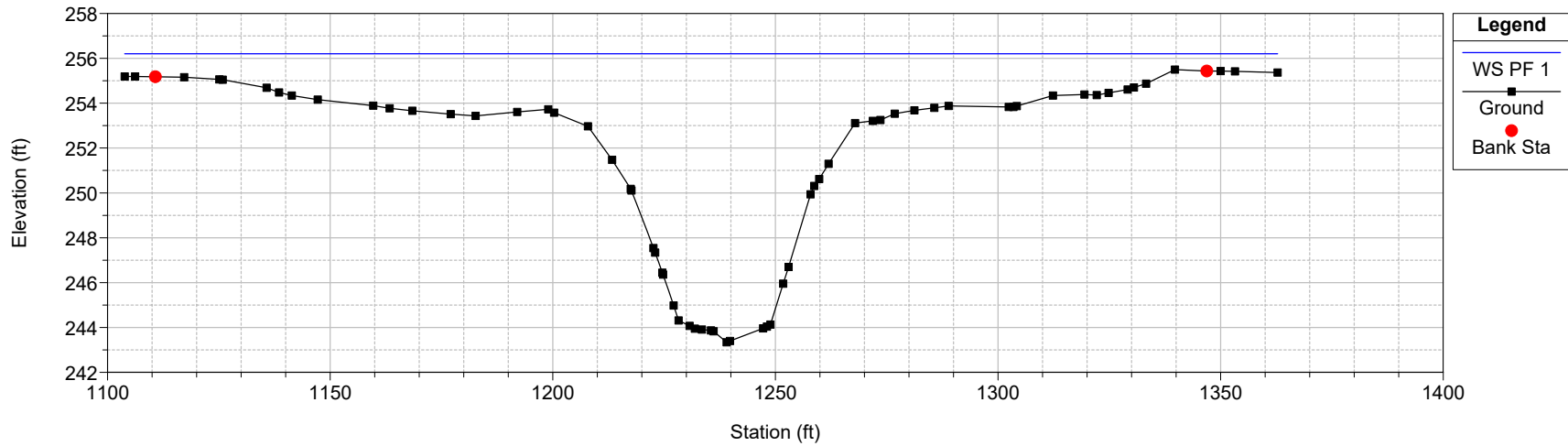
River = AdamsBarranca Reach = Reach1 RS = 5246.089



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

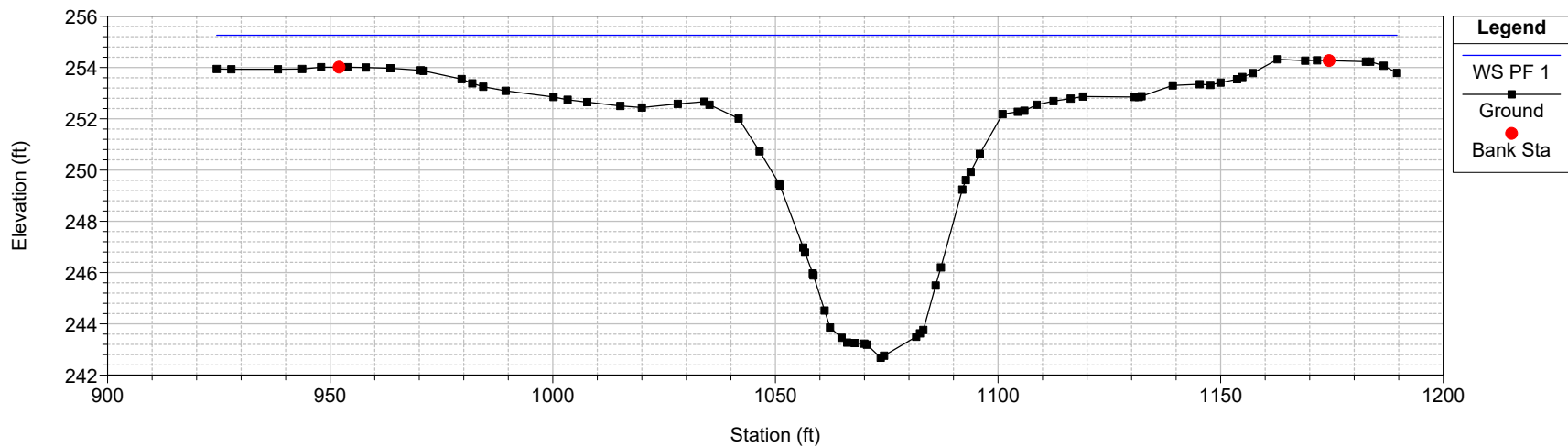
River = AdamsBarranca Reach = Reach1 RS = 5201.42



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

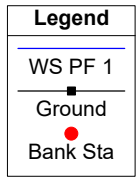
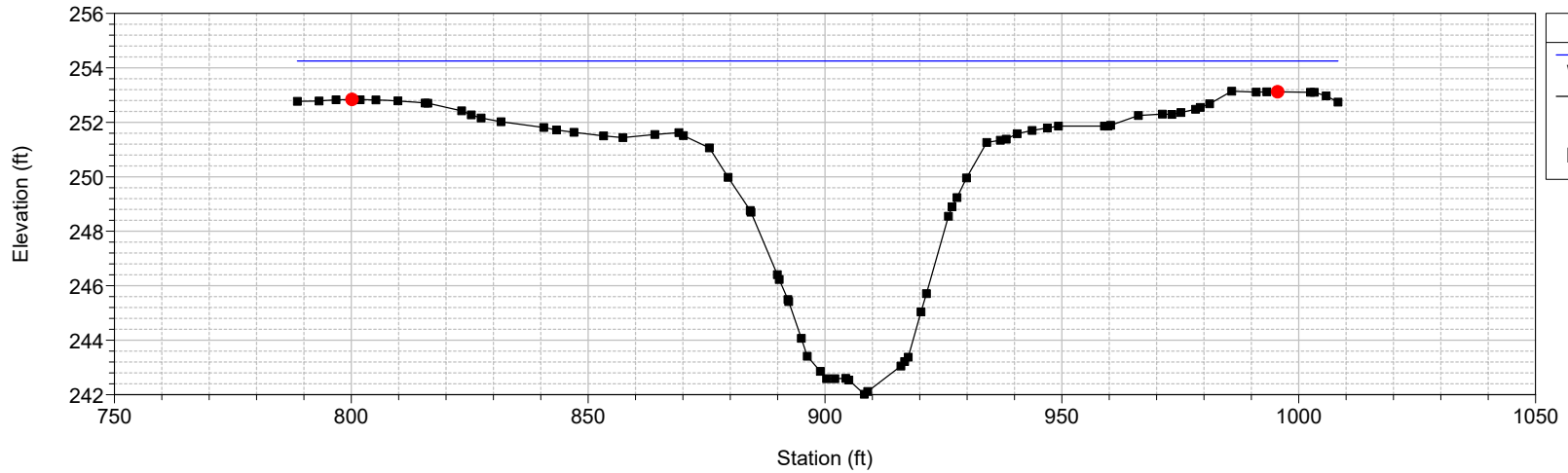
River = AdamsBarranca Reach = Reach1 RS = 5156.75



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

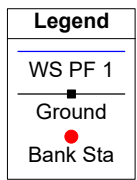
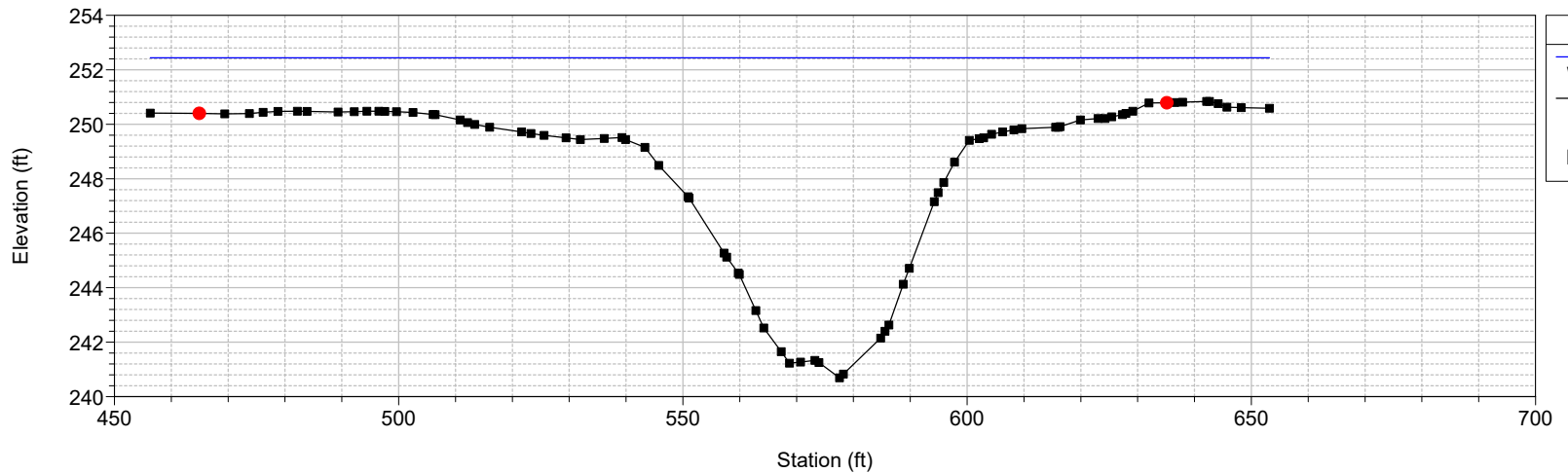
River = AdamsBarranca Reach = Reach1 RS = 5112.09



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

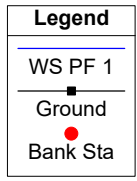
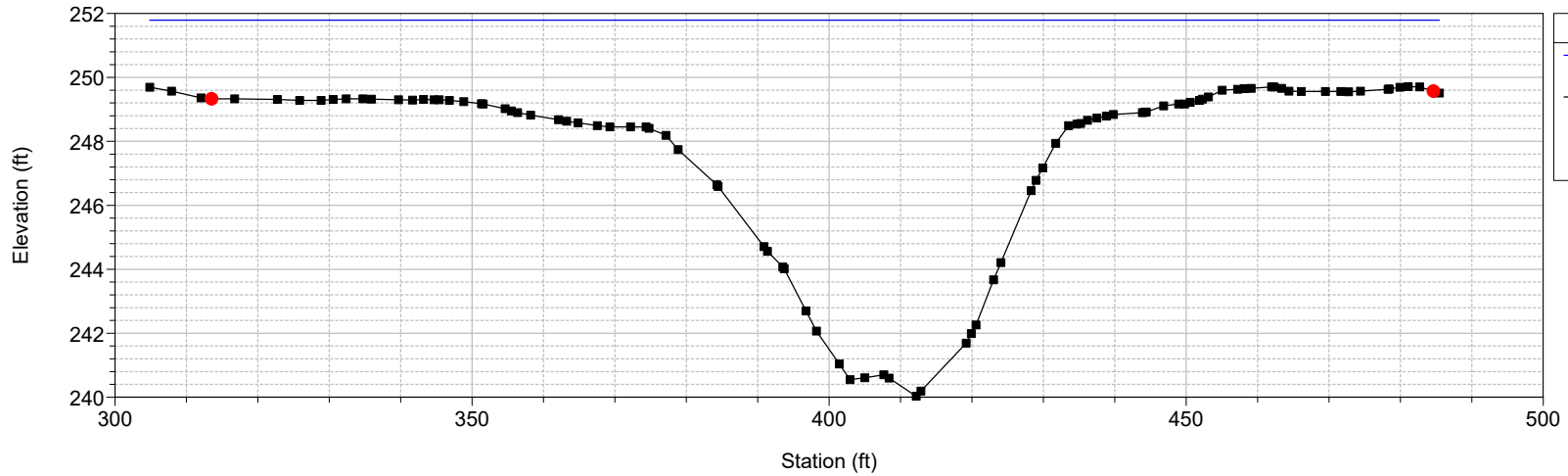
River = AdamsBarranca Reach = Reach1 RS = 5022.76



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

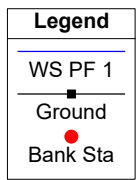
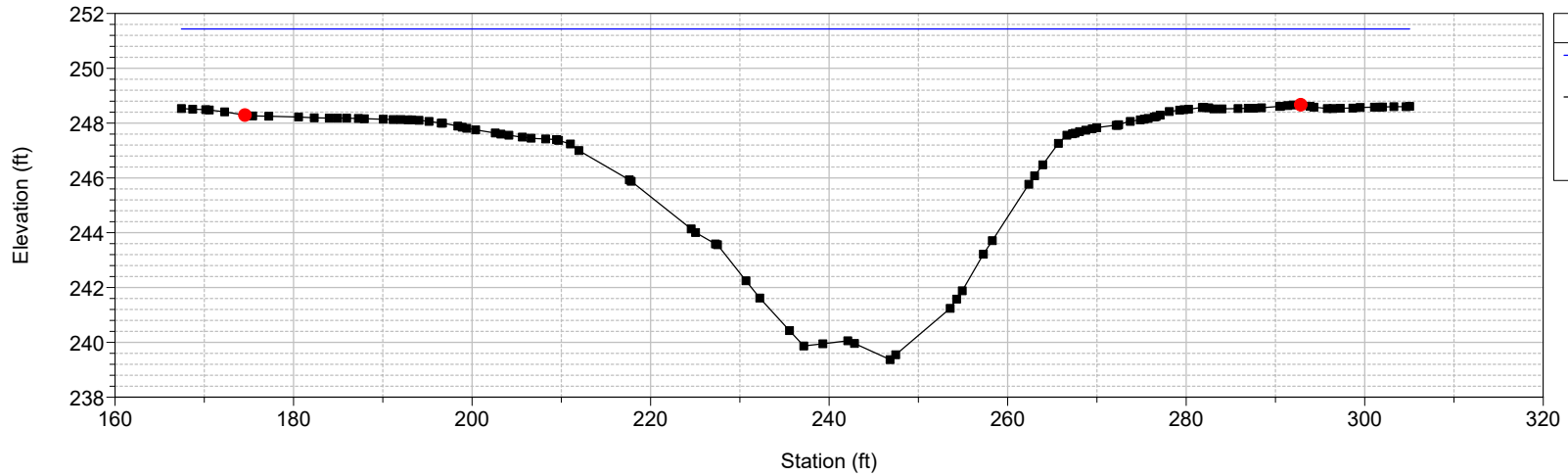
River = AdamsBarranca Reach = Reach1 RS = 4978.1



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

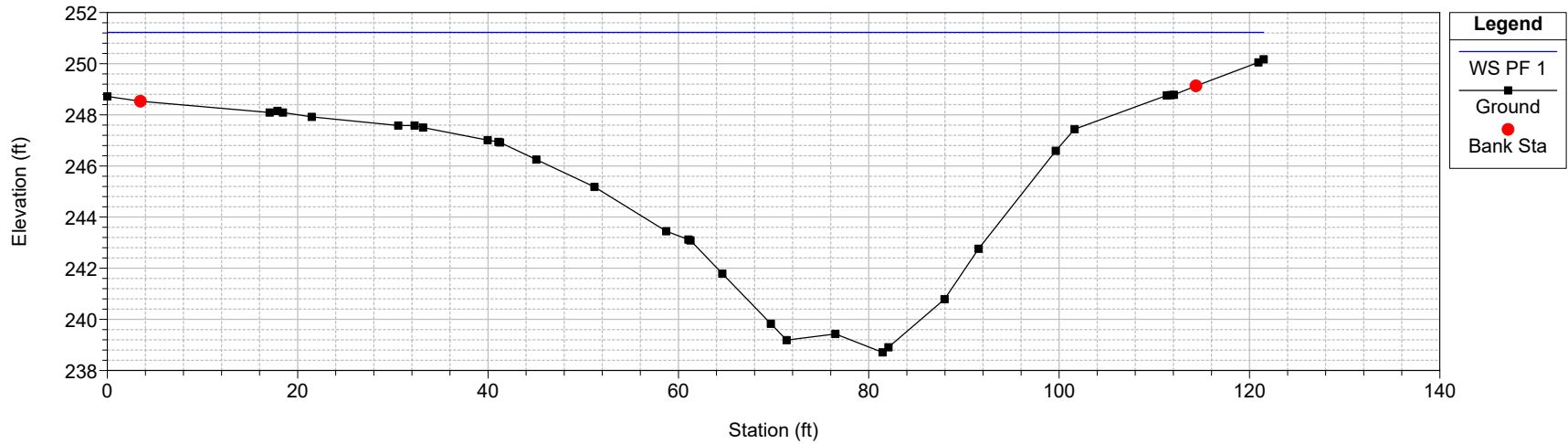
River = AdamsBarranca Reach = Reach1 RS = 4933.43



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

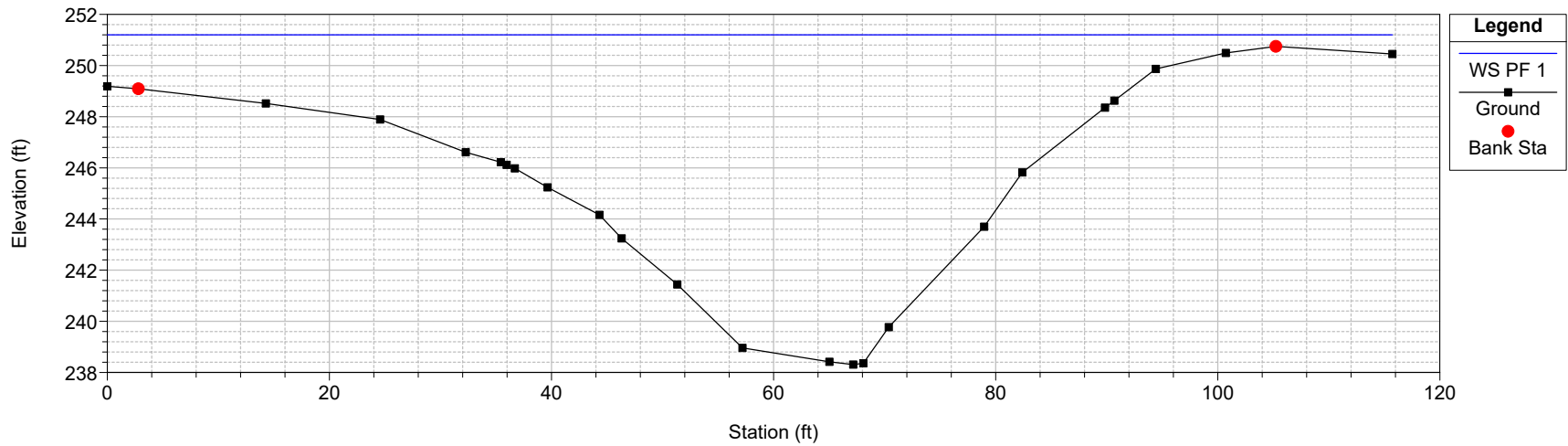
River = AdamsBarranca Reach = Reach1 RS = 4888.77



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

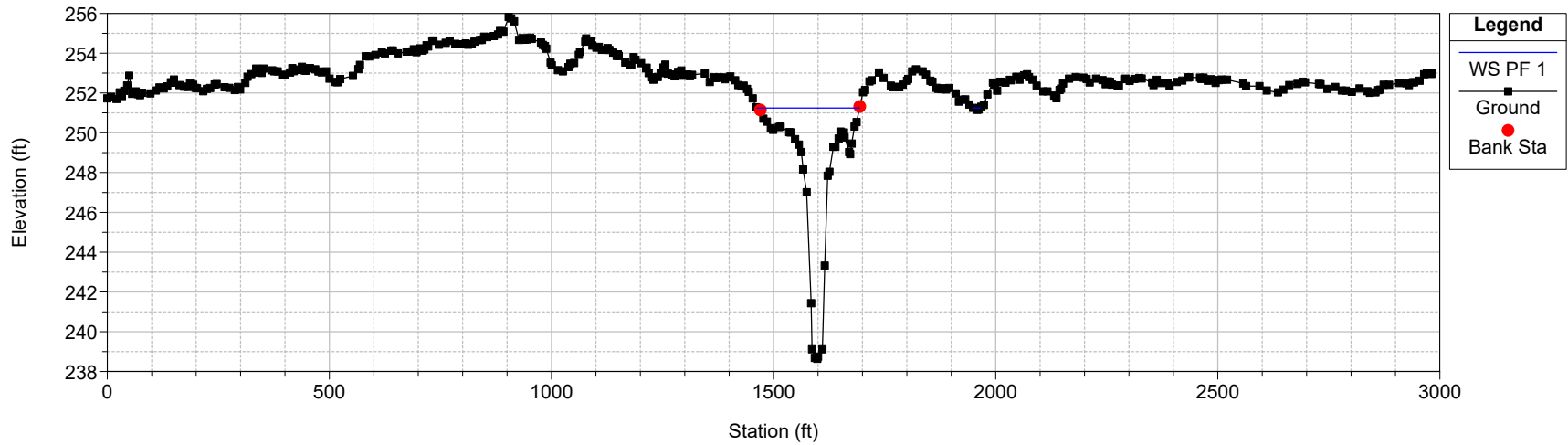
River = AdamsBarranca Reach = Reach1 RS = 4826.612



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

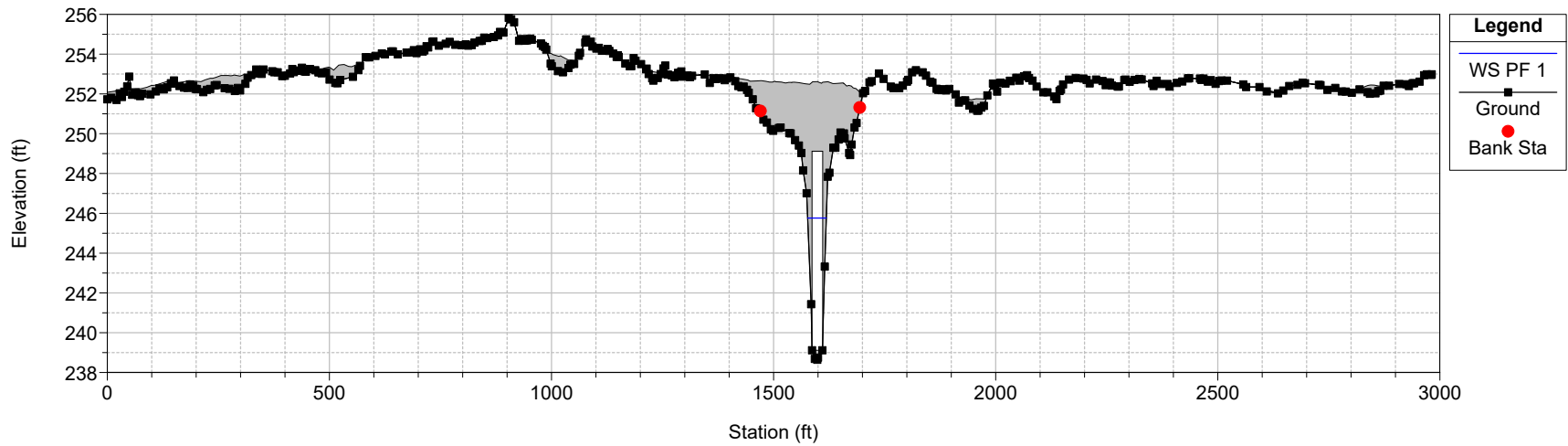
River = AdamsBarranca Reach = Reach1 RS = 4808.237



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

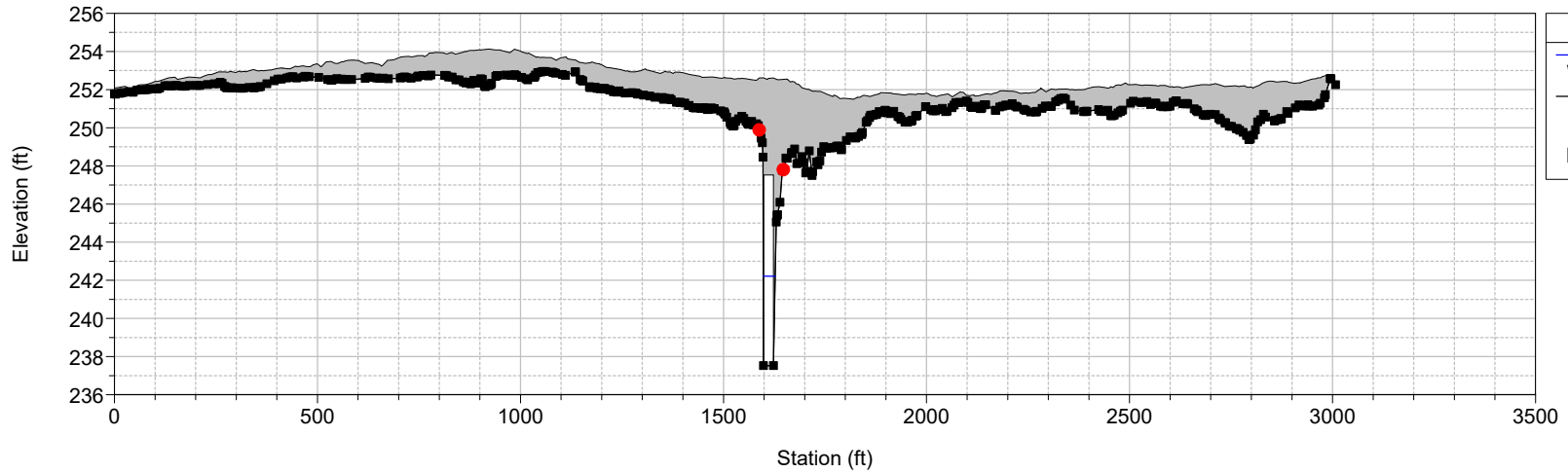
River = AdamsBarranca Reach = Reach1 RS = 4775.879 Culv



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

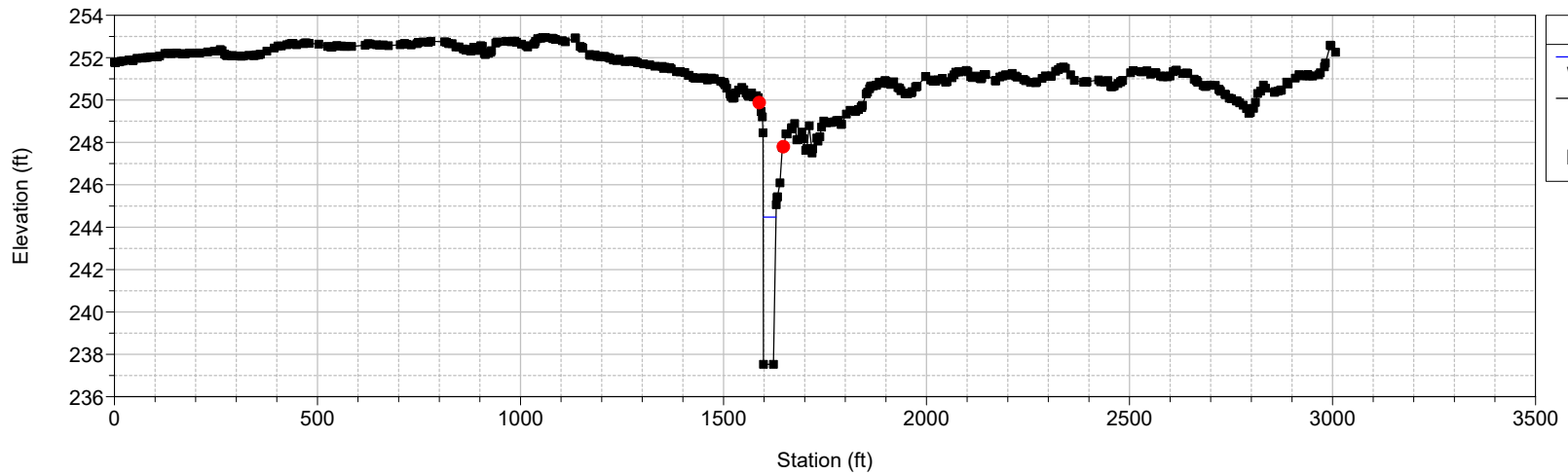
River = AdamsBarranca Reach = Reach1 RS = 4775.879 Culv



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

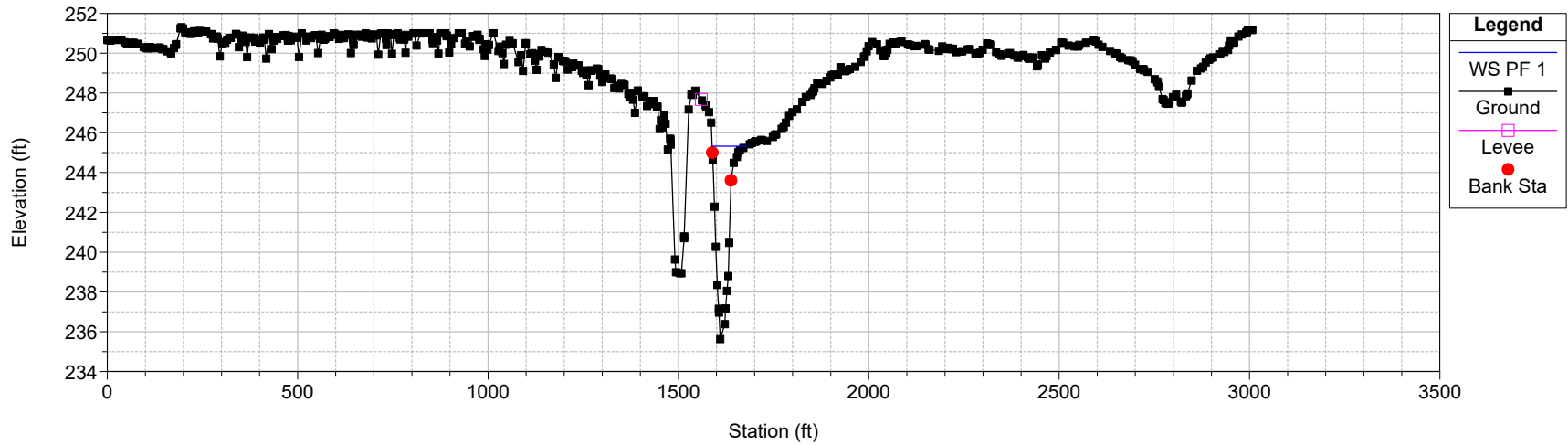
Geom: AdamsProposed Flow: Prop_Profiles

River = AdamsBarranca Reach = Reach1 RS = 4739.053



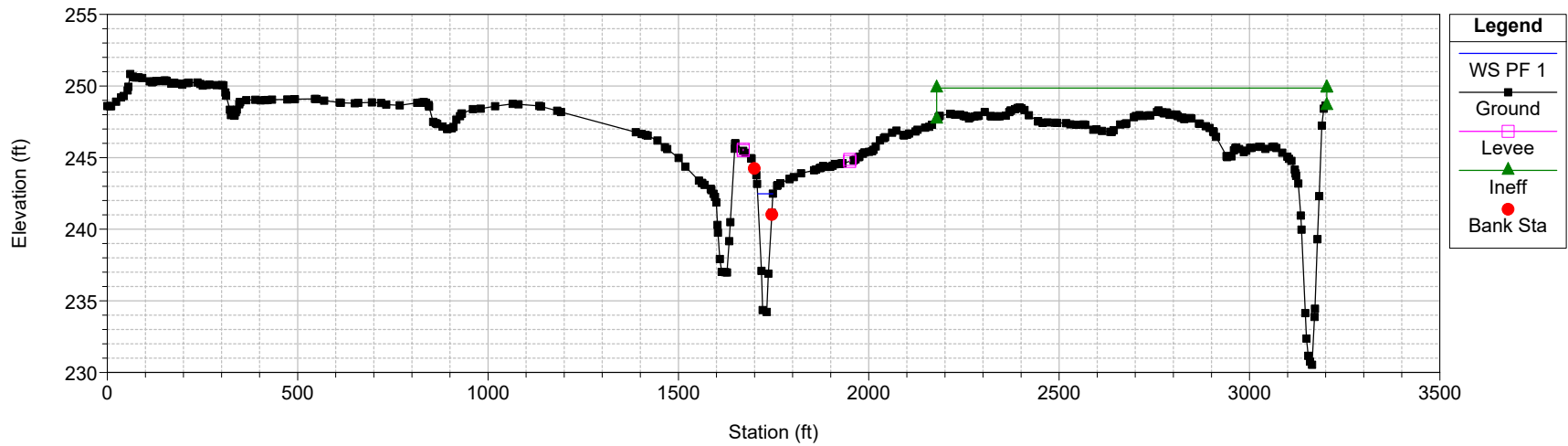
4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4673.858



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

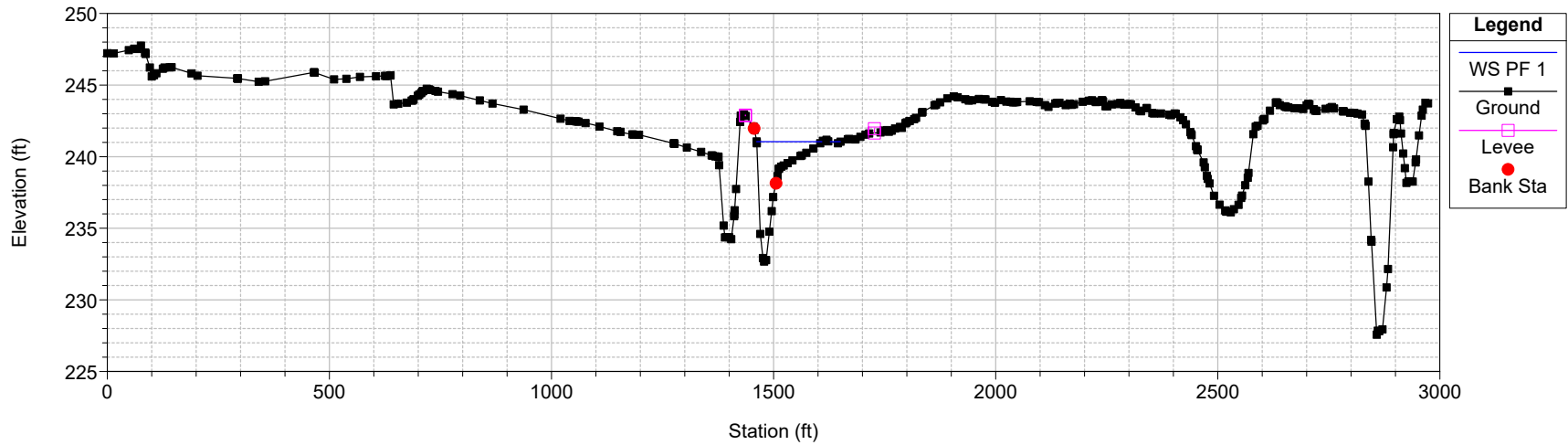
Geom: AdamsProposed Flow: Prop_Profiles
River = AdamsBarranca Reach = Reach1 RS = 4495.546



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

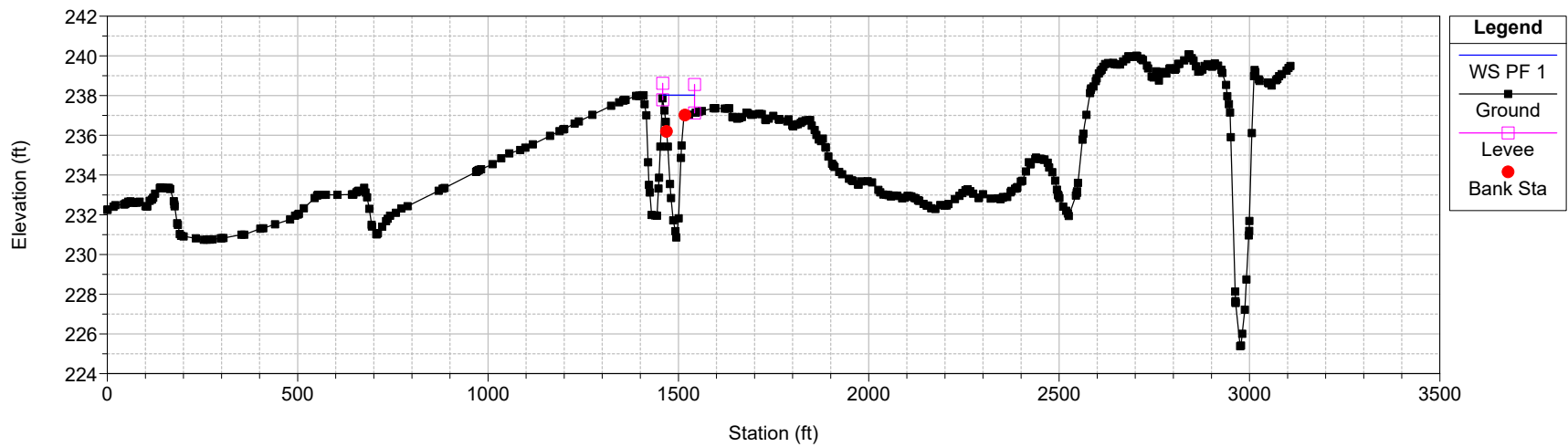
River = AdamsBarranca Reach = Reach1 RS = 4247.987



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

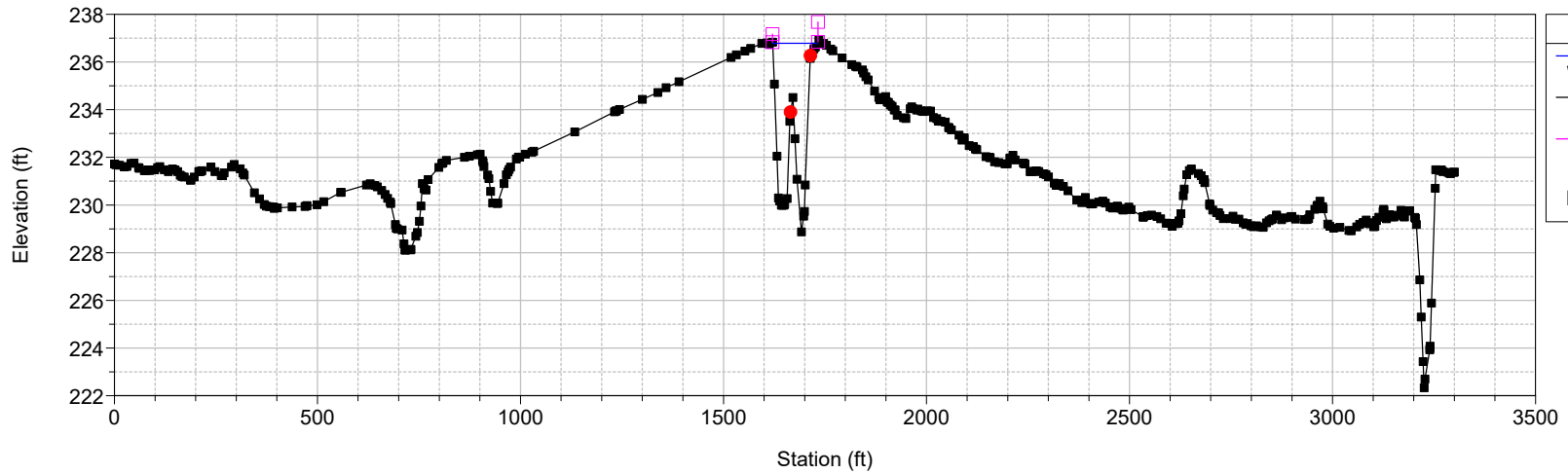
River = AdamsBarranca Reach = Reach1 RS = 3997.28



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

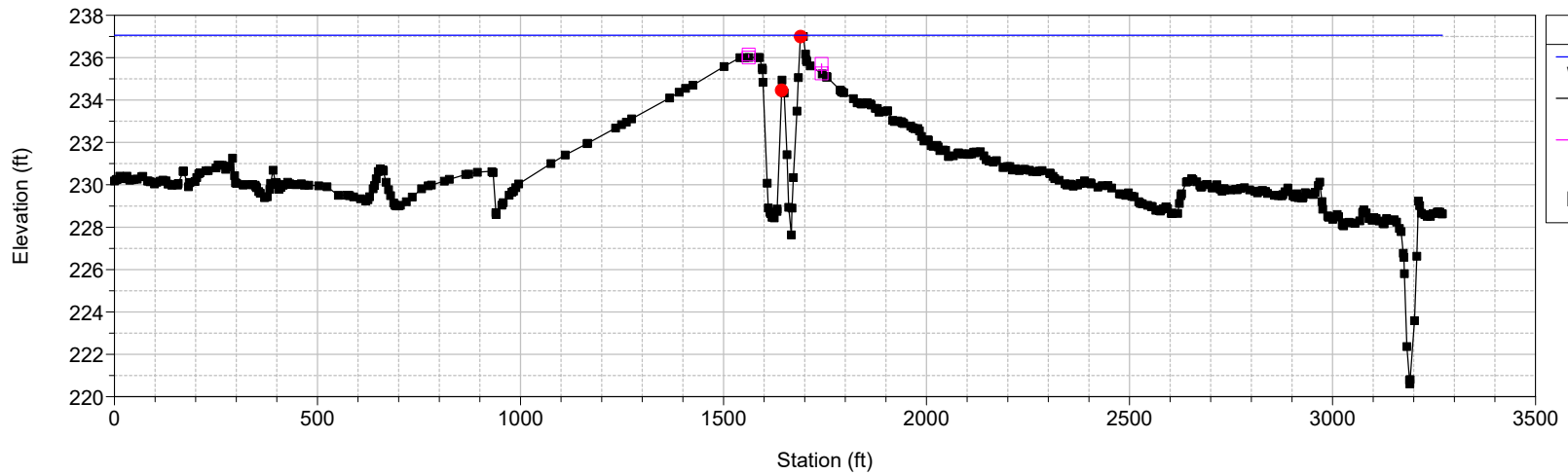
River = AdamsBarranca Reach = Reach1 RS = 3823.969



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

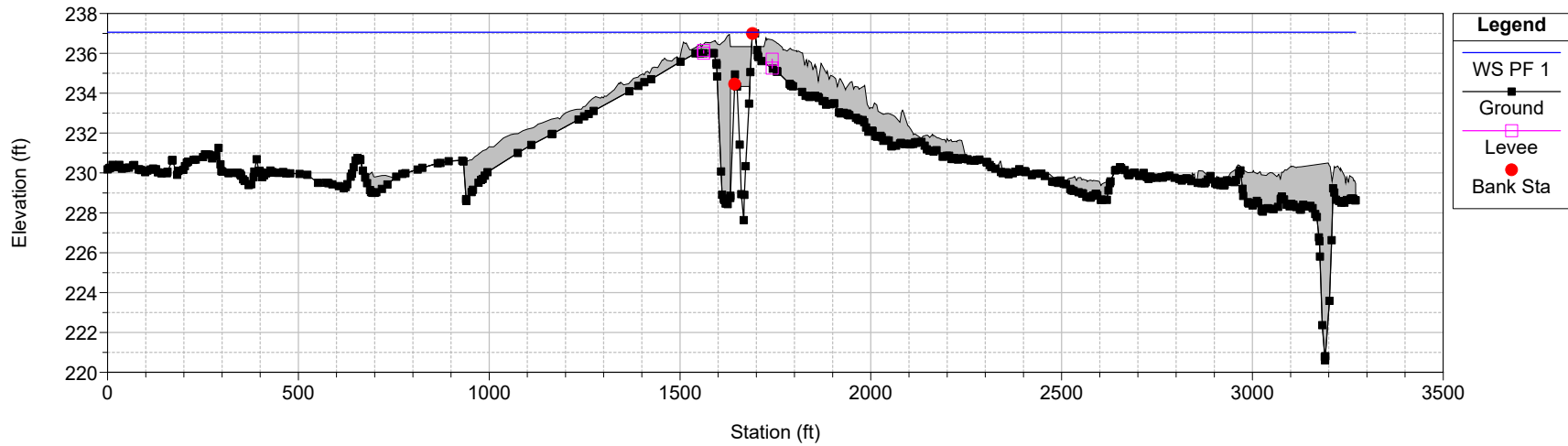
River = AdamsBarranca Reach = Reach1 RS = 3656.055



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

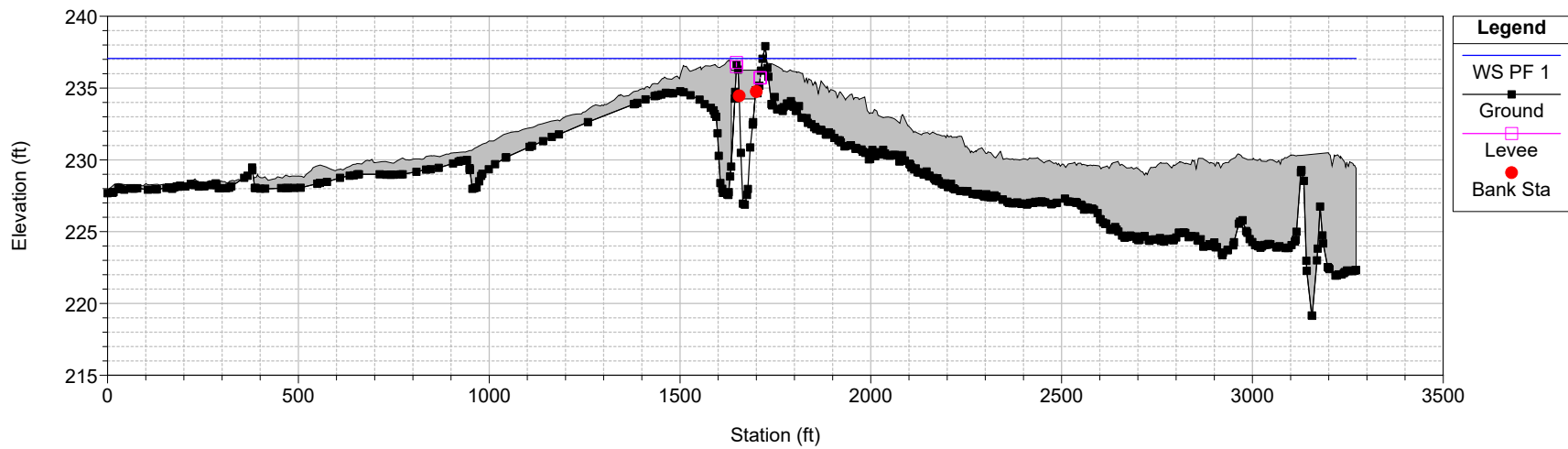
River = AdamsBarranca Reach = Reach1 RS = 3574.137 BR



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

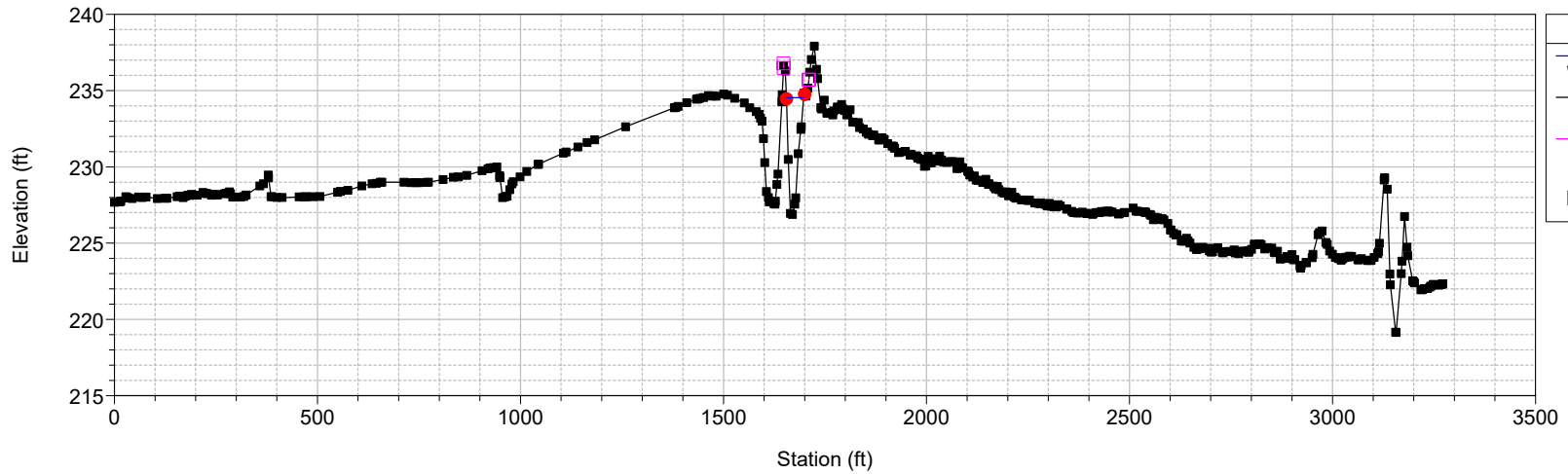
River = AdamsBarranca Reach = Reach1 RS = 3574.137 BR



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

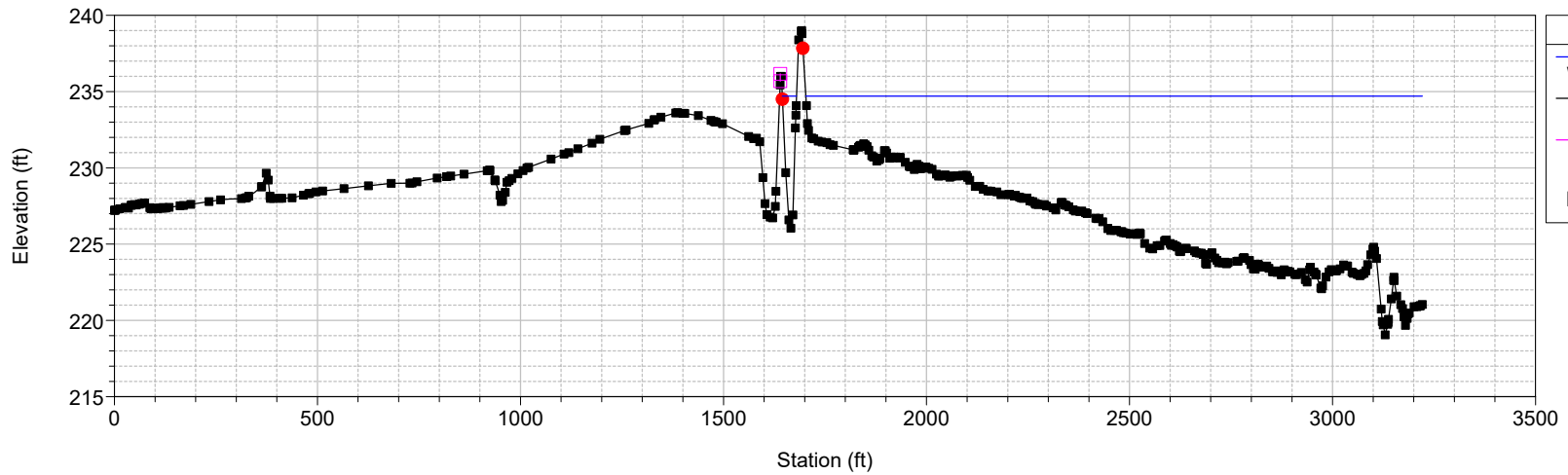
River = AdamsBarranca Reach = Reach1 RS = 3547.872



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

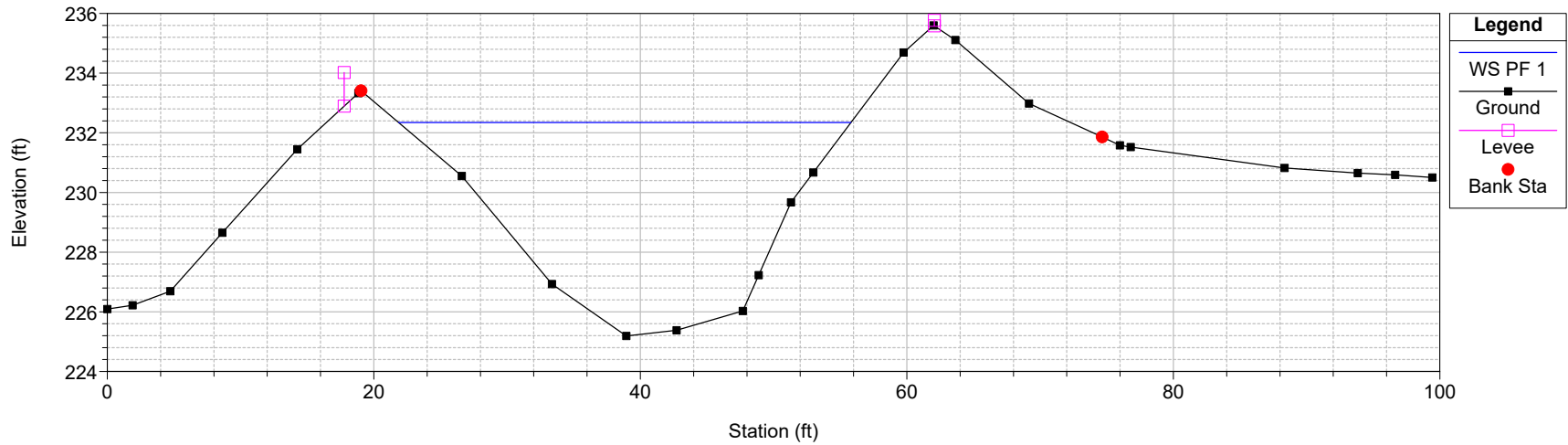
River = AdamsBarranca Reach = Reach1 RS = 3454.093



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

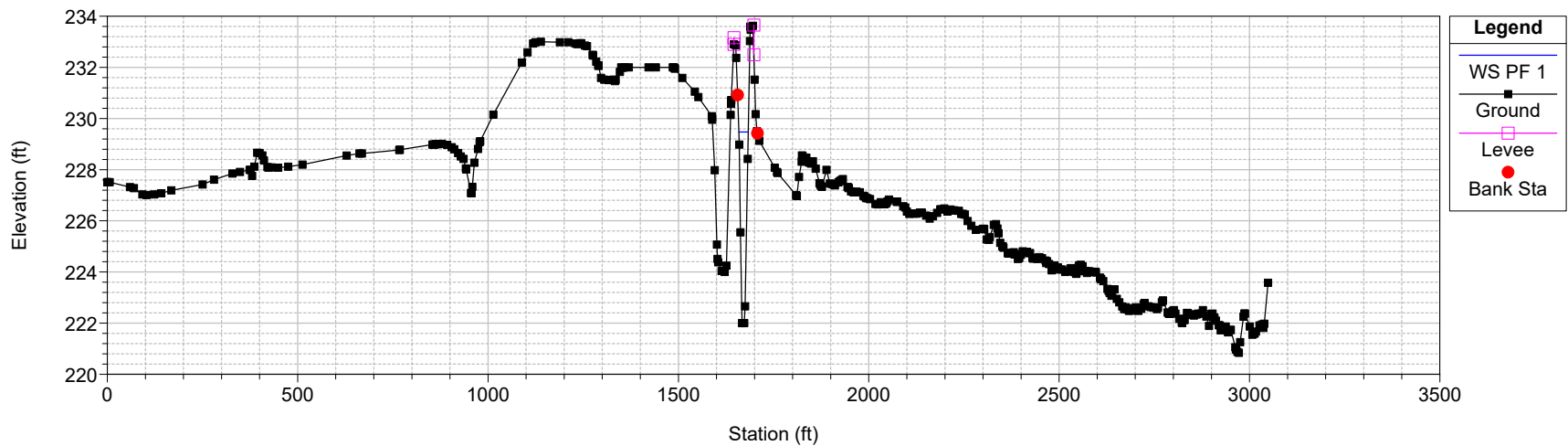
River = AdamsBarranca Reach = Reach1 RS = 3372.434



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

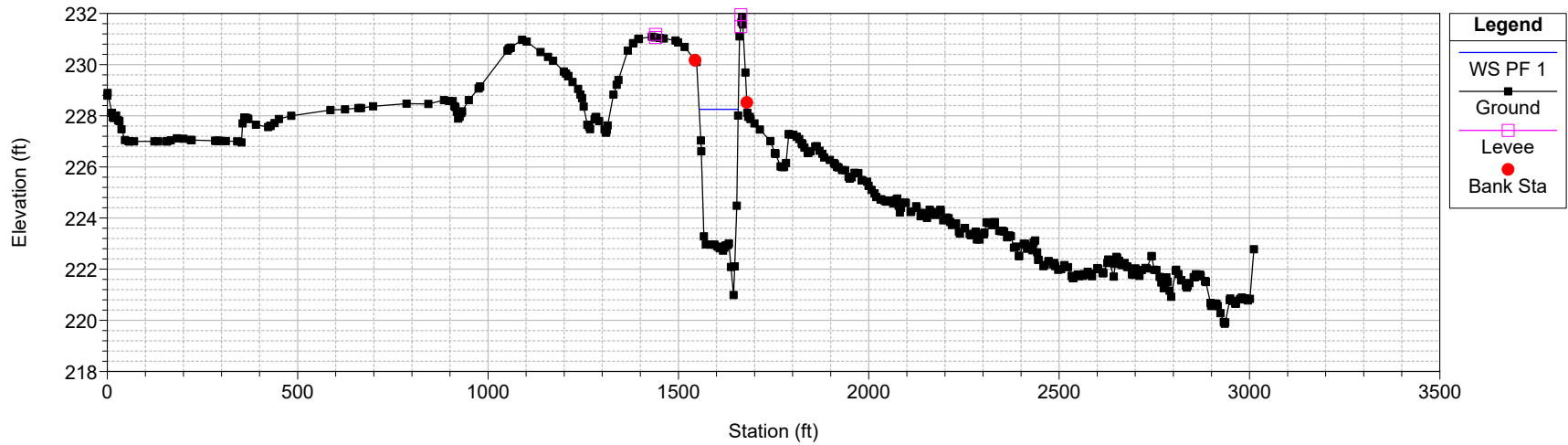
River = AdamsBarranca Reach = Reach1 RS = 3230.667



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

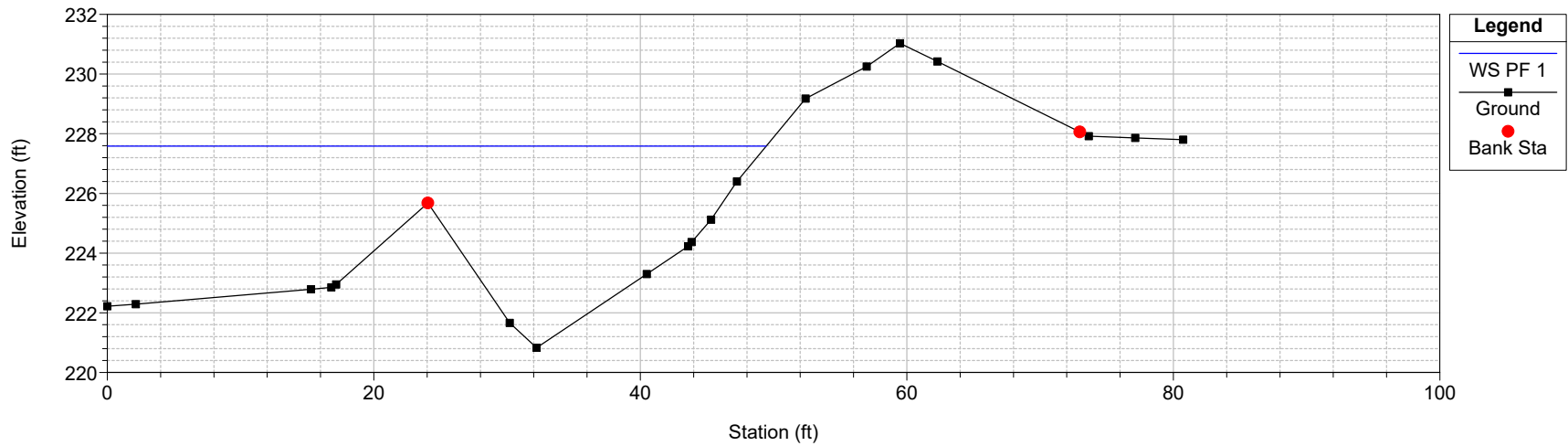
River = AdamsBarranca Reach = Reach1 RS = 3089.225



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

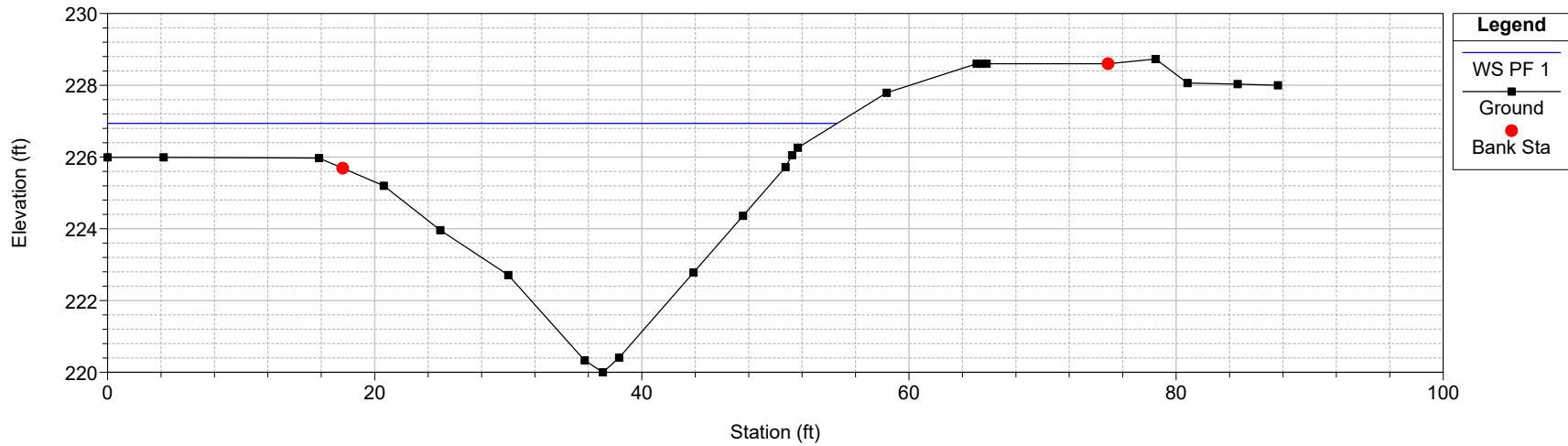
River = AdamsBarranca Reach = Reach1 RS = 3020.276



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

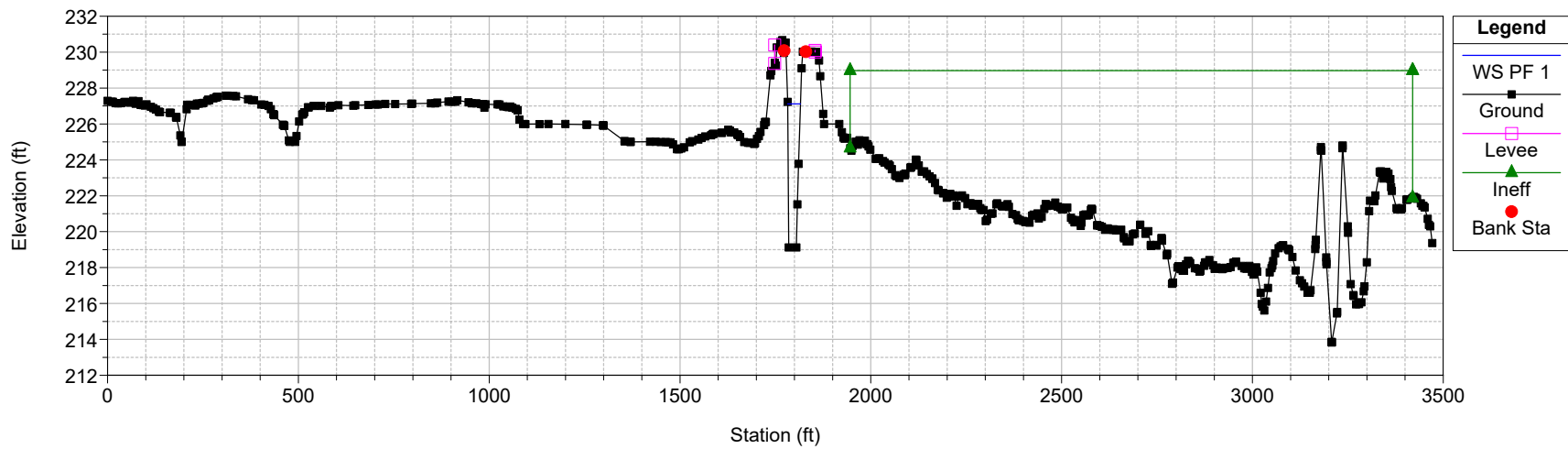
River = AdamsBarranca Reach = Reach1 RS = 2929.252



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

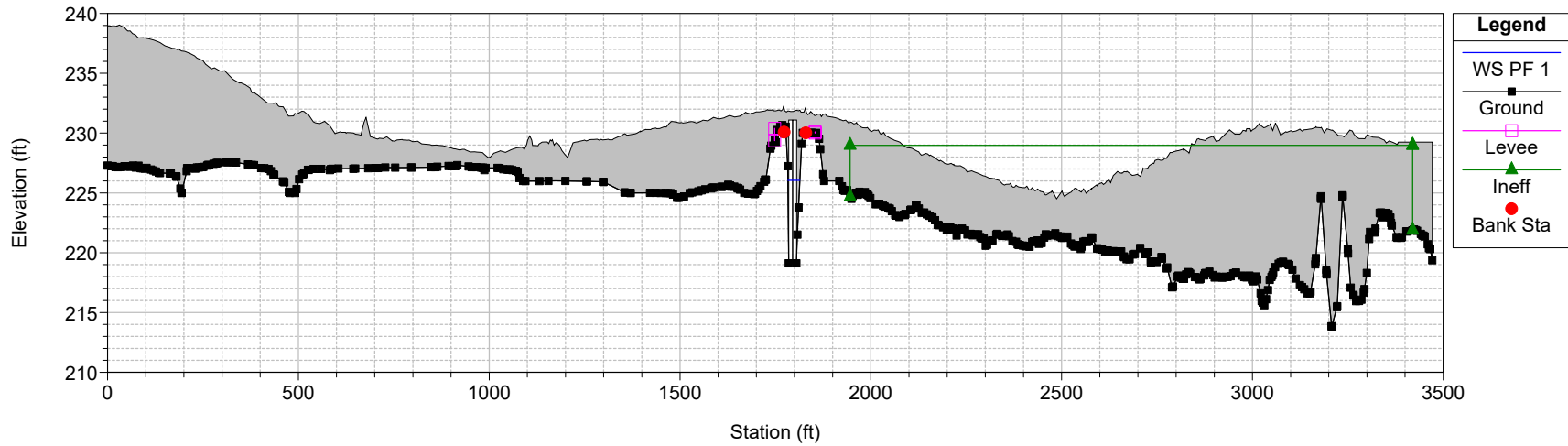
River = AdamsBarranca Reach = Reach1 RS = 2895.24



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

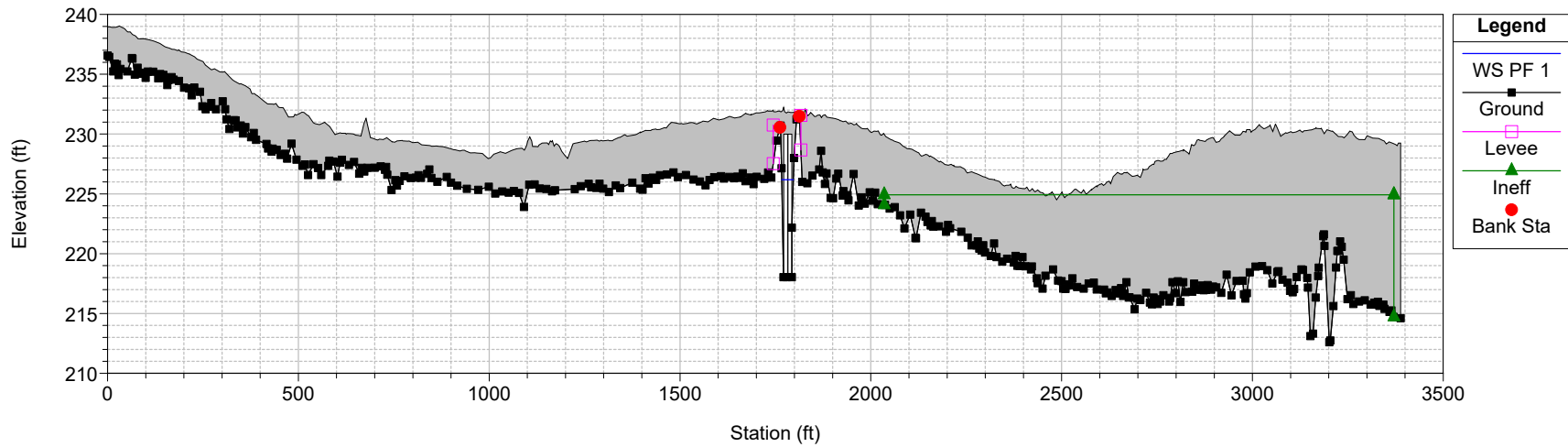
River = AdamsBarranca Reach = Reach1 RS = 2773.995 Culv



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

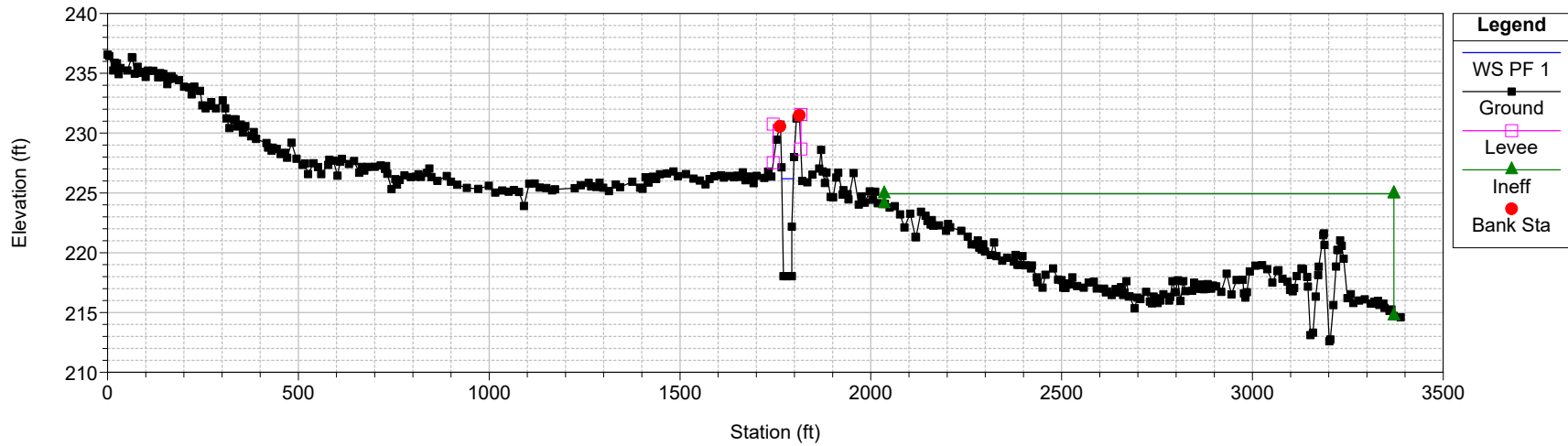
River = AdamsBarranca Reach = Reach1 RS = 2773.995 Culv



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

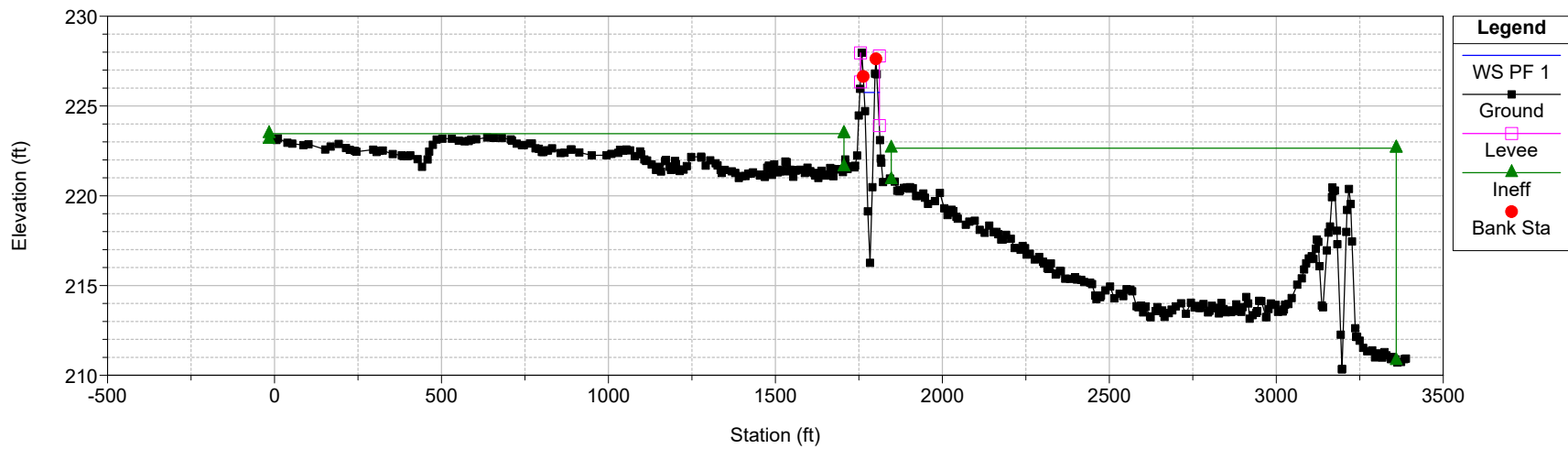
River = AdamsBarranca Reach = Reach1 RS = 2684.378



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

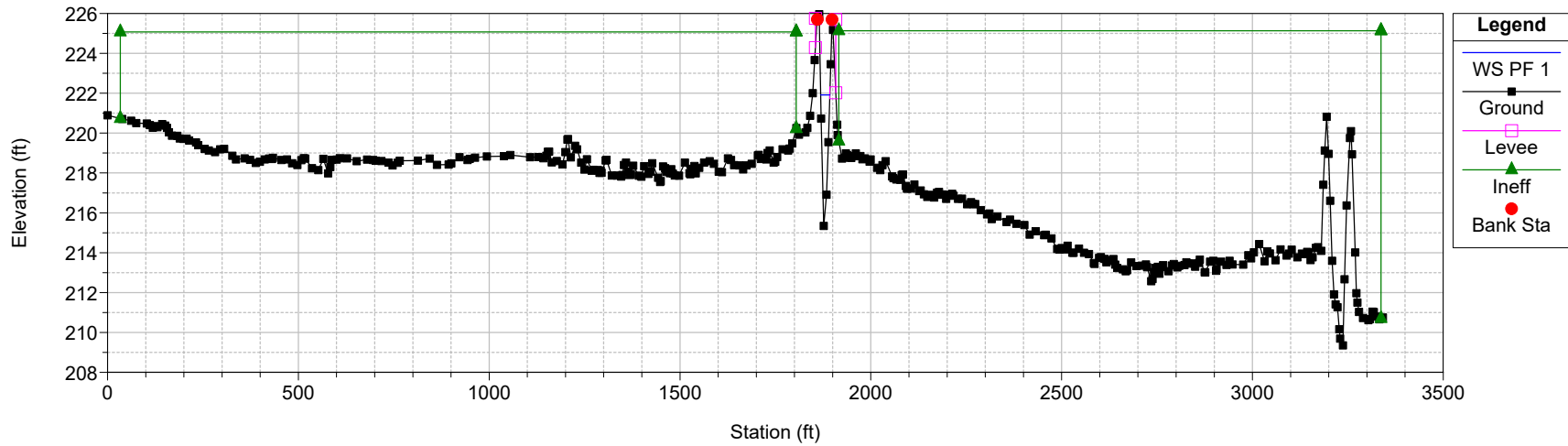
River = AdamsBarranca Reach = Reach1 RS = 2485.067



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

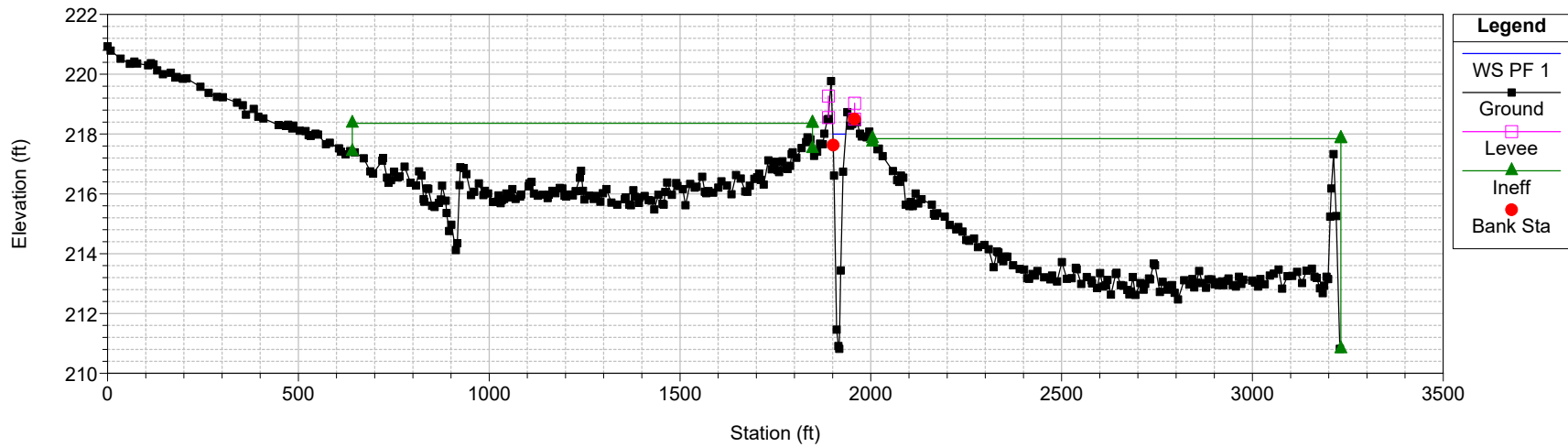
River = AdamsBarranca Reach = Reach1 RS = 2247.204



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

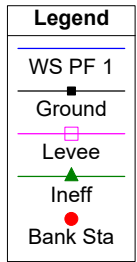
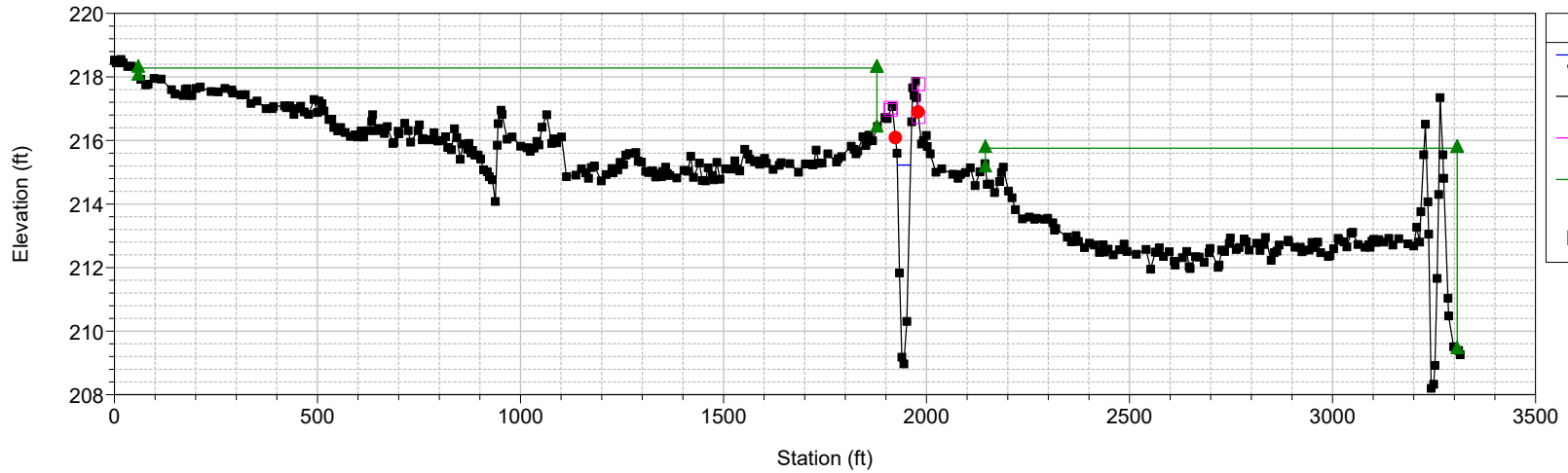
River = AdamsBarranca Reach = Reach1 RS = 1997.363



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

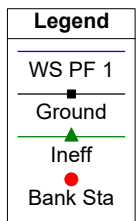
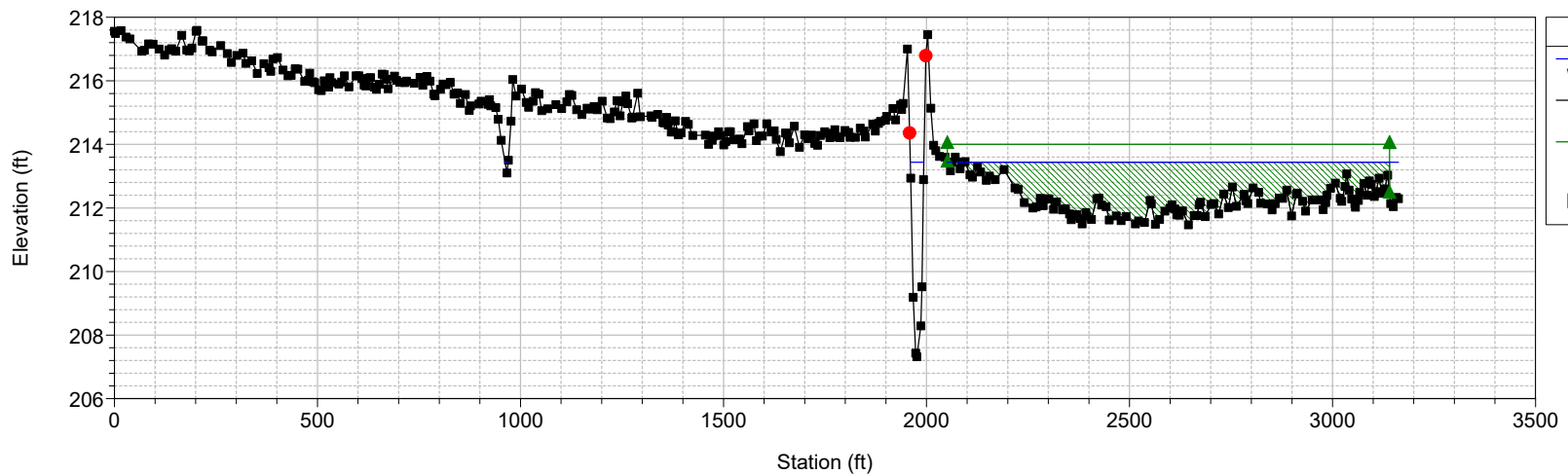
River = AdamsBarranca Reach = Reach1 RS = 1747.714



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

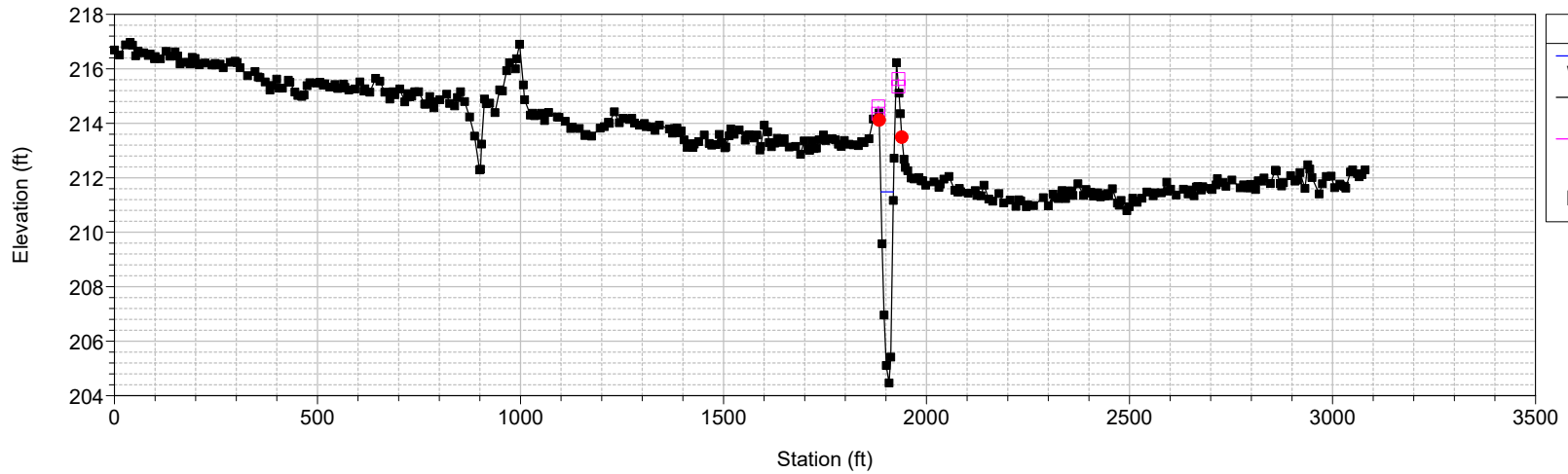
River = AdamsBarranca Reach = Reach1 RS = 1498.684



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

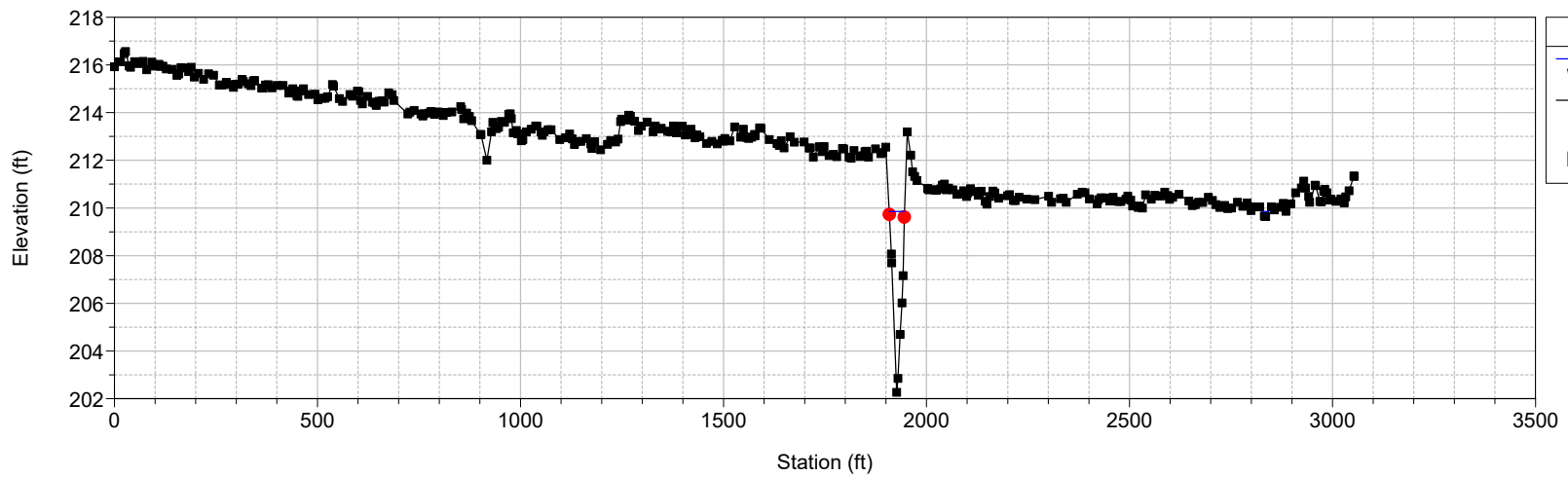
River = AdamsBarranca Reach = Reach1 RS = 1250.347



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

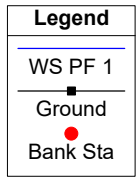
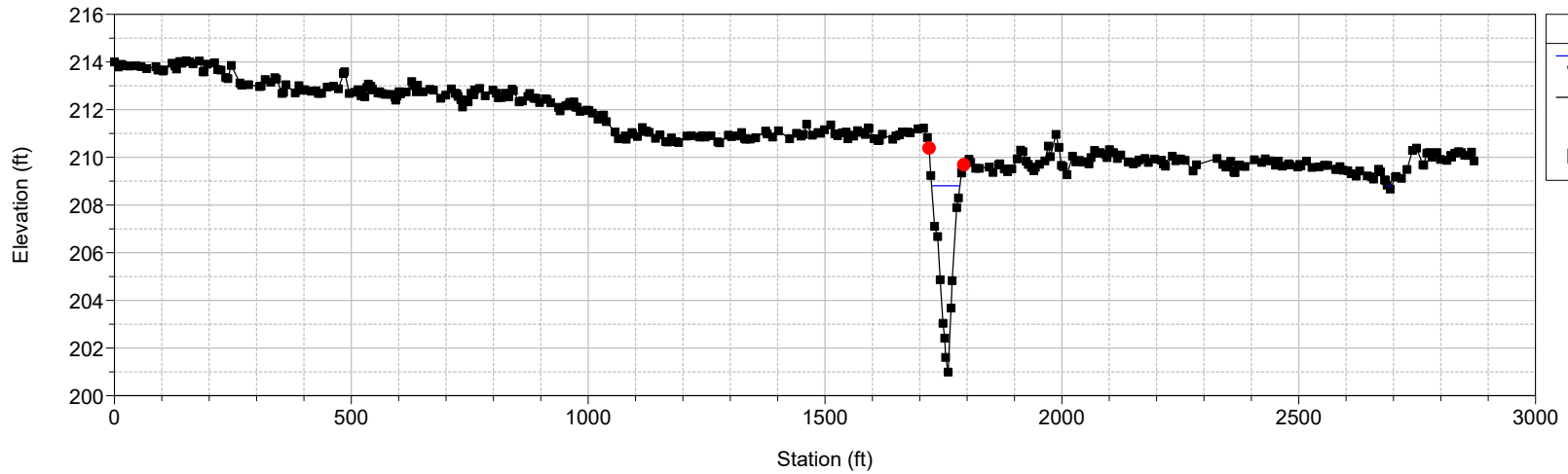
River = AdamsBarranca Reach = Reach1 RS = 1001.841



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

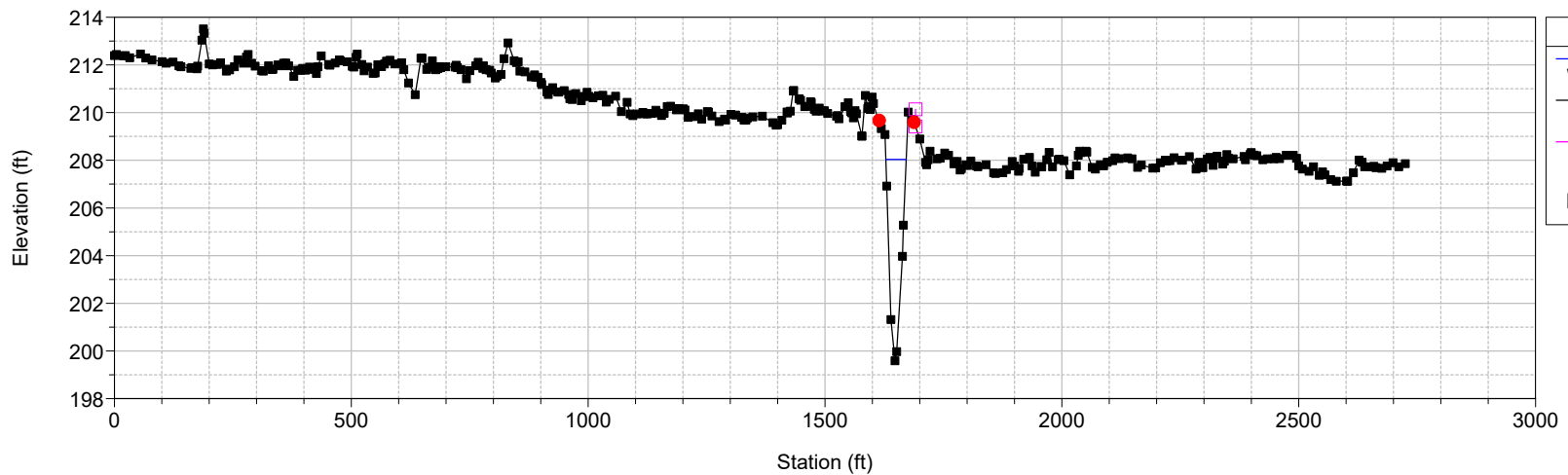
River = AdamsBarranca Reach = Reach1 RS = 748.9206



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

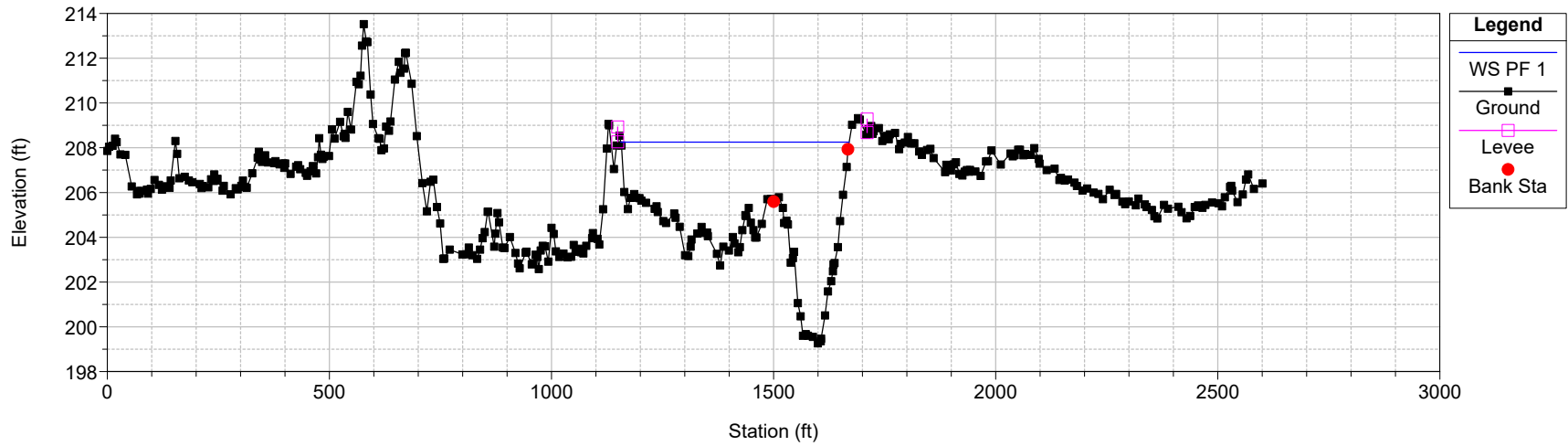
River = AdamsBarranca Reach = Reach1 RS = 502.0116



4492_AdamsBarranca Plan: Prop_AdamsBarranca 11/17/2015

Geom: AdamsProposed Flow: Prop_Profiles

River = AdamsBarranca Reach = Reach1 RS = 249.222

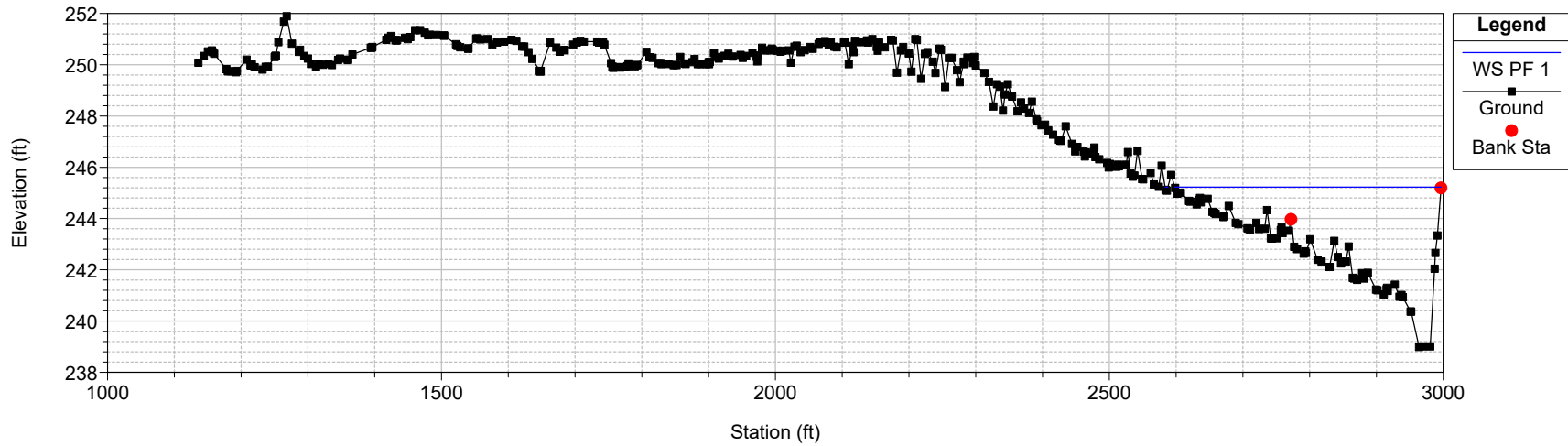


HEC-RAS Plan: PropEast River: AdamsBarranca Reach: propLOB Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
propLOB	5653.369	PF 1	2177.00	238.99	245.23		245.31	0.000609	2.43	1000.34	402.72	0.23
propLOB	5484.759	PF 1	2177.00	236.98	244.13		244.98	0.008736	7.38	294.83	113.64	0.81
propLOB	5288.458	PF 1	2177.00	234.97	241.82	241.82	242.72	0.015840	7.59	286.64	166.72	1.02
propLOB	5002.825	PF 1	2177.00	231.98	238.07	238.07	238.09	0.000366	1.53	1794.24	986.02	0.16
propLOB	4286.143	PF 1	2637.00	224.96	231.69	231.69	232.80	0.011024	8.43	313.46	150.02	0.99
propLOB	4095.103	PF 1	2637.00	222.98	230.11	227.76	230.85	0.004801	6.89	382.53	69.84	0.52
propLOB	3408.064	PF 1	2637.00	223.45	226.82	226.82	228.10	0.003283	9.06	290.91	115.18	1.01
propLOB	3194.191	PF 1	2637.00	221.41	222.97	222.97	223.35	0.019430	4.99	528.84	682.16	1.00
propLOB	2863.473	PF 1	2637.00	217.88	219.49	219.12	219.68	0.005857	3.49	755.78	678.15	0.58
propLOB	2308.391	PF 1	2637.00	213.72	216.73	216.30	216.85	0.004401	2.80	941.49	949.06	0.50
propLOB	1672.413	PF 1	2637.00	204.49	214.10	213.57	214.24	0.003812	3.04	918.69	932.56	0.49
propLOB	910.8447	PF 1	2637.00	199.57	206.31	206.31	208.46	0.019372	11.76	224.21	51.98	1.00
propLOB	425.6386	PF 1	2637.00	201.50	206.40	203.84	206.48	0.001001	2.21	1193.09	386.80	0.22

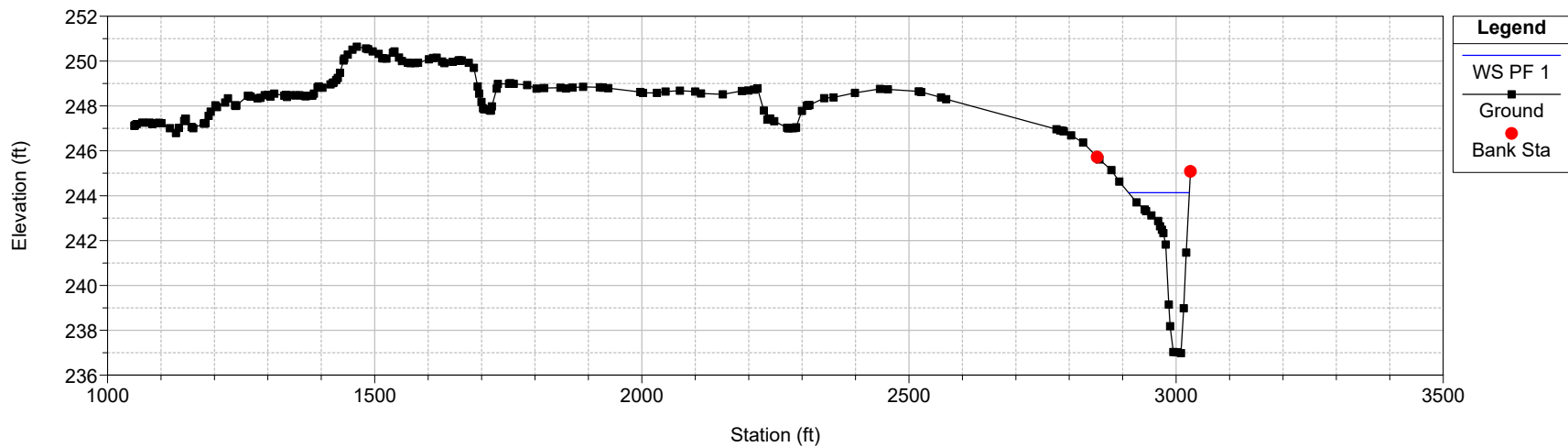
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 5653.369



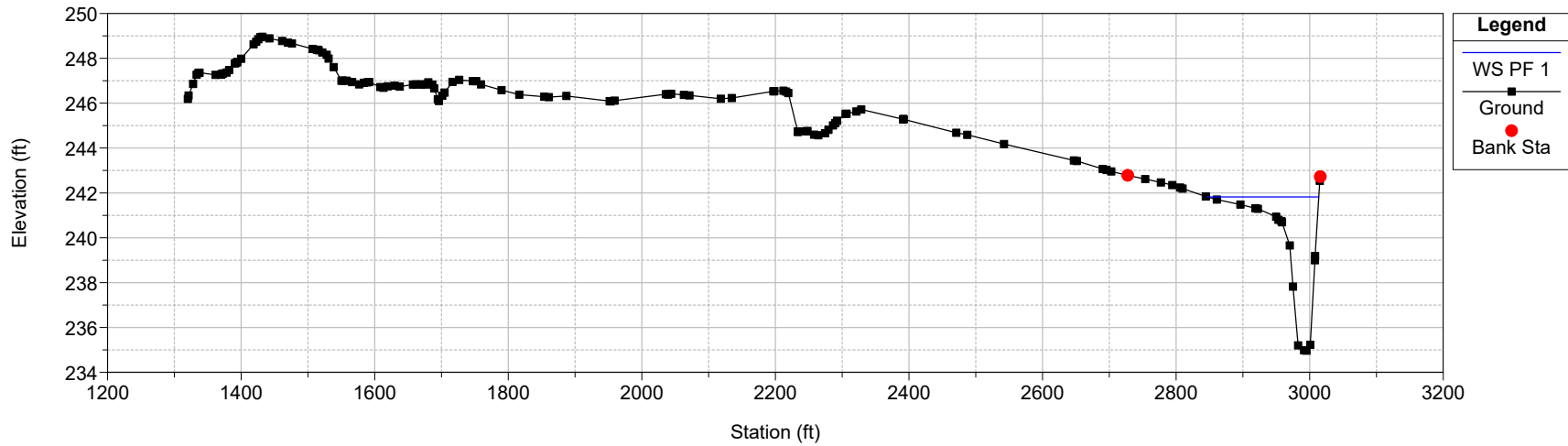
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 5484.759



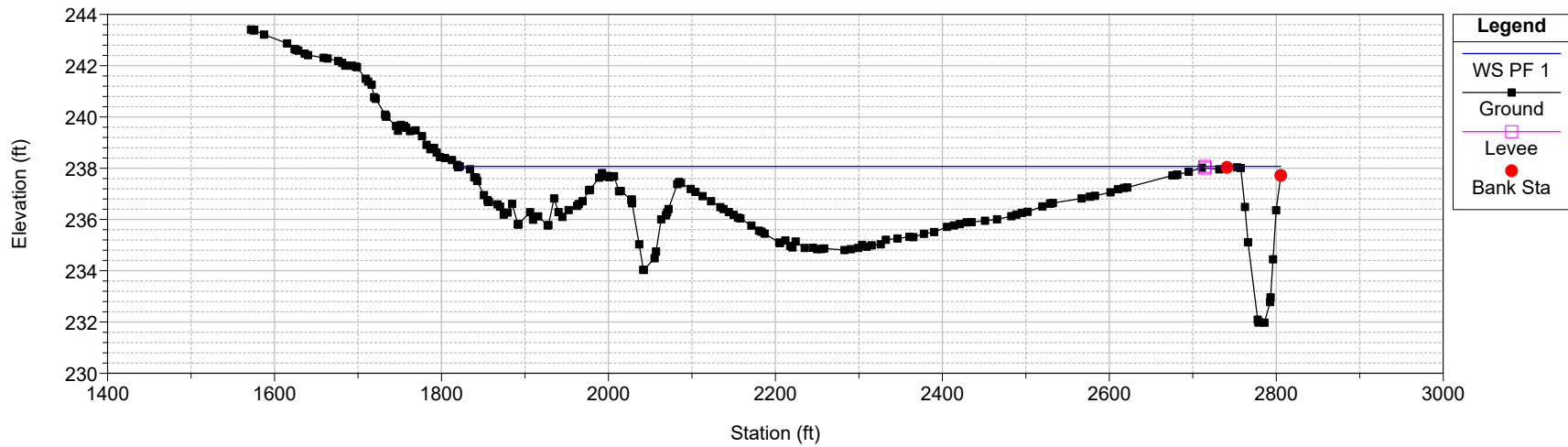
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 5288.458



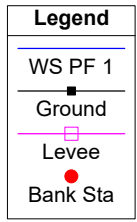
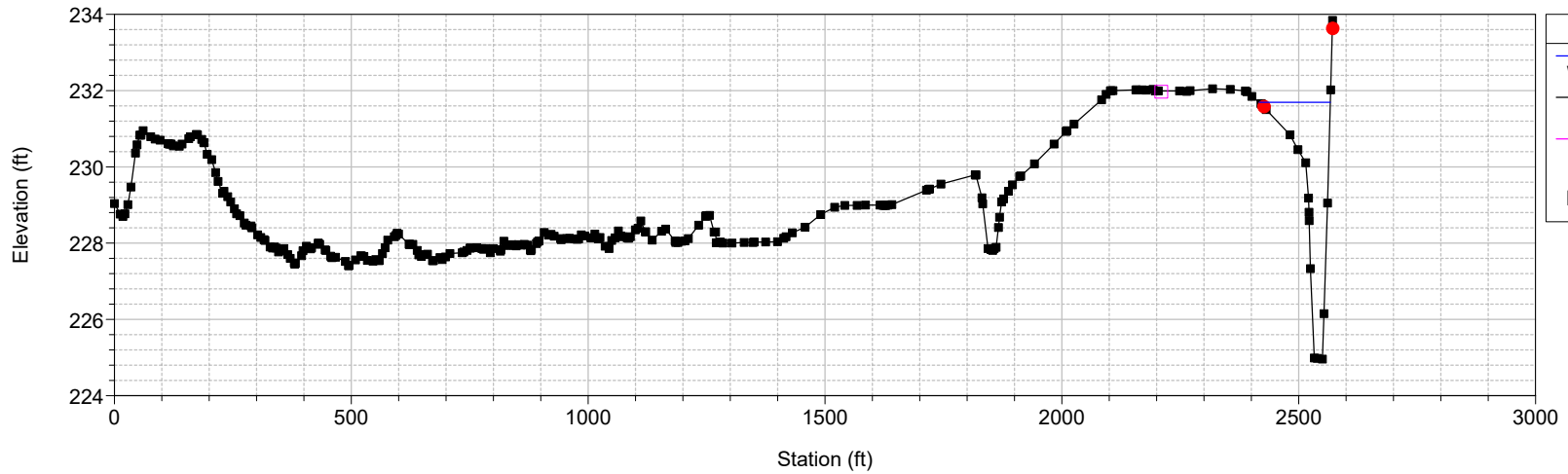
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 5002.825



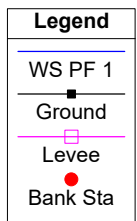
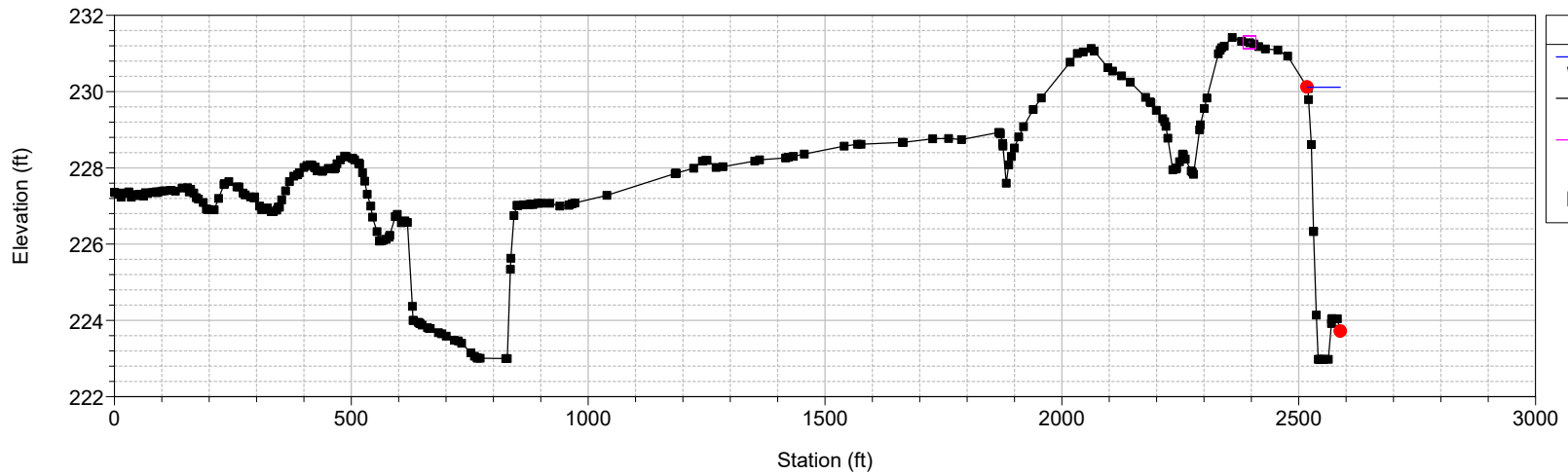
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 4286.143



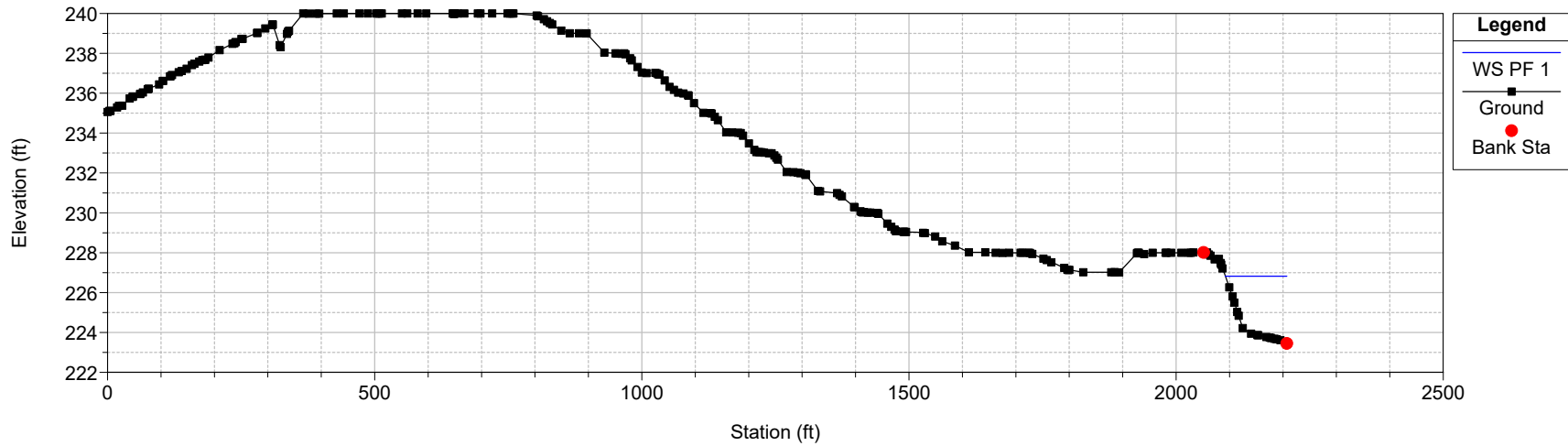
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 4095.103



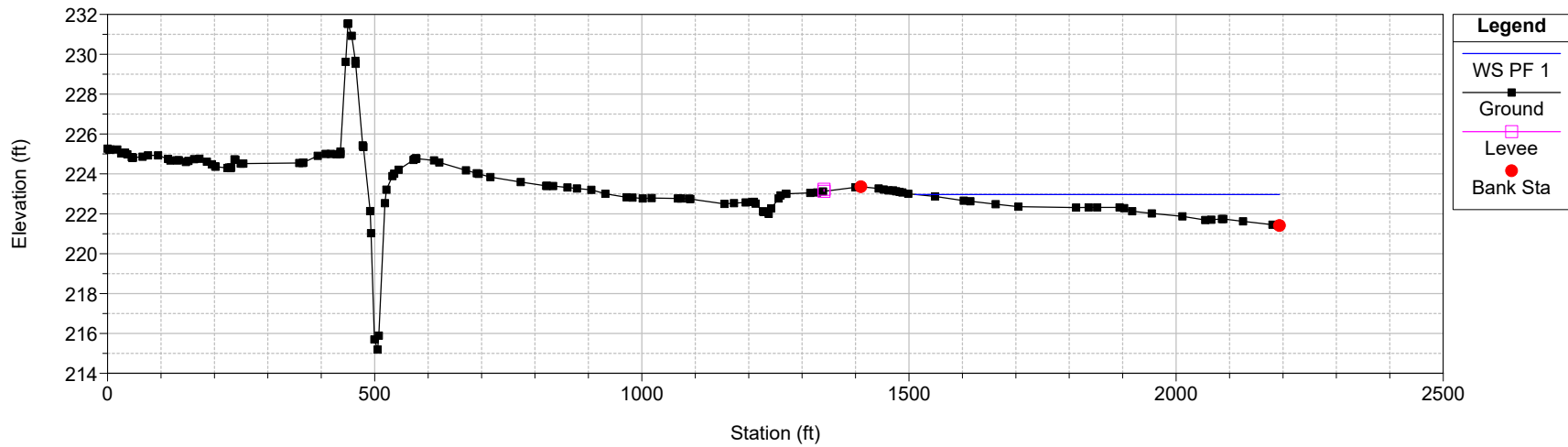
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 3408.064



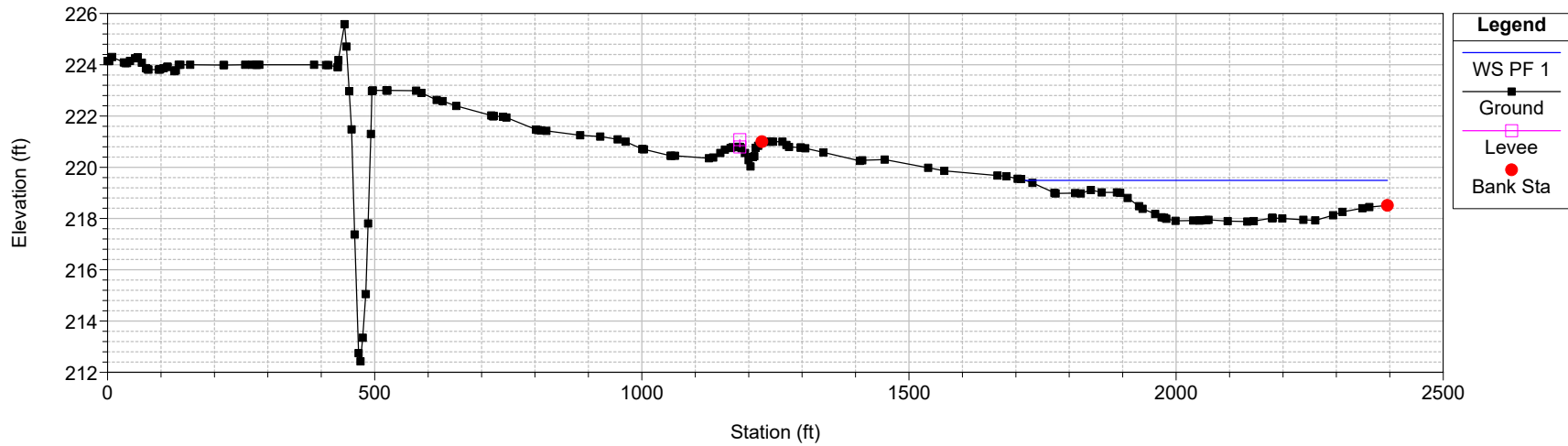
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 3194.191



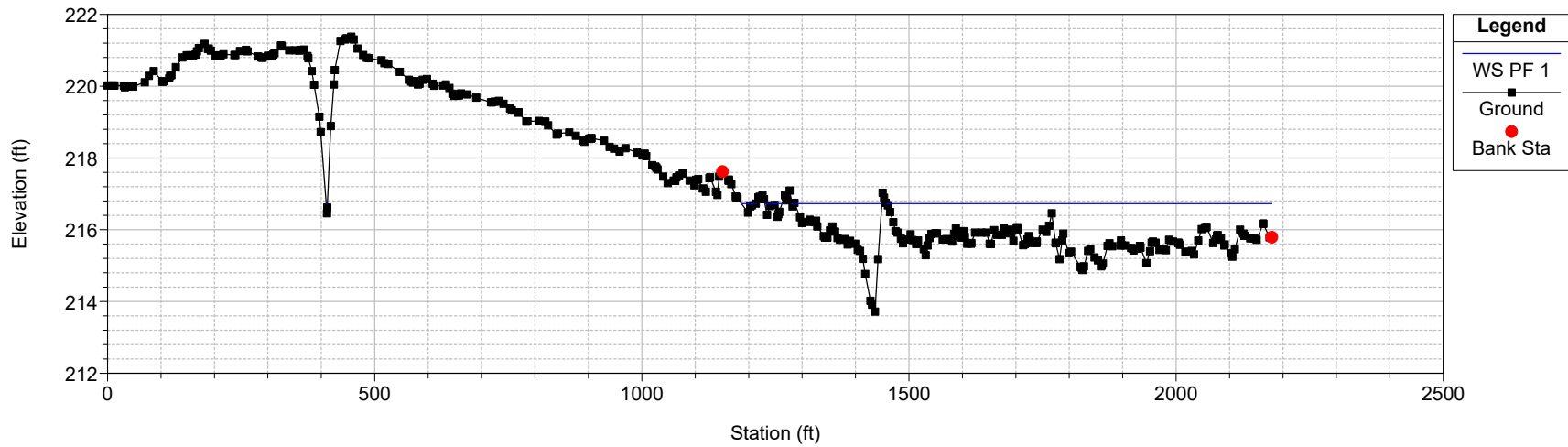
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 2863.473



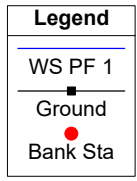
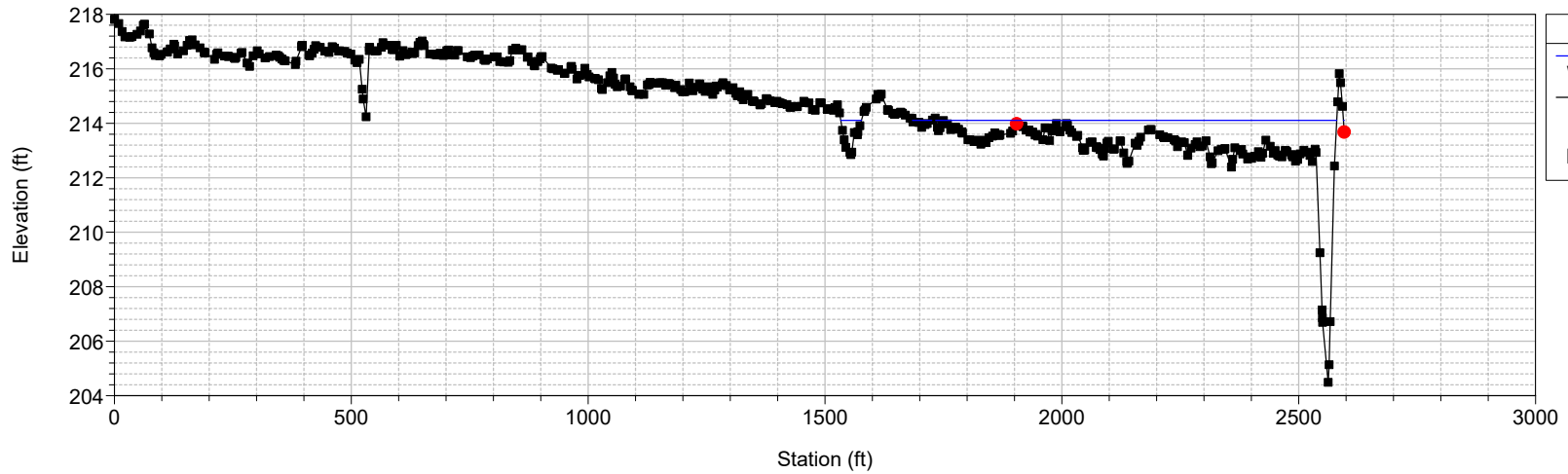
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 2308.391



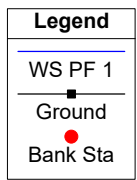
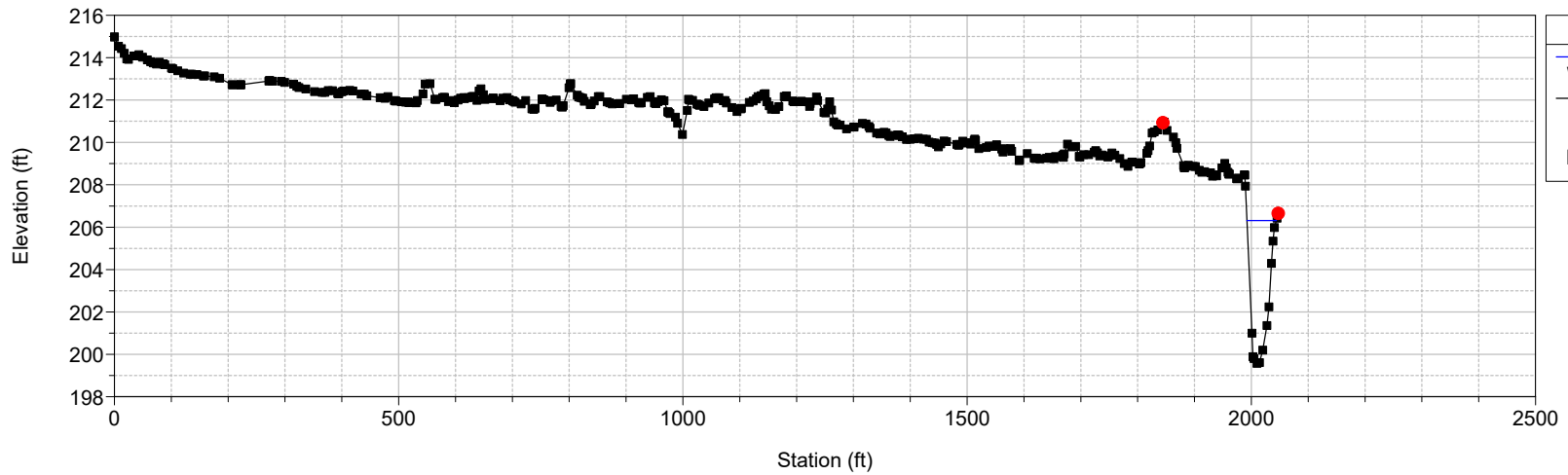
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 1672.413



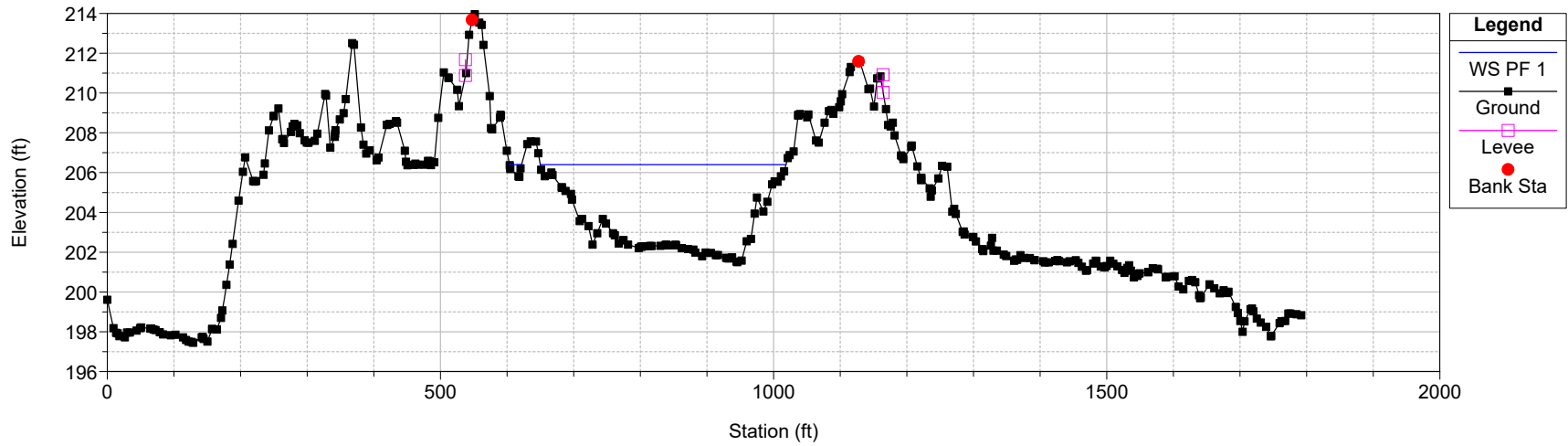
4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 910.8447



4492_AdamsBarranca Plan: Prop_EastOvebank_Adams 11/17/2015

Geom: PropEast2 Flow: Prop_ProfilesEASTOverbank
River = AdamsBarranca Reach = propLOB RS = 425.6386



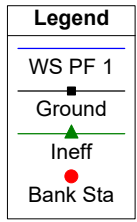
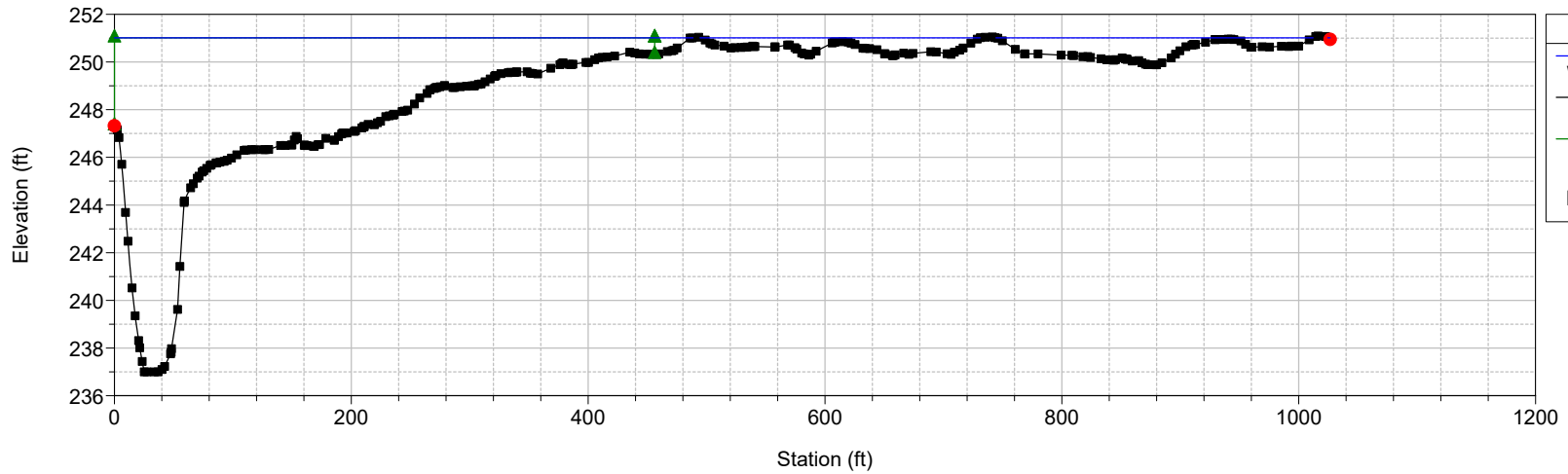
HEC-RAS Plan: Prop_ROB River: AdamsBarranca Reach: ROB Profile: PF 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
ROB	4876.64	PF 1	1348.00	237.00	251.01	251.01	251.02	0.000057	0.65	2067.35	994.77	0.08
ROB	4369.222	PF 1	1348.00	234.00	242.54		242.75	0.003262	3.67	366.95	227.34	0.51
ROB	4130.314	PF 1	1348.00	233.00	242.57	242.57	242.58	0.000169	0.92	1469.12	720.39	0.11
ROB	4014.771	PF 1	1348.00	231.97	236.15	236.15	236.60	0.018570	5.39	250.22	318.14	1.00
ROB	3871.933	PF 1	1348.00	228.94	232.04	231.53	232.20	0.004677	3.16	427.09	666.61	0.52
ROB	3800.783	PF 1	1348.00	227.98	231.90	230.94	231.97	0.001898	2.20	613.50	992.03	0.34
ROB	3592.327	PF 1	2203.00	226.85	230.38	230.38	230.71	0.020840	4.61	478.30	941.84	1.01
ROB	3269.723	PF 1	2203.00	221.00	227.72	224.28	227.73	0.000050	0.58	3769.66	1417.18	0.06
ROB	2837.474	PF 1	2203.00	218.22	227.72	221.41	227.72	0.000006	0.31	7089.13	1367.09	0.02
ROB	2537.857	PF 1	2203.00	225.08	227.20	227.20	227.67	0.002601	5.51	399.64	434.31	1.01
ROB	2157.755	PF 1	2203.00	212.65	215.06	214.37	215.16	0.002560	2.52	873.91	691.96	0.39
ROB	1945.575	PF 1	2203.00	211.33	214.50	213.98	214.59	0.002892	2.30	959.34	965.38	0.40
ROB	1526.76	PF 1	2203.00	208.00	213.30	212.83	213.37	0.002885	2.15	1026.43	1153.33	0.40
ROB	1028.893	PF 1	2203.00	203.26	212.02	211.46	212.08	0.002338	2.01	1097.32	1171.15	0.36
ROB	549.033	PF 1	2203.00	200.74	209.27	209.27	209.51	0.021938	3.98	553.26	1160.58	0.99
ROB	272.1645	PF 1	2203.00	199.75	208.17	206.98	208.21	0.001001	1.53	1440.42	1280.12	0.24

4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

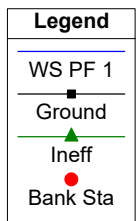
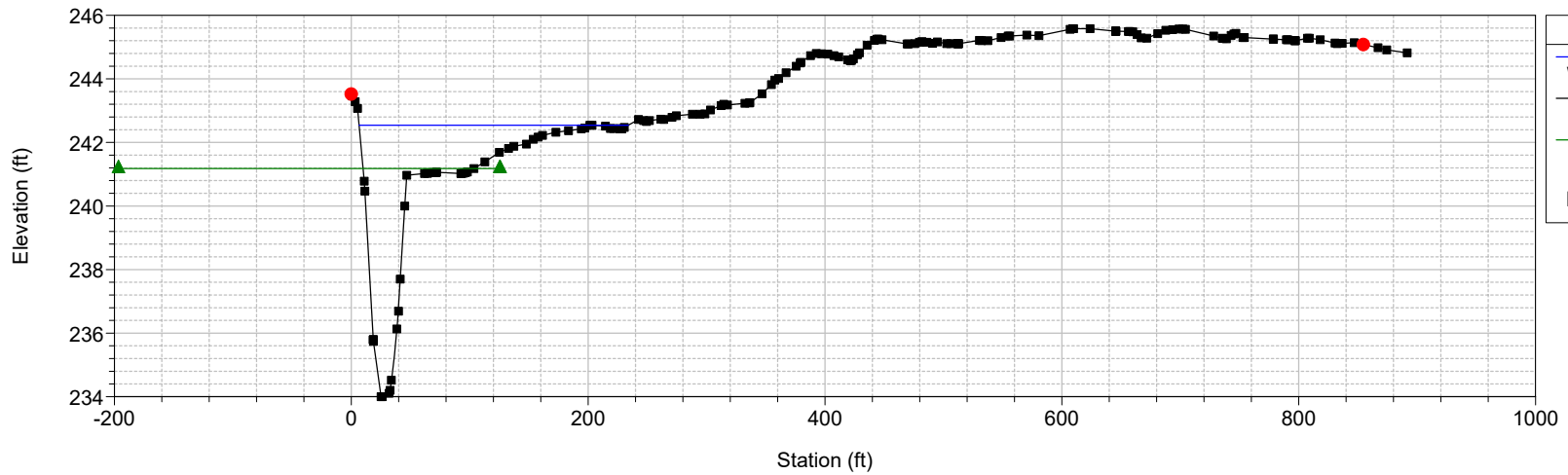
River = AdamsBarranca Reach = ROB RS = 4876.64



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

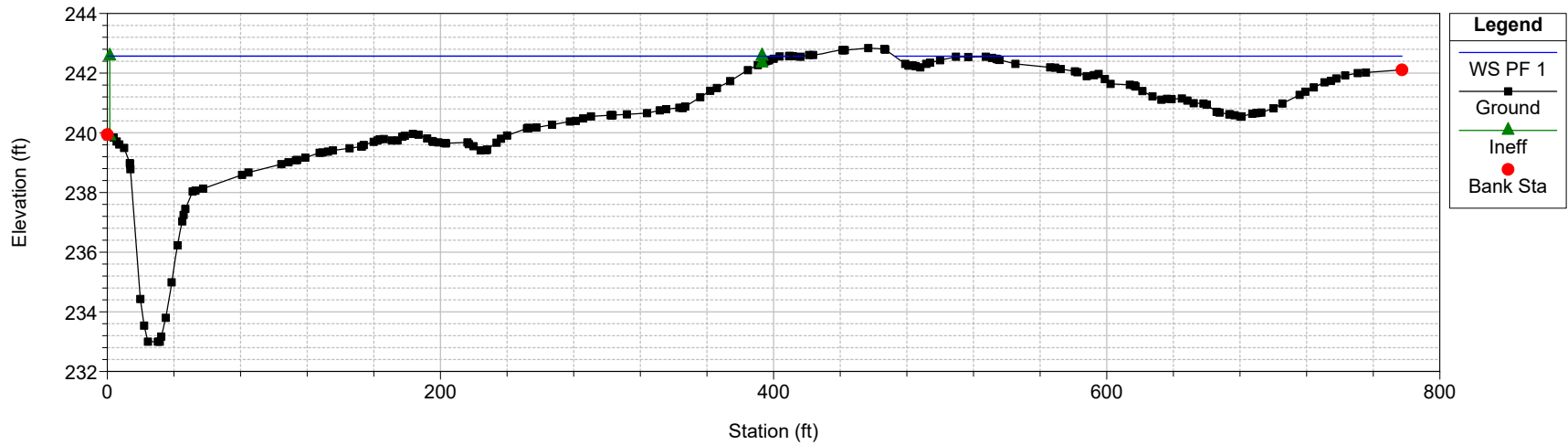
River = AdamsBarranca Reach = ROB RS = 4369.222



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

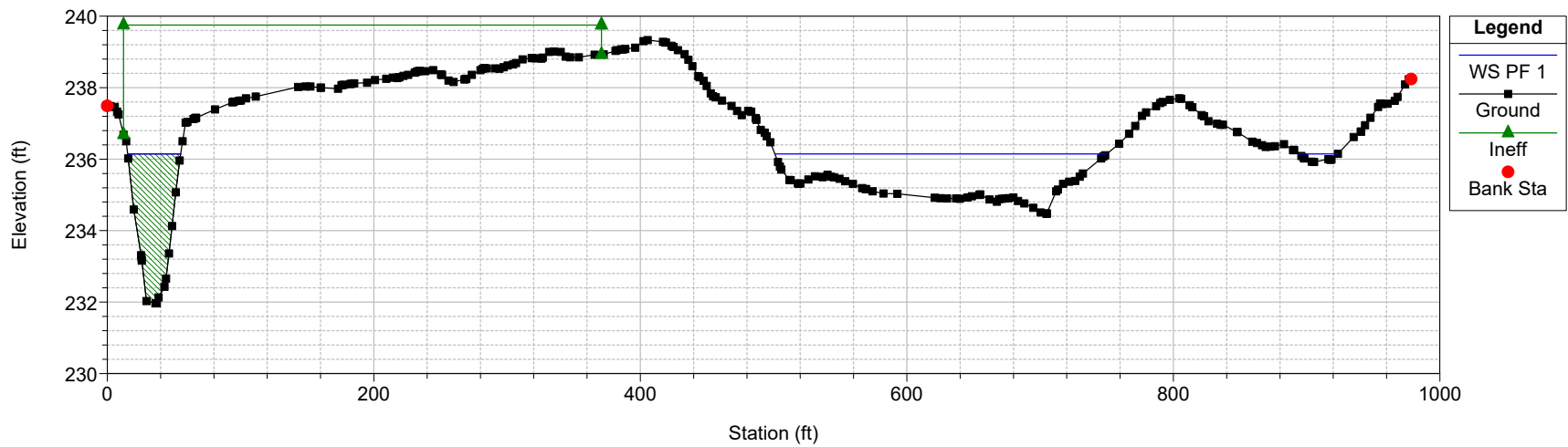
River = AdamsBarranca Reach = ROB RS = 4130.314



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

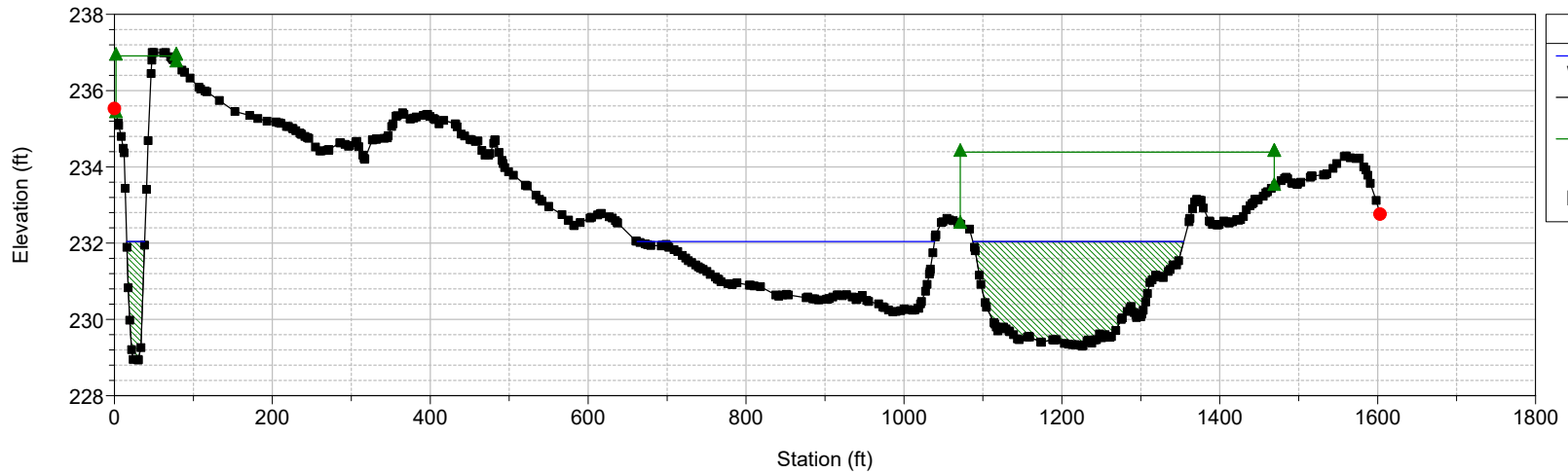
River = AdamsBarranca Reach = ROB RS = 4014.771



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

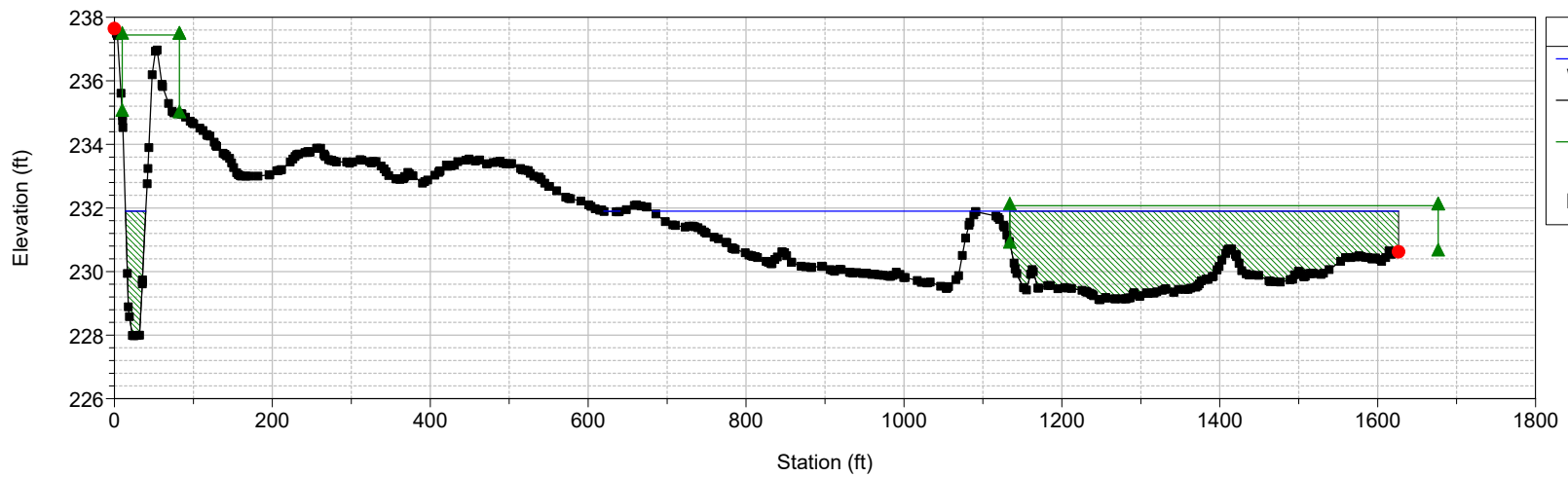
River = AdamsBarranca Reach = ROB RS = 3871.933



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

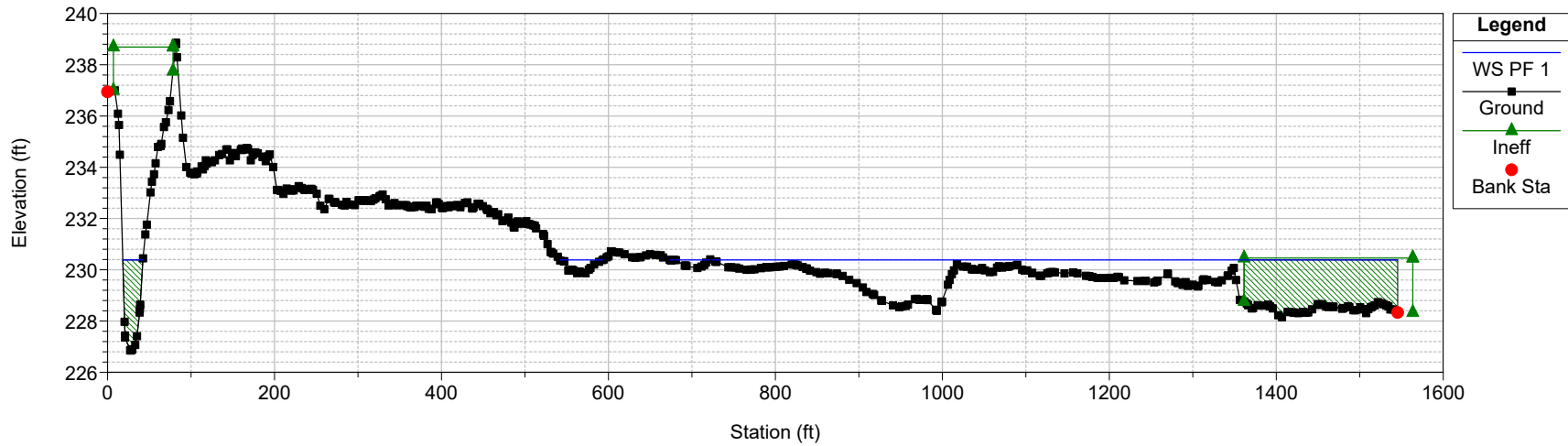
River = AdamsBarranca Reach = ROB RS = 3800.783



4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

Geom: AdamsProp_WestOverbank Flow: Prop_ProfilesWestOverbank

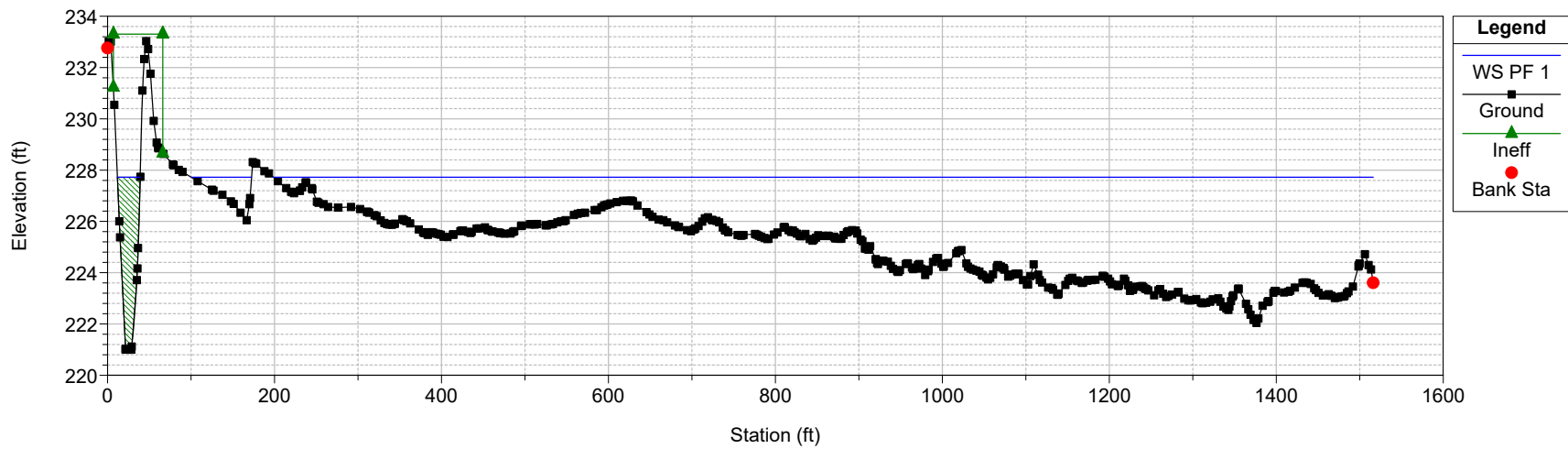
River = AdamsBarranca Reach = ROB RS = 3592.327



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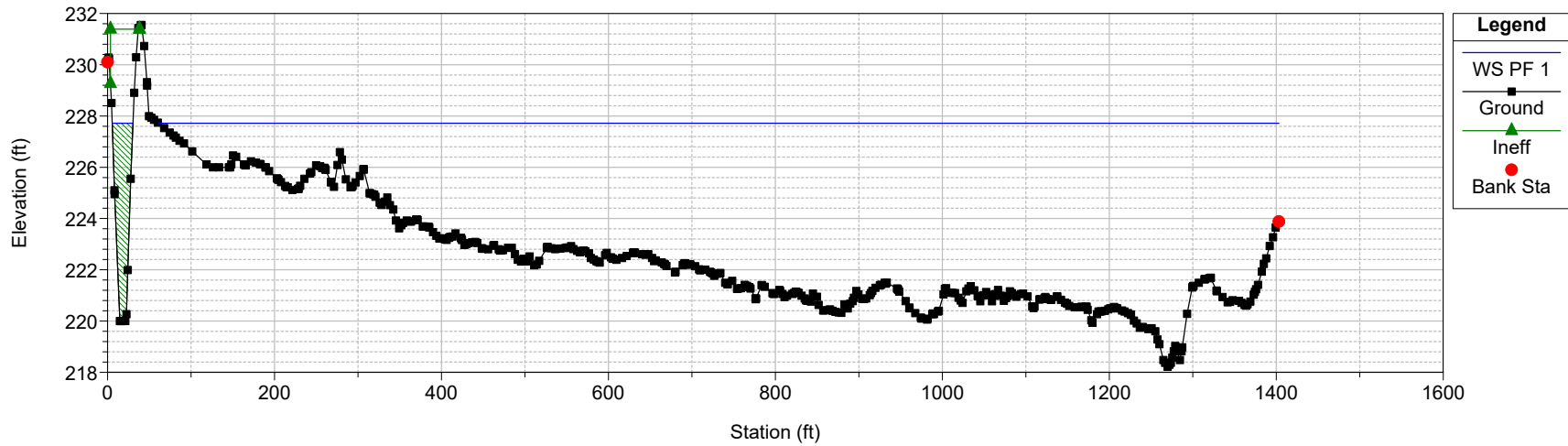
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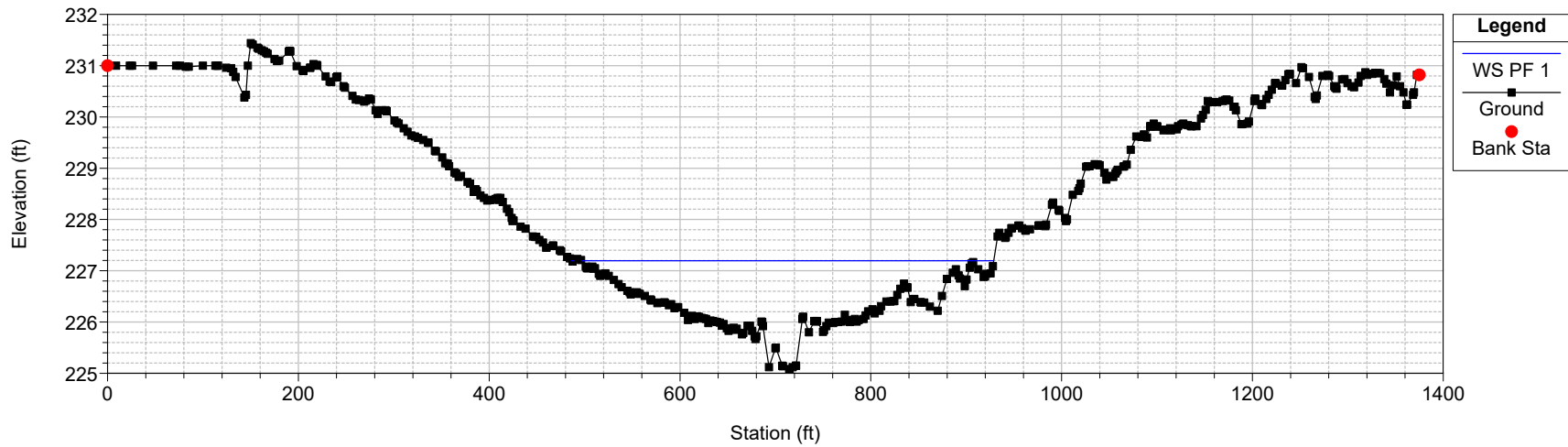
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4492_AdamsBarranca Plan: Prop_WestOvebank_Adams 11/17/2015

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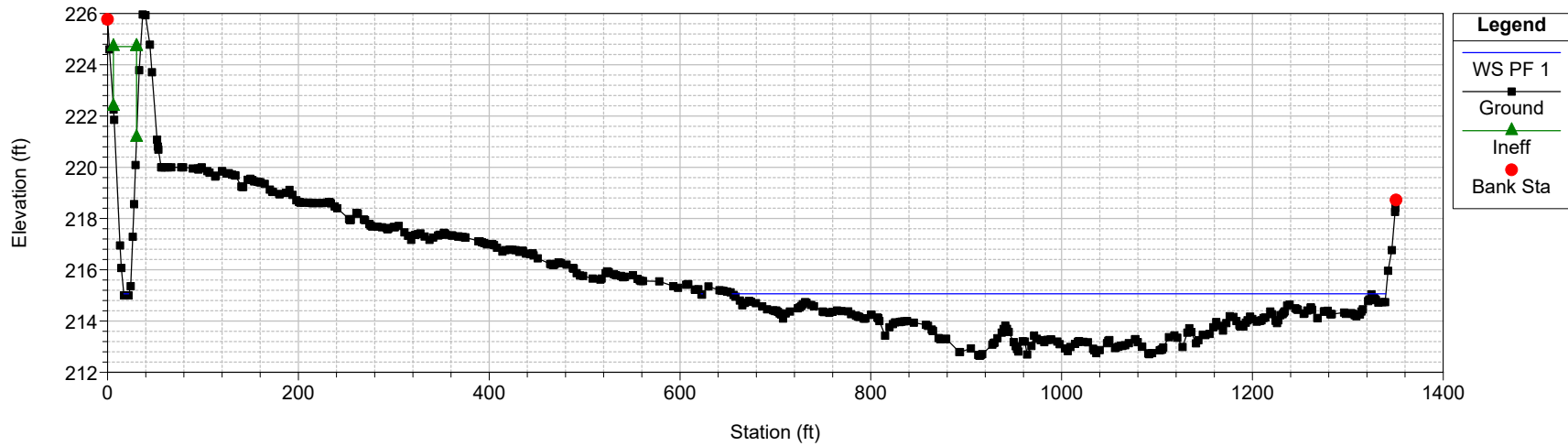
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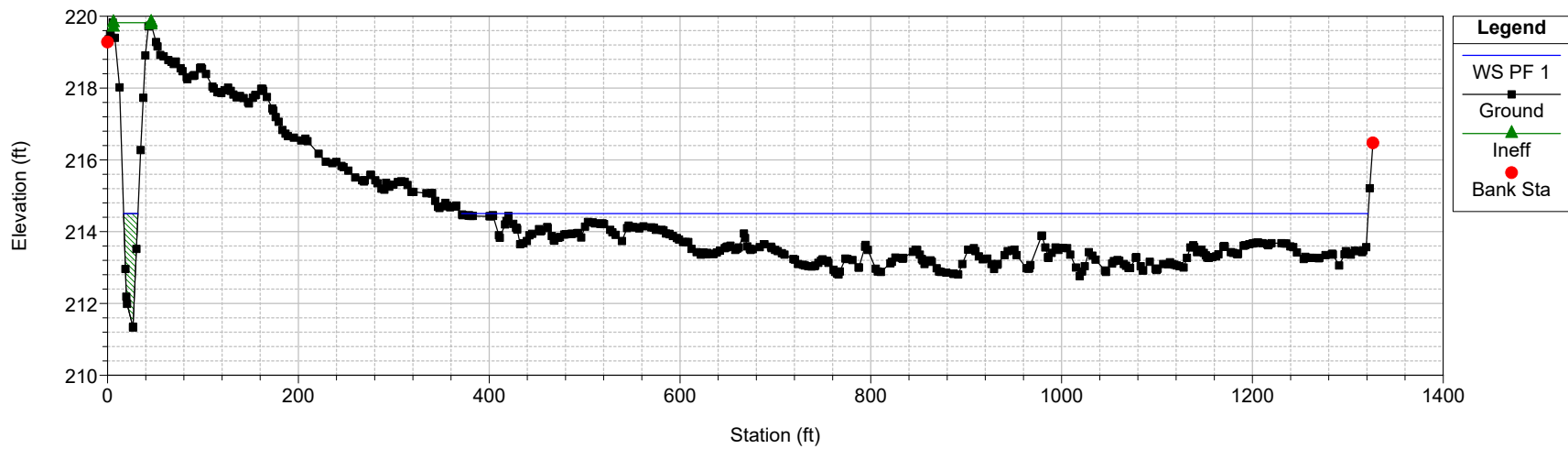
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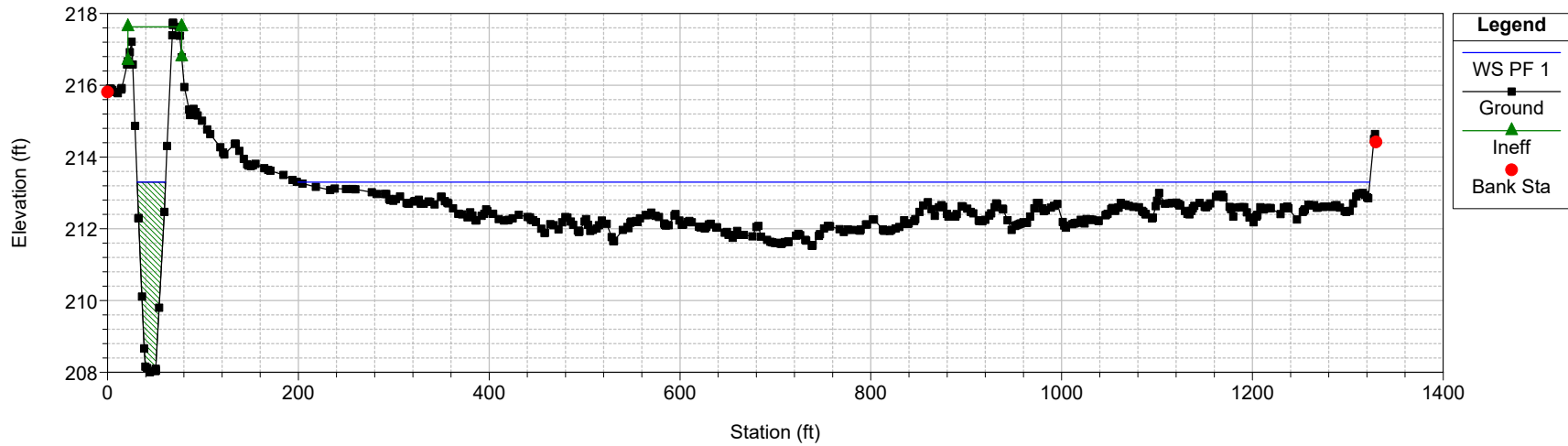
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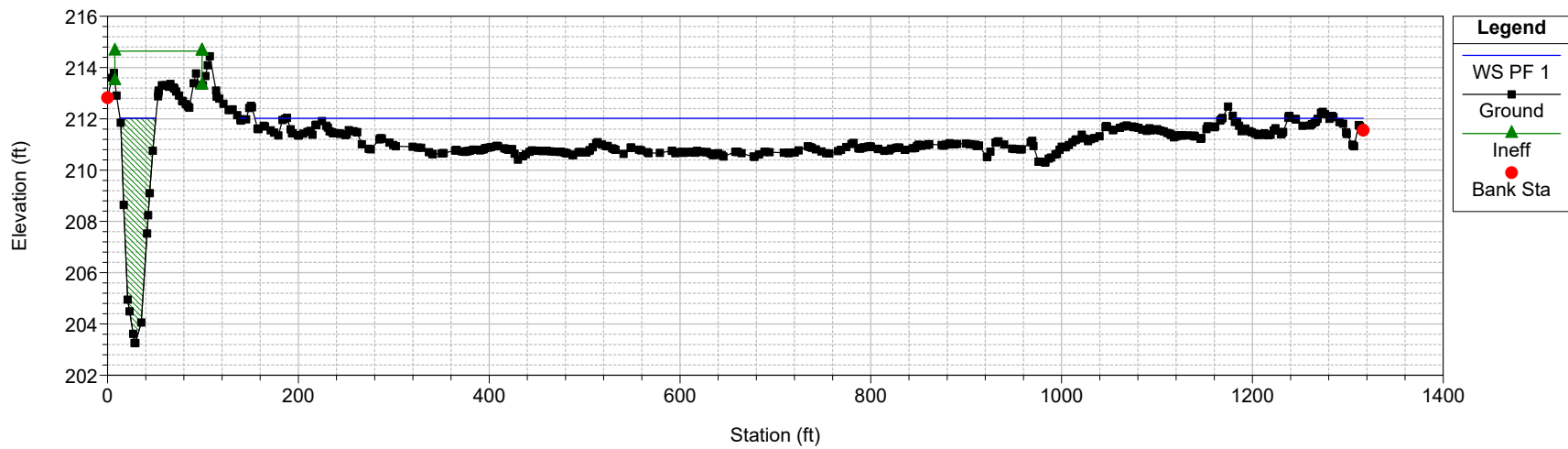
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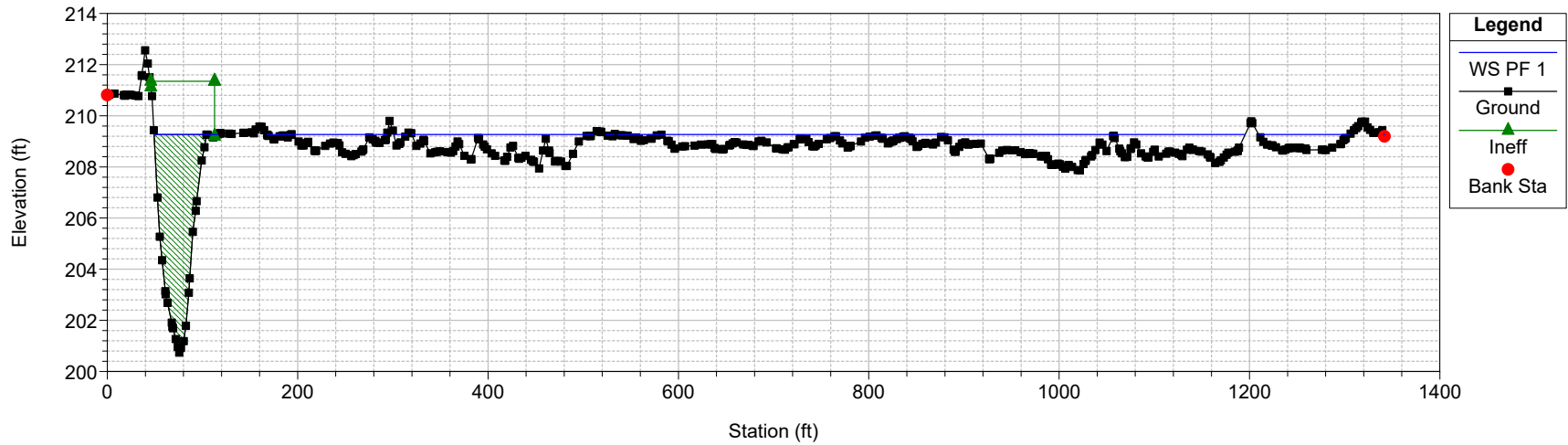
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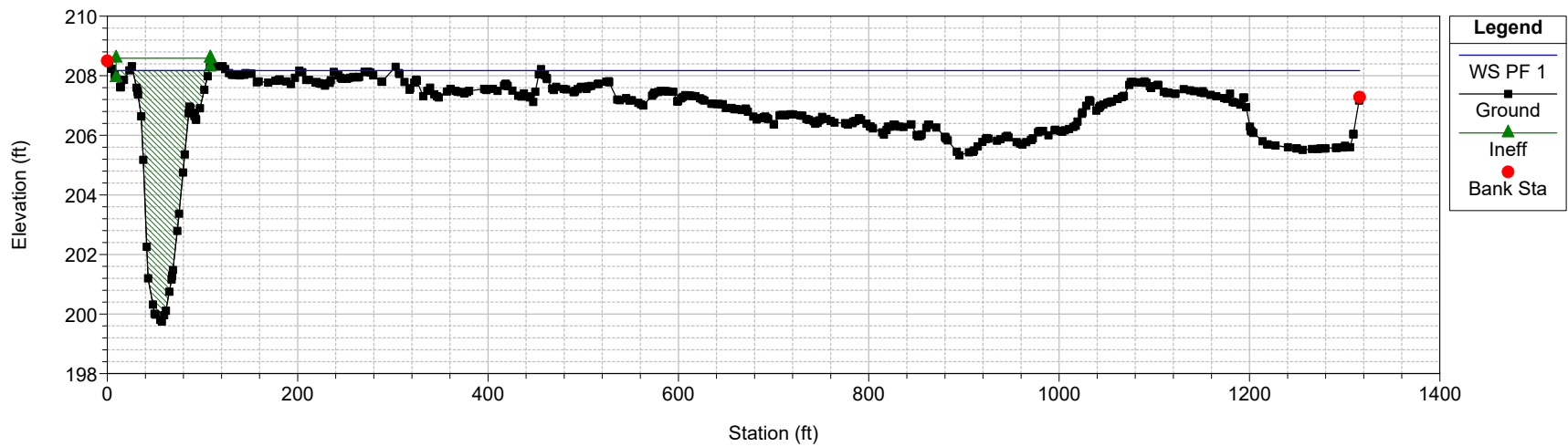
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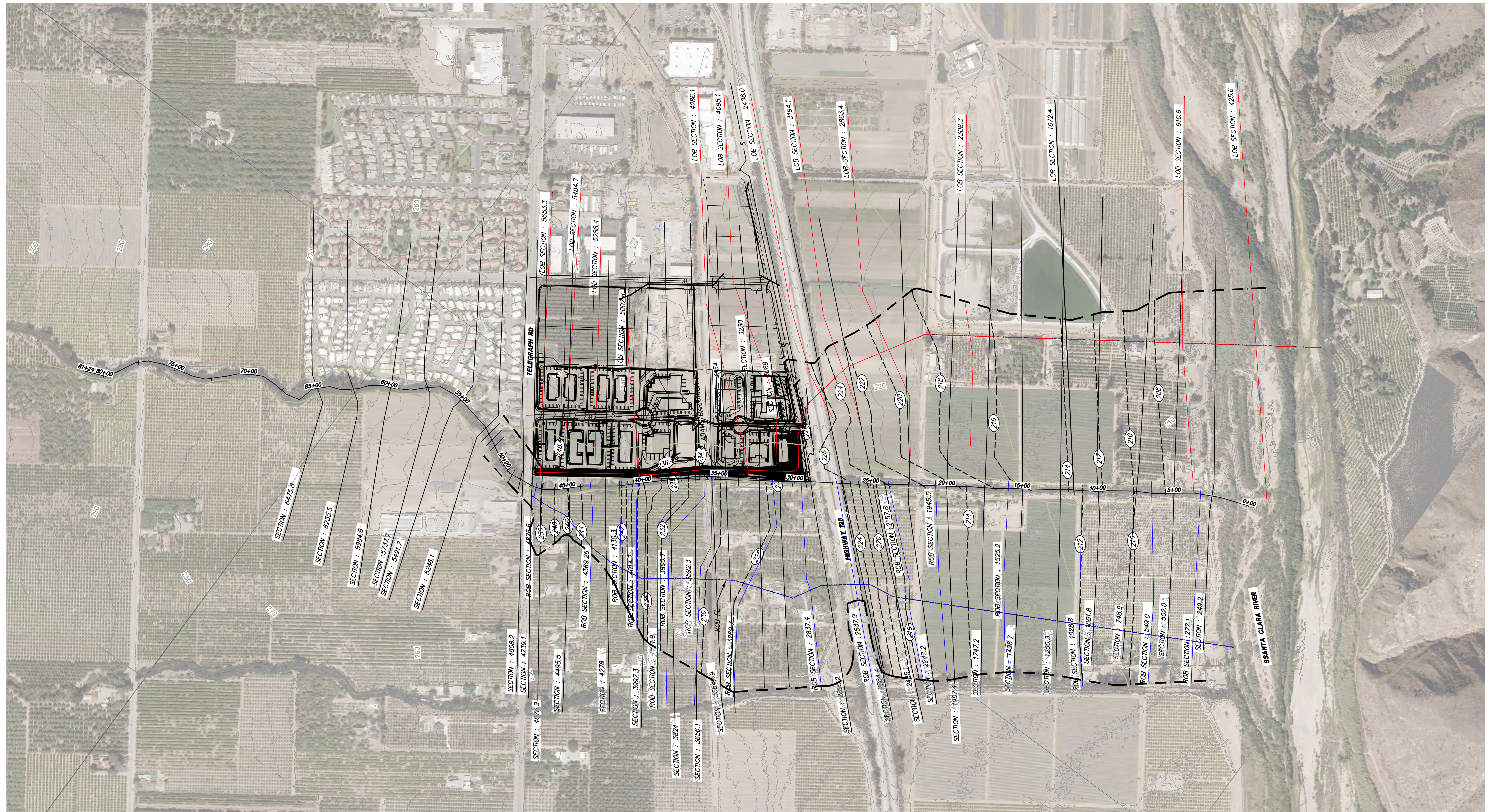


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 - 100 YEAR FLOODPLAIN ZONE AO
 - 100 YEAR CHANNEL FLOODZONE LIMITS
 - FEMA 100 YEAR FLOODPLAIN PER FIRM PANEL No. 0604130755C
 - 200 — 100 YEAR WATER SURFACE ELEVATION
 - 200 — PROPOSED CONTOUR
 - 200 — EXISTING CONTOUR
 - PROPERTY LINE

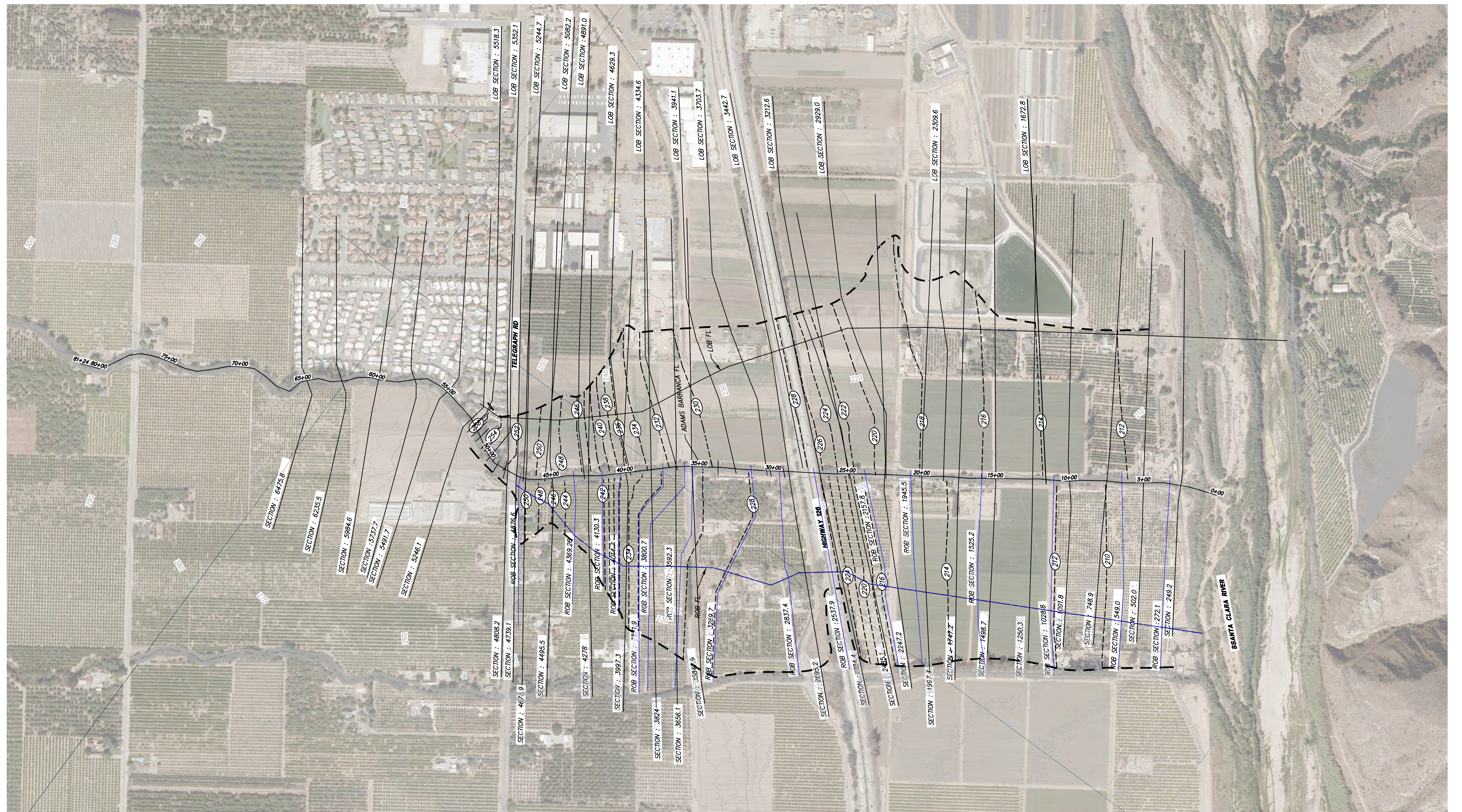
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 1672 DONLON STREET
 VENTURA, CALIF. 93003
 PHONE 805/654-6977
 FAX 805/654-6979

SCALE: 1" = 300'
 DATE: 8/27/2012
 DWG. NAME: 4492 EX-FLOOD PLAIN_WorkMap.dwg


EXHIBIT B
PROPOSED FLOODPLAIN
ADAMS BARRANCA
 SANTA PAULA
 COUNTY OF VENTURA STATE OF CALIFORNIA

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- LEGEND**
- 100 YEAR FLOODPLAIN ZONE AO LIMITS (Q=5,861 CFS)
 - 100 YEAR FLOODPLAIN ZONE AO
 - 100 YEAR CHANNEL FLOODZONE LIMITS
 - FEMA 100 YEAR FLOODPLAIN PER FIRM PANEL No. 0604130755C
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 - PROPERTY LINE

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 <p>JENSEN DESIGN & SURVEY, INC. 1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979</p>	SCALE: 1" = 300'	J.N.: _____
	DATE: 8/27/2012	DWG. NAME: 4492 EX-FLOOD PLAIN_WorkMap.dwg

<p>EXHIBIT A EXISTING FLOODPLAIN ADAMS BARRANCA</p>
<p>SANTA PAULA</p>
<p>COUNTY OF VENTURA STATE OF CALIFORNIA</p>

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To Be Added.

DRAFT
TRAFFIC IMPACT ANALYSIS
FOR THE
SANTA PAULA WEST BUSINESS PARK
SPECIFIC PLAN

SANTA PAULA, CALIFORNIA

MARCH 2015

PREPARED FOR

MCGAELIC GROUP, LTD.

PREPARED BY

FEHR  PEERS

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EXECUTIVE SUMMARY

This report documents the assumptions, methodologies, and findings of a study conducted by Fehr & Peers to evaluate the potential traffic impacts of the proposed development under the Santa Paula West Business Park Specific Plan (Project) in the City of Santa Paula. The following summarizes the findings of the study:

- Weekday AM and PM peak hour capacity analyses were conducted at 16 intersections and 10 directional freeway segments on the local and regional street system near the project site. One of the 16 study intersections currently operates at level of service (LOS) D during the PM peak hour. The 10 directional freeway segments operate at LOS C or better during both peak hours. The results of the intersection analysis for existing (2014) and future (2031) conditions are summarized in Tables ES-1 and ES-2.
- The proposed Santa Paula West Business Park Specific Plan would guide a development within the project site that includes a total of 683,173 square feet (s.f.) of general light industrial space and 18,405 s.f. of retail space. It is estimated to generate approximately 5,546 daily trips on weekdays, with approximately 646 trips during the AM peak hour and 732 trips during the weekday PM peak hour. The project has been studied both with and without the Beckwith Road extension to Faulkner Road.
- Under existing plus project conditions, four analyzed intersections are projected to operate at or below LOS D (the standard adopted by the City) during at least one of the analyzed peak hours. Three analyzed intersections are projected to operate at or below LOS D during at least one of the analyzed peak hours without the Beckwith Road extension. The 10 directional freeway segments operate at LOS C or better during both peak hours.
- Under cumulative base conditions (Year 2031), four analyzed intersections are projected to operate at or below LOS D during at least one of the analyzed peak hours. The 10 directional freeway segments operate at LOS E or better during both peak hours. The cumulative base forecasts were developed using an ambient growth rate developed from the 2012 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Travel Demand Model and related projects provided by information from the City. The cumulative base forecasts include growth over existing traffic volumes to reflect the effects of overall regional growth and development outside the study area and traffic generated by specific cumulative development projects elsewhere in the City of Santa Paula.
- According to the significant impact criteria employed by the City of Santa Paula, the proposed project, both with and without the Beckwith Road extension, would cause or contribute to significant impacts at five intersections. Of the five intersections projected to operate at LOS D or worse under cumulative plus project conditions (Year 2031), four are projected to operate at LOS D or worse prior to the addition of project traffic. The significant impact at the other intersection is a result of LOS deteriorating to D or worse from traffic generated by the proposed project.
- Mitigation measures were developed to mitigate (to LOS D or better) the cumulative and project traffic impacts that were identified at the significantly impacted study intersections under both existing plus project and cumulative plus project scenarios. A partial mitigation measure was developed for one intersection and one intersection had no feasible mitigation.

**TABLE ES-1
INTERSECTION LEVEL OF SERVICE ANALYSIS COMPILATION**

Intersections	Peak Hour	Existing Year 2014		Existing plus Project Year 2014		Existing (2014) plus Project with Mitigation		Cumulative Base Year 2031		Cumulative plus Project Year 2031		Cumulative plus Project with Mitigation Year 2031	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
1. 10th Street & Harvard Boulevard	AM PM	0.752 0.764	C C	0.797 0.815	C D	0.797 0.815	C D	0.992 1.033	E F	1.037 1.082	F F	1.037 1.082	F F
2. 8th Street & Main Street	AM PM	0.316 0.389	A A	0.323 0.405	A A			0.423 0.496	A A	0.425 0.512	A A		
3. 8th Street & Harvard Boulevard	AM PM	0.261 0.351	A A	0.280 0.355	A A			0.387 0.492	A A	0.406 0.495	A A		
4. Palm Avenue & Main Street	AM PM	0.457 0.430	A A	0.478 0.448	A A			0.607 0.569	B A	0.629 0.588	B A		
5. Palm Avenue & Harvard Boulevard	AM PM	0.539 0.542	A A	0.568 0.553	A A			0.757 0.757	C C	0.766 0.767	C C		
6. Steckel Drive & Main Street [a]	AM PM	10.6 11.2	B B	11.1 11.9	B B			14.1 16.7	B C	15.2 18.6	C C		
7. Steckel Drive & Harvard Boulevard	AM PM	0.341 0.354	A A	0.386 0.381	A A			0.444 0.488	A A	0.489 0.500	A A		
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM PM	0.669 0.483	B A	0.834 0.552	D A	0.669 0.510	B A	0.908 0.741	E C	1.079 0.810	F D	0.842 0.650	D B
9. Peck Road & Faulkner Road	AM PM	0.338 0.453	A A	0.419 0.464	A A			0.439 0.627	A B	0.519 0.637	A B		
10. Peck Road & SR-126 EB On/Off-Ramps/ Acacia Way [a]	AM PM	9.6 26.1	A D	11.7 40.7	B E	0.411 0.665	A B	12.2 97.6	B F	16.6 127.3	C F	0.460 0.646	A B
11. Faulkner Road & SR-126 WB On/Off-Ramps [a]	AM PM	19.0 10.0	C B	22.0 11.6	C B			56.3 14.1	F B	66.9 17.4	F C	15.1 12.8	C B
12. Beckwith Road & Telegraph Road [a]	AM PM	11.6 14.8	B B	18.7 30.2	C D	0.300 0.496	A A	12.3 16.9	B C	21.0 40.1	C E	0.325 0.533	A A
13. Briggs Road & Telegraph Road	AM PM	0.280 0.369	A A	0.310 0.398	A A			0.487 0.565	A A	0.507 0.594	A A		
14. Briggs Road & Faulkner Road [a]	AM PM	9.9 10.1	A B	10.1 10.4	B B			13.3 14.3	B B	13.7 14.8	B B		
15. Briggs Road & SR-126 WB On/Off-Ramps [a]	AM PM	10.0 10.0	A A	10.3 10.3	B B			19.5 15.5	C C	21.0 16.7	C C		
16. Briggs Road & SR-126 EB On/Off-Ramps [a]	AM PM	9.6 10.2	A B	9.9 10.2	A B			11.7 13.7	B B	12.2 13.8	B B		

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE ES-2
INTERSECTION LEVEL OF SERVICE ANALYSIS COMPILATION - WITHOUT BECKWITH EXTENSION**

Intersections	Peak Hour	Existing Year 2014		Existing plus Project Year 2014		Existing (2014) plus Project with Mitigation		Cumulative Base Year 2031		Cumulative plus Project Year 2031		Cumulative plus Project with Mitigation Year 2031	
		V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS
1. 10th Street & Harvard Boulevard	AM PM	0.752 0.764	C C	0.788 0.800	C C	0.788 0.800	C C	0.992 1.033	E F	1.028 1.068	F F	1.028 1.068	F F
2. 8th Street & Main Street	AM PM	0.316 0.389	A A	0.328 0.411	A A			0.423 0.496	A A	0.425 0.518	A A		
3. 8th Street & Harvard Boulevard	AM PM	0.261 0.351	A A	0.281 0.355	A A			0.387 0.492	A A	0.407 0.495	A A		
4. Palm Avenue & Main Street	AM PM	0.457 0.430	A A	0.480 0.455	A A			0.607 0.569	B A	0.630 0.594	B A		
5. Palm Avenue & Harvard Boulevard	AM PM	0.539 0.542	A A	0.570 0.553	A A			0.757 0.757	C C	0.767 0.768	C C		
6. Steckel Drive & Main Street [a]	AM PM	10.6 11.2	B B	11.1 12.0	B B			14.1 16.7	B C	15.2 18.9	C C		
7. Steckel Drive & Harvard Boulevard	AM PM	0.341 0.354	A A	0.386 0.384	A A			0.444 0.488	A A	0.489 0.500	A A		
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM PM	0.669 0.483	B A	0.885 0.599	D A	0.647 0.590	B A	0.908 0.741	E C	1.131 0.857	F D	0.891 0.687	D B
9. Peck Road & Faulkner Road	AM PM	0.338 0.453	A A	0.441 0.522	A A			0.439 0.627	A B	0.541 0.696	A B		
10. Peck Road & SR-126 EB On/Off-Ramps/ Acacia Way [a]	AM PM	9.6 26.1	A D	11.8 40.3	B E	0.415 0.659	A B	12.2 97.6	B F	17.0 126.6	C F	0.464 0.647	A B
11. Faulkner Road & SR-126 WB On/Off-Ramps [a]	AM PM	19.0 10.0	C B	21.7 12.4	C B			56.3 14.1	F B	66.8 21.1	F C	15.1 13.1	B B
12. Beckwith Road & Telegraph Road [a]	AM PM	11.6 14.8	B B	18.8 30.0	C D	0.328 0.495	A A	12.3 16.9	B C	21.1 39.3	C E	0.349 0.531	A A
13. Briggs Road & Telegraph Road	AM PM	0.280 0.369	A A	0.306 0.401	A A			0.487 0.565	A A	0.500 0.597	A A		
14. Briggs Road & Faulkner Road [a]	AM PM	9.9 10.1	A B	10.1 10.4	B B			13.3 14.3	B B	13.8 14.9	B B		
15. Briggs Road & SR-126 WB On/Off-Ramps [a]	AM PM	10.0 10.0	A A	10.3 10.3	B B			19.5 15.5	C C	21.2 16.9	C C		
16. Briggs Road & SR-126 EB On/Off-Ramps [a]	AM PM	9.6 10.2	A B	9.9 10.2	A B			11.7 13.7	B B	12.2 13.8	B B		

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

CHAPTER 1. INTRODUCTION

This report documents the results of a traffic study conducted by Fehr & Peers to evaluate the potential impacts of the development under the Santa Paula West Business Park Specific Plan (Project) in the City of Santa Paula, California. The study provides analysis of future traffic conditions and potential traffic impacts on the roadway system associated with the project at completion in 2031. This document includes a description of the assumptions and methods used to conduct the study as well as a discussion of the results.

1.1 PROJECT DESCRIPTION

The Santa Paula West Business Park Specific Plan project site is located within the Sphere of Influence of the City of Santa Paula, with frontage along State Route 126 (SR-126), Beckwith Road, and Telegraph Road, and is crossed by the railroad right-of-way. Figure 1 presents the conceptual site plan, roadway network and external connections for the project. The southern boundary of the project area is SR-126, the northern boundary is Telegraph Road, the western boundary is agricultural land, and the eastern boundary is existing industrial and commercial development.

As proposed in the Santa Paula West Business Park Specific Plan at build-out in 2031, the development in the project area will include a total of 683,174 square feet (s.f.) of general light industrial space and 18,405 s.f. of retail space. The proposed project may also extend Beckwith Road from its current terminus north of the railroad tracks to Faulkner Road, creating a new at-grade crossing which would require regulatory approval. Two project options, or scenarios, are analyzed in this study: with and without the Beckwith Road extension.

1.2 STUDY SCOPE

The study analyzed potential project-related traffic impacts on the local and regional street system surrounding the project site. The following traffic scenarios were analyzed for the weekday AM peak hour (between 7:00 and 9:00 AM) and the weekday PM peak hour (between 4:00 and 6:00 PM).

- Existing Conditions (2014) – The analysis of existing traffic conditions provides a basis for the remainder of the study. The existing conditions analysis includes an assessment of streets, traffic volumes, and operating conditions.
- Existing plus Project Conditions (2014) – This is an analysis of the existing traffic conditions where traffic expected from the proposed project is added to existing traffic volumes. The objective of this phase of analysis is to identify impacts of the project with the extension of Beckwith Road to Faulkner Road.
- Existing plus Project Conditions without Beckwith Road Extension (2014) – This is an analysis of the existing traffic conditions where traffic expected from the proposed project is added to existing traffic volumes. The objective of this phase of analysis is to identify impacts of the project without the extension of Beckwith Road to Faulkner Road.
- Cumulative Base Conditions (Year 2031) – Future traffic conditions are projected without the proposed project. The objective of this phase of analysis is to project future traffic growth and operating conditions that could be expected to result from regional ambient growth and cumulative projects.
- Cumulative plus Project Conditions (Year 2031) – This is an analysis of future traffic conditions with traffic expected from the proposed project added to cumulative base traffic forecasts. The objective of this phase of the analysis is to identify potential impacts of the project with the extension of Beckwith Road to Faulkner Road.
- Cumulative plus Project Conditions without Beckwith Road Extension (Year 2031) – This is an analysis of future traffic conditions with traffic expected from the proposed project added to cumulative base traffic forecasts. The objective of this phase of analysis is to identify potential impacts of the project without the extension of Beckwith Road to Faulkner Road.



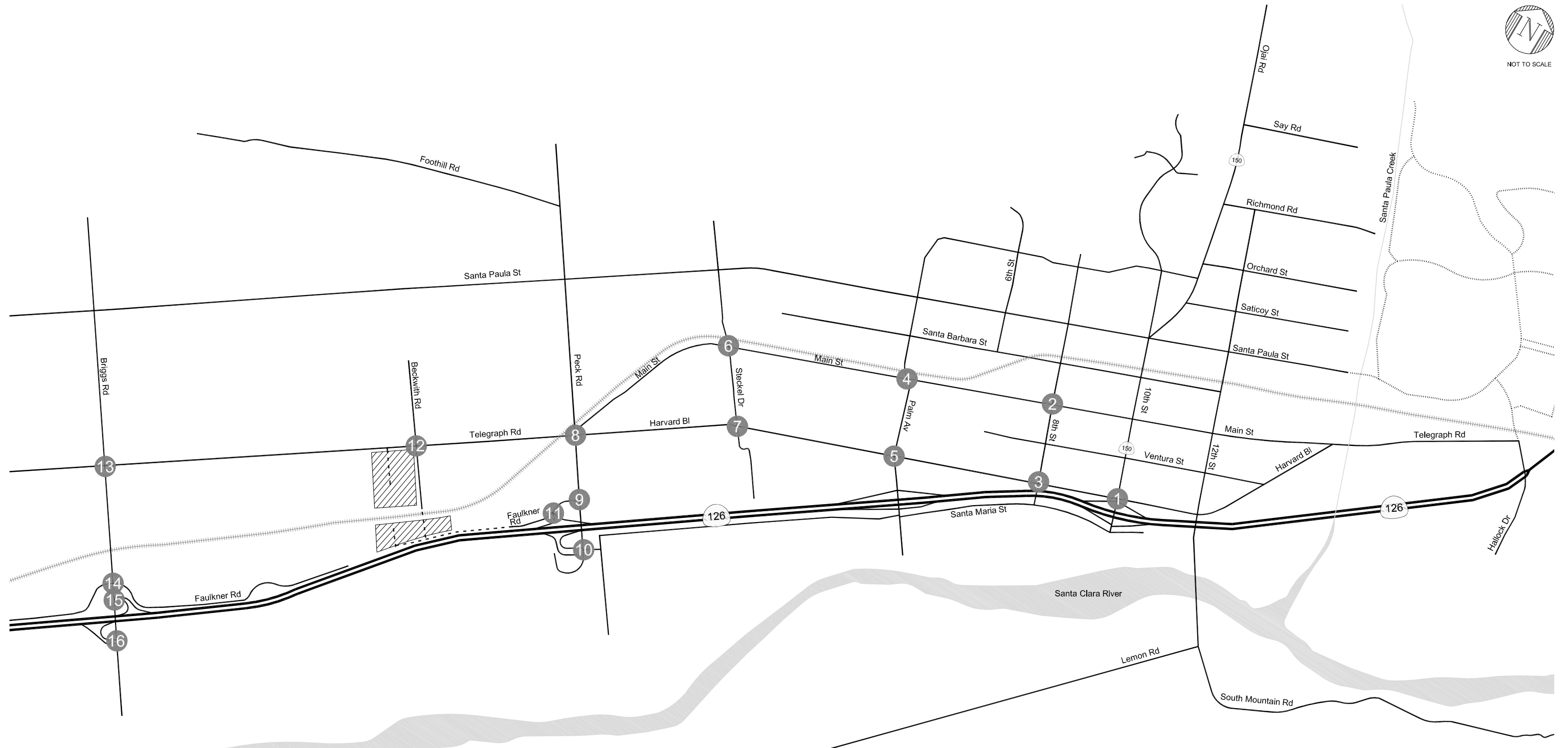
Source: Santa Paula West Business Park Specific Plan

FIGURE 1
CONCEPTUAL SITE PLAN

The area of study encompasses most of Santa Paula, spanning from Briggs Avenue in the west to 10th Street in the east. The study includes 16 study intersections that were analyzed for each of the traffic scenarios described above. The selection of these intersections was based on input received from the City, as well as a review of previous studies. The study area is consistent with previous studies conducted for projects in the City. These study intersections are shown in Figure 2 and are listed below:

1. 10th Street & Harvard Boulevard
2. 8th Street & Main Street
3. 8th Street & Harvard Boulevard
4. Palm Avenue & Main Street
5. Palm Avenue & Harvard Boulevard
6. Steckel Drive & Main Street
7. Steckel Drive & Harvard Boulevard
8. Peck Road & Harvard Boulevard/Telegraph Road
9. Peck Road & Faulkner Road
10. Peck Road & SR-126 Eastbound On-/Off-Ramps
11. Faulkner Road & SR-126 Westbound On-/Off-Ramps
12. Beckwith Road & Telegraph Road
13. Briggs Road & Telegraph Road
14. Briggs Road & Faulkner Road
15. Briggs Road & SR-126 Westbound On-/Off-Ramps
16. Briggs Road & SR-126 Eastbound On-/Off-Ramps

Of the 16 study intersections, nine operate under signal control; the remaining seven operate under stop control. Diagrams of the lane configurations and signal control at the study intersections are provided in Appendix A.



LEGEND

- # Analyzed Intersections
- ▨ Project Site
- Future Roadways

FIGURE 2
PROJECT SITE AND PROPOSED STUDY INTERSECTIONS

1.3 ORGANIZATION OF REPORT

This report is divided into an Executive Summary and five chapters, including this introductory chapter. Chapter 2 describes the existing conditions, including the circulation system, traffic volumes, and traffic conditions in the study area. The methodologies used to forecast future traffic volumes are described in Chapter 3. Chapter 4 presents an assessment of potential traffic impacts and improvements for the existing plus project and cumulative plus project scenarios, i.e., conditions with the addition of project traffic. Chapter 5 presents an assessment of potential intersection traffic impacts of the proposed project without the Beckwith Road extension to Faulkner Road relative to both existing and future conditions. The report also presents discussion of the project's fair share contribution to the identified mitigation measures. Appendices to this report include details of the technical analysis.

CHAPTER 2. EXISTING (2014) CONDITIONS

A comprehensive data collection effort was undertaken to develop a detailed description of existing conditions in the study area. The assessment of conditions to this study includes an inventory of the street system, traffic volumes on these facilities, and operating conditions at key intersections.

2.1 EXISTING STREET SYSTEM

Primary regional access is provided by SR-126, which runs east-west. Secondary regional access is provided by Ojai Road (SR-150)/10th Street and 12th Street/South Mountain Road in the north and south directions, respectively. Immediately to the north of the project site is Telegraph Road, and immediately south of the project site is SR-126. Faulkner Road also fronts the project site just north of SR-126. The closest adjacent north-south streets providing access to the project site are Briggs to the west and Peck to the east. Beckwith Road provides direct access onto the project site onto Telegraph Road and Faulkner Road. The following provides a brief description of the streets adjacent to the project site and those providing regional access to the site:

- Harvard Boulevard – Harvard Boulevard, classified as an Arterial, is an east-west street extending from Peck Road to the east where it joins with Telegraph. Harvard Boulevard lies east of the project site and is a four-lane road divided by a two-way left-turn lane. On-street parking is generally allowed on both sides of the street and the speed limit is 35 miles per hour (mph).
- Telegraph Road/Main Street – Telegraph Road, classified as an Arterial, is an east-west street extending westward from Peck Road. Telegraph Road lies north of the project site and is a two-lane road divided by a single dashed yellow line. On-street parking is available on both sides of the street and the speed limit ranges from 35 to 50 mph. East of Harvard Boulevard, the roadway is named Main Street. Main Street continues as a two-lane road divided with either a single dashed yellow line or a double yellow line. On-street parking is generally allowed on both sides of the street, and the speed limit ranges from 25 mph to 35 mph.
- Faulkner Road – Faulkner Road, classified as an Arterial, is an east-west street extending from Peck Road to its current terminus west of the SR-126 Westbound Ramps. Faulkner Road lies south of the project site and is a four-lane road divided by a double yellow line or a two-lane road divided by a double yellow line. On-street parking is not allowed on Faulkner Road, and the speed limit is 25 mph.
- SR-126 (Santa Paula Freeway) – SR-126 is an east-west freeway providing access to Fillmore and Santa Clarita to the east and to Ventura and Oxnard to the west. SR-126 is a four-lane divided freeway west of Hallock Drive with a speed limit of 65 mph. East of Hallock Drive, it is a four-lane highway divided by a two-way left-turn lane with a speed limit of 60 mph.
- Briggs Road – Briggs Road, classified as a Local Street, is a north-south street extending from SR-126 in the south to Foothill Road in the north. Briggs Road lies west of the project site and is a two-lane road divided by a double yellow line. On-street parking is not allowed along Briggs Road, and the speed limit is 25 mph.

- Peck Road – Peck Road, classified as an Arterial, is a north-south street extending from SR-126 in the south to Foothill Road in the north. Peck Road lies east of the project site and is a two-lane road divided by a double yellow line. On-street parking is generally not allowed along Peck Road, and the speed limit is 30 mph.
- Steckel Drive – Steckel Drive, classified as a Collector, is a north-south street extending from SR-126 in the south to Foothill Road in the north. Steckel Drive lies east of the project site and is a two-lane road divided by a double yellow line. On-street parking is generally not allowed along Steckel Drive, and the speed limit is 30 mph.
- Palm Avenue – Palm Avenue, classified as an Arterial, is a north-south street extending from SR-126 in the south to its terminus north of Santa Paula Street. Palm Avenue lies east of the project site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of Palm Avenue, and the speed limit is 30 mph.
- 8th Street – 8th Street, classified as a Collector, is a north-south street extending from Santa Maria Street in the south to its terminus north of Santa Paula Street. 8th Street lies east of the project site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of 8th Street, and the speed limit is 30 mph.
- 10th Street/Ojai Road (SR-150) – 10th Street (SR-150), classified as a Collector, is a north-south street extending from Santa Maria Street in the south to its terminus north of Vista Point Place. 10th Street lies east of the project site and is a two-lane road divided by a double yellow line or a two-way left-turn lane. On-street parking is generally allowed on both sides of 10th Street, and the speed limit is 30 mph. At the intersection of 10th Street/Ojai Road & Santa Paula Street, SR-150 deviates from 10th Street along Ojai Road. Ojai Road (SR-150) is a north-south highway extending from Santa Paula Street to Meiners Oaks in the north. 10th Street lies east of the project site and is a two-lane street divided by a double yellow line. On-street parking is generally allowed, and the posted speed limit ranges from 30 to 40 mph.
- 12th Street/South Mountain Road – 12th Street, classified as a Collector, is a north-south street extending from Richmond Road in the north to its terminus at Santa Maria Street where it becomes South Mountain Drive. 12th Street lies east of the project site and is a two-lane road divided by a double yellow line. On-street parking is generally allowed on both sides of 12th Street, and the speed limit is 25 mph. South Mountain Drive, classified as an Arterial, is generally an east-west rural road extending from Santa Maria Street in the west towards Fillmore in the east. South Mountain Drive is east of the project site and is a two-lane road divided by a double yellow line. On-street parking is not allowed on South Mountain Drive, and the speed limit is 25 mph.

2.2 EXISTING TRANSIT SERVICE

The Ventura Intercity Service Transit Authority (VISTA) currently provides transit service in the City of Santa Paula. The following is a description of the existing transit service in the City:

- Dial-a-Ride – A demand responsive service with citywide coverage.

- Santa Paula Valley Express – The Valley Express is operates four fixed routes that provide service to the city and schools. The Tripper bus routes and operate twice daily on school days. Route A and B operate throughout the day with headways of 30-40 minutes during the weekday.
- VISTA Highway 126 – This is a commuter-oriented line that provides service between Fillmore and Ventura. During the AM peak, the line primarily travels west into Ventura; during the PM, the line travels to points east of Ventura. The line operates Monday through Friday on approximately 60-minute headways during the peak periods and has limited service on the weekends.

2.3 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Designated bicycle facilities in the City of Santa Paula are located on Santa Paula Street and along the railroad tracks between Peck Road and 9th Street. There are no existing bicycle facilities on the project site.

2.3.1 Pedestrian Facilities

The project area lacks a complete network of pedestrian facilities around the project site such as sidewalks, crosswalks, and pedestrian safety features. The north side of Telegraph Road and the east side of Beckwith Road provide sidewalks. The proposed project will enhance the pedestrian environment in the development area and along the access routes to the site.

2.4 EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

The following sections present the existing peak hour traffic volumes at each analyzed location, a description of the methodology used to analyze the intersection traffic conditions, and the resulting level of service at each location under existing conditions.

2.4.1 Existing Traffic Volumes

New weekday peak period traffic counts (from 7:00 to 9:00 AM and from 4:00 to 6:00 PM) were collected in late August 2014 for five of the 16 analyzed intersections in this study. For the remaining 11 intersections, traffic counts used in *Transportation Analysis Report for the East Area 1 Specific Plan* (Fehr & Peers, May 2014) which were collected in March 2014 were used.

All traffic counts were collected outside of weeks with major holidays and are provided in Appendix B. The peak hour volumes are shown in Figure 3 and were used to determine the existing (2014) weekday AM and PM peak hour intersection levels of service.

2.4.2 Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow ranging from excellent conditions at LOS A to overloaded conditions at LOS F. Tables 1 and 2 provide level of service definitions for signalized and unsignalized intersections, respectively. Table 3 provides the level of service definitions for freeways.



NOT TO SCALE



FIGURE 3
EXISTING PEAK HOUR TRAFFIC VOLUMES

TABLE 1
LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Volume/Capacity Ratio	Definition
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	>0.600 - 0.700	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat what restricted within groups of vehicles.
C	>0.700 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	>0.800 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	>0.900 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	> 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths

Source: *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, Transportation Research Board, 1980.

TABLE 2
LEVEL OF SERVICE DEFINITIONS FOR
UNSIGNALIZED INTERSECTIONS

Level of Service	Average Vehicle Delay (seconds)
A	0 to 10
B	>10 to 15
C	>15 to 25
D	>25 to 35
E	>35 to 50
F	> 50

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

TABLE 3
LEVEL OF SERVICE DEFINITIONS FOR
FREEWAY MAINLINE AND
MULTILANE HIGHWAY SEGMENT ANALYSES

LOS Criteria for Freeway Segments

Level of Service	Density Range (pc/mi/ln)*
A	0-11
B	>11-18
C	>18-26
D	>26-35
E	>35-45
F	>45

Note:

* pc/mi/ln denotes passenger cars per mile per lane

Source: *Highway Capacity Manual*, Exhibit 23-3, Transportation Research Board, 2000.

Consistent with the City's practices, the Intersection Capacity Utilization (ICU) method of intersection analysis was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding level of service for the turning movements and intersection characteristics at the signalized intersections. Based on the calculation methodology described in *2009 Ventura County Congestion Management Program* (VCCMP) (Ventura County Transportation Commission, 2009), the lane capacity at signalized intersections is assumed to be 1,600 vehicles per lane per hour. Nine of the analyzed intersections are currently controlled by traffic signals.

Highway Capacity Manual (HCM) methodologies were used for analysis of the stop-controlled intersections, where controlled vehicular delay in seconds is reported rather than the V/C ratio. Seven of the analyzed intersections are currently stop-controlled.

The freeway methodology as described in the HCM was used to determine the vehicular density on each analyzed segment (passenger cars per mile per lane) by direction and the corresponding level of service.

The Circulation Element of the City of Santa Paula General Plan defines LOS C as the minimum desirable level of service for intersection operations. The VCCMP indicates that LOS E is the minimum desirable level of service across the CMP roadway network.

2.4.3 Existing Intersection Level of Service

Table 4 summarizes the existing weekday AM and PM peak hour LOS at the 16 analyzed intersections. The detailed LOS calculation worksheets are presented in Appendix C. Of the nine signalized intersections, all currently operate at LOS C or better during both the AM and PM peak hours. Of the seven stop-controlled intersections, all but one currently operate at LOS C or better during both the AM and PM peak hours. The exception is Peck Road and SR-126 Eastbound On-/Off-Ramps (Intersection 10), which operates at LOS D in the PM peak hour.

2.4.4 Existing Freeway Analysis

Table 5 summarizes the results of the freeway and multilane highway analysis. As shown in Table 5, all of the freeway segments currently operate at LOS C or better in both directions during both peak hours.

**TABLE 4
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING CONDITIONS (2014)**

Intersections	Peak Hour	Existing	
		V/C or Delay	LOS
1. 10th Street & Harvard Boulevard [b]	AM PM	0.752 0.764	C C
2. 8th Street & Main Street [b]	AM PM	0.316 0.389	A A
3. 8th Street & Harvard Boulevard [b]	AM PM	0.261 0.351	A A
4. Palm Avenue & Main Street [b]	AM PM	0.457 0.430	A A
5. Palm Avenue & Harvard Boulevard [b]	AM PM	0.539 0.542	A A
6. Steckel Drive & Main Street [a] [b]	AM PM	10.6 11.2	B B
7. Steckel Drive & Harvard Boulevard [b]	AM PM	0.341 0.354	A A
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St [c]	AM PM	0.669 0.483	B A
9. Peck Road & Faulkner Road [b]	AM PM	0.338 0.453	A A
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a] [b]	AM PM	9.6 26.1	A D
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a] [b]	AM PM	19.0 10.0	C B
12. Beckwith Road & Telegraph Road [a] [c]	AM PM	11.6 14.8	B B
13. Briggs Road & Telegraph Road [c]	AM PM	0.280 0.369	A A
14. Briggs Road & Faulkner Road [a] [c]	AM PM	9.9 10.1	A B
15. Briggs Road & SR-126 WB On-/Off-Ramps [a] [c]	AM PM	10.0 10.0	A A
16. Briggs Road & SR-126 EB On-/Off-Ramps [a] [c]	AM PM	9.6 10.2	A B

Note:

- [a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.
- [b] Count conducted March 2014
- [c] Count conducted August 2014

**TABLE 5
 FREEWAY SEGMENT LEVEL OF SERVICE ANALYSIS
 EXISTING CONDITIONS (2014)**

Roadway Segment	Peak Hour	Eastbound			Westbound		
		Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS
1. SR-126 - Hallock Dr to 10th St (SR-150) [a]	AM	932	7.5	A	1,509	12.2	B
	PM	1,729	14.0	B	1,729	14.0	B
2. SR-126 - 10th St (SR-150) to Palm Av [a]	AM	1,136	9.2	A	2,102	17.0	B
	PM	1,729	14.0	B	1,729	14.0	B
3. SR-126 - Palm Av to Peck Rd [a]	AM	1,253	10.1	A	2,429	19.6	C
	PM	1,729	14.0	B	1,729	14.0	B
4. SR-126 Peck Rd to Briggs Rd [a]	AM	1,354	10.9	A	2,802	22.8	C
	PM	1,729	14.0	B	1,729	14.0	B
5. SR-126 Briggs Rd to Wells Rd [a]	AM	1,410	11.4	B	2,820	22.9	C
	PM	1,729	14.0	B	1,729	14.0	B

Notes:

* pc/mi/ln denotes passenger cars per mile per lane

[a] Analyzed using Freeway methodology from *Highway Capacity Manual*.

CHAPTER 3. FUTURE (2031) TRAFFIC PROJECTIONS

3.1 PROJECT TRAFFIC VOLUMES

Development of the traffic generation estimates for the proposed project involved a three-step process including traffic generation, trip distribution, and traffic assignment.

3.1.1 Project Traffic Generation

Trip generation rates and equations from *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE], 2012) were used to develop trip generation estimates for the proposed project. The trip generation estimates for each proposed land use are summarized in Table 6.

Pass-by credits were not taken for the project's commercial components. Pass-by credits account for trips that would have been passing by the project site regardless of the project, primarily along SR-126 or Telegraph Road, and would therefore not contribute to external project traffic impacts. These credits were not applied in this analysis to ensure traffic generation was not underestimated, resulting in inadequate future roadway capacities.

Transit trip reduction credits were also not applied to any of the proposed uses on the project site because of the limited public transit options available in the area.

As summarized in Table 6, the proposed project is estimated to generate approximately 5,546 daily trips on weekdays, with approximately 646 trips during the weekday AM peak hour and 732 trips during the weekday PM peak hour. These trips formed the basis of the traffic impact analysis.

3.1.2 Project Traffic Distribution

The geographic distribution of traffic generated by the proposed project depends on several factors, including the nature of the proposed land uses, the location of site access points in relation to the surrounding street system, the geographic distribution of existing and future population centers, existing travel patterns, and topographic constraints.

The estimated distribution of trips generated by the proposed project was based on the location of the project site in the City and Santa Paula region, and was informed by the studies of previous projects in the area. Following consultation with City staff, the trip distribution pattern illustrated in Figure 4 and described below was used in this analysis:

- 60% local trips within town
- 3% to/from the north
- 2% to/from the south
- 10% to/from the east
- 25% to/from the west

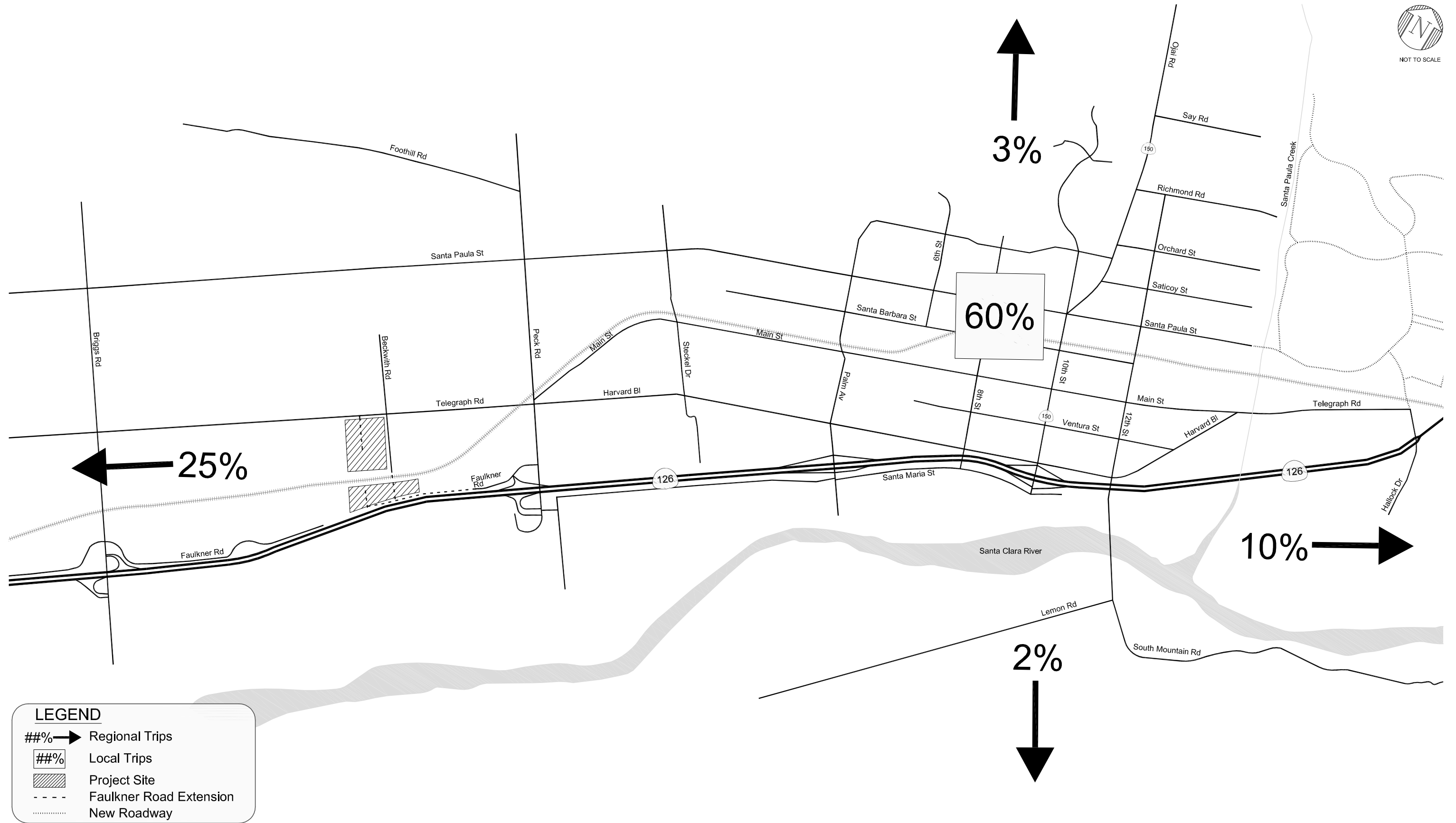


FIGURE 4
PROJECT TRIP DISTRIBUTION

**TABLE 6
TRIP GENERATION RATES AND ESTIMATES - SANTA PAULA WEST BUSINESS PARK**

TRIP GENERATION RATES [a]									
Land Use	ITE#	Rate	Daily	A.M. Peak			P.M. Peak		
				In %	Out %	Total	In %	Out %	Total
General Light Industrial	110	per 1,000 square feet	6.97	88%	12%	0.92	12%	88%	0.97
Shopping Center	820	per 1,000 square feet	42.70	62%	38%	0.96	48%	52%	3.71
TRIP GENERATION ESTIMATES									
Location	ITE#	Size	Daily	A.M. Peak			P.M. Peak		
				In	Out	Total	In	Out	Total
<u>Northeast of Railroad Tracks</u>									
General Light Industrial	110	187,373 sf	1,306	151	21	172	22	160	182
Shopping Center	820	2,836 sf	121	2	1	3	1	10	11
Total Property Trips North of Railroad Tracks			1,427	153	22	175	23	170	193
<u>Northwest of Railroad Tracks</u>									
General Light Industrial	110	219,695 sf	1,531	178	24	202	26	187	213
Shopping Center	820	5,347 sf	228	3	2	5	3	17	20
Total Property Trips North of Railroad Tracks			1,759	181	26	207	29	204	233
<u>South of Railroad Tracks</u>									
General Light Industrial	110	276,105 sf	1,924	224	30	254	32	236	268
Shopping Center	820	10,222 sf	436	6	4	10	18	20	38
Total Property Trips South of Railroad Tracks			2,360	230	34	264	50	256	306
Total Project Trips			5,546	564	82	646	102	630	732

[a] Source: *Trip Generation, 9th Edition* (ITE, 2012).

3.1.3 Project Traffic Assignment

The trip generation estimates presented in Table 6 and the distribution pattern illustrated in Figure 4 were used to assign the project-generated traffic to the local and regional roadway system. Figure 5 illustrates the estimated project-generated peak hour traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours.

3.2 EXISTING PLUS PROJECT TRAFFIC PROJECTIONS

The proposed project traffic volumes were then added to the existing traffic volumes to develop the existing plus project traffic forecasts. Figure 6 illustrates the resulting projected existing plus project peak hour traffic volumes for a typical weekday AM and PM peak hour.

3.3 CUMULATIVE BASE (YEAR 2031) TRAFFIC PROJECTIONS

The cumulative base traffic projections normally reflect changes to existing traffic conditions that can be expected from two sources. The first source is the ambient growth in traffic, which reflects increases in traffic due to regional growth and development. The second source is traffic generated by specific development located within, or in the vicinity of, the study area. These projected traffic volumes represent cumulative base conditions.

3.3.1 Related Projects Traffic Generation and Assignment

Information on cumulative projects was obtained from the City of Santa Paula Planning Department. These developments are assumed to be in place by year 2031 and are included in the forecasts. For reference, the locations of the cumulative projects are illustrated in Figure 7 and trip generation estimates were prepared for the cumulative projects in the City using standard trip generation rates from *Trip Generation, 9th Edition* (Institute of Transportation Engineers [ITE], 2012). The list of cumulative projects and trip generation estimates are shown in Table 7. The cumulative projects are estimated to add approximately 4,509 AM peak hour trips and 5,235 PM peak hour trips.

3.3.2 Background or Ambient Growth

To develop the ambient growth rate for Santa Paula for 2031, the 2012 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) Travel Demand Model was used. The SCAG model is maintained SCAG and is reviewed by local agencies throughout the SCAG region. Land use projections for the City in that model were compared with projections in the countywide model maintained by the Ventura County Transportation Commission and found to be more conservative. A review of forecast traffic volume growth on roadways within the City indicated an ambient growth rate of approximately 0.5%/year, or 8.5% over the 17-year planning horizon for this study. This growth was applied to the existing baseline traffic volumes to reflect the effects of regional growth through 2031. The projected traffic volumes representing the cumulative base conditions (Year 2031) without the project are shown in Figure 8.



NOT TO SCALE



FIGURE 5
PROJECT ONLY PEAK HOUR TRAFFIC VOLUMES



NOT TO SCALE



FIGURE 6
EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES



LEGEND




-  Related Project Location
-  Project Site
-  Future Roadways

FIGURE 7
LOCATION OF RELATED PROJECTS



FIGURE 8
CUMULATIVE BASE PEAK HOUR TRAFFIC VOLUMES

**TABLE 7
TRIP GENERATION ESTIMATES FOR SANTA PAULA WEST BUSINESS PARK RELATED PROJECTS**

	Project Location	Land Use	Size	ITE Code[a]	Trip Generation						
					Daily	AM			PM		
						In	Out	Total	In	Out	Total
1	Cliff Dr & Forrest Dr	Single Family Units	19 du	210	181	4	10	14	12	7	19
2	North of Foothill Rd & Steckel Dr	Single Family Units	88 du	210	838	17	49	66	55	33	88
3	North of Foothill Rd & Peck Rd	Single Family Units	79 du	210	752	15	44	59	50	29	79
4	Fagan Canyon	Single Family Units	450 du	210	4,284	85	253	338	284	166	450
		Retail	76.2 ksf	820	3,254	45	28	73	136	147	283
		Active Parks [b]	32 ac	412	73	1	0	1	2	1	3
		School [c]	10 ac	520	387	74	61	135	22	23	45
		Passive Open Space [d]	208 ac	413	135	2	2	4	2	2	4
5	Adams Canyon	Single Family Units	495 du	210	4,712	93	278	371	312	183	495
		Public Elementary School [e]	40 ac	520	387	61	74	135	22	23	45
		Public Middle School [e]	300 su	522	486	89	73	162	n/a	n/a	n/a
		Public Recreational Facilities [f]	100 ac	413	65	1	1	2	1	1	2
		Destination Resort Hotel [g]	150 rooms	330	n/a	40	16	56	32	42	74
		Golf Course [h]	18 hole	430	643	29	8	37	27	26	53
6	1445 East Main St	Public Passive Open Space [d]	200 ac	413	130	2	2	4	2	2	4
		Motel	16 rooms	320	90	3	4	7	4	4	8
		Restaurant	0.5 ksf	932	64	3	2	5	3	2	5
7	East Area 1	Live/work studios	9 du	220	60	1	4	5	4	2	6
		Residential/School/Commercial [j]	from traffic study [b]		16,982	762	1,038	1,800	1,031	797	1,828
		Shopping Center/Business Park [i]	360 ksf	820/770	10,183	414	82	496	512	532	1,044
9	Cal Pipe	Manufacturing	44 ksf	140	168	25	7	32	12	20	32
10	100-106 Calavo	General Light Industrial	35.7 ksf	110	249	29	4	33	4	31	35
11	324 W. Santa Maria St	Industrial Park	571.37 ksf	130	3,902	385	84	469	102	384	486
12	310 S. Palm	Coffee/Donut Shop without Drive-Thru Window	1,798 ksf	936	n/a	49	48	97	19	18	37
		Manufacturing	139.7 ksf	140	534	80	22	102	37	65	102
14	Cemetery & Santa Paula St	Single Family Units	8 du	210	76	2	4	6	5	3	8
15	125 Oak Street	Apartment	8 du	220	53	1	3	4	3	2	5
16	327 Acacia Road	Apartment	6 du	220	40	1	2	3	3	1	4
17	1170 Montebello St	Apartment	37 du	220	246	4	15	19	15	8	23
		General Light Industrial	72.2 ksf	110	503	58	8	66	8	62	70
18	250 S Hallock Dr	Apartment	1 du	220	7	0	1	1	1	0	1
		General Light Industrial	7.8 du	110	54	6	1	7	1	7	8
TOTAL RELATED PROJECT TRAFFIC					48,635	2,311	2,198	4,509	2,692	2,543	5,235

Notes:

du = dwelling units; ac = acres; ksf = one thousand square feet

[a] Trip generation estimates based on "Trip Generation" (9th Edition, ITE, 2012) unless otherwise noted.

[b] Trip generation rates for ITE LU 412 County Park used

[c] General Plan Land Use Plan and Expansion Areas map does not indicate the size or type of the 10 acre school site; table assumes an elementary school with 300 students.

[d] Treated as a state park.

[e] General Plan Land Use Plan and Expansion Areas map does not indicate the size or type of schools on the 40-acre site; table assumes an elementary school and a middle school, with 300 students.

[f] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the recreation center; table treats this acreage as additional passive open space.

[g] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the resort hotel; table assumes a 150-room resort hotel.

[h] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the golf course; table assumes an 18-hole course.

[i] Source: *Transportation Analysis Report East Area Gateway Project*, Fehr and Peers, 2012.

[j] Source: *East Area 1 Specific Plan Transportation Analysis Report*, Fehr and Peers, 2014.

Related project data obtained from the City of Santa Paula in December 2013.

3.4 TRANSPORTATION SYSTEM IMPROVEMENTS

Physical street system improvements expected to be implemented by 2031 in the study area were included in the analysis of cumulative base conditions. Information about these expected improvements was provided by City staff in 2014.

On-street bicycle lanes will be added to 10th Street from Santa Paula Street to Harvard Boulevard possibly extending to SR-126. The City has selected a consultant to design landscape and streetscape improvements along this corridor, which include the removal of on-street parking at some locations to accommodate the planned bicycle lanes. While no plans are yet available for these improvements, this study assumes that the existing lane configurations at each of the analyzed intersections along 10th Street will be maintained.

3.5 CUMULATIVE PLUS PROJECT (YEAR 2031) TRAFFIC PROJECTIONS

The proposed project traffic volumes were then added to the cumulative base traffic projections to develop the cumulative plus project traffic forecasts. Figure 9 illustrates the resulting projected cumulative plus project peak hour traffic volumes for a typical weekday AM and PM peak hour, representing future traffic conditions following completion of the proposed project with the Beckwith Road extension.



FIGURE 9
CUMULATIVE PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES

CHAPTER 4. TRAFFIC IMPACT ANALYSIS

This section presents an analysis of the projected future volumes to determine the potential impacts of the proposed project on the operating conditions of the surrounding street system.

4.1 SIGNIFICANT IMPACT CRITERIA

As adopted in the City of Santa Paula General Plan Circulation Element (1998), the minimum acceptable level of service at intersections in the City is LOS C. An intersection operating at LOS D or worse under the cumulative base conditions is considered a cumulatively impacted intersection. An intersection projected to operate at LOS D or worse after the addition of project traffic is considered significantly impacted by the project. Therefore, any contribution resulting in operating conditions of LOS D or worse is considered a significant impact.

The minimum desirable level of service on the analyzed freeway segments is LOS E, as described in the VCCMP. If the addition of project traffic were to cause or significantly worsen LOS F, it would be considered a significant impact. Although the VCTC has adopted LOS E as a minimum system-wide level of service on all VCCMP roadways it does not provide specific criteria regarding when an individual project's impact may be deemed significant. Therefore, for the purpose of this analysis, the significance threshold from *2010 Los Angeles Congestion Management Program (CMP) for Los Angeles County* (Los Angeles County Metropolitan Transportation Authority, 2010) was used. The Los Angeles County CMP states that a project impact would be considered significant if the facility were projected to operate at LOS F after the addition of project traffic, and if the project causes a net increase in traffic demand of 2% of capacity or more (i.e., V/C ratio increase greater than or equal to 0.02).

4.2 EXISTING PLUS PROJECT OPERATING CONDITIONS

The resulting existing plus project peak hour traffic volumes, illustrated in Figure 6, were analyzed to determine the projected operating conditions following completion of the proposed project. The results of the analysis are summarized in Table 8.

A total of 12 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The four intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

1. 10th Street & Harvard Boulevard (LOS D AM)
8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS D AM)
10. Peck Road & SR-126 Eastbound On-/Off-Ramps (LOS E PM)
12. Beckwith Road & Telegraph Road (LOS D PM)

Because the City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these four intersections. All of the impacted intersections have project-specific impacts (impacts directly related to the addition of project traffic).

**TABLE 8
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (2014) PLUS PROJECT CONDITIONS**

Intersections	Peak Hour	Existing		Existing plus Project				
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact	
							Existing?	Project?
1. 10th Street & Harvard Boulevard [b]	AM	0.752	C	0.797	C	0.045	NO	NO
	PM	0.764	C	0.815	D	0.051	NO	YES
2. 8th Street & Main Street	AM	0.316	A	0.323	A	0.007	NO	NO
	PM	0.389	A	0.405	A	0.016	NO	NO
3. 8th Street & Harvard Boulevard	AM	0.261	A	0.280	A	0.019	NO	NO
	PM	0.351	A	0.355	A	0.004	NO	NO
4. Palm Avenue & Main Street	AM	0.457	A	0.478	A	0.021	NO	NO
	PM	0.430	A	0.448	A	0.018	NO	NO
5. Palm Avenue & Harvard Boulevard	AM	0.539	A	0.568	A	0.029	NO	NO
	PM	0.542	A	0.553	A	0.011	NO	NO
6. Steckel Drive & Main Street [a]	AM	10.6	B	11.1	B	0.5	NO	NO
	PM	11.2	B	11.9	B	0.7	NO	NO
7. Steckel Drive & Harvard Boulevard	AM	0.341	A	0.386	A	0.045	NO	NO
	PM	0.354	A	0.381	A	0.027	NO	NO
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.669	B	0.834	D	0.165	NO	YES
	PM	0.483	A	0.552	A	0.069	NO	NO
9. Peck Road & Faulkner Road	AM	0.338	A	0.419	A	0.081	NO	NO
	PM	0.453	A	0.464	A	0.011	NO	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	9.6	A	11.7	B	2.1	NO	NO
	PM	26.1	D	40.7	E	14.6	YES	YES
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM	19.0	C	22.0	C	3.0	NO	NO
	PM	10.0	B	11.6	B	1.6	NO	NO
12. Beckwith Road & Telegraph Road [a]	AM	11.6	B	18.7	C	7.1	NO	NO
	PM	14.8	B	30.2	D	15.4	NO	YES
13. Briggs Road & Telegraph Road	AM	0.280	A	0.310	A	0.030	NO	NO
	PM	0.369	A	0.398	A	0.029	NO	NO
14. Briggs Road & Faulkner Road [a]	AM	9.9	A	10.1	B	0.2	NO	NO
	PM	10.1	B	10.4	B	0.3	NO	NO
15. Briggs Road & SR-126 WB On-/Off-Ramps [a]	AM	10.0	A	10.3	B	0.3	NO	NO
	PM	10.0	A	10.3	B	0.3	NO	NO
16. Briggs Road & SR-126 EB On-/Off-Ramps [a]	AM	9.6	A	9.9	A	0.3	NO	NO
	PM	10.2	B	10.2	B	0.0	NO	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

The project-related traffic added to these intersections during the peak hours would contribute to a projected decline below LOS C operation under existing plus project conditions.

The 10 directional freeway segments are projected to operate at LOS C or better during both peak hours under the existing plus project scenario, as summarized in Table 9.

4.3 CUMULATIVE BASE (YEAR 2031) OPERATING CONDITIONS

The cumulative base (Year 2031) without project traffic volumes shown in Figure 8 were analyzed using the LOS methodologies described in Chapter 2 to evaluate future levels of service at the study intersections for the weekday AM and PM peak hours. This analysis assumed completion of the related projects described in Chapter 3 as well as regional traffic growth as estimated by the SCAG's travel demand model. The results of the intersection analysis are summarized in Table 10. The freeway segment analysis is presented in Table 11. Detailed LOS calculation worksheets are presented in Appendix C.

Of the 16 intersections selected for analysis, 12 intersections are projected to operate at LOS C or better during both AM and PM peak hours under cumulative base conditions. Four intersections are projected to operate at LOS D or worse during one or both peak hours:

1. 10th Street & Harvard Boulevard (LOS E AM and LOS F PM)
8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS E AM)
10. Peck Road & SR-126 Eastbound On-/Off-Ramps (LOS F PM)
11. Faulkner Road & SR-126 Westbound On-/Off-Ramps (LOS F AM)

As defined by the City of Santa Paula, the minimum desirable intersection level of service is LOS C. The four study intersections listed above are projected to operate at undesirable levels of service in one or both peak hours under cumulative base conditions, without the addition of project-related traffic. Therefore, these intersections would be significantly impacted due to cumulative development and are noted as such in Table 10.

**TABLE 9
 FREEWAY SEGMENTS LEVEL OF SERVICE ANALYSIS
 EXISTING (2014) PLUS PROJECT CONDITIONS**

Roadway Segment	Peak Hour	Existing						Existing plus Project						Project Increase		Significant Impact			
		Eastbound			Westbound			Eastbound			Westbound			Eastbound	Westbound	Eastbound		Westbound	
		Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	%	%	Existing?	Project?	Existing?	Project?
1. SR-126 - Hallock Dr to 10th St (SR-150) [a]	AM	932	7.5	A	1,509	12.2	B	947	7.6	A	1,612	13.0	B	1.6%	6.8%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
2. SR-126 - 10th St (SR-150) to Palm Av [a]	AM	1,136	9.2	A	2,102	17.0	B	1,158	9.3	A	2,253	18.2	C	1.9%	7.2%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
3. SR-126 - Palm Av to Peck Rd [a]	AM	1,253	10.1	A	2,429	19.6	C	1,275	10.3	A	2,580	20.9	C	1.8%	6.2%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
4. SR-126 - Peck Rd to Briggs Rd [a]	AM	1,354	10.9	A	2,802	22.8	C	1,463	11.8	B	2,816	22.9	C	8.1%	0.5%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
5. SR-126 - Briggs Rd to Wells Rd [a]	AM	1,410	11.4	B	2,820	22.9	C	1,551	12.5	B	2,839	23.1	C	10.0%	0.7%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO

Notes:

* pc/mi/ln denotes passenger cars per mile per lane

[a] Analyzed using freeway methodology from *Highway Capacity Manual*.

**TABLE 10
INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE (YEAR 2031) CONDITIONS**

Intersections	Peak Hour	Cumulative Base Year 2031		Cumulative plus Project Year 2031				
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact	
							Cumulative?	Project?
1. 10th Street & Harvard Boulevard [b]	AM	0.992	E	1.037	F	0.045	YES	YES
	PM	1.033	F	1.082	F	0.049	YES	YES
2. 8th Street & Main Street	AM	0.423	A	0.425	A	0.002	NO	NO
	PM	0.496	A	0.512	A	0.016	NO	NO
3. 8th Street & Harvard Boulevard	AM	0.387	A	0.406	A	0.019	NO	NO
	PM	0.492	A	0.495	A	0.003	NO	NO
4. Palm Avenue & Main Street	AM	0.607	B	0.629	B	0.022	NO	NO
	PM	0.569	A	0.588	A	0.019	NO	NO
5. Palm Avenue & Harvard Boulevard	AM	0.757	C	0.766	C	0.009	NO	NO
	PM	0.757	C	0.767	C	0.010	NO	NO
6. Steckel Drive & Main Street [a]	AM	14.1	B	15.2	C	1.1	NO	NO
	PM	16.7	C	18.6	C	1.9	NO	NO
7. Steckel Drive & Harvard Boulevard	AM	0.444	A	0.489	A	0.045	NO	NO
	PM	0.488	A	0.500	A	0.012	NO	NO
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.908	E	1.079	F	0.171	YES	YES
	PM	0.741	C	0.810	D	0.069	NO	YES
9. Peck Road & Faulkner Road	AM	0.439	A	0.519	A	0.080	NO	NO
	PM	0.627	B	0.637	B	0.010	NO	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	12.2	B	16.6	C	4.4	NO	NO
	PM	97.6	F	127.3	F	29.7	YES	YES
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM	56.3	F	66.9	F	10.6	YES	YES
	PM	14.1	B	17.4	C	3.3	NO	NO
12. Beckwith Road & Telegraph Road [a]	AM	12.3	B	21.0	C	8.7	NO	NO
	PM	16.9	C	40.1	E	23.2	NO	YES
13. Briggs Road & Telegraph Road	AM	0.487	A	0.507	A	0.020	NO	NO
	PM	0.565	A	0.594	A	0.029	NO	NO
14. Briggs Road & Faulkner Road [a]	AM	13.3	B	13.7	B	0.4	NO	NO
	PM	14.3	B	14.8	B	0.5	NO	NO
15. Briggs Road & SR-126 WB On-/Off-Ramps [a]	AM	19.5	C	21.0	C	1.5	NO	NO
	PM	15.5	C	16.7	C	1.2	NO	NO
16. Briggs Road & SR-126 EB On-/Off-Ramps [a]	AM	11.7	B	12.2	B	0.5	NO	NO
	PM	13.7	B	13.8	B	0.1	NO	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE 11
FREEWAY SEGMENTS LEVEL OF SERVICE ANALYSIS
FUTURE (YEAR 2031) CONDITIONS**

Roadway Segment	Peak Hour	Cumulative Base						Cumulative plus Project						Project Increase		Significant Impact			
		Eastbound			Westbound			Eastbound			Westbound			Eastbound	Westbound	Eastbound		Westbound	
		Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	%	%	Cumulative?	Project?	Cumulative?	Project?
1. SR-126 - Hallock Dr to 10th St (SR-150) [a]	AM	2,193	17.7	B	2,193	17.7	B	2,296	18.5	C	2,296	18.5	C	4.7%	4.7%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
2. SR-126 - 10th St (SR-150) to Palm Av [a]	AM	2,971	24.3	C	2,971	24.3	C	3,122	25.9	C	3,122	25.9	C	5.1%	5.1%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
3. SR-126 - Palm Av to Peck Rd [a]	AM	3,248	27.2	D	3,248	27.2	D	3,399	29.0	D	3,399	29.0	D	4.6%	4.6%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
4. SR-126 - Peck Rd to Briggs Rd [a]	AM	3,702	33.3	D	3,702	33.3	D	3,716	33.5	D	3,716	33.5	D	0.4%	0.4%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
5. SR-126 - Briggs Rd to Wells Rd [a]	AM	3,997	38.7	E	3,997	38.7	E	4,016	39.1	E	4,016	39.1	E	0.5%	0.5%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO

Notes:

* pc/mi/ln denotes passenger cars per mile per lane

[a] Analyzed using freeway methodology from *Highway Capacity Manual* .

Of the 10 directional freeway segments selected for analysis, all are projected to operate at LOS E or better during both the AM and PM peak hours under cumulative base conditions. As defined in the VCCMP, the minimum desirable level of service on freeway segments is LOS E. Therefore, no freeway segments would be significantly impacted due to cumulative development.

4.4 CUMULATIVE PLUS PROJECT (YEAR 2031) TRAFFIC CONDITIONS

The resulting cumulative plus project peak hour traffic volumes, illustrated in Figure 9, were analyzed to determine the projected future 2031 operating conditions following completion of the proposed project. The results of the analysis are summarized in Table 10.

A total of 11 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The five intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

1. 10th Street & Harvard Boulevard (LOS F AM and PM)
8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS F AM and LOS D PM)
10. Peck Road & SR-126 Eastbound On-/Off-Ramps (LOS F PM)
11. Faulkner Road & SR-126 Westbound On-/Off-Ramps (LOS F AM)
12. Beckwith Road & Telegraph Road (LOS E PM)

As defined by the City of Santa Paula's definition of minimum desirable intersection level of service (LOS C), traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these intersections. Of the five impacted intersections, project-specific impacts (impacts directly related to the addition of project traffic) are identified at the following intersection:

12. Beckwith Road & Telegraph Road (LOS F PM)

The project related traffic added to this intersection during the PM peak hour would contribute to a projected decline below LOS C operation under cumulative plus project conditions. The addition of project-related traffic to the other impacted intersections would contribute to the projected undesirable levels of service.

Of the 10 analyzed directional freeway segments, all are projected to operate at LOS E or better in both directions and in both peak hours, thereby meeting the minimum desirable level of service.

Although the VCTC has adopted LOS E as a minimum system-wide level of service on all VCCMP roadways it does not provide specific criteria regarding when an individual project's impact may be deemed significant, nor does it have a funding mechanism in place for individual projects to contribute toward future improvements. Therefore, for the purpose of this analysis, the significance threshold from *2010 Los Angeles Congestion Management Program (CMP) for Los Angeles County* was used. The Los Angeles County CMP states that a project impact would be considered significant if the facility were projected to

operate at LOS F after the addition project traffic and if the project causes a net increase in traffic demand of 2% of capacity or more (i.e., V/C ratio increase greater than or equal to 0.02).

No project-related impact was identified. It is noted that the VCCMP indicates that VCTC may request that Caltrans initiate a Corridor System Management Plan (CSMP) for the entire SR-126 corridor within Ventura County, which would examine multi-modal solutions for reducing congestion along the corridor.

4.5 MITIGATION MEASURES

Mitigation measures were developed to alleviate the impacts under both the existing plus project scenario and the cumulative plus project scenario. Recommended mitigation measures include both operational and physical improvements. Tables 12 through 14 present summaries of the LOS analysis results with these mitigation measures in place.

4.5.1 Existing plus Project Mitigation Measures

Intersection Improvements

At the four intersections projected to operate at LOS D or worse, the recommended mitigation measures would fully mitigate all but one of the identified existing undesirable LOS and project impacts, as shown in Table 12. The lane configuration diagrams in Appendix A illustrate the proposed mitigation measures at the impacted intersections. The following provides a description of the proposed improvements:

- 10th Street & Harvard Boulevard (Intersection 1) – Mitigation measures from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project including bicycle lanes is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, this intersection cannot be fully mitigated; thus, the impact would remain **significant and unavoidable**. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include on shared through/right turn lane, one through lane (during peak hours), and on left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B under the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.
- Peck Road & Main Street and Harvard Boulevard (Intersection 8) – This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane.

- Peck Road & SR-126 Eastbound On-/Off-Ramps (Intersection 10) – This intersection can be mitigated to LOS C or better by installing a traffic signal. A peak hour signal warrant analysis is provided in Appendix D and indicates that the installation of a traffic signal would be warranted under existing plus project conditions during the PM peak hour.¹
- Beckwith Road & Telegraph Road (Intersection 12) – This intersection could be mitigated to LOS C or better by installing a traffic signal and reconfiguring the westbound approach. A peak hour signal warrant analysis is provided in Appendix E and indicates that the installation of a traffic signal would be warranted under existing plus project conditions. The westbound approach can be restriped to provide one right-turn lane, one through lane, and one left-turn lane (a reconfiguration of the existing two-way left-turn lane). With the development of the Santa Paula West Business Park, Beckwith Road will be widened to full City standards, which provide for a 64-foot roadway within an 84-foot right-of-way. With the additional roadway width, the northbound approach could be widened from its current single-lane configuration to provide one left-turn lane and one shared through/right-turn lane. With this configuration as mitigation, the intersection would operate at LOS C or better under existing plus project conditions.

Freeway Improvements

No freeway mitigation measures are needed because the project would not result in significant impacts based on the CMP criteria.

4.5.2 Cumulative plus Project Mitigation Measures

Intersection Improvements

At the five intersections projected to operate at LOS D or worse, the recommended mitigation measures would fully mitigate all but two of the intersections identified with cumulative and project impacts, as shown in Table 13. The lane configuration diagrams in Appendix A illustrate the proposed mitigation measures at the impacted intersections. The following provides a description of the proposed improvements:

- 10th Street & Harvard Boulevard (Intersection 1) –The constraints of the intersection and the proposed bicycle lanes discussed under Existing plus Project scenario would also apply to the Cumulative plus Project scenario. Therefore, this intersection cannot be fully mitigated; thus, the impact would remain **significant and unavoidable**. The alternative proposed mitigation mentioned previously under Existing plus Project would result in an improvement from LOS F during the AM peak and PM peak hours to LOS C during the AM peak hour and LOS E under the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation.

¹ Ibid.

- Peck Road & Harvard Boulevard/Telegraph Road/Main Street (Intersection 8) – This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation. Given the constraints of the intersection, this intersection cannot be fully mitigated; thus, the impact would remain **significant and unavoidable**.
- Peck Road & SR-126 Eastbound On-/Off-Ramps (Intersection 10) – This intersection could be mitigated to LOS C or better by installing a traffic signal and reconfiguring all approaches. A peak hour signal warrant analysis is provided in Appendix E and indicates that the installation of a traffic signal would be warranted under cumulative plus project conditions. The northbound approach can be restriped to provide one shared through/right-turn lane and one left-turn lane. The southbound approach would require widening within Caltrans' existing right-of-way to provide one right-turn lane, one through lane, and one left-turn lane. The eastbound and westbound approaches can be restriped to provide one shared through/right-turn lane and one left-turn lane each. This improvement would require coordination with and approval by Caltrans.
- Faulkner Road & SR-126 Westbound On-/Off-Ramps (Intersection 11) – This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach. The westbound approach can be restriped to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two lanes, this improvement would require coordination with and approval by Caltrans.
- Beckwith Road & Telegraph Road (Intersection 12) – This intersection could be also mitigated to LOS C under cumulative plus project conditions with the same mitigation measure suggested for the existing plus project conditions.

Freeway Improvements

No freeway mitigation measures are needed because the project would not result in significant impacts based on the CMP criteria.

4.6 MITIGATION FUNDING

Fair-share calculations for developer contributions were made for the intersections impacted by project generated traffic. The calculations were developed by calculating the increase in total projected traffic volumes at each intersection from the existing conditions to the cumulative plus project conditions; the increase establishes the total amount of projected growth at each location. Next, the project-only volumes are divided by the total volume increase at each impacted intersection. This step determines the amount of traffic the project is contributing to the intersection and the approximate proportional contribution towards funding the proposed mitigation measure.

The fair-share calculations were performed for both AM and PM peak hours, as shown in Table 14. The range of maximum contribution is between 13.3% and 55.1%. At one location, the calculated maximum fair share does not accurately reflect the cause of the impacts at the intersection. Based on the intersections analysis, the impacts at one intersection is a project-related impact (rather than cumulative impacts to which the project would contribute):

12. Beckwith Road & Telegraph Road

As a project-related impact, 100% contribution is identified for this intersection.

**TABLE 12
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (2014) PLUS PROJECT CONDITIONS WITH MITIGATION**

Intersections	Peak Hour	Existing		Existing plus Project					With Mitigation			
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
							Cumulative?	Project?				
1. 10th Street & Harvard Boulevard	AM	0.752	C	0.797	C	0.045	NO	NO	0.797	C	0.045	NO
	PM	0.764	C	0.815	D	0.051	NO	YES	0.815	D	0.051	YES
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.669	B	0.834	D	0.165	NO	YES	0.669	B	0.000	NO
	PM	0.483	A	0.552	A	0.069	NO	NO	0.510	A	0.027	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	9.6	A	11.7	B	2.1	NO	NO	0.411	A	--	NO
	PM	26.1	A	40.7	E	14.6	NO	YES	0.665	B	--	NO
12. Beckwith Road & Telegraph Road [a]	AM	11.6	B	18.7	C	7.1	NO	NO	0.300	A	--	NO
	PM	14.8	B	30.2	D	15.4	NO	YES	0.496	A	--	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

TABLE 13
INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE (YEAR 2031) CONDITIONS WITH MITIGATION

Intersections	Peak Hour	Cumulative Base Year 2031		Cumulative plus Project Year 2031					With Mitigation Year 2031			
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
							Cumulative?	Project?				
1. 10th Street & Harvard Boulevard	AM	0.992	E	1.037	F	0.045	YES	YES	1.037	F	0.045	YES
	PM	1.033	F	1.082	F	0.049	YES	YES	1.082	F	0.049	YES
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.908	E	1.079	F	0.171	YES	YES	0.842	D	-0.066	YES
	PM	0.741	C	0.810	D	0.069	NO	YES	0.650	B	-0.091	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	12.2	B	16.6	C	4.4	NO	NO	0.460	A	--	NO
	PM	97.6	F	127.3	F	29.7	YES	YES	0.646	B	--	NO
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM	56.3	F	66.9	F	10.6	YES	YES	15.1	C	-41.2	NO
	PM	14.1	B	17.4	C	3.3	NO	NO	12.8	B	-1.3	NO
12. Beckwith Road & Telegraph Road [a]	AM	12.3	B	21.0	C	8.7	NO	NO	0.325	A	--	NO
	PM	16.9	C	40.1	E	23.2	NO	YES	0.533	A	--	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE 14
FUTURE (YEAR 2031) PROJECT FAIR SHARE TRAFFIC CONTRIBUTION**

Int #	Intersection	AM Peak Hour					PM Peak Hour					Maximum Contribution
		Existing Traffic	2031 Projected Traffic	Project Only Traffic	Total New Traffic	Project % of New Traffic	Existing Traffic	2031 Projected Traffic	Project Only Traffic	Total New Traffic	Project % of New Traffic	
1.	10th Street & Harvard Boulevard	2,054	2,808	100	754	13.3%	2,232	3,125	113	893	12.7%	13.3%
8.	Peck Road & Harvard Boulevard/Telegraph Road/Main St	1,959	3,083	337	1,124	30.0%	1,935	3,087	326	1,152	28.3%	30.0%
10.	Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way	[b]	[b]	[b]	[b]	[b]	974	1,540	209	566	36.9%	36.9%
11.	Faulkner Road & SR-126 WB On-/Off-Ramps	731	1,310	319	579	55.1%	[b]	[b]	[b]	[b]	[b]	55.1%
12.	Beckwith Road & Telegraph Road	[b]	[b]	[b]	[b]	[b]	728	1,199	368	471	78.1%	100% [a]

Notes:

- [a] Based on Table 11, the impact at this intersection is only attributed to the project. Therefore, the maximum contribution is recommended for this intersection.
- [b] Because no project impact was identified in this peak hour, no fair-share contribution was calculated.

CHAPTER 5. WITHOUT BECKWITH EXTENSION ANALYSIS

Another future scenario considers impacts on the roadway network that would occur if Beckwith Road were not extended to Faulkner Road. This scenario would not require a new at-grade crossing, for which the regulatory approvals have not yet been granted. Figure 1 illustrates the approximate location of the Beckwith Road extension. The full development of the uses permitted by the Santa Paula West Business Park Specific Plan project was assumed in this scenario, as described earlier in this report. The number and location of analyzed intersections and roadway segments is identical to what was analyzed for the cumulative base plus project conditions with Beckwith Road extension.

5.1 WITHOUT BECKWITH ROAD EXTENSION TRAFFIC PROJECTION

The trip generation estimates presented in Table 6 and the distribution pattern illustrated in Figure 4 were used to assign the project-generated traffic to the local and regional street system. Figure 10 illustrates the estimated project-only volumes without the Beckwith Road extension traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours. The project-only volumes differ from those displayed in Figure 5 due to the lack of the Beckwith Road extension. The trip generation estimates presented in Table 6 and the distribution pattern illustrated in Figure 4 were used to assign the project-generated traffic to the local and regional street system.

5.2 EXISTING PLUS PROJECT WITHOUT BECKWITH ROAD EXTENSION TRAFFIC CONDITIONS

Figure 11 illustrates the estimated existing plus project-generated peak hour traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours without the Beckwith Road extension. The project-only volumes differ somewhat slightly from those displayed in Figure 5 due to the lack of the Beckwith Road extension.

These volumes were analyzed to determine the projected existing plus project operating conditions under this scenario. The results of the intersection analysis are summarized in Table 15. The freeway segment analysis is presented in Table 16.

A total of 13 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The three intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS D AM)
10. Peck Road & SR-126 Eastbound On-/Off-Ramps (LOS E PM)
12. Beckwith Road & Telegraph Road (LOS D PM)

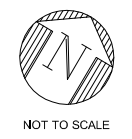


FIGURE 10
PROJECT ONLY PEAK HOUR TRAFFIC VOLUMES (WITHOUT BECKWITH EXTENSION)



FIGURE 11
 EXISTING PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES (WITHOUT BECKWITH EXTENSION)

**TABLE 15
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (2014) PLUS PROJECT CONDITIONS - WITHOUT BECKWITH EXTENSION**

Intersections	Peak Hour	Existing		Existing plus Project				
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact	
							Existing?	Project?
1. 10th Street & Harvard Boulevard [b]	AM	0.752	C	0.788	C	0.036	NO	NO
	PM	0.764	C	0.800	C	0.036	NO	NO
2. 8th Street & Main Street	AM	0.316	A	0.328	A	0.012	NO	NO
	PM	0.389	A	0.411	A	0.022	NO	NO
3. 8th Street & Harvard Boulevard	AM	0.261	A	0.281	A	0.020	NO	NO
	PM	0.351	A	0.355	A	0.004	NO	NO
4. Palm Avenue & Main Street	AM	0.457	A	0.480	A	0.023	NO	NO
	PM	0.430	A	0.455	A	0.025	NO	NO
5. Palm Avenue & Harvard Boulevard	AM	0.539	A	0.570	A	0.031	NO	NO
	PM	0.542	A	0.553	A	0.011	NO	NO
6. Steckel Drive & Main Street [a]	AM	10.6	B	11.1	B	0.5	NO	NO
	PM	11.2	B	12.0	B	0.8	NO	NO
7. Steckel Drive & Harvard Boulevard	AM	0.341	A	0.386	A	0.045	NO	NO
	PM	0.354	A	0.384	A	0.030	NO	NO
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.669	B	0.885	D	0.216	NO	YES
	PM	0.483	A	0.599	A	0.116	NO	NO
9. Peck Road & Faulkner Road	AM	0.338	A	0.441	A	0.103	NO	NO
	PM	0.453	A	0.522	A	0.069	NO	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	9.6	A	11.8	B	2.2	NO	NO
	PM	26.1	D	40.3	E	14.2	YES	YES
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM	19.0	C	21.7	C	2.7	NO	NO
	PM	10.0	B	12.4	B	2.4	NO	NO
12. Beckwith Road & Telegraph Road [a]	AM	11.6	B	18.8	C	7.2	NO	NO
	PM	14.8	B	30.0	D	15.2	NO	YES
13. Briggs Road & Telegraph Road	AM	0.280	A	0.306	A	0.026	NO	NO
	PM	0.369	A	0.401	A	0.032	NO	NO
14. Briggs Road & Faulkner Road [a]	AM	9.9	A	10.1	B	0.2	NO	NO
	PM	10.1	B	10.4	B	0.3	NO	NO
15. Briggs Road & SR-126 WB On-/Off-Ramps [a]	AM	10.0	A	10.3	B	0.3	NO	NO
	PM	10.0	A	10.3	B	0.3	NO	NO
16. Briggs Road & SR-126 EB On-/Off-Ramps [a]	AM	9.6	A	9.9	A	0.3	NO	NO
	PM	10.2	B	10.2	B	0.0	NO	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE 16
 FREEWAY SEGMENTS LEVEL OF SERVICE ANALYSIS
 EXISTING (2014) PLUS PROJECT CONDITIONS - WITHOUT BECKWITH EXTENSION**

Roadway Segment	Peak Hour	Existing						Existing plus Project						Project Increase		Significant Impact			
		Eastbound			Westbound			Eastbound			Westbound			Eastbound	Westbound	Eastbound		Westbound	
		Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	%	%	Existing?	Project?	Existing?	Project?
1. SR-126 - Hallock Dr to 10th St (SR-150) [a]	AM	932	7.5	A	1,509	12.2	B	947	7.6	A	1,612	13.0	B	1.6%	6.8%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
2. SR-126 - 10th St (SR-150) to Palm Av [a]	AM	1,136	9.2	A	2,102	17.0	B	1,158	9.3	A	2,253	18.2	C	1.9%	7.2%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
3. SR-126 - Palm Av to Peck Rd [a]	AM	1,253	10.1	A	2,429	19.6	C	1,275	10.3	A	2,580	20.9	C	1.8%	6.2%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
4. SR-126 - Peck Rd to Briggs Rd [a]	AM	1,354	10.9	A	2,802	22.8	C	1,463	11.8	B	2,816	22.9	C	8.1%	0.5%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO
5. SR-126 - Briggs Rd to Wells Rd [a]	AM	1,410	11.4	B	2,820	22.9	C	1,551	12.5	B	2,839	23.1	C	10.0%	0.7%	NO	NO	NO	NO
	PM	1,729	14.0	B	1,729	14.0	B	1,886	15.2	B	1,886	15.2	B	9.1%	9.1%	NO	NO	NO	NO

Notes:

* pc/mi/ln denotes passenger cars per mile per lane

[a] Analyzed using freeway methodology from *Highway Capacity Manual*.

Because the City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these three intersections. With the exception of Peck Road and SR-126 Eastbound On-/Off-Ramps intersection because the existing has an LOS D in the PM peak hour, all of the impacted intersections have project-specific impacts (impacts directly related to the addition of project traffic).

The freeway LOS results for this scenario are consistent with those in the previous chapter.

One intersection impact (10th Street & Harvard Boulevard) would be removed under existing plus project conditions in the scenario without the roadway link. Significant impacts are identified at the same three other intersections under this scenario.

5.3 CUMULATIVE PLUS PROJECT WITHOUT BECKWITH ROAD EXTENSION TRAFFIC CONDITIONS

Figure 12 illustrates the estimated future project-generated peak hour traffic volumes at each of the analyzed intersections during typical weekday AM and PM peak hours without the Beckwith Road extension. The project-only volumes differ from those displayed in Figure 9 due to the lack of the Beckwith Road extension.

These volumes were analyzed to determine the projected future operating conditions under this scenario. The results of the intersection analysis are summarized in Table 17. The freeway segment analysis is presented in Table 18.

A total of 11 intersections are projected to operate at LOS C or better during both AM and PM peak hours. The five intersections listed below are projected to operate at LOS D or worse during one or both peak hours.

1. 10th Street & Harvard Boulevard (LOS F AM and PM)
8. Peck Road & Harvard Boulevard/Telegraph Road/Main Street (LOS F AM and LOS D PM)
10. Peck Road & SR-126 Eastbound On-/Off-Ramps (LOS F PM)
11. Faulkner Road & SR-126 Westbound On-/Off-Ramps (LOS F AM)
12. Beckwith Road & Telegraph Road (LOS E PM)

As defined by the City of Santa Paula's definition of minimum desirable intersection level of service (LOS C), traffic generated by the proposed project would cause or contribute to significant traffic impacts at each of these intersections. Of the five impacted intersections, project-specific impacts (impacts directly related to the addition of project traffic) are identified at one intersection: 12. Beckwith Road & Telegraph Road (LOS E PM).



LEGEND

- # Analyzed Intersections
- ▨ Project Site
- ⋯ Future Roadways
- X(X) AM(PM) Peak Hour Traffic Volumes

FIGURE 12
 CUMULATIVE PLUS PROJECT PEAK HOUR TRAFFIC VOLUMES (WITHOUT BECKWITH EXTENSION)

**TABLE 17
INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE (YEAR 2031) CONDITIONS - WITHOUT BECKWITH EXTENSION**

Intersections	Peak Hour	Cumulative Base Year 2031		Cumulative plus Project Year 2031				
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact	
							Cumulative?	Project?
1. 10th Street & Harvard Boulevard [b]	AM PM	0.992 1.033	E F	1.028 1.068	F F	0.036 0.035	YES YES	YES YES
2. 8th Street & Main Street	AM PM	0.423 0.496	A A	0.425 0.518	A A	0.002 0.022	NO NO	NO NO
3. 8th Street & Harvard Boulevard	AM PM	0.387 0.492	A A	0.407 0.495	A A	0.020 0.003	NO NO	NO NO
4. Palm Avenue & Main Street	AM PM	0.607 0.569	B A	0.630 0.594	B A	0.023 0.025	NO NO	NO NO
5. Palm Avenue & Harvard Boulevard	AM PM	0.757 0.757	C C	0.767 0.768	C C	0.010 0.011	NO NO	NO NO
6. Steckel Drive & Main Street [a]	AM PM	14.1 16.7	B C	15.2 18.9	C C	1.1 2.2	NO NO	NO NO
7. Steckel Drive & Harvard Boulevard	AM PM	0.444 0.488	A A	0.489 0.500	A A	0.045 0.012	NO NO	NO NO
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM PM	0.908 0.741	E C	1.131 0.857	F D	0.223 0.116	YES NO	YES YES
9. Peck Road & Faulkner Road	AM PM	0.439 0.627	A B	0.541 0.696	A B	0.102 0.069	NO NO	NO NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM PM	12.2 97.6	B F	17.0 126.6	C F	4.8 29.0	NO YES	NO YES
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM PM	56.3 14.1	F B	66.8 21.1	F C	10.5 7.0	YES NO	YES NO
12. Beckwith Road & Telegraph Road [a]	AM PM	12.3 16.9	B C	21.1 39.3	C E	8.8 22.4	NO NO	NO YES
13. Briggs Road & Telegraph Road	AM PM	0.487 0.565	A A	0.500 0.597	A A	0.013 0.032	NO NO	NO NO
14. Briggs Road & Faulkner Road [a]	AM PM	13.3 14.3	B B	13.8 14.9	B B	0.5 0.6	NO NO	NO NO
15. Briggs Road & SR-126 WB On-/Off-Ramps [a]	AM PM	19.5 15.5	C C	21.2 16.9	C C	1.7 1.4	NO NO	NO NO
16. Briggs Road & SR-126 EB On-/Off-Ramps [a]	AM PM	11.7 13.7	B B	12.2 13.8	B B	0.5 0.1	NO NO	NO NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE 18
 FREEWAY SEGMENTS LEVEL OF SERVICE ANALYSIS
 FUTURE (YEAR 2031) CONDITIONS - WITHOUT BECKWITH EXTENSION**

Roadway Segment	Peak Hour	Cumulative Base						Cumulative plus Project						Project Increase		Significant Impact			
		Eastbound			Westbound			Eastbound			Westbound			Eastbound	Westbound	Eastbound		Westbound	
		Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	Volume	Density (pc/mi/ln)*	LOS	%	%	Cumulative?	Project?	Cumulative?	Project?
1. SR-126 - Hallock Dr to 10th St (SR-150) [a]	AM	2,193	17.7	B	2,193	17.7	B	2,296	18.5	C	2,296	18.5	C	4.7%	4.7%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
2. SR-126 - 10th St (SR-150) to Palm Av [a]	AM	2,971	24.3	C	2,971	24.3	C	3,122	25.9	C	3,122	25.9	C	5.1%	5.1%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
3. SR-126 - Palm Av to Peck Rd [a]	AM	3,248	27.2	D	3,248	27.2	D	3,399	29.0	D	3,399	29.0	D	4.6%	4.6%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
4. SR-126 - Peck Rd to Briggs Rd [a]	AM	3,702	33.3	D	3,702	33.3	D	3,716	33.5	D	3,716	33.5	D	0.4%	0.4%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO
5. SR-126 - Briggs Rd to Wells Rd [a]	AM	3,997	38.7	E	3,997	38.7	E	4,016	39.1	E	4,016	39.1	E	0.5%	0.5%	NO	NO	NO	NO
	PM	2,853	23.2	C	2,853	23.2	C	3,010	24.7	C	3,010	24.7	C	5.5%	5.5%	NO	NO	NO	NO

Notes:

* pc/mi/ln denotes passenger cars per mile per lane

[a] Analyzed using freeway methodology from *Highway Capacity Manual*.

The project related traffic added to this intersection during the PM peak hour would contribute to a projected decline below LOS C operation under cumulative plus project conditions. The addition of project-related traffic to the other impacted intersections would contribute to the projected undesirable levels of service.

The freeway LOS results for this scenario are consistent with those in the previous chapter.

5.4 MITIGATION MEASURES

For the Existing plus Project Scenario without the Beckwith Road extension, the mitigation measures discussed in Chapter 4 for the three significantly impacted intersections would mitigate all intersection impacts, as shown in Table 19.

For the Cumulative plus Project Scenario without the Beckwith Road extension, the mitigation measures discussed in Chapter 4 for these significantly impacted intersections would mitigate all but two intersection impacts, as shown in Table 20. The two remaining intersection impacts are at 10th Street & Harvard Boulevard and Peck Road and Harvard Boulevard/Telegraph Road/Main Street. These impacts would remain **significant and unavoidable** for the Cumulative plus Project Scenario without the Beckwith Road extension due to the same constraints identified previously in Section 4.5.

5.4.1 Mitigation Funding

Fair-share calculations for developer contributions were made for the intersections impacted by project generated traffic. The calculations were developed by calculating the increase in projected traffic volumes from the existing condition to the cumulative plus project condition; the increase establishes the total amount of projected growth at each location. Next, the project-only volumes are divided by the total volume increase at each impacted intersection. This step determines the amount of traffic the project is contributing to the intersection and the approximate proportional contribution towards funding the proposed mitigation measure.

The fair share calculations were performed for both the AM and PM peak hours, as shown in Table 21. The range of maximum project contribution is between 11.3% and 56.6%. At one location, the calculated maximum fair share does not accurately reflect the cause of the impacts at the intersections. Based on the intersection analysis, the impacts at the following intersections are project-related impacts (rather than cumulative impacts to which the project would contribute):

12. Beckwith Road & Telegraph Road

As projected-related impacts, a 100% contribution is identified for this location.

**TABLE 19
INTERSECTION LEVEL OF SERVICE ANALYSIS
EXISTING (2014) PLUS PROJECT CONDITIONS WITH MITIGATION - WITHOUT BECKWITH EXTENSION**

Intersections	Peak Hour	Existing		Existing plus Project					With Mitigation			
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
							Cumulative?	Project?				
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.669	B	0.885	D	0.216	NO	YES	0.647	B	-0.022	NO
	PM	0.483	A	0.599	A	0.116	NO	NO	0.590	A	0.107	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	9.6	A	11.8	B	2.2	NO	NO	0.415	A	--	NO
	PM	26.1	D	40.3	E	14.2	YES	YES	0.659	B	--	NO
12. Beckwith Road & Telegraph Road [a]	AM	11.6	B	18.8	C	7.2	NO	NO	0.328	A	--	NO
	PM	14.8	B	30.0	D	15.2	NO	YES	0.495	A	--	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

TABLE 20
INTERSECTION LEVEL OF SERVICE ANALYSIS
FUTURE (YEAR 2031) CONDITIONS WITH MITIGATION - WITHOUT BECKWITH EXTENSION

Intersections	Peak Hour	Cumulative Base Year 2031		Cumulative plus Project Year 2031					With Mitigation Year 2031			
		V/C or Delay	LOS	V/C or Delay	LOS	Change	Significant Impact		V/C or Delay	LOS	Change	Signif. Impact?
							Cumulative?	Project?				
1. 10th Street & Harvard Boulevard	AM	0.992	E	1.028	F	0.036	YES	YES	1.028	F	0.036	YES
	PM	1.033	F	1.068	F	0.035	YES	YES	1.068	F	0.035	YES
8. Peck Road & Harvard Boulevard/Telegraph Road/Main St	AM	0.908	E	1.131	F	0.223	YES	YES	0.891	D	-0.017	YES
	PM	0.741	C	0.857	D	0.116	NO	YES	0.687	B	-0.054	NO
10. Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way [a]	AM	12.2	B	17.0	C	4.8	NO	NO	0.464	A	--	NO
	PM	97.6	F	126.6	F	29.0	YES	YES	0.647	B	--	NO
11. Faulkner Road & SR-126 WB On-/Off-Ramps [a]	AM	56.3	F	66.8	F	10.5	YES	YES	15.1	C	-41.2	NO
	PM	14.1	B	21.1	C	7.0	NO	NO	13.1	B	-1.0	NO
12. Beckwith Road & Telegraph Road [a]	AM	12.3	B	21.1	C	8.8	NO	NO	0.349	A	--	NO
	PM	16.9	C	39.3	E	22.4	NO	YES	0.531	A	--	NO

Note:

[a] Intersection is controlled by stop signs. Average vehicular delay in seconds is reported rather than V/C ratio.

**TABLE 21
FUTURE (YEAR 2031) PROJECT FAIR SHARE TRAFFIC CONTRIBUTION - WITHOUT BECKWITH EXTENSION**

Int #	Intersection	AM Peak Hour					PM Peak Hour					Maximum Contribution
		Existing Traffic	2031 Projected Traffic	Project Only Traffic	Total New Traffic	Project % of New Traffic	Existing Traffic	2031 Projected Traffic	Project Only Traffic	Total New Traffic	Project % of New Traffic	
1.	10th Street & Harvard Boulevard	2,054	2,791	83	737	11.3%	2,232	3,105	93	873	10.7%	11.3%
8.	Peck Road & Harvard Boulevard/Telegraph Road/Main St	1,959	3,223	477	1,264	37.7%	1,935	3,231	470	1,296	36.3%	37.7%
10.	Peck Road & SR-126 EB On-/Off-Ramps/ Acacia Way	[b]	[b]	[b]	[b]	[b]	974	1,529	198	555	35.7%	35.7%
11.	Faulkner Road & SR-126 WB On-/Off-Ramps	731	1,330	339	599	56.6%	[b]	[b]	[b]	[b]	[b]	56.6%
12.	Beckwith Road & Telegraph Road	[b]	[b]	[b]	[b]	[b]	728	1,215	384	487	78.9%	100% [a]

Notes:

- [a] Based on Table 18, the impact at this intersection is only attributed to the project. Therefore, the maximum contribution is recommended for this intersection.
- [b] Because no project impact was identified in this peak hour, no fair-share contribution was calculated.

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LIST OF PREPARERS

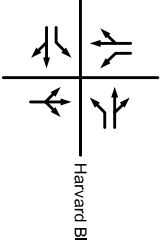
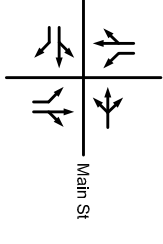
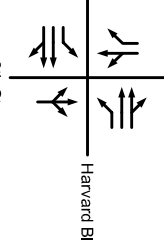
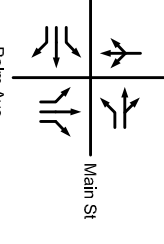
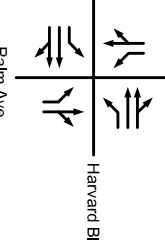
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**APPENDIX A:
INTERSECTION LANE CONFIGURATIONS**

INTERSECTION LANE CONFIGURATIONS

	EXISTING CONDITIONS	EXISTING CONDITIONS WITH MITIGATIONS *	FUTURE (2031) CONDITIONS	FUTURE (2031) CONDITIONS WITH MITIGATIONS *
1. 10th St & Harvard Bl		Same As Existing	Same As Existing	Same As Existing
2. 8th St & Main St		Same As Existing	Same As Existing	Same As Existing
3. 8th St & Harvard Bl		Same As Existing	Same As Existing	Same As Existing
4. Palm Ave & Main St		Same As Existing	Same As Existing	Same As Existing
5. Palm Ave & Harvard Bl		Same As Existing	Same As Existing	Same As Existing

LEGEND

 Stop Controlled

* With and without Beckwith Extension

INTERSECTION LANE CONFIGURATIONS

	EXISTING CONDITIONS	EXISTING CONDITIONS WITH MITIGATIONS *	FUTURE (2031) CONDITIONS	FUTURE (2031) CONDITIONS WITH MITIGATIONS *
6. Steckel Dr & Main St		Same As Existing	Same As Existing	Same As Existing
7. Steckel Dr & Harvard Bl		Same As Existing	Same As Existing	Same As Existing
8. Peck Rd & Telegraph Rd/ Harvard Bl/ / Main St		Same As Existing OVL	Same As Existing	Same As Existing OVL
9. Peck Rd & Faulkner Rd		Same As Existing	Same As Existing	Same As Existing
10. Peck Rd & SR-126 EB Ramps/ Acacia Way		Signalize	Same As Existing	Signalize

LEGEND

- ▬ Stop Controlled
- ▬ OVL Overlap Phase
- * With and without Backwith Extension

INTERSECTION LANE CONFIGURATIONS

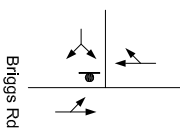
	EXISTING CONDITIONS	EXISTING CONDITIONS WITH MITIGATIONS *	FUTURE (2031) CONDITIONS	FUTURE (2031) CONDITIONS WITH MITIGATIONS *
11. Faulkner Rd & SR-126 WB Ramps		Same As Existing	Same As Existing	
12. Beckwith Rd & Telegraph Rd		Signalize	Same As Existing	
13. Briggs Rd & Telegraph Rd		Same As Existing	Same As Existing	Same As Existing
14. Briggs Rd & Faulkner Rd		Same As Existing	Same As Existing	Same As Existing
15. Briggs Rd & SR-126 WB Ramps		Same As Existing	Same As Existing	Same As Existing

LEGEND

● Stop Controlled

* With and without Beckwith Extension

INTERSECTION LANE CONFIGURATIONS

	EXISTING CONDITIONS	EXISTING CONDITIONS WITH MITIGATIONS *	FUTURE (2031) CONDITIONS	FUTURE (2031) CONDITIONS WITH MITIGATIONS *
<p>16. Briggs Rd & SR-126 EB Ramps</p>		Same As Existing	Same As Existing	Same As Existing

LEGEND

- Stop Controlled
- * With and without Beckwith Extension

**APPENDIX B:
TRAFFIC COUNT SHEETS**

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-001

Day: Tuesday

City: Santa Paula

Date: 3/4/2014

AM

NS/EW Streets:	Ojai Santa Paula Rd - 10th St		Ojai Santa Paula Rd - 10th St			SR-126 WB Ramps			SR-126 WB Ramps			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	0	0	1	0	1	
7:00 AM	0	52			35	153				0		17	257
7:15 AM	0	66			37	170				1		33	307
7:30 AM	0	94			20	209				0		29	352
7:45 AM	0	89			37	172				1		34	333
8:00 AM	1	82			39	162				1		22	307
8:15 AM	0	68			39	124				1		28	260
8:30 AM	0	65			39	120				0		32	256
8:45 AM	0	60			28	112				0		22	222
TOTAL VOLUMES :	1	576	0	0	274	1222	0	0	0	4	0	217	2294
APPROACH %'s :	0.17%	99.83%	0.00%	0.00%	18.32%	81.68%	#DIV/0!	#DIV/0!	#DIV/0!	1.81%	0.00%	98.19%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	1	331	0	0	133	713	0	0	0	3	0	118	1299
PEAK HR FACTOR :		0.883			0.924			0.000			0.864		0.923

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-001

Day: Tuesday

City: Santa Paula

Date: 3/4/2014

PM

NS/EW Streets:	Ojai Santa Paula Rd - 10th St			Ojai Santa Paula Rd - 10th St			SR-126 WB Ramps			SR-126 WB Ramps			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	1	0	0	1	0	0	0	0	1	0	1	
4:00 PM	1	123			47	112				1		22	306
4:15 PM	0	117			38	99				0		39	293
4:30 PM	3	129			24	110				4		30	300
4:45 PM	2	150			39	95				0		30	316
5:00 PM	0	145			51	114				0		28	338
5:15 PM	1	142			41	115				0		26	325
5:30 PM	1	146			41	88				0		25	301
5:45 PM	1	152			42	87				0		27	309
TOTAL VOLUMES :	9	1104	0	0	323	820	0	0	0	5	0	227	2488
APPROACH %'s :	0.81%	99.19%	0.00%	0.00%	28.26%	71.74%	#DIV/0!	#DIV/0!	#DIV/0!	2.16%	0.00%	97.84%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	4	583	0	0	172	412	0	0	0	0	0	109	1280
PEAK HR FACTOR :		0.965			0.885		0.000				0.908		0.947

CONTROL : 1-Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-002

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM											
NS/EW Streets:	8th St			8th St			Main St			Main St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	5	15	7	4	13	7	6	31	5	3	19	5	120
7:15 AM	2	6	3	3	27	11	2	22	3	2	12	3	96
7:30 AM	4	33	7	5	60	16	21	51	8	4	43	3	255
7:45 AM	6	55	6	17	59	25	13	65	10	4	43	6	309
8:00 AM	7	12	5	18	29	14	5	53	6	5	41	7	202
8:15 AM	5	24	8	5	16	7	9	25	7	3	33	6	148
8:30 AM	3	11	9	7	15	10	7	32	13	4	21	6	138
8:45 AM	5	17	11	2	15	10	6	29	12	7	31	5	150
TOTAL VOLUMES :	37	173	56	61	234	100	69	308	64	32	243	41	1418
APPROACH %'s :	13.91%	65.04%	21.05%	15.44%	59.24%	25.32%	15.65%	69.84%	14.51%	10.13%	76.90%	12.97%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	22	124	26	45	164	62	48	194	31	16	160	22	914
PEAK HR FACTOR :	0.642			0.671			0.776			0.934			0.739

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-002

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM												
NS/EW Streets:	8th St			8th St			Main St			Main St				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
4:00 PM	13	34	14	5	20	11	12	54	9	5	38	3	218	
4:15 PM	13	25	12	7	25	6	21	72	5	9	48	9	252	
4:30 PM	15	25	11	6	27	16	15	48	9	5	38	10	225	
4:45 PM	17	30	16	14	16	12	12	58	13	11	48	13	260	
5:00 PM	12	36	18	11	34	18	18	65	6	9	57	11	295	
5:15 PM	3	48	12	11	27	12	20	64	16	7	49	10	279	
5:30 PM	6	41	12	3	23	10	16	64	18	3	45	11	252	
5:45 PM	12	37	18	9	16	11	15	77	15	8	49	9	276	
TOTAL VOLUMES :	91	276	113	66	188	96	129	502	91	57	372	76	2057	
APPROACH %'s :	18.96%	57.50%	23.54%	18.86%	53.71%	27.43%	17.87%	69.53%	12.60%	11.29%	73.66%	15.05%		
PEAK HR START TIME :	500 PM												TOTAL	
PEAK HR VOL :	33	162	60	34	100	51	69	270	55	27	200	41	1102	
PEAK HR FACTOR :	0.951			0.734			0.921			0.870			0.934	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-003

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM											
NS/EW Streets:	8th St			8th St			Harvard Blvd			Harvard Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	1	4	1	11	2	12	15	46	0	3	52	3	150
7:15 AM	1	0	5	12	4	22	13	70	1	3	64	4	199
7:30 AM	1	6	6	21	6	46	24	74	2	4	124	7	321
7:45 AM	2	13	3	18	6	51	40	106	2	4	133	13	391
8:00 AM	1	5	2	7	6	21	20	69	2	3	86	5	227
8:15 AM	0	2	1	9	2	12	22	71	0	0	67	6	192
8:30 AM	1	4	3	10	2	8	11	54	1	3	71	4	172
8:45 AM	0	2	1	1	3	21	26	47	0	0	65	9	175
TOTAL VOLUMES :	7	36	22	89	31	193	171	537	8	20	662	51	1827
APPROACH %'s :	10.77%	55.38%	33.85%	28.43%	9.90%	61.66%	23.88%	75.00%	1.12%	2.73%	90.31%	6.96%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	5	24	16	58	22	140	97	319	7	14	407	29	1138
PEAK HR FACTOR :	0.625			0.733			0.715			0.750			0.728

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-003

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM											
NS/EW Streets:	8th St			8th St			Harvard Blvd			Harvard Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	1	12	9	7	3	21	33	91	0	6	107	9	299
4:15 PM	2	15	8	6	3	26	18	101	0	4	120	5	308
4:30 PM	1	10	5	11	3	29	30	109	2	5	119	10	334
4:45 PM	1	15	7	14	7	27	31	127	0	3	123	17	372
5:00 PM	2	13	5	14	7	24	34	117	0	4	142	11	373
5:15 PM	1	20	13	10	2	28	38	124	1	4	126	5	372
5:30 PM	1	14	9	11	4	18	29	127	0	4	120	14	351
5:45 PM	0	20	5	19	4	14	26	100	1	3	122	12	326
TOTAL VOLUMES :	9	119	61	92	33	187	239	896	4	33	979	83	2735
APPROACH %'s :	4.76%	62.96%	32.28%	29.49%	10.58%	59.94%	20.98%	78.67%	0.35%	3.01%	89.41%	7.58%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	5	62	34	49	20	97	132	495	1	15	511	47	1468
PEAK HR FACTOR :	0.743			0.865			0.963			0.912			0.984

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-004

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM											
NS/EW Streets:	Palm Ave			Palm Ave			Main St			Main St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	9	10	20	4	55	2	0	27	12	13	16	2	170
7:15 AM	9	21	23	5	74	8	7	24	11	23	19	3	227
7:30 AM	10	43	46	15	67	12	11	61	21	18	32	1	337
7:45 AM	18	74	59	5	93	13	14	71	34	31	60	9	481
8:00 AM	18	31	21	2	69	5	12	55	19	30	33	1	296
8:15 AM	14	34	18	1	72	7	10	31	15	12	22	6	242
8:30 AM	13	26	28	1	55	8	3	29	9	16	19	1	208
8:45 AM	8	12	23	1	35	8	3	47	10	18	21	4	190
TOTAL VOLUMES :	99	251	238	34	520	63	60	345	131	161	222	27	2151
APPROACH %'s :	16.84%	42.69%	40.48%	5.51%	84.28%	10.21%	11.19%	64.37%	24.44%	39.27%	54.15%	6.59%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	60	182	144	23	301	37	47	218	89	91	147	17	1356
PEAK HR FACTOR :	0.639			0.813			0.744			0.638			0.705

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-004

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM												
NS/EW Streets:	Palm Ave			Palm Ave			Main St			Main St				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
	1	1	1	0	1	0	1	1	1	1	1	0		
4:00 PM	18	54	31	4	53	4	6	64	16	21	51	5	327	
4:15 PM	24	48	31	2	34	9	10	72	17	23	45	3	318	
4:30 PM	23	43	38	4	53	7	12	52	17	29	41	5	324	
4:45 PM	25	49	31	5	50	5	9	53	8	20	38	4	297	
5:00 PM	12	49	52	5	57	13	9	64	28	28	52	8	377	
5:15 PM	11	67	46	1	48	9	16	74	15	30	31	3	351	
5:30 PM	13	65	45	4	43	9	13	68	19	34	48	3	364	
5:45 PM	9	66	52	1	57	6	10	75	7	16	44	7	350	
TOTAL VOLUMES :	135	441	326	26	395	62	85	522	127	201	350	38	2708	
APPROACH %'s :	14.97%	48.89%	36.14%	5.38%	81.78%	12.84%	11.58%	71.12%	17.30%	34.13%	59.42%	6.45%		
PEAK HR START TIME :	500 PM												TOTAL	
PEAK HR VOL :	45	247	195	11	205	37	48	281	69	108	175	21	1442	
PEAK HR FACTOR :	0.959			0.843			0.948			0.864			0.956	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-005

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM											
NS/EW Streets:	Palm Ave			Palm Ave			Harvard Blvd			Harvard Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	2	0	1	2	0	
7:00 AM	17	20	9	16	51	20	6	58	28	31	51	7	314
7:15 AM	17	28	18	12	66	28	14	58	24	22	51	11	349
7:30 AM	26	48	27	17	71	22	27	93	31	44	114	14	534
7:45 AM	30	60	20	13	95	48	25	94	31	46	134	31	627
8:00 AM	31	45	11	9	91	30	22	85	36	21	97	11	489
8:15 AM	30	34	9	7	67	23	20	67	33	17	63	6	376
8:30 AM	23	37	10	6	54	16	15	67	21	19	77	6	351
8:45 AM	37	35	16	11	51	10	6	63	31	13	62	6	341
TOTAL VOLUMES :	211	307	120	91	546	197	135	585	235	213	649	92	3381
APPROACH %'s :	33.07%	48.12%	18.81%	10.91%	65.47%	23.62%	14.14%	61.26%	24.61%	22.33%	68.03%	9.64%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	117	187	67	46	324	123	94	339	131	128	408	62	2026
PEAK HR FACTOR :	0.843			0.790			0.934			0.709			0.808

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-005

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

PM													
NS/EW Streets:	Palm Ave			Palm Ave			Harvard Blvd			Harvard Blvd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	2	0	1	2	0	
4:00 PM	37	73	21	12	46	28	25	97	34	24	88	16	501
4:15 PM	49	77	23	14	44	20	30	82	35	36	110	10	530
4:30 PM	36	69	18	18	48	21	24	112	36	29	114	14	539
4:45 PM	44	70	35	17	45	29	31	125	32	32	130	14	604
5:00 PM	39	74	27	15	67	29	34	135	48	24	117	14	623
5:15 PM	36	85	19	18	51	25	30	128	33	23	132	10	590
5:30 PM	44	88	19	18	42	37	33	113	35	14	122	15	580
5:45 PM	41	78	14	12	49	25	39	104	39	15	105	9	530
TOTAL VOLUMES :	326	614	176	124	392	214	246	896	292	197	918	102	4497
APPROACH %'s :	29.21%	55.02%	15.77%	16.99%	53.70%	29.32%	17.15%	62.48%	20.36%	16.19%	75.43%	8.38%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	163	317	100	68	205	120	128	501	148	93	501	53	2397
PEAK HR FACTOR :	0.960			0.885			0.895			0.919			0.962

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-006

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM											
NS/EW Streets:	Steckel Dr			Steckel Dr			Main St			Main St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	0	3	11	4	9	8	2	23	3	9	34	3	109
7:15 AM	5	12	12	6	16	12	6	31	10	15	47	2	174
7:30 AM	15	21	25	11	23	7	1	50	9	30	40	1	233
7:45 AM	14	12	31	11	24	15	3	48	25	46	68	4	301
8:00 AM	17	14	15	5	19	11	4	51	24	15	60	1	236
8:15 AM	3	5	10	5	10	7	5	38	18	11	30	4	146
8:30 AM	2	8	9	5	8	8	7	31	17	5	34	2	136
8:45 AM	4	8	8	4	8	1	3	53	12	17	33	1	152
TOTAL VOLUMES :	60	83	121	51	117	69	31	325	118	148	346	18	1487
APPROACH %'s :	22.73%	31.44%	45.83%	21.52%	49.37%	29.11%	6.54%	68.57%	24.89%	28.91%	67.58%	3.52%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	51	59	83	33	82	45	14	180	68	106	215	8	944
PEAK HR FACTOR :	0.791			0.800			0.829			0.697			0.784

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-006

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM											
NS/EW Streets:	Steckel Dr			Steckel Dr			Main St			Main St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	2	0	0	2	0	
4:00 PM	6	18	26	1	14	18	18	76	11	14	63	3	268
4:15 PM	5	15	16	3	8	12	14	83	11	20	59	3	249
4:30 PM	4	14	15	3	19	5	16	85	18	9	63	4	255
4:45 PM	6	16	13	6	15	9	7	70	12	20	41	3	218
5:00 PM	7	18	19	3	14	13	15	85	9	30	67	6	286
5:15 PM	9	18	18	3	11	5	15	81	16	21	43	3	243
5:30 PM	10	21	10	3	15	11	16	97	14	9	58	3	267
5:45 PM	8	17	14	9	17	7	24	85	5	18	49	5	258
TOTAL VOLUMES :	55	137	131	31	113	80	125	662	96	141	443	30	2044
APPROACH %'s :	17.03%	42.41%	40.56%	13.84%	50.45%	35.71%	14.16%	74.97%	10.87%	22.96%	72.15%	4.89%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	34	74	61	18	57	36	70	348	44	78	217	17	1054
PEAK HR FACTOR :	0.939			0.841			0.909			0.757			0.921

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-007

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM												
NS/EW Streets:	Steckel Dr			Steckel Dr			Harvard Blvd			Harvard Blvd				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
7:00 AM	5	1	6	13	3	11	6	50	1	7	50	10	163	
7:15 AM	8	5	6	14	6	13	18	74	4	1	62	18	229	
7:30 AM	8	19	21	24	3	19	15	71	1	8	65	55	309	
7:45 AM	13	10	23	36	8	19	16	82	1	9	90	66	373	
8:00 AM	7	3	10	29	18	22	12	89	3	7	84	34	318	
8:15 AM	6	4	9	14	4	8	6	83	3	3	59	13	212	
8:30 AM	2	1	5	15	2	7	11	57	7	13	61	16	197	
8:45 AM	5	3	6	16	4	7	8	79	3	0	61	13	205	
TOTAL VOLUMES :	54	46	86	161	48	106	92	585	23	48	532	225	2006	
APPROACH %'s :	29.03%	24.73%	46.24%	51.11%	15.24%	33.65%	13.14%	83.57%	3.29%	5.96%	66.09%	27.95%		
PEAK HR START TIME :	715 AM												TOTAL	
PEAK HR VOL :	36	37	60	103	35	73	61	316	9	25	301	173	1229	
PEAK HR FACTOR :	0.693			0.764			0.928			0.756			0.824	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-007

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM												
NS/EW Streets:	Steckel Dr			Steckel Dr			Harvard Blvd			Harvard Blvd				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
	0	1	0	0	1	0	1	2	0	1	2	0		
4:00 PM	6	4	7	20	6	13	29	127	17	11	88	22	350	
4:15 PM	7	4	11	16	3	12	15	107	10	9	103	21	318	
4:30 PM	7	4	9	28	10	10	15	160	6	12	96	20	377	
4:45 PM	7	6	17	21	7	11	15	138	5	17	125	27	396	
5:00 PM	4	6	20	15	13	22	19	142	8	21	105	29	404	
5:15 PM	5	9	14	19	4	14	28	125	10	10	122	33	393	
5:30 PM	4	2	12	20	9	17	18	129	15	9	113	30	378	
5:45 PM	4	3	13	19	6	14	17	114	5	15	113	22	345	
TOTAL VOLUMES :	44	38	103	158	58	113	156	1042	76	104	865	204	2961	
APPROACH %'s :	23.78%	20.54%	55.68%	48.02%	17.63%	34.35%	12.24%	81.79%	5.97%	8.87%	73.74%	17.39%		
PEAK HR START TIME :	445 PM												TOTAL	
PEAK HR VOL :	20	23	63	75	33	64	80	534	38	57	465	119	1571	
PEAK HR FACTOR :	0.883			0.860			0.964			0.948			0.972	

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-008

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

AM

NS/EW Streets:	Peck Rd			Peck Rd			Telegraph Rd - Harvard Blvd			Telegraph Rd - Harvard Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	0.5	0.5	1	2	0	1	1	1	
7:00 AM	5	21	21	3	60	15	10	27	14	38	33	7	254
7:15 AM	8	23	34	6	79	25	18	31	32	51	39	11	357
7:30 AM	6	41	40	11	81	26	19	28	21	60	40	17	390
7:45 AM	11	54	38	17	73	30	27	38	19	40	51	50	448
8:00 AM	10	32	40	18	108	28	22	39	17	55	61	10	440
8:15 AM	7	26	46	5	47	17	22	31	10	39	36	7	293
8:30 AM	14	27	40	3	59	22	11	24	9	38	29	8	284
8:45 AM	8	28	38	6	37	15	17	33	13	43	18	1	257
TOTAL VOLUMES :	69	252	297	69	544	178	146	251	135	364	307	111	2723
APPROACH %'s :	11.17%	40.78%	48.06%	8.72%	68.77%	22.50%	27.44%	47.18%	25.38%	46.55%	39.26%	14.19%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	35	150	152	52	341	109	86	136	89	206	191	88	1635
PEAK HR FACTOR :	0.818			0.815			0.926			0.860			0.912

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-008

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

PM

NS/EW Streets:	Peck Rd			Peck Rd			Telegraph Rd - Harvard Blvd			Telegraph Rd - Harvard Blvd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	1	1	0.5	0.5	1	2	0	1	1	1	
4:00 PM	12	56	101	4	38	19	28	59	17	41	27	2	404
4:15 PM	17	48	85	3	34	27	29	54	15	39	57	9	417
4:30 PM	14	59	104	5	45	20	40	88	20	50	28	7	480
4:45 PM	10	64	84	3	17	11	37	57	16	48	37	7	391
5:00 PM	7	60	89	7	35	28	36	81	25	47	48	10	473
5:15 PM	12	68	84	8	42	21	41	55	10	28	49	8	426
5:30 PM	14	66	110	6	43	14	36	54	22	49	41	6	461
5:45 PM	13	75	93	7	34	13	25	52	14	48	34	4	412
TOTAL VOLUMES :	99	496	750	43	288	153	272	500	139	350	321	53	3464
APPROACH %'s :	7.36%	36.88%	55.76%	8.88%	59.50%	31.61%	29.86%	54.88%	15.26%	48.34%	44.34%	7.32%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	46	269	376	28	154	76	138	242	71	172	172	28	1772
PEAK HR FACTOR :	0.909			0.908			0.794			0.886			0.937

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-009

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

AM

NS/EW Streets:	Peck Rd			Peck Rd			Faulkner Rd			Faulkner Rd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	1	0	1	1	0	1	0	1	0	0	0	
7:00 AM	11	45			24	85	11		8				184
7:15 AM	21	56			34	113	16		12				252
7:30 AM	20	68			33	128	17		14				280
7:45 AM	22	64			36	100	34		14				270
8:00 AM	10	66			45	126	19		11				277
8:15 AM	35	57			20	81	14		20				227
8:30 AM	18	60			31	74	23		15				221
8:45 AM	13	50			19	72	22		9				185
TOTAL VOLUMES :	150	466	0	0	242	779	156	0	103	0	0	0	1896
APPROACH %'s :	24.35%	75.65%	0.00%	0.00%	23.70%	76.30%	60.23%	0.00%	39.77%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	73	254	0	0	148	467	86	0	51	0	0	0	1079
PEAK HR FACTOR :		0.929			0.899		0.714			0.000			0.963

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-009

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM											
NS/EW Streets:	Peck Rd			Peck Rd			Faulkner Rd			Faulkner Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	0	1	0	0	0	
4:00 PM	16	125			27	60	40		21				289
4:15 PM	16	124			34	64	27		21				286
4:30 PM	22	121			36	72	50		26				327
4:45 PM	14	132			32	50	40		13				281
5:00 PM	15	137			42	79	36		14				323
5:15 PM	13	146			31	52	30		19				291
5:30 PM	18	158			39	67	28		21				331
5:45 PM	18	152			31	63	37		19				320
TOTAL VOLUMES :	132	1095	0	0	272	507	288	0	154	0	0	0	2448
APPROACH %'s :	10.76%	89.24%	0.00%	0.00%	34.92%	65.08%	65.16%	0.00%	34.84%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	64	593	0	0	143	261	131	0	73	0	0	0	1265
PEAK HR FACTOR :	0.933			0.835			0.911			0.000			0.955

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-010

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		AM												
NS/EW Streets:	Peck Rd			Peck Rd			SR-126 EB Ramps - Acacia Way			SR-126 EB Ramps - Acacia Way				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
	0	1	0	0	1	0	0.5	1	0.5	0	2	0		
7:00 AM	5	0	0	8	11	13	33	0	6	0	10	22	108	
7:15 AM	0	5	0	9	9	29	39	2	4	1	11	34	143	
7:30 AM	2	7	1	13	13	20	47	1	2	1	23	34	164	
7:45 AM	2	1	1	24	10	17	50	4	3	1	11	35	159	
8:00 AM	2	6	2	27	6	20	52	1	5	3	7	15	146	
8:15 AM	2	5	3	22	8	15	61	1	4	0	9	28	158	
8:30 AM	0	3	2	17	5	23	50	3	5	2	5	20	135	
8:45 AM	1	4	1	8	2	19	41	3	2	0	3	24	108	
TOTAL VOLUMES :	14	31	10	128	64	156	373	15	31	8	79	212	1121	
APPROACH %'s :	25.45%	56.36%	18.18%	36.78%	18.39%	44.83%	89.02%	3.58%	7.40%	2.68%	26.42%	70.90%		
PEAK HR START TIME :	730 AM												TOTAL	
PEAK HR VOL :	8	19	7	86	37	72	210	7	14	5	50	112	627	
PEAK HR FACTOR :	0.850			0.920			0.875			0.720			0.956	

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-010

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

		PM												
NS/EW Streets:	Peck Rd			Peck Rd			SR-126 EB Ramps - Acacia Way			SR-126 EB Ramps - Acacia Way				
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	
	0	1	0	0	1	0	0.5	1	0.5	0	2	0		
4:00 PM	4	11	1	20	11	19	125	14	0	4	4	9	222	
4:15 PM	4	11	2	23	8	21	111	17	2	1	4	18	222	
4:30 PM	9	12	1	23	4	34	107	8	3	1	4	23	229	
4:45 PM	2	10	0	21	4	23	120	15	3	2	1	13	214	
5:00 PM	1	11	0	19	3	31	132	13	1	0	6	17	234	
5:15 PM	5	6	0	19	6	23	136	13	0	0	4	16	228	
5:30 PM	2	7	3	26	2	35	143	22	1	1	3	25	270	
5:45 PM	0	2	1	31	0	20	139	15	0	0	8	26	242	
TOTAL VOLUMES :	27	70	8	182	38	206	1013	117	10	9	34	147	1861	
APPROACH %'s :	25.71%	66.67%	7.62%	42.72%	8.92%	48.36%	88.86%	10.26%	0.88%	4.74%	17.89%	77.37%		
PEAK HR START TIME :	500 PM												TOTAL	
PEAK HR VOL :	8	26	4	95	11	109	550	63	2	1	21	84	974	
PEAK HR FACTOR :	0.792			0.853			0.926			0.779			0.902	

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-011

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

AM													
NS/EW Streets:	SR-126 WB Ramps			SR-126 WB Ramps			Faulkner Rd			Faulkner Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	4	2	15	2	1		0	2	1	92	2	2	123
7:15 AM	2	4	23	1	2		0	7	1	130	2	1	173
7:30 AM	2	0	18	3	1		0	8	0	143	6	2	183
7:45 AM	4	5	43	3	4		0	5	4	100	8	13	189
8:00 AM	9	4	23	2	1		0	5	3	121	8	10	186
8:15 AM	5	4	20	6	2		0	6	6	84	21	9	163
8:30 AM	6	0	19	6	4		0	12	2	76	9	9	143
8:45 AM	2	3	13	9	1		1	10	7	64	7	13	130
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	34	22	174	32	16	0	1	55	24	810	63	59	1290
	14.78%	9.57%	75.65%	66.67%	33.33%	0.00%	1.25%	68.75%	30.00%	86.91%	6.76%	6.33%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	17	13	107	9	8	0	0	25	8	494	24	26	731
PEAK HR FACTOR :	0.659			0.607			0.917			0.901			0.967

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-011

Day: Wednesday

City: Santa Paula

Date: 3/5/2014

PM

NS/EW Streets:	SR-126 WB Ramps			SR-126 WB Ramps			Faulkner Rd			Faulkner Rd			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0.5	0.5	1	0	2	0	1	2	0	1	2	0	
4:00 PM	8	5	35	11	0	0	0	16	2	49	16	13	155
4:15 PM	5	5	21	12	3	0	1	13	1	58	6	12	137
4:30 PM	3	6	35	17	3	0	0	25	6	66	9	20	190
4:45 PM	7	3	31	11	2	1	0	9	2	47	11	9	133
5:00 PM	4	7	26	11	5	0	1	15	6	71	12	7	165
5:15 PM	1	5	24	10	2	0	0	14	9	49	8	12	134
5:30 PM	2	7	25	14	3	0	1	12	3	60	5	14	146
5:45 PM	3	7	31	13	5	0	1	9	2	57	11	16	155
TOTAL VOLUMES :	33	45	228	99	23	1	4	113	31	457	78	103	1215
APPROACH %'s :	10.78%	14.71%	74.51%	80.49%	18.70%	0.81%	2.70%	76.35%	20.95%	71.63%	12.23%	16.14%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	19	21	113	51	13	1	2	62	15	242	38	48	625
PEAK HR FACTOR :	0.869			0.813			0.637			0.863			0.822

CONTROL : 4-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-012

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

AM

NS/EW Streets:	Beckwith Rd		Beckwith Rd			Telegraph Rd			Telegraph Rd			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	3		4	14		16	4	25	1	0	39	4	110
7:15 AM	1		3	13		21	3	30	3	3	73	9	159
7:30 AM	0		3	32		27	6	45	2	2	75	11	203
7:45 AM	0		2	9		15	12	49	4	6	37	13	147
8:00 AM	0		1	13		5	4	32	3	6	36	16	116
8:15 AM	1		0	9		8	1	26	1	2	37	8	93
8:30 AM	0		0	9		5	2	26	3	1	27	8	81
8:45 AM	0		2	10		9	0	16	1	0	41	2	81
TOTAL VOLUMES :	5	0	15	109	0	106	32	249	18	20	365	71	990
APPROACH %'s :	25.00%	0.00%	75.00%	50.70%	0.00%	49.30%	10.70%	83.28%	6.02%	4.39%	80.04%	15.57%	
PEAK HR START TIME :	7:15 AM												TOTAL
PEAK HR VOL :	1	0	9	67	0	68	25	156	12	17	221	49	625
PEAK HR FACTOR :	0.625			0.572			0.742			0.815			0.770

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-012

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

		PM											
NS/EW Streets:	Beckwith Rd			Beckwith Rd			Telegraph Rd			Telegraph Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	0	0	4	9	1	4	10	100	0	3	31	10	172
4:15 PM	4	0	2	9	0	6	9	74	3	1	53	6	167
4:30 PM	2	1	2	11	0	6	9	117	1	1	34	13	197
4:45 PM	2	0	5	16	0	6	19	87	0	1	33	12	181
5:00 PM	0	0	3	14	0	5	17	86	0	1	36	19	181
5:15 PM	2	0	3	20	0	2	16	71	0	1	37	17	169
5:30 PM	0	0	0	13	0	5	14	73	1	0	27	19	152
5:45 PM	1	0	1	23	1	7	6	56	0	1	35	19	150
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	11	1	20	115	2	41	100	664	5	9	286	115	1369
APPROACH %'s :	34.38%	3.13%	62.50%	72.78%	1.27%	25.95%	13.00%	86.35%	0.65%	2.20%	69.76%	28.05%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	6	1	13	61	0	19	61	361	1	4	140	61	728
PEAK HR FACTOR :	0.714			0.909			0.833			0.915			0.924

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-013

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

AM													
NS/EW Streets:	Briggs Rd			Briggs Rd			Telegraph Rd			Telegraph Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	13	3	10	2	5	3	1	14	6	21	33	1	112
7:15 AM	14	2	7	1	7	1	0	14	7	34	56	4	147
7:30 AM	14	5	6	4	32	5	2	15	11	45	66	26	231
7:45 AM	11	11	16	10	24	1	3	27	19	46	38	34	240
8:00 AM	18	8	10	12	8	2	1	33	16	15	25	2	150
8:15 AM	7	5	9	0	4	0	0	21	5	14	38	2	105
8:30 AM	14	2	4	2	5	2	2	21	5	12	23	0	92
8:45 AM	9	6	5	0	4	0	3	21	6	11	31	1	97
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	100	42	67	31	89	14	12	166	75	198	310	70	1174
APPROACH %'s :	47.85%	20.10%	32.06%	23.13%	66.42%	10.45%	4.74%	65.61%	29.64%	34.26%	53.63%	12.11%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	57	26	39	27	71	9	6	89	53	140	185	66	768
PEAK HR FACTOR :	0.803			0.652			0.740			0.714			0.800

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-013

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

		PM											
NS/EW Streets:	Briggs Rd			Briggs Rd			Telegraph Rd			Telegraph Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	4	3	20	5	9	1	3	78	18	11	27	4	183
4:15 PM	7	8	11	4	5	2	5	65	12	17	33	5	174
4:30 PM	6	9	17	13	4	1	3	91	15	11	30	3	203
4:45 PM	5	10	25	7	11	0	6	76	14	11	21	7	193
5:00 PM	6	14	29	7	5	0	4	70	12	19	27	2	195
5:15 PM	7	11	17	3	7	0	4	68	10	16	18	1	162
5:30 PM	7	13	21	0	6	1	8	61	8	15	24	3	167
5:45 PM	6	5	16	1	2	0	3	38	15	11	23	0	120
TOTAL VOLUMES :	NL 48	NT 73	NR 156	SL 40	ST 49	SR 5	EL 36	ET 547	ER 104	WL 111	WT 203	WR 25	TOTAL 1397
APPROACH %'s :	17.33%	26.35%	56.32%	42.55%	52.13%	5.32%	5.24%	79.62%	15.14%	32.74%	59.88%	7.37%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	24	41	82	31	25	3	18	302	53	58	111	17	765
PEAK HR FACTOR :	0.750			0.819			0.856			0.845			0.942

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-014

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

AM													
NS/EW Streets:	Briggs Rd			Briggs Rd			Faulkner Rd			Faulkner Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	1	20	2	1	22	0				4		4	54
7:15 AM	1	26	2	0	28	1				2		2	62
7:30 AM	0	34	4	2	48	0				4		4	96
7:45 AM	2	53	5	3	43	0				5		5	116
8:00 AM	1	33	2	5	38	0				1		2	82
8:15 AM	2	24	3	0	22	1				5		1	58
8:30 AM	2	25	3	0	21	1				4		1	57
8:45 AM	0	22	5	0	19	0				1		3	50
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	9	237	26	11	241	3	0	0	0	26	0	22	575
APPROACH %'s :	3.31%	87.13%	9.56%	4.31%	94.51%	1.18%	#DIV/0!	#DIV/0!	#DIV/0!	54.17%	0.00%	45.83%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	4	146	13	10	157	1	0	0	0	12	0	13	356
PEAK HR FACTOR :	0.679			0.840			0.000			0.625			0.767

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-014

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

		PM											
NS/EW Streets:	Briggs Rd			Briggs Rd			Faulkner Rd			Faulkner Rd			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
4:00 PM	0	25	5	0	43	1	3		6	1		1	85
4:15 PM	1	29	4	1	28	0	0		0	4		0	67
4:30 PM	0	31	5	1	30	0	0		1	1		3	72
4:45 PM	0	37	6	0	32	0	0		1	3		2	81
5:00 PM	1	45	6	2	29	0	1		0	4		1	89
5:15 PM	1	36	3	7	19	0	1		2	3		3	75
5:30 PM	0	43	4	4	22	0	0		1	1		1	76
5:45 PM	1	29	8	1	26	0	0		0	2		0	67
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
APPROACH %'s :	4	275	41	16	229	1	5	0	11	19	0	11	612
	1.25%	85.94%	12.81%	6.50%	93.09%	0.41%	31.25%	0.00%	68.75%	63.33%	0.00%	36.67%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	2	161	19	13	102	0	2	0	4	11	0	7	321
PEAK HR FACTOR :	0.875			0.898			0.500			0.750			0.902

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-015

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

AM

NS/EW Streets:	Briggs Rd			Briggs Rd			I-126 WB Ramps			I-126 WB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM		12	6	21	6					5		10	60
7:15 AM		17	10	20	10					5		14	76
7:30 AM		14	6	36	16					7		27	106
7:45 AM		26	5	30	20					11		30	122
8:00 AM		23	4	20	17					7		12	83
8:15 AM		24	7	18	6					4		7	66
8:30 AM		21	6	17	10					5		7	66
8:45 AM		18	7	14	6					3		9	57
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	155	51	176	91	0	0	0	0	47	0	116	636
APPROACH %'s :	0.00%	75.24%	24.76%	65.92%	34.08%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	28.83%	0.00%	71.17%	
PEAK HR START TIME :	715 AM												TOTAL
PEAK HR VOL :	0	80	25	106	63	0	0	0	0	30	0	83	387
PEAK HR FACTOR :	0.847			0.813			0.000			0.689			0.793

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-015

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

PM

NS/EW Streets:	Briggs Rd			Briggs Rd			I-126 WB Ramps			I-126 WB Ramps			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM		25	17	24	25					5		2	98
4:15 PM		19	11	19	15					7		16	87
4:30 PM		26	9	19	16					4		12	86
4:45 PM		36	13	18	17					5		9	98
5:00 PM		38	16	21	13					5		13	106
5:15 PM		27	14	8	13					6		14	82
5:30 PM		38	11	13	10					3		9	84
5:45 PM		25	5	12	17					3		9	71
TOTAL VOLUMES :	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	234	96	134	126	0	0	0	0	38	0	84	712
APPROACH %'s :	0.00%	70.91%	29.09%	51.54%	48.46%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	31.15%	0.00%	68.85%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	0	119	49	77	61	0	0	0	0	21	0	50	377
PEAK HR FACTOR :		0.778			0.986			0.000			0.772		0.889

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-016

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

AM

NS/EW Streets:	Briggs Rd		Briggs Rd			I-126 EB Ramps			I-126 EB Ramps			TOTAL	
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	1	11		8	3		9		8				40
7:15 AM	4	7		10	6		16		5				48
7:30 AM	6	12		9	14		11		7				59
7:45 AM	5	6		18	14		24		14				81
8:00 AM	6	5		9	13		23		6				62
8:15 AM	3	8		7	4		22		14				58
8:30 AM	1	10		11	5		19		6				52
8:45 AM	3	12		3	3		13		16				50
TOTAL VOLUMES :	29	71	0	0	75	62	137	0	76	0	0	0	450
APPROACH %'s :	29.00%	71.00%	0.00%	0.00%	54.74%	45.26%	64.32%	0.00%	35.68%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM											TOTAL	
PEAK HR VOL :	20	31	0	0	43	45	80	0	41	0	0	0	260
PEAK HR FACTOR :	0.708			0.688			0.796			0.000			0.802

CONTROL : 0

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-5533-016

Day: Tuesday

City: Santa Paula

Date: 8/26/2014

PM

NS/EW Streets:	Briggs Rd			Briggs Rd			I-126 EB Ramps			I-126 EB Ramps			TOTAL
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	0	0	0	0	0	0	0	0	0	0	0	
4:00 PM	4	17		6	24	28			10				89
4:15 PM	7	12		4	15	19			4				61
4:30 PM	2	7		6	13	25			11				64
4:45 PM	9	18		6	16	34			5				88
5:00 PM	13	21		4	16	31			3				88
5:15 PM	5	16		9	12	24			2				68
5:30 PM	1	12		2	10	34			7				66
5:45 PM	4	8		7	13	26			0				58
TOTAL VOLUMES :	45	111	0	0	44	119	221	0	42	0	0	0	582
APPROACH %'s :	28.85%	71.15%	0.00%	0.00%	26.99%	73.01%	84.03%	0.00%	15.97%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	28	67	0	0	21	54	123	0	17	0	0	0	310
PEAK HR FACTOR :	0.699			0.852			0.854			0.000			0.881

CONTROL : 0

**APPENDIX C:
INTERSECTION LEVEL OF SERVICE WORKSHEETS**

EXISTING

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Existing						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	111	0	0.000	N-S(1): 0.294
	TH	1.00	582	1,600	0.433 *	N-S(2): 0.452 *
	LT	1.00	22	1,600	0.014	E-W(1): 0.300 *
Westbound	RT	0.00	17	0	0.000	E-W(2): 0.257
	TH	1.00	302	1,600	0.199	V/C: 0.752
	LT	1.00	168	1,600	0.105 *	Lost Time: 0.000
Northbound	RT	0.00	78	0	0.000	ITS: 0.000
	TH	1.00	340	1,600	0.280	ICU: 0.752
	LT	0.00	30	1,600	0.019 *	LOS: C
Eastbound	RT	0.00	94	0	0.000	
	TH	1.00	218	1,600	0.195 *	
	LT	1.00	92	1,600	0.058	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	135	0	0.000	N-S(1): 0.442 *
	TH	1.00	378	1,600	0.321	N-S(2): 0.345
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.322 *
Westbound	RT	0.00	29	0	0.000	E-W(2): 0.310
	TH	1.00	341	1,600	0.231	V/C: 0.764
	LT	1.00	146	1,600	0.091 *	Lost Time: 0.000
Northbound	RT	0.00	134	0	0.000	ITS: 0.000
	TH	1.00	506	1,600	0.424 *	ICU: 0.764
	LT	0.00	39	1,600	0.024	LOS: C
Eastbound	RT	0.00	70	0	0.000	
	TH	1.00	300	1,600	0.231 *	
	LT	1.00	126	1,600	0.079	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 2 8th Street & Main Street Description: Existing Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	62	0	0.000	N-S(1):	0.122
	TH	1.00	164	1,600	0.141 *	N-S(2):	0.155 *
	LT	1.00	45	1,600	0.028	E-W(1):	0.161 *
Westbound	RT	0.00	22	0	0.000	E-W(2):	0.154
	TH	1.00	160	1,600	0.124	V/C:	0.316
	LT	0.00	16	1,600	0.010 *	Lost Time:	0.000
Northbound	RT	0.00	26	0	0.000	ITS:	0.000
	TH	1.00	124	1,600	0.094	ICU:	0.316
	LT	1.00	22	1,600	0.014 *	LOS:	A
Eastbound	RT	1.00	31	1,600	0.006		
	TH	1.00	194	1,600	0.151 *		
	LT	0.00	48	1,600	0.030		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	51	0	0.000	N-S(1):	0.160 *
	TH	1.00	100	1,600	0.094	N-S(2):	0.115
	LT	1.00	34	1,600	0.021 *	E-W(1):	0.229 *
Westbound	RT	0.00	41	0	0.000	E-W(2):	0.211
	TH	1.00	200	1,600	0.168	V/C:	0.389
	LT	0.00	27	1,600	0.017 *	Lost Time:	0.000
Northbound	RT	0.00	60	0	0.000	ITS:	0.000
	TH	1.00	162	1,600	0.139 *	ICU:	0.389
	LT	1.00	33	1,600	0.021	LOS:	A
Eastbound	RT	1.00	55	1,600	0.014		
	TH	1.00	270	1,600	0.212 *		
	LT	0.00	69	1,600	0.043		

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Existing Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	140	1,600	0.027	N-S(1):	0.064 *
	TH	1.00	22	1,600	0.050	N-S(2):	0.053
	LT	0.00	58	1,600	0.036 *	E-W(1):	0.111
Westbound	RT	0.00	29	0	0.000	E-W(2):	0.197 *
	TH	2.00	407	3,200	0.136 *	V/C:	0.261
	LT	1.00	14	1,600	0.009	Lost Time:	0.000
Northbound	RT	0.00	16	0	0.000	ITS:	0.000
	TH	1.00	24	1,600	0.028 *	ICU:	0.261
	LT	0.00	5	1,600	0.003	LOS:	A
Eastbound	RT	0.00	7	0	0.000		
	TH	2.00	319	3,200	0.102		
	LT	1.00	97	1,600	0.061 *		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	97	1,600	0.000	N-S(1):	0.094 *
	TH	1.00	20	1,600	0.043	N-S(2):	0.046
	LT	0.00	49	1,600	0.031 *	E-W(1):	0.164
Westbound	RT	0.00	47	0	0.000	E-W(2):	0.257 *
	TH	2.00	511	3,200	0.174 *	V/C:	0.351
	LT	1.00	15	1,600	0.009	Lost Time:	0.000
Northbound	RT	0.00	34	0	0.000	ITS:	0.000
	TH	1.00	62	1,600	0.063 *	ICU:	0.351
	LT	0.00	5	1,600	0.003	LOS:	A
Eastbound	RT	0.00	1	0	0.000		
	TH	2.00	495	3,200	0.155		
	LT	1.00	132	1,600	0.083 *		

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		4 Palm Avenue & Main Street				
Description:		Existing				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	37	0	0.000	N-S(1): 0.128
	TH	1.00	301	1,600	0.226 *	N-S(2): 0.264 *
	LT	0.00	23	1,600	0.014	E-W(1): 0.193 *
Westbound	RT	0.00	17	0	0.000	E-W(2): 0.132
	TH	1.00	147	1,600	0.103	V/C: 0.457
	LT	1.00	91	1,600	0.057 *	Lost Time: 0.000
Northbound	RT	1.00	144	1,600	0.033	ITS: 0.000
	TH	1.00	182	1,600	0.114	ICU: 0.457
	LT	1.00	60	1,600	0.038 *	LOS: A
Eastbound	RT	1.00	89	1,600	0.018	
	TH	1.00	218	1,600	0.136 *	
	LT	1.00	47	1,600	0.029	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	37	0	0.000	N-S(1): 0.161
	TH	1.00	205	1,600	0.158 *	N-S(2): 0.186 *
	LT	0.00	11	1,600	0.007	E-W(1): 0.244 *
Westbound	RT	0.00	21	0	0.000	E-W(2): 0.153
	TH	1.00	175	1,600	0.123	V/C: 0.430
	LT	1.00	108	1,600	0.068 *	Lost Time: 0.000
Northbound	RT	1.00	195	1,600	0.054	ITS: 0.000
	TH	1.00	247	1,600	0.154	ICU: 0.430
	LT	1.00	45	1,600	0.028 *	LOS: A
Eastbound	RT	1.00	69	1,600	0.015	
	TH	1.00	281	1,600	0.176 *	
	LT	1.00	48	1,600	0.030	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 5 Palm Avenue & Harvard Boulevard Description: Existing						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	123	0	0.000	N-S(1): 0.188
	TH	1.00	324	1,600	0.279 *	N-S(2): 0.352 *
	LT	1.00	46	1,600	0.029	E-W(1): 0.186
Westbound	RT	1.00	62	1,600	0.010	E-W(2): 0.187 *
	TH	2.00	408	3,200	0.128 *	
	LT	1.00	128	1,600	0.080	V/C: 0.539
Northbound	RT	0.00	67	0	0.000	Lost Time: 0.000
	TH	1.00	187	1,600	0.159	ITS: 0.000
	LT	1.00	117	1,600	0.073 *	
Eastbound	RT	1.00	131	1,600	0.009	ICU: 0.539
	TH	2.00	339	3,200	0.106	
	LT	1.00	94	1,600	0.059 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	120	0	0.000	N-S(1): 0.304
	TH	1.00	205	1,600	0.203 *	N-S(2): 0.305 *
	LT	1.00	68	1,600	0.043	E-W(1): 0.215
Westbound	RT	1.00	53	1,600	0.000	E-W(2): 0.237 *
	TH	2.00	501	3,200	0.157 *	
	LT	1.00	93	1,600	0.058	V/C: 0.542
Northbound	RT	0.00	100	0	0.000	Lost Time: 0.000
	TH	1.00	317	1,600	0.261	ITS: 0.000
	LT	1.00	163	1,600	0.102 *	
Eastbound	RT	1.00	148	1,600	0.000	ICU: 0.542
	TH	2.00	501	3,200	0.157	
	LT	1.00	128	1,600	0.080 *	LOS: A

* - Denotes critical movement

EXISTING AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.293
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.6
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), Min. Green, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.389
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.2
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Project Title: Santa Paula West Business Park Specific Plan Intersection: 7 Steckel Drive & Harvard Boulevard Description: Existing						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	73	0	0.000	N-S(1): 0.147
	TH	1.00	35	1,600	0.132 *	N-S(2): 0.155 *
	LT	0.00	103	1,600	0.064	E-W(1): 0.118
Westbound	RT	0.00	173	0	0.000	E-W(2): 0.186 *
	TH	2.00	301	3,200	0.148 *	V/C: 0.341
	LT	1.00	25	1,600	0.016	Lost Time: 0.000
Northbound	RT	0.00	60	0	0.000	ITS: 0.000
	TH	1.00	37	1,600	0.083	ICU: 0.341
	LT	0.00	36	1,600	0.023 *	LOS: A
Eastbound	RT	0.00	9	0	0.000	
	TH	2.00	316	3,200	0.102	
	LT	1.00	61	1,600	0.038 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	64	0	0.000	N-S(1): 0.113
	TH	1.00	33	1,600	0.108 *	N-S(2): 0.121 *
	LT	0.00	75	1,600	0.047	E-W(1): 0.215
Westbound	RT	0.00	119	0	0.000	E-W(2): 0.233 *
	TH	2.00	465	3,200	0.183 *	V/C: 0.354
	LT	1.00	57	1,600	0.036	Lost Time: 0.000
Northbound	RT	0.00	63	0	0.000	ITS: 0.000
	TH	1.00	23	1,600	0.066	ICU: 0.354
	LT	0.00	20	1,600	0.013 *	LOS: A
Eastbound	RT	0.00	38	0	0.000	
	TH	2.00	534	3,200	0.179	
	LT	1.00	80	1,600	0.050 *	

* - Denotes critical movement

Project Title:	Santa Paula West Business Park Specific Plan		
Intersection:	8 Peck Road & Harvard Boulevard		
Description:	Existing		
Date/Time:	AM PEAK HOUR		
Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	0
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	109	0	0.000	N-S(1): 0.127
	TH	1.00	341	1,600	0.281 *	N-S(2): 0.303 *
	LT	1.00	52	1,600	0.033	E-W(1): 0.199 *
Westbound	RT	1.00	88	1,600	0.023	E-W(2): 0.173
	TH	1.00	191	1,600	0.119	V/C: 0.502
	LT	1.00	206	1,600	0.129 *	Lost Time: 0.000
Northbound	RT	1.00	152	1,600	0.000	ITS: 0.000
	TH	1.00	150	1,600	0.094	ICU: 0.502
	LT	1.00	35	1,600	0.022 *	LOS: A
Eastbound	RT	0.00	89	0	0.000	
	TH	2.00	136	3,200	0.070 *	
	LT	1.00	86	1,600	0.054	

Date/Time:	PM PEAK HOUR		
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APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	76	0	0.000	N-S(1): 0.186 *
	TH	1.00	154	1,600	0.144	N-S(2): 0.173
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.206 *
Westbound	RT	1.00	28	1,600	0.000	E-W(2): 0.194
	TH	1.00	172	1,600	0.108	V/C: 0.392
	LT	1.00	172	1,600	0.108 *	Lost Time: 0.000
Northbound	RT	1.00	376	1,600	0.128	ITS: 0.000
	TH	1.00	269	1,600	0.168 *	ICU: 0.392
	LT	1.00	46	1,600	0.029	LOS: A
Eastbound	RT	0.00	71	0	0.000	
	TH	2.00	242	3,200	0.098 *	
	LT	1.00	138	1,600	0.086	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		8 Peck Road & Main (as Part of Intersection 8)				
Description:		Existing				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.023 * N-S(2): 0.000 E-W(1): 0.144 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	36	1,600	0.023 *	
Westbound	RT	1.00	58	1,600	0.014	V/C: 0.167 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	230	1,600	0.144 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.167 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.013 * N-S(2): 0.000 E-W(1): 0.078 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	20	1,600	0.013 *	
Westbound	RT	1.00	18	1,600	0.000	V/C: 0.091 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	125	1,600	0.078 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.091 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		9 Peck Road & Faulkner Road				
Description:		Existing				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	SBR, EBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	467	1,600	0.238 *	N-S(1): 0.159
	TH	1.00	148	1,600	0.093	N-S(2): 0.284 *
	LT	0.00	0	0	0.000	E-W(1): 0.000
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.054 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.338
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	254	1,600	0.159	ITS: 0.000
	LT	1.00	73	1,600	0.046 *	
Eastbound	RT	1.00	51	1,600	0.000	ICU: 0.338
	TH	0.00	0	0	0.000	
	LT	1.00	86	1,600	0.054 *	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	261	1,600	0.081	N-S(1): 0.371 *
	TH	1.00	143	1,600	0.089	N-S(2): 0.129
	LT	0.00	0	0	0.000 *	E-W(1): 0.006
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.082 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.453
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	593	1,600	0.371 *	ITS: 0.000
	LT	1.00	64	1,600	0.040	
Eastbound	RT	1.00	73	1,600	0.006	ICU: 0.453
	TH	0.00	0	0	0.000	
	LT	1.00	131	1,600	0.082 *	LOS: A

* - Denotes critical movement

EXISTING AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.343
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 9.6
Optimal Cycle: 0 Level Of Service: A

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.897
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 26.1
Optimal Cycle: 0 Level Of Service: D

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.769
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 19.0
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.402
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[11.6]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across various movements.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across various movements.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various movements.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 2.7 Worst Case Level Of Service: B[14.8]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gp and FollowUpTim for each approach.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each approach.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		13 Briggs Road & Telegraph Road				
Description:		Existing				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	9	0	0.000	N-S(1): 0.093
	TH	1.00	71	1,600	0.067 *	N-S(2): 0.103 *
	LT	0.00	27	1,600	0.017	E-W(1): 0.177 *
Westbound	RT	0.00	66	0	0.000	E-W(2): 0.161
	TH	1.00	185	1,600	0.157	V/C: 0.280
	LT	1.00	140	1,600	0.088 *	Lost Time: 0.000
Northbound	RT	0.00	39	0	0.000	ITS: 0.000
	TH	1.00	26	1,600	0.076	ICU: 0.280
	LT	0.00	57	1,600	0.036 *	LOS: A
Eastbound	RT	0.00	53	0	0.000	
	TH	1.00	89	1,600	0.089 *	
	LT	1.00	6	1,600	0.004	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.111 *
	TH	1.00	25	1,600	0.037	N-S(2): 0.052
	LT	0.00	31	1,600	0.019 *	E-W(1): 0.258 *
Westbound	RT	0.00	17	0	0.000	E-W(2): 0.091
	TH	1.00	111	1,600	0.080	V/C: 0.369
	LT	1.00	58	1,600	0.036 *	Lost Time: 0.000
Northbound	RT	0.00	82	0	0.000	ITS: 0.000
	TH	1.00	41	1,600	0.092 *	ICU: 0.369
	LT	0.00	24	1,600	0.015	LOS: A
Eastbound	RT	0.00	53	0	0.000	
	TH	1.00	302	1,600	0.222 *	
	LT	1.00	18	1,600	0.011	

* - Denotes critical movement

EXISTING AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.9]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[10.1]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each movement.

Note: Queue reported is the number of cars per lane.

EXISTING AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: A[10.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table showing Critical Gp and FollowUpTim for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for various movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: A[10.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the four approaches.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows correspond to the four approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the four approaches.

Note: Queue reported is the number of cars per lane.

EXISTING AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.0 Worst Case Level Of Service: A[9.6]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the movements defined in the previous table.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows correspond to the movements defined in the previous table.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the movements defined in the previous table.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the movements defined in the previous table.

Note: Queue reported is the number of cars per lane.

EXISTING PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.3 Worst Case Level Of Service: B[10.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the movements defined in the previous table.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows correspond to the movements defined in the previous table.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the movements defined in the previous table.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the movements defined in the previous table.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Existing plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	131	0	0.000	N-S(1): 0.298
	TH	1.00	608	1,600	0.462 *	N-S(2): 0.481 *
	LT	1.00	22	1,600	0.014	E-W(1): 0.316 *
Westbound	RT	0.00	17	0	0.000	E-W(2): 0.270
	TH	1.00	321	1,600	0.211	V/C: 0.797
	LT	1.00	180	1,600	0.113 *	Lost Time: 0.000
Northbound	RT	0.00	80	0	0.000	ITS: 0.000
	TH	1.00	344	1,600	0.284	ICU: 0.797
	LT	0.00	31	1,600	0.019 *	LOS: C
Eastbound	RT	0.00	104	0	0.000	
	TH	1.00	221	1,600	0.203 *	
	LT	1.00	95	1,600	0.059	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	139	0	0.000	N-S(1): 0.476 *
	TH	1.00	383	1,600	0.326	N-S(2): 0.357
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.339 *
Westbound	RT	0.00	29	0	0.000	E-W(2): 0.326
	TH	1.00	344	1,600	0.233	V/C: 0.815
	LT	1.00	148	1,600	0.093 *	Lost Time: 0.000
Northbound	RT	0.00	147	0	0.000	ITS: 0.000
	TH	1.00	535	1,600	0.458 *	ICU: 0.815
	LT	0.00	50	1,600	0.031	LOS: D
Eastbound	RT	0.00	72	0	0.000	
	TH	1.00	321	1,600	0.246 *	
	LT	1.00	149	1,600	0.093	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		2 8th Street & Main Street				
Description:		Existing plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	62	0	0.000	N-S(1): 0.122 N-S(2): 0.155 * E-W(1): 0.163 E-W(2): 0.168 *
	TH	1.00	164	1,600	0.141 *	
	LT	1.00	45	1,600	0.028	
Westbound	RT	0.00	22	0	0.000	V/C: 0.323 Lost Time: 0.000 ITS: 0.000
	TH	1.00	183	1,600	0.138 *	
	LT	0.00	16	1,600	0.010	
Northbound	RT	0.00	26	0	0.000	ICU: 0.323
	TH	1.00	124	1,600	0.094	
	LT	1.00	22	1,600	0.014 *	
Eastbound	RT	1.00	31	1,600	0.006	LOS: A
	TH	1.00	197	1,600	0.153	
	LT	0.00	48	1,600	0.030 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	51	0	0.000	N-S(1): 0.160 * N-S(2): 0.115 E-W(1): 0.245 * E-W(2): 0.213
	TH	1.00	100	1,600	0.094	
	LT	1.00	34	1,600	0.021 *	
Westbound	RT	0.00	41	0	0.000	V/C: 0.405 Lost Time: 0.000 ITS: 0.000
	TH	1.00	204	1,600	0.170	
	LT	0.00	27	1,600	0.017 *	
Northbound	RT	0.00	60	0	0.000	ICU: 0.405
	TH	1.00	162	1,600	0.139 *	
	LT	1.00	33	1,600	0.021	
Eastbound	RT	1.00	55	1,600	0.014	LOS: A
	TH	1.00	295	1,600	0.228 *	
	LT	0.00	69	1,600	0.043	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Existing plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	140	1,600	0.027	N-S(1): 0.064 * N-S(2): 0.053 E-W(1): 0.114 E-W(2): 0.216 *
	TH	1.00	22	1,600	0.050	
	LT	0.00	58	1,600	0.036 *	
Westbound	RT	0.00	29	0	0.000	V/C: 0.280 Lost Time: 0.000 ITS: 0.000
	TH	2.00	467	3,200	0.155 *	
	LT	1.00	14	1,600	0.009	
Northbound	RT	0.00	16	0	0.000	ICU: 0.280
	TH	1.00	24	1,600	0.028 *	
	LT	0.00	5	1,600	0.003	
Eastbound	RT	0.00	7	0	0.000	LOS: A
	TH	2.00	328	3,200	0.105	
	LT	1.00	97	1,600	0.061 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	97	1,600	0.000	N-S(1): 0.094 * N-S(2): 0.046 E-W(1): 0.185 E-W(2): 0.261 *
	TH	1.00	20	1,600	0.043	
	LT	0.00	49	1,600	0.031 *	
Westbound	RT	0.00	47	0	0.000	V/C: 0.355 Lost Time: 0.000 ITS: 0.000
	TH	2.00	521	3,200	0.178 *	
	LT	1.00	15	1,600	0.009	
Northbound	RT	0.00	34	0	0.000	ICU: 0.355
	TH	1.00	62	1,600	0.063 *	
	LT	0.00	5	1,600	0.003	
Eastbound	RT	0.00	1	0	0.000	LOS: A
	TH	2.00	562	3,200	0.176	
	LT	1.00	132	1,600	0.083 *	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		4 Palm Avenue & Main Street				
Description:		Existing plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	59	0	0.000	N-S(1): 0.128
	TH	1.00	310	1,600	0.245 *	N-S(2): 0.283 *
	LT	0.00	23	1,600	0.014	E-W(1): 0.195 *
Westbound	RT	0.00	17	0	0.000	E-W(2): 0.148
	TH	1.00	170	1,600	0.117	V/C: 0.478
	LT	1.00	91	1,600	0.057 *	Lost Time: 0.000
Northbound	RT	1.00	144	1,600	0.033	ITS: 0.000
	TH	1.00	183	1,600	0.114	ICU: 0.478
	LT	1.00	60	1,600	0.038 *	LOS: A
Eastbound	RT	1.00	89	1,600	0.018	
	TH	1.00	221	1,600	0.138 *	
	LT	1.00	50	1,600	0.031	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	41	0	0.000	N-S(1): 0.168
	TH	1.00	206	1,600	0.161 *	N-S(2): 0.189 *
	LT	0.00	11	1,600	0.007	E-W(1): 0.259 *
Westbound	RT	0.00	21	0	0.000	E-W(2): 0.170
	TH	1.00	179	1,600	0.125	V/C: 0.448
	LT	1.00	108	1,600	0.068 *	Lost Time: 0.000
Northbound	RT	1.00	195	1,600	0.054	ITS: 0.000
	TH	1.00	257	1,600	0.161	ICU: 0.448
	LT	1.00	45	1,600	0.028 *	LOS: A
Eastbound	RT	1.00	69	1,600	0.015	
	TH	1.00	306	1,600	0.191 *	
	LT	1.00	72	1,600	0.045	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 5 Palm Avenue & Harvard Boulevard Description: Existing plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	132	0	0.000	N-S(1): 0.188
	TH	1.00	324	1,600	0.285 *	N-S(2): 0.358 *
	LT	1.00	46	1,600	0.029	E-W(1): 0.189
Westbound	RT	1.00	62	1,600	0.010	E-W(2): 0.210 *
	TH	2.00	483	3,200	0.151 *	
	LT	1.00	128	1,600	0.080	V/C: 0.568
Northbound	RT	0.00	67	0	0.000	Lost Time: 0.000
	TH	1.00	187	1,600	0.159	ITS: 0.000
	LT	1.00	117	1,600	0.073 *	
Eastbound	RT	1.00	131	1,600	0.009	ICU: 0.568
	TH	2.00	350	3,200	0.109	
	LT	1.00	95	1,600	0.059 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	121	0	0.000	N-S(1): 0.304
	TH	1.00	205	1,600	0.204 *	N-S(2): 0.306 *
	LT	1.00	68	1,600	0.043	E-W(1): 0.241
Westbound	RT	1.00	53	1,600	0.000	E-W(2): 0.247 *
	TH	2.00	514	3,200	0.161 *	
	LT	1.00	93	1,600	0.058	V/C: 0.553
Northbound	RT	0.00	100	0	0.000	Lost Time: 0.000
	TH	1.00	317	1,600	0.261	ITS: 0.000
	LT	1.00	163	1,600	0.102 *	
Eastbound	RT	1.00	148	1,600	0.000	ICU: 0.553
	TH	2.00	585	3,200	0.183	
	LT	1.00	138	1,600	0.086 *	LOS: A

* - Denotes critical movement

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.335
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.1
 Optimal Cycle: 0 Level Of Service: B

Street Name:	Steckel Drive						Main Street									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign						
Rights:	Include			Include			Include			Include						
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0				
Lanes:	0	1	0	1	0	0	0	0	1	0	0	0	1	0	1	0

Volume Module:

Base Vol:	51	60	83	33	87	56	16	186	68	106	259	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	60	83	33	87	56	16	186	68	106	259	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	60	83	33	87	56	16	186	68	106	259	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	60	83	33	87	56	16	186	68	106	259	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	60	83	33	87	56	16	186	68	106	259	8

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.53	0.62	0.85	0.19	0.49	0.32	0.12	1.38	0.50	0.57	1.39	0.04
Final Sat.:	265	322	491	101	267	172	66	786	300	316	800	25

Capacity Analysis Module:

Vol/Sat:	0.19	0.19	0.17	0.33	0.33	0.33	0.24	0.24	0.23	0.34	0.32	0.32
Crit Moves:	****			****			****			****		
Delay/Veh:	10.9	10.6	9.6	12.1	12.1	12.1	10.7	10.5	10.0	11.9	11.5	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	10.6	9.6	12.1	12.1	12.1	10.7	10.5	10.0	11.9	11.5	11.2
LOS by Move:	B	B	A	B	B	B	B	B	B	B	B	B
ApproachDel:		10.3			12.1			10.4			11.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.3			12.1			10.4			11.6	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.4

 Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.445
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.9
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Min. Green values.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each movement.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for each movement.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ values.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		7 Steckel Drive & Harvard Boulevard				
Description:		Existing plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	78	0	0.000	N-S(1): 0.147 N-S(2): 0.158 * E-W(1): 0.124 E-W(2): 0.228 *
	TH	1.00	35	1,600	0.135 *	
	LT	0.00	103	1,600	0.064	
Westbound	RT	0.00	173	0	0.000	V/C: 0.386 Lost Time: 0.000 ITS: 0.000
	TH	2.00	432	3,200	0.189 *	
	LT	1.00	25	1,600	0.016	
Northbound	RT	0.00	60	0	0.000	ICU: 0.386
	TH	1.00	37	1,600	0.083	
	LT	0.00	36	1,600	0.023 *	
Eastbound	RT	0.00	9	0	0.000	LOS: A
	TH	2.00	335	3,200	0.108	
	LT	1.00	62	1,600	0.039 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	65	0	0.000	N-S(1): 0.113 N-S(2): 0.121 * E-W(1): 0.260 * E-W(2): 0.243
	TH	1.00	33	1,600	0.108 *	
	LT	0.00	75	1,600	0.047	
Westbound	RT	0.00	119	0	0.000	V/C: 0.381 Lost Time: 0.000 ITS: 0.000
	TH	2.00	488	3,200	0.190	
	LT	1.00	57	1,600	0.036 *	
Northbound	RT	0.00	63	0	0.000	ICU: 0.381
	TH	1.00	23	1,600	0.066	
	LT	0.00	20	1,600	0.013 *	
Eastbound	RT	0.00	38	0	0.000	LOS: A
	TH	2.00	680	3,200	0.224 *	
	LT	1.00	85	1,600	0.053	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Existing plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	179	0	0.000	N-S(1): 0.127
	TH	1.00	347	1,600	0.329 *	N-S(2): 0.367 *
	LT	1.00	52	1,600	0.033	E-W(1): 0.211
Westbound	RT	1.00	88	1,600	0.023	E-W(2): 0.260 *
	TH	1.00	320	1,600	0.200 *	
	LT	1.00	212	1,600	0.133	V/C: 0.627
Northbound	RT	1.00	153	1,600	0.000	Lost Time: 0.000
	TH	1.00	151	1,600	0.094	ITS: 0.000
	LT	1.00	60	1,600	0.038 *	
Eastbound	RT	0.00	94	0	0.000	ICU: 0.627
	TH	2.00	155	3,200	0.078	
	LT	1.00	96	1,600	0.060 *	LOS: B
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	89	0	0.000	N-S(1): 0.191 *
	TH	1.00	155	1,600	0.153	N-S(2): 0.184
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.262 *
Westbound	RT	1.00	28	1,600	0.000	E-W(2): 0.257
	TH	1.00	194	1,600	0.121	
	LT	1.00	173	1,600	0.108 *	V/C: 0.453
Northbound	RT	1.00	383	1,600	0.131	Lost Time: 0.000
	TH	1.00	276	1,600	0.173 *	ITS: 0.000
	LT	1.00	50	1,600	0.031	
Eastbound	RT	0.00	106	0	0.000	ICU: 0.453
	TH	2.00	387	3,200	0.154 *	
	LT	1.00	217	1,600	0.136	LOS: A

* - Denotes critical movement

Project Title:	Santa Paula West Business Park Specific Plan		
Intersection:	8 Peck Road & Main (as Part of Intersection 8)		
Description:	Existing plus Project		
Date/Time:	AM PEAK HOUR		
Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	0
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :	0		
FF Movements:	0		

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.023 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	36	1,600	0.023 *	E-W(1): 0.184 *
Westbound	RT	1.00	58	1,600	0.014	E-W(2): 0.014
	TH	0.00	0	0	0.000	
	LT	1.00	295	1,600	0.184 *	V/C: 0.207
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.207
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

Date/Time:	PM PEAK HOUR		
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APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.013 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	20	1,600	0.013 *	E-W(1): 0.086 *
Westbound	RT	1.00	18	1,600	0.000	E-W(2): 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	137	1,600	0.086 *	V/C: 0.099
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.099
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 9 Peck Road & Faulkner Road Description: Existing plus Project Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :	SBR, EBR,						
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	480	1,600	0.234 *	N-S(1):	0.164
	TH	1.00	152	1,600	0.095	N-S(2):	0.353 *
	LT	0.00	0	0	0.000	E-W(1):	0.000
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.066 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.419
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.000
	TH	1.00	262	1,600	0.164	ITS:	0.000
	LT	1.00	190	1,600	0.119 *		
Eastbound	RT	1.00	71	1,600	0.000	ICU:	0.419
	TH	0.00	0	0	0.000		
	LT	1.00	105	1,600	0.066 *	LOS:	A
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	1.00	267	1,600	0.074	N-S(1):	0.371 *
	TH	1.00	174	1,600	0.109	N-S(2):	0.162
	LT	0.00	0	0	0.000 *	E-W(1):	0.089
Westbound	RT	0.00	0	0	0.000	E-W(2):	0.093 *
	TH	0.00	0	0	0.000 *		
	LT	0.00	0	0	0.000	V/C:	0.464
Northbound	RT	0.00	0	0	0.000	Lost Time:	0.000
	TH	1.00	594	1,600	0.371 *	ITS:	0.000
	LT	1.00	85	1,600	0.053		
Eastbound	RT	1.00	228	1,600	0.089	ICU:	0.464
	TH	0.00	0	0	0.000		
	LT	1.00	148	1,600	0.093 *	LOS:	A

* - Denotes critical movement

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.533
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.7
 Optimal Cycle: 0 Level Of Service: B

Street Name:	Peck Road						SR-126 EB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1! 0	0	0	1! 0	0	1	0	1	0	1

Volume Module:

Base Vol:	8	35	7	86	39	94	319	7	14	5	50	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	35	7	86	39	94	319	7	14	5	50	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	8	35	7	86	39	94	319	7	14	5	50	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	35	7	86	39	94	319	7	14	5	50	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	35	7	86	39	94	319	7	14	5	50	112

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.70	0.14	0.39	0.18	0.43	1.00	0.92	0.08	0.06	0.94	1.00
Final Sat.:	95	414	83	259	118	283	599	604	54	36	573	695

Capacity Analysis Module:

Vol/Sat:	0.08	0.08	0.08	0.33	0.33	0.33	0.53	0.01	0.26	0.14	0.09	0.16
Crit Moves:	****			****			****			****		
Delay/Veh:	9.0	9.0	9.0	10.4	10.4	10.4	14.8	8.2	8.2	8.9	8.9	8.5
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	9.0	9.0	9.0	10.4	10.4	10.4	14.8	8.2	8.2	8.9	8.9	8.5
LOS by Move:	A	A	A	B	B	B	B	A	A	A	A	A
ApproachDel:	9.0			10.4			14.4			8.6		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	9.0			10.4			14.4			8.6		
LOS by Appr:	A			B			B			A		
AllWayAvgQ:	0.1	0.1	0.1	0.4	0.4	0.4	1.0	0.0	0.0	0.1	0.2	0.2

 Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.020
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 40.7
Optimal Cycle: 0 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.859
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 22.0
 Optimal Cycle: 0 Level Of Service: C

Street Name:	Faulkner Road						SR-126 WB On/Off-Ramps						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0	1	0	0	1	0	0	1	0	1	0	1	0

Volume Module:

Base Vol:	152	13	124	9	8	0	0	47	23	494	154	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	13	124	9	8	0	0	47	23	494	154	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	13	124	9	8	0	0	47	23	494	154	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	13	124	9	8	0	0	47	23	494	154	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	13	124	9	8	0	0	47	23	494	154	26

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.92	0.08	1.00	1.00	1.00	0.00	1.00	1.34	0.66	1.00	1.71	0.29
Final Sat.:	458	39	593	458	489	0	457	667	342	575	1071	184

Capacity Analysis Module:

Vol/Sat:	0.33	0.33	0.21	0.02	0.02	xxxx	0.00	0.07	0.07	0.86	0.14	0.14
Crit Moves:	****			****			****			****		
Delay/Veh:	12.9	12.9	9.9	10.3	9.7	0.0	0.0	10.0	9.7	34.9	9.3	9.1
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.9	12.9	9.9	10.3	9.7	0.0	0.0	10.0	9.7	34.9	9.3	9.1
LOS by Move:	B	B	A	B	A	*	*	B	A	D	A	A
ApproachDel:	11.6			10.0			9.9			28.0		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	11.6			10.0			9.9			28.0		
LOS by Appr:	B			B			A			D		
AllWayAvgQ:	0.4	0.4	0.2	0.0	0.0	0.0	0.0	0.1	0.1	4.1	0.2	0.2

 Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.468
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.6
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: C[18.7]

Street Name:	Beckwith Road						Telegraph Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	0	1	0	0	1	0	0

Volume Module:

Base Vol:	7	1	29	67	9	72	26	170	50	155	311	49
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	7	1	29	67	9	72	26	170	50	155	311	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	1	29	67	9	72	26	170	50	155	311	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	1	29	67	9	72	26	170	50	155	311	49

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	933	917	195	883	893	311	360	xxxx	xxxxx	220	xxxx	xxxxx
Potent Cap.:	248	274	851	269	283	734	1210	xxxx	xxxxx	1361	xxxx	xxxxx
Move Cap.:	194	235	851	230	242	734	1210	xxxx	xxxxx	1361	xxxx	xxxxx
Volume/Cap:	0.04	0.00	0.03	0.29	0.04	0.10	0.02	xxxx	xxxx	0.11	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	1.2	xxxx	xxxxx	0.1	xxxx	xxxxx	0.4	xxxx	xxxxx
Control Del:	24.3	xxxx	xxxxx	26.9	xxxx	xxxxx	8.0	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	C	*	*	D	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	783	xxxx	xxxx	599	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	0.1	xxxxx	xxxx	0.5	xxxxx	xxxx	xxxxx	0.4	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	9.8	xxxxx	xxxx	11.9	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
Shared LOS:	*	*	A	*	*	B	*	*	*	A	*	*
ApproachDel:	12.5			18.7			xxxxxxx			xxxxxxx		
ApproachLOS:	B			C			*			*		

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 6.3 Worst Case Level Of Service: D[30.2]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each movement.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		13 Briggs Road & Telegraph Road				
Description:		Existing plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	9	0	0.000	N-S(1): 0.113 * N-S(2): 0.103 E-W(1): 0.197 * E-W(2): 0.163
	TH	1.00	71	1,600	0.067	
	LT	0.00	27	1,600	0.017 *	
Westbound	RT	0.00	66	0	0.000	V/C: 0.310 Lost Time: 0.000 ITS: 0.000
	TH	1.00	189	1,600	0.159	
	LT	1.00	145	1,600	0.091 *	
Northbound	RT	0.00	71	0	0.000	ICU: 0.310 LOS: A
	TH	1.00	26	1,600	0.096 *	
	LT	0.00	57	1,600	0.036	
Eastbound	RT	0.00	53	0	0.000	
	TH	1.00	117	1,600	0.106 *	
	LT	1.00	6	1,600	0.004	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.115 * N-S(2): 0.052 E-W(1): 0.283 * E-W(2): 0.111
	TH	1.00	25	1,600	0.037	
	LT	0.00	31	1,600	0.019 *	
Westbound	RT	0.00	17	0	0.000	V/C: 0.398 Lost Time: 0.000 ITS: 0.000
	TH	1.00	143	1,600	0.100	
	LT	1.00	93	1,600	0.058 *	
Northbound	RT	0.00	88	0	0.000	ICU: 0.398 LOS: A
	TH	1.00	41	1,600	0.096 *	
	LT	0.00	24	1,600	0.015	
Eastbound	RT	0.00	53	0	0.000	
	TH	1.00	307	1,600	0.225 *	
	LT	1.00	18	1,600	0.011	

* - Denotes critical movement

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.1]

Street Name:	Briggs Road						Faulkner Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0	0	0	1! 0 0

Volume Module:

Base Vol:	4	178	13	10	162	1	0	0	0	12	0	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	178	13	10	162	1	0	0	0	12	0	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	178	13	10	162	1	0	0	0	12	0	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	178	13	10	162	1	0	0	0	12	0	13

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	6.4	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	163	xxxx	xxxxx	191	xxxx	xxxxx	382	382	163	375	376	185
Potent Cap.:	1428	xxxx	xxxxx	1395	xxxx	xxxxx	580	554	888	630	559	863
Move Cap.:	1428	xxxx	xxxxx	1395	xxxx	xxxxx	567	549	888	625	553	863
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.02

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.5	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	730	xxxxx
SharedQueue:	xxxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	xxxxxx	0.1	xxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	xxxxxx	xxxx	xxxxx	xxxxxx	10.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[10.4]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across various movements.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across various movements.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various movements.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: B[10.3]

Street Name:	Briggs Road						SR-126 WB On/Off-Ramps																	
Approach:	North Bound			South Bound			East Bound			West Bound														
Movement:	L	T	R	L	T	R	L	T	R	L	T	R												
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign														
Rights:	Include			Include			Include			Include														
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	112	25	111	63	0	0	0	0	0	30	0	83
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	112	25	111	63	0	0	0	0	0	30	0	83
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	112	25	111	63	0	0	0	0	0	30	0	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	112	25	111	63	0	0	0	0	0	30	0	83

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	137	xxxx	xxxxx	xxxx	xxxx	xxxxx	410	410	125
Potent Cap.:	xxxx	xxxx	xxxxx	1459	xxxx	xxxxx	xxxx	xxxx	xxxxx	602	535	932
Move Cap.:	xxxx	xxxx	xxxxx	1459	xxxx	xxxxx	xxxx	xxxx	xxxxx	565	491	932
Volume/Cap:	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	0.00	0.09

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	795	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.3	xxxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxxx			xxxxxxx			xxxxxxx			10.3		
ApproachLOS:	*			*			*			B		

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: B[10.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table showing Critical Gp and FollowUpTim for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for different movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.7 Worst Case Level Of Service: A[9.9]

Street Name:	Briggs Road						SR-126 EB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0

Volume Module:

Base Vol:	20	31	0	0	43	45	112	0	41	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	31	0	0	43	45	112	0	41	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	31	0	0	43	45	112	0	41	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	31	0	0	43	45	112	0	41	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	88	xxxx	xxxxx	xxxx	xxxx	xxxxx	137	137	66	xxxx	xxxx	xxxxx
Potent Cap.:	1520	xxxx	xxxxx	xxxx	xxxx	xxxxx	862	758	1004	xxxx	xxxx	xxxxx
Move Cap.:	1520	xxxx	xxxxx	xxxx	xxxx	xxxxx	853	748	1004	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.13	0.00	0.04	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	889	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.9	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.9			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[10.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Final Volume. Rows include various adjustment factors and volume calculations.

Critical Gap Module table with columns for Critical Gp, FollowUpTim. Rows include gap and follow-up time values for different movements.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., Volume/Cap. Rows include conflict volume, potential capacity, move capacity, and volume-to-capacity ratios.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, ApproachLOS. Rows include various level of service and delay metrics.

Note: Queue reported is the number of cars per lane.

**EXISTING PLUS PROJECT
PLUS MITIGATION**

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Existing plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	131	0	0.000	N-S(1): 0.298 N-S(2): 0.481 * E-W(1): 0.316 * E-W(2): 0.260
	TH	1.00	608	1,600	0.462 *	
	LT	1.00	22	1,600	0.014	
Westbound	RT	1.00	17	1,600	0.000	V/C: 0.797 Lost Time: 0.000 ITS: 0.000
	TH	1.00	321	1,600	0.201	
	LT	1.00	180	1,600	0.113 *	
Northbound	RT	0.00	80	0	0.000	ICU: 0.797
	TH	1.00	344	1,600	0.284	
	LT	0.00	31	1,600	0.019 *	
Eastbound	RT	0.00	104	0	0.000	LOS: C
	TH	1.00	221	1,600	0.203 *	
	LT	1.00	95	1,600	0.059	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	139	0	0.000	N-S(1): 0.476 * N-S(2): 0.357 E-W(1): 0.339 * E-W(2): 0.308
	TH	1.00	383	1,600	0.326	
	LT	1.00	28	1,600	0.018 *	
Westbound	RT	1.00	29	1,600	0.001	V/C: 0.815 Lost Time: 0.000 ITS: 0.000
	TH	1.00	344	1,600	0.215	
	LT	1.00	148	1,600	0.093 *	
Northbound	RT	0.00	147	0	0.000	ICU: 0.815
	TH	1.00	535	1,600	0.458 *	
	LT	0.00	50	1,600	0.031	
Eastbound	RT	0.00	72	0	0.000	LOS: D
	TH	1.00	321	1,600	0.246 *	
	LT	1.00	149	1,600	0.093	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Existing plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	NBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	179	0	0.000	N-S(1): 0.080
	TH	2.00	347	3,200	0.164 *	N-S(2): 0.202 *
	LT	1.00	52	1,600	0.033	E-W(1): 0.211
Westbound	RT	1.00	88	1,600	0.023	E-W(2): 0.260 *
	TH	1.00	320	1,600	0.200 *	
	LT	1.00	212	1,600	0.133	V/C: 0.462
Northbound	RT	1.00	153	1,600	0.000	Lost Time: 0.000
	TH	2.00	151	3,200	0.047	ITS: 0.000
	LT	1.00	60	1,600	0.038 *	
Eastbound	RT	0.00	94	0	0.000	ICU: 0.462
	TH	2.00	155	3,200	0.078	
	LT	1.00	96	1,600	0.060 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	89	0	0.000	N-S(1): 0.149 *
	TH	2.00	155	3,200	0.076	N-S(2): 0.107
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.262 *
Westbound	RT	1.00	28	1,600	0.000	E-W(2): 0.257
	TH	1.00	194	1,600	0.121	
	LT	1.00	173	1,600	0.108 *	V/C: 0.411
Northbound	RT	1.00	383	1,600	0.131 *	Lost Time: 0.000
	TH	2.00	276	3,200	0.086	ITS: 0.000
	LT	1.00	50	1,600	0.031	
Eastbound	RT	0.00	106	0	0.000	ICU: 0.411
	TH	2.00	387	3,200	0.154 *	
	LT	1.00	217	1,600	0.136	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8b Peck Road & Main (as Part of Intersection 8) Description: Existing plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.023 * N-S(2): 0.000 E-W(1): 0.184 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	36	1,600	0.023 *	
Westbound	RT	1.00	58	1,600	0.014	V/C: 0.207 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	295	1,600	0.184 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.207 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.013 * N-S(2): 0.000 E-W(1): 0.086 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	20	1,600	0.013 *	
Westbound	RT	1.00	18	1,600	0.000	V/C: 0.099 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	137	1,600	0.086 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.099 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title:	Santa Paula West Business Park Specific Plan		
Intersection:	10 Peck Road & SR-126 EB ramps		
Description:	Existing plus Project Mitigation		
Date/Time:	AM PEAK HOUR		
Thru Lane:	1600 vph	N-S Split Phase :	N
Left Lane:	1600 vph	E-W Split Phase :	N
Double Lt Penalty:	20 %	Lost Time (% of cycle) :	0
ITS:	0 %	V/C Round Off (decs.) :	3
OLA Movements :			
FF Movements:			

APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	94	0	0.000	N-S(1): 0.085
	TH	1.00	39	1,600	0.137 *	N-S(2): 0.142 *
	LT	0.00	86	1,600	0.054	E-W(1): 0.216
Westbound	RT	0.00	112	1,600	0.070 *	E-W(2): 0.269 *
	TH	2.00	50	1,600	0.034	V/C: 0.411
	LT	0.00	5	1,600	0.003	Lost Time: 0.000
Northbound	RT	0.00	7	0	0.000	ITS: 0.000
	TH	1.00	35	1,600	0.031	ICU: 0.411
	LT	0.00	8	1,600	0.005 *	LOS: A
Eastbound	RT	0.00	14	0	0.000	
	TH	2.00	7	1,600	0.213	
	LT	0.00	319	1,600	0.199 *	

Date/Time:	PM PEAK HOUR		
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APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	278	0	0.000	N-S(1): 0.085
	TH	1.00	28	1,600	0.251 *	N-S(2): 0.256 *
	LT	0.00	95	1,600	0.059	E-W(1): 0.398
Westbound	RT	0.00	84	1,600	0.053 *	E-W(2): 0.409 *
	TH	2.00	21	1,600	0.014	V/C: 0.665
	LT	0.00	1	1,600	0.001	Lost Time: 0.000
Northbound	RT	0.00	4	0	0.000	ITS: 0.000
	TH	1.00	29	1,600	0.026	ICU: 0.665
	LT	0.00	8	1,600	0.005 *	LOS: B
Eastbound	RT	0.00	2	0	0.000	
	TH	2.00	63	1,600	0.397	
	LT	0.00	570	1,600	0.356 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 12 Beckwith Road & Telegraph Road Description: Existing plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	72	0	0.000	N-S(1): 0.065 * N-S(2): 0.055 E-W(1): 0.235 * E-W(2): 0.210
	TH	1.00	9	1,600	0.051	
	LT	1.00	67	1,600	0.042 *	
Westbound	RT	1.00	49	1,600	0.000	V/C: 0.300 Lost Time: 0.000 ITS: 0.000
	TH	1.00	311	1,600	0.194	
	LT	1.00	155	1,600	0.097 *	
Northbound	RT	0.00	29	0	0.000	ICU: 0.300
	TH	1.00	1	1,600	0.023 *	
	LT	0.00	7	1,600	0.004	
Eastbound	RT	0.00	50	0	0.000	LOS: A
	TH	1.00	170	1,600	0.138 *	
	LT	1.00	26	1,600	0.016	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	20	0	0.000	N-S(1): 0.179 * N-S(2): 0.044 E-W(1): 0.317 * E-W(2): 0.137
	TH	1.00	2	1,600	0.014	
	LT	1.00	61	1,600	0.038 *	
Westbound	RT	1.00	61	1,600	0.000	V/C: 0.496 Lost Time: 0.000 ITS: 0.000
	TH	1.00	154	1,600	0.096	
	LT	1.00	30	1,600	0.019 *	
Northbound	RT	0.00	167	0	0.000	ICU: 0.496
	TH	1.00	11	1,600	0.141 *	
	LT	0.00	48	1,600	0.030	
Eastbound	RT	0.00	8	0	0.000	LOS: A
	TH	1.00	469	1,600	0.298 *	
	LT	1.00	65	1,600	0.041	

* - Denotes critical movement

EXISTING PLUS PROJECT WITHOUT BECKWITH EXTENSION

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	135	0	0.000	N-S(1): 0.297 N-S(2): 0.477 * E-W(1): 0.311 * E-W(2): 0.270
	TH	1.00	597	1,600	0.458 *	
	LT	1.00	22	1,600	0.014	
Westbound	RT	0.00	17	0	0.000	V/C: 0.788 Lost Time: 0.000 ITS: 0.000
	TH	1.00	321	1,600	0.211	
	LT	1.00	173	1,600	0.108 *	
Northbound	RT	0.00	79	0	0.000	ICU: 0.788
	TH	1.00	342	1,600	0.283	
	LT	0.00	31	1,600	0.019 *	
Eastbound	RT	0.00	104	0	0.000	LOS: C
	TH	1.00	221	1,600	0.203 *	
	LT	1.00	95	1,600	0.059	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	139	0	0.000	N-S(1): 0.462 * N-S(2): 0.356 E-W(1): 0.338 * E-W(2): 0.329
	TH	1.00	381	1,600	0.325	
	LT	1.00	28	1,600	0.018 *	
Westbound	RT	0.00	29	0	0.000	V/C: 0.800 Lost Time: 0.000 ITS: 0.000
	TH	1.00	344	1,600	0.233	
	LT	1.00	147	1,600	0.092 *	
Northbound	RT	0.00	139	0	0.000	ICU: 0.800
	TH	1.00	522	1,600	0.444 *	
	LT	0.00	50	1,600	0.031	
Eastbound	RT	0.00	72	0	0.000	LOS: C
	TH	1.00	321	1,600	0.246 *	
	LT	1.00	153	1,600	0.096	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 2 8th Street & Main Street Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	62	0	0.000	N-S(1): 0.122
	TH	1.00	164	1,600	0.141 *	N-S(2): 0.155 *
	LT	1.00	45	1,600	0.028	E-W(1): 0.164
Westbound	RT	0.00	22	0	0.000	E-W(2): 0.173 *
	TH	1.00	191	1,600	0.143 *	V/C: 0.328
	LT	0.00	16	1,600	0.010	Lost Time: 0.000
Northbound	RT	0.00	26	0	0.000	ITS: 0.000
	TH	1.00	124	1,600	0.094	ICU: 0.328
	LT	1.00	22	1,600	0.014 *	LOS: A
Eastbound	RT	1.00	31	1,600	0.006	
	TH	1.00	198	1,600	0.154	
	LT	0.00	48	1,600	0.030 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	51	0	0.000	N-S(1): 0.160 *
	TH	1.00	100	1,600	0.094	N-S(2): 0.115
	LT	1.00	34	1,600	0.021 *	E-W(1): 0.251 *
Westbound	RT	0.00	41	0	0.000	E-W(2): 0.214
	TH	1.00	205	1,600	0.171	V/C: 0.411
	LT	0.00	27	1,600	0.017 *	Lost Time: 0.000
Northbound	RT	0.00	60	0	0.000	ITS: 0.000
	TH	1.00	162	1,600	0.139 *	ICU: 0.411
	LT	1.00	33	1,600	0.021	LOS: A
Eastbound	RT	1.00	55	1,600	0.014	
	TH	1.00	305	1,600	0.234 *	
	LT	0.00	69	1,600	0.043	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	140	1,600	0.027	N-S(1): 0.064 * N-S(2): 0.053 E-W(1): 0.114 E-W(2): 0.217 *
	TH	1.00	22	1,600	0.050	
	LT	0.00	58	1,600	0.036 *	
Westbound	RT	0.00	29	0	0.000	V/C: 0.281 Lost Time: 0.000 ITS: 0.000
	TH	2.00	470	3,200	0.156 *	
	LT	1.00	14	1,600	0.009	
Northbound	RT	0.00	16	0	0.000	ICU: 0.281
	TH	1.00	24	1,600	0.028 *	
	LT	0.00	5	1,600	0.003	
Eastbound	RT	0.00	7	0	0.000	LOS: A
	TH	2.00	328	3,200	0.105	
	LT	1.00	97	1,600	0.061 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	97	1,600	0.000	N-S(1): 0.094 * N-S(2): 0.046 E-W(1): 0.186 E-W(2): 0.261 *
	TH	1.00	20	1,600	0.043	
	LT	0.00	49	1,600	0.031 *	
Westbound	RT	0.00	47	0	0.000	V/C: 0.355 Lost Time: 0.000 ITS: 0.000
	TH	2.00	522	3,200	0.178 *	
	LT	1.00	15	1,600	0.009	
Northbound	RT	0.00	34	0	0.000	ICU: 0.355
	TH	1.00	62	1,600	0.063 *	
	LT	0.00	5	1,600	0.003	
Eastbound	RT	0.00	1	0	0.000	LOS: A
	TH	2.00	566	3,200	0.177	
	LT	1.00	132	1,600	0.083 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 4 Palm Avenue & Main Street Description: Existing plus Project without Beckwith Extension Date/Time: AM PEAK HOUR								
Thru Lane:	1600 vph					N-S Split Phase :	N	
Left Lane:	1600 vph					E-W Split Phase :	N	
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0	
ITS:	0 %					V/C Round Off (decs.) :	3	
OLA Movements :								
FF Movements:								
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS		
Southbound	RT	0.00	60	0	0.000	N-S(1):	0.128	
	TH	1.00	310	1,600	0.246 *	N-S(2):	0.284 *	
	LT	0.00	23	1,600	0.014	E-W(1):	0.196 *	
Westbound	RT	0.00	17	0	0.000	E-W(2):	0.153	
	TH	1.00	178	1,600	0.122	V/C:	0.480	
	LT	1.00	91	1,600	0.057 *	Lost Time:	0.000	
Northbound	RT	1.00	144	1,600	0.033	ITS:	0.000	
	TH	1.00	183	1,600	0.114	ICU:	0.480	
	LT	1.00	60	1,600	0.038 *	LOS:	A	
Eastbound	RT	1.00	89	1,600	0.018			
	TH	1.00	222	1,600	0.139 *			
	LT	1.00	50	1,600	0.031			
Date/Time: PM PEAK HOUR								
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS		
Southbound	RT	0.00	41	0	0.000	N-S(1):	0.168	
	TH	1.00	206	1,600	0.161 *	N-S(2):	0.189 *	
	LT	0.00	11	1,600	0.007	E-W(1):	0.266 *	
Westbound	RT	0.00	21	0	0.000	E-W(2):	0.172	
	TH	1.00	180	1,600	0.126	V/C:	0.455	
	LT	1.00	108	1,600	0.068 *	Lost Time:	0.000	
Northbound	RT	1.00	195	1,600	0.054	ITS:	0.000	
	TH	1.00	257	1,600	0.161	ICU:	0.455	
	LT	1.00	45	1,600	0.028 *	LOS:	A	
Eastbound	RT	1.00	69	1,600	0.015			
	TH	1.00	316	1,600	0.198 *			
	LT	1.00	74	1,600	0.046			

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 5 Palm Avenue & Harvard Boulevard Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	132	0	0.000	N-S(1): 0.188
	TH	1.00	324	1,600	0.285 *	N-S(2): 0.358 *
	LT	1.00	46	1,600	0.029	E-W(1): 0.190
Westbound	RT	1.00	62	1,600	0.010	E-W(2): 0.212 *
	TH	2.00	488	3,200	0.153 *	
	LT	1.00	128	1,600	0.080	V/C: 0.570
Northbound	RT	0.00	67	0	0.000	Lost Time: 0.000
	TH	1.00	187	1,600	0.159	ITS: 0.000
	LT	1.00	117	1,600	0.073 *	
Eastbound	RT	1.00	131	1,600	0.009	ICU: 0.570
	TH	2.00	351	3,200	0.110	
	LT	1.00	95	1,600	0.059 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	121	0	0.000	N-S(1): 0.304
	TH	1.00	205	1,600	0.204 *	N-S(2): 0.306 *
	LT	1.00	68	1,600	0.043	E-W(1): 0.242
Westbound	RT	1.00	53	1,600	0.000	E-W(2): 0.247 *
	TH	2.00	515	3,200	0.161 *	
	LT	1.00	93	1,600	0.058	V/C: 0.553
Northbound	RT	0.00	100	0	0.000	Lost Time: 0.000
	TH	1.00	317	1,600	0.261	ITS: 0.000
	LT	1.00	163	1,600	0.102 *	
Eastbound	RT	1.00	148	1,600	0.000	ICU: 0.553
	TH	2.00	590	3,200	0.184	
	LT	1.00	138	1,600	0.086 *	LOS: A

* - Denotes critical movement

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.343
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.1
Optimal Cycle: 0 Level Of Service: B

Street Name:	Steckel Drive						Main Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	51	59	83	33	85	56	16	188	68	106	269	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	51	59	83	33	85	56	16	188	68	106	269	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	59	83	33	85	56	16	188	68	106	269	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	59	83	33	85	56	16	188	68	106	269	8
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	59	83	33	85	56	16	188	68	106	269	8

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.53	0.61	0.86	0.19	0.49	0.32	0.12	1.38	0.50	0.55	1.41	0.04
Final Sat.:	266	317	492	102	262	173	65	788	297	309	811	24

Capacity Analysis Module:

Vol/Sat:	0.19	0.19	0.17	0.32	0.32	0.32	0.24	0.24	0.23	0.34	0.33	0.33
Crit Moves:	****				****		****			****		
Delay/Veh:	10.9	10.6	9.7	12.1	12.1	12.1	10.8	10.5	10.1	12.0	11.6	11.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.9	10.6	9.7	12.1	12.1	12.1	10.8	10.5	10.1	12.0	11.6	11.3
LOS by Move:	B	B	A	B	B	B	B	B	B	B	B	B
ApproachDel:		10.3			12.1			10.4			11.7	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		10.3			12.1			10.4			11.7	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.4	0.4

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.0
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control, Rights, Min. Green, and Lanes.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across movements.

Saturation Flow Module: Table showing Adjustment, Lanes, and Final Sat. for each movement.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Project Title: Santa Paula West Business Park Specific Plan Intersection: 7 Steckel Drive & Harvard Boulevard Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	76	0	0.000	N-S(1): 0.147 N-S(2): 0.157 * E-W(1): 0.124 E-W(2): 0.229 *
	TH	1.00	35	1,600	0.134 *	
	LT	0.00	103	1,600	0.064	
Westbound	RT	0.00	173	0	0.000	V/C: 0.386 Lost Time: 0.000 ITS: 0.000
	TH	2.00	438	3,200	0.191 *	
	LT	1.00	25	1,600	0.016	
Northbound	RT	0.00	60	0	0.000	ICU: 0.386
	TH	1.00	37	1,600	0.083	
	LT	0.00	36	1,600	0.023 *	
Eastbound	RT	0.00	9	0	0.000	LOS: A
	TH	2.00	336	3,200	0.108	
	LT	1.00	61	1,600	0.038 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	65	0	0.000	N-S(1): 0.113 N-S(2): 0.121 * E-W(1): 0.263 * E-W(2): 0.243
	TH	1.00	33	1,600	0.108 *	
	LT	0.00	75	1,600	0.047	
Westbound	RT	0.00	119	0	0.000	V/C: 0.384 Lost Time: 0.000 ITS: 0.000
	TH	2.00	489	3,200	0.190	
	LT	1.00	57	1,600	0.036 *	
Northbound	RT	0.00	63	0	0.000	ICU: 0.384
	TH	1.00	23	1,600	0.066	
	LT	0.00	20	1,600	0.013 *	
Eastbound	RT	0.00	38	0	0.000	LOS: A
	TH	2.00	687	3,200	0.227 *	
	LT	1.00	84	1,600	0.053	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	158	0	0.000	N-S(1): 0.130
	TH	1.00	376	1,600	0.334 *	N-S(2): 0.434 *
	LT	1.00	52	1,600	0.033	E-W(1): 0.237
Westbound	RT	1.00	88	1,600	0.023	E-W(2): 0.239 *
	TH	1.00	289	1,600	0.181 *	
	LT	1.00	248	1,600	0.155	V/C: 0.673
Northbound	RT	1.00	158	1,600	0.000	Lost Time: 0.000
	TH	1.00	155	1,600	0.097	ITS: 0.000
	LT	1.00	160	1,600	0.100 *	
Eastbound	RT	0.00	113	0	0.000	ICU: 0.673
	TH	2.00	150	3,200	0.082	
	LT	1.00	93	1,600	0.058 *	LOS: B
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	84	0	0.000	N-S(1): 0.211 *
	TH	1.00	162	1,600	0.154	N-S(2): 0.199
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.289 *
Westbound	RT	1.00	28	1,600	0.000	E-W(2): 0.238
	TH	1.00	187	1,600	0.117	
	LT	1.00	181	1,600	0.113 *	V/C: 0.500
Northbound	RT	1.00	422	1,600	0.151	Lost Time: 0.000
	TH	1.00	308	1,600	0.193 *	ITS: 0.000
	LT	1.00	72	1,600	0.045	
Eastbound	RT	0.00	212	0	0.000	ICU: 0.500
	TH	2.00	352	3,200	0.176 *	
	LT	1.00	193	1,600	0.121	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Main (as Part of Intersection 8) Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.023 * N-S(2): 0.000 E-W(1): 0.189 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	36	1,600	0.023 *	
Westbound	RT	1.00	58	1,600	0.014	V/C: 0.212 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	302	1,600	0.189 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.212 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.013 * N-S(2): 0.000 E-W(1): 0.086 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	20	1,600	0.013 *	
Westbound	RT	1.00	18	1,600	0.000	V/C: 0.099 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	138	1,600	0.086 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.099 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 9 Peck Road & Faulkner Road Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	SBR, EBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	557	1,600	0.244 *	N-S(1): 0.194
	TH	1.00	159	1,600	0.099	N-S(2): 0.337 *
	LT	0.00	0	0	0.000	E-W(1): 0.000
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.104 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.441
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	310	1,600	0.194	ITS: 0.000
	LT	1.00	148	1,600	0.093 *	
Eastbound	RT	1.00	62	1,600	0.000	ICU: 0.441
	TH	0.00	0	0	0.000	
	LT	1.00	167	1,600	0.104 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	331	1,600	0.061	N-S(1): 0.376 *
	TH	1.00	230	1,600	0.144	N-S(2): 0.194
	LT	0.00	0	0	0.000 *	E-W(1): 0.050
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.146 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.522
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	602	1,600	0.376 *	ITS: 0.000
	LT	1.00	80	1,600	0.050	
Eastbound	RT	1.00	160	1,600	0.050	ICU: 0.522
	TH	0.00	0	0	0.000	
	LT	1.00	234	1,600	0.146 *	LOS: A

* - Denotes critical movement

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 11.8
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Peck Road, SR-126 EB On/Off-Ramps), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lanes (0, 1, 0, 1, 0).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume, and values for 12 movements.

Saturation Flow Module: Table with columns for Adjustment, Lanes, Final Sat., and values for 12 movements.

Capacity Analysis Module: Table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ, and values for 12 movements.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.018
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 40.3
Optimal Cycle: 0 Level Of Service: E

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Peck Road (North/South Bound) and SR-126 EB On/Off-Ramps (East/West Bound).

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module: Table showing Adjustment, Lanes, and Final Sat. for different movements.

Capacity Analysis Module: Table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.860
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.7
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module:

Table showing volume calculations: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table showing saturation flow: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.552
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.4
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module: Table showing traffic volume metrics such as Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different movements.

Saturation Flow Module: Table showing adjustment factors and saturation flow values for different movements.

Capacity Analysis Module: Table showing delay, LOS, and capacity analysis metrics for various movements.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: C[18.8]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes (1, 0, 0, 1, 0).

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movement categories.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim across various movement categories.

Capacity Module: Table with columns for Cnflict Vol, Potent Cap., Move Cap., and Volume/Cap across various movement categories.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various movement categories.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 4.9 Worst Case Level Of Service: D[30.0]

Street Name:	Beckwith Road						Telegraph Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	0	1	0	0	0	1	0

Volume Module:

Base Vol:	23	5	117	62	1	20	65	563	3	18	168	67
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	23	5	117	62	1	20	65	563	3	18	168	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	23	5	117	62	1	20	65	563	3	18	168	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	23	5	117	62	1	20	65	563	3	18	168	67

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	943	966	565	960	900	168	235	xxxx	xxxxx	566	xxxx	xxxxx
Potent Cap.:	245	257	529	238	280	881	1344	xxxx	xxxxx	1016	xxxx	xxxxx
Move Cap.:	227	240	529	174	262	881	1344	xxxx	xxxxx	1016	xxxx	xxxxx
Volume/Cap:	0.10	0.02	0.22	0.36	0.00	0.02	0.05	xxxx	xxxx	0.02	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.3	xxxx	xxxxx	1.5	xxxx	xxxxx	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx			
Control Del:	22.7	xxxx	xxxxx	36.8	xxxx	xxxxx	7.8	xxxx	xxxxx	8.6	xxxx	xxxxx			
LOS by Move:	C	*	*	E	*	*	A	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	504	xxxx	xxxx	792	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	0.9	xxxxx	xxxx	0.1	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	14.4	xxxxx	xxxx	9.7	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx			
Shared LOS:	*	*	B	*	*	A	*	*	*	A	*	*			
ApproachDel:	15.7			30.0			xxxxxx			xxxxxx					
ApproachLOS:	C			D			*			*					

Note: Queue reported is the number of cars per lane.

Project Title: Santa Paula West Business Park Specific Plan Intersection: 13 Briggs Road & Telegraph Road Description: Existing plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	9	0	0.000	N-S(1): 0.116 * N-S(2): 0.103 E-W(1): 0.190 * E-W(2): 0.162
	TH	1.00	71	1,600	0.067	
	LT	0.00	27	1,600	0.017 *	
Westbound	RT	0.00	66	0	0.000	V/C: 0.306 Lost Time: 0.000 ITS: 0.000
	TH	1.00	187	1,600	0.158	
	LT	1.00	145	1,600	0.091 *	
Northbound	RT	0.00	76	0	0.000	ICU: 0.306
	TH	1.00	26	1,600	0.099 *	
	LT	0.00	57	1,600	0.036	
Eastbound	RT	0.00	53	0	0.000	LOS: A
	TH	1.00	106	1,600	0.099 *	
	LT	1.00	6	1,600	0.004	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.115 * N-S(2): 0.052 E-W(1): 0.286 * E-W(2): 0.103
	TH	1.00	25	1,600	0.037	
	LT	0.00	31	1,600	0.019 *	
Westbound	RT	0.00	17	0	0.000	V/C: 0.401 Lost Time: 0.000 ITS: 0.000
	TH	1.00	130	1,600	0.092	
	LT	1.00	99	1,600	0.062 *	
Northbound	RT	0.00	88	0	0.000	ICU: 0.401
	TH	1.00	41	1,600	0.096 *	
	LT	0.00	24	1,600	0.015	
Eastbound	RT	0.00	53	0	0.000	LOS: A
	TH	1.00	305	1,600	0.224 *	
	LT	1.00	18	1,600	0.011	

* - Denotes critical movement

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[10.1]

Street Name:	Briggs Road						Faulkner Road								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0

Volume Module:

Base Vol:	4	183	13	10	162	1	0	0	0	12	0	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	183	13	10	162	1	0	0	0	12	0	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	183	13	10	162	1	0	0	0	12	0	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	183	13	10	162	1	0	0	0	12	0	13

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	6.4	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	163	xxxx	xxxxx	196	xxxx	xxxxx	387	387	163	380	381	190
Potent Cap.:	1428	xxxx	xxxxx	1389	xxxx	xxxxx	576	551	888	626	555	857
Move Cap.:	1428	xxxx	xxxxx	1389	xxxx	xxxxx	563	545	888	621	550	857
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.02

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.5	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	725	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			10.1					
ApproachLOS:	*			*			*			B					

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[10.4]

Street Name:	Briggs Road						Faulkner Road													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	1	0	0	0	0	0	1!	0	0	0	0	1!	0	0

Volume Module:

Base Vol:	2	167	19	13	143	0	2	0	4	11	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	167	19	13	143	0	2	0	4	11	0	7
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	167	19	13	143	0	2	0	4	11	0	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	167	19	13	143	0	2	0	4	11	0	7

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	143	xxxx	xxxxx	186	xxxx	xxxxx	353	359	143	352	350	177
Potent Cap.:	1452	xxxx	xxxxx	1401	xxxx	xxxxx	606	571	910	607	578	872
Move Cap.:	1452	xxxx	xxxxx	1401	xxxx	xxxxx	596	565	910	599	572	872
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.02	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.5	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	774	xxxxx	xxxx	682	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.1	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	9.7	xxxxx	xxxxx	10.4	xxxxx			
Shared LOS:	*	*	*	A	*	*	*	A	*	*	B	*			
ApproachDel:	xxxxxx			xxxxxx			9.7			10.4					
ApproachLOS:	*			*			A			B					

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 4.7 Worst Case Level Of Service: B[10.3]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module: Table showing Critical Gp and FollowUpTim for different movements.

Capacity Module: Table showing Cnflict Vol, Potent Cap., Move Cap., and Volume/Cap for various movements.

Level Of Service Module: Table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[10.3]

Street Name:	Briggs Road						SR-126 WB On/Off-Ramps																
Approach:	North Bound			South Bound			East Bound			West Bound													
Movement:	L	T	R	L	T	R	L	T	R	L	T	R											
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign													
Rights:	Include			Include			Include			Include													
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	125	49	118	61	0	0	0	0	0	21	0	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	125	49	118	61	0	0	0	0	0	21	0	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	125	49	118	61	0	0	0	0	0	21	0	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	125	49	118	61	0	0	0	0	0	21	0	50

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	6.5	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxx	174	xxxx	xxxx	xxxx	xxxx	xxxx	447	447	150
Potent Cap.:	xxxx	xxxx	xxxx	1415	xxxx	xxxx	xxxx	xxxx	xxxx	573	510	902
Move Cap.:	xxxx	xxxx	xxxx	1415	xxxx	xxxx	xxxx	xxxx	xxxx	534	464	902
Volume/Cap:	xxxx	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	0.00	0.06

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
Control Del:	xxxx	xxxx	xxxx	7.8	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	750	xxxx			
SharedQueue:	xxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.3	xxxx			
Shrd ConDel:	xxxx	xxxx	xxxx	7.8	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	10.3	xxxx			
Shared LOS:	*	*	*	A	*	*	*	*	*	*	B	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				10.3				
ApproachLOS:	*			*			*				B				

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.8 Worst Case Level Of Service: A[9.9]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North/South Bound and East/West Bound movements.

Volume Module: Table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for various movements.

Critical Gap Module: Table showing Critical Gp and FollowUpTim for different movements.

Capacity Module: Table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for various movements.

Level Of Service Module: Table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

EXISTING PLUS PROJECT PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 5.4 Worst Case Level Of Service: B[10.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North/South and East/West bounds.

Volume Module: Table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the movements in the previous table.

Critical Gap Module: Table with columns for Critical Gp and FollowUpTim. Rows correspond to the movements in the previous table.

Capacity Module: Table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the movements in the previous table.

Level Of Service Module: Table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the movements in the previous table.

Note: Queue reported is the number of cars per lane.

**EXISTING PLUS PROJECT WITHOUT BECKWITH EXTENSION
PLUS MITIGATION**

Project Title: Santa Paula West Business Park Specific Plan						
Intersection: 1 10th Street (SR-150) & Harvard Boulevard						
Description: Existing plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	135	0	0.000	N-S(1): 0.297
	TH	1.00	597	1,600	0.458 *	N-S(2): 0.477 *
	LT	1.00	22	1,600	0.014	E-W(1): 0.311 *
Westbound	RT	1.00	17	1,600	0.000	E-W(2): 0.260
	TH	1.00	321	1,600	0.201	
	LT	1.00	173	1,600	0.108 *	V/C: 0.788
Northbound	RT	0.00	79	0	0.000	Lost Time: 0.000
	TH	1.00	342	1,600	0.283	ITS: 0.000
	LT	0.00	31	1,600	0.019 *	
Eastbound	RT	0.00	104	0	0.000	ICU: 0.788
	TH	1.00	221	1,600	0.203 *	
	LT	1.00	95	1,600	0.059	LOS: C
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	139	0	0.000	N-S(1): 0.462 *
	TH	1.00	381	1,600	0.325	N-S(2): 0.356
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.338 *
Westbound	RT	1.00	29	1,600	0.001	E-W(2): 0.311
	TH	1.00	344	1,600	0.215	
	LT	1.00	147	1,600	0.092 *	V/C: 0.800
Northbound	RT	0.00	139	0	0.000	Lost Time: 0.000
	TH	1.00	522	1,600	0.444 *	ITS: 0.000
	LT	0.00	50	1,600	0.031	
Eastbound	RT	0.00	72	0	0.000	ICU: 0.800
	TH	1.00	321	1,600	0.246 *	
	LT	1.00	153	1,600	0.096	LOS: C

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan						
Intersection: 8 Peck Road & Harvard Boulevard						
Description: Existing plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	NBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	158	0	0.000	N-S(1): 0.130
	TH	2.00	376	3,200	0.167 *	N-S(2): 0.267 *
	LT	1.00	52	1,600	0.033	E-W(1): 0.237
Westbound	RT	1.00	88	1,600	0.023	E-W(2): 0.239 *
	TH	1.00	289	1,600	0.181 *	
	LT	1.00	248	1,600	0.155	V/C: 0.506
Northbound	RT	1.00	158	1,600	0.000	Lost Time: 0.000
	TH	1.00	155	1,600	0.097	ITS: 0.000
	LT	1.00	160	1,600	0.100 *	
Eastbound	RT	0.00	113	0	0.000	ICU: 0.506
	TH	2.00	150	3,200	0.082	
	LT	1.00	93	1,600	0.058 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	84	0	0.000	N-S(1): 0.211 *
	TH	2.00	162	3,200	0.077	N-S(2): 0.122
	LT	1.00	28	1,600	0.018 *	E-W(1): 0.289 *
Westbound	RT	1.00	28	1,600	0.000	E-W(2): 0.238
	TH	1.00	187	1,600	0.117	
	LT	1.00	181	1,600	0.113 *	V/C: 0.500
Northbound	RT	1.00	422	1,600	0.151	Lost Time: 0.000
	TH	1.00	308	1,600	0.193 *	ITS: 0.000
	LT	1.00	72	1,600	0.045	
Eastbound	RT	0.00	212	0	0.000	ICU: 0.500
	TH	2.00	352	3,200	0.176 *	
	LT	1.00	193	1,600	0.121	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Main (as Part of Intersection 8) Description: Existing plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.023 * N-S(2): 0.000 E-W(1): 0.118 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	36	1,600	0.023 *	
Westbound	RT	1.00	58	1,600	0.014	V/C: 0.141 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	302	2,560	0.118 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.141
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 * N-S(2): 0.000 E-W(1): 0.076 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	23	1,600	0.014 *	
Westbound	RT	1.00	23	1,600	0.000	V/C: 0.090 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	2.00	194	2,560	0.076 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.090
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 10 Peck Road & SR-126 EB ramps Description: Existing plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	92	0	0.000	N-S(1): 0.085
	TH	1.00	39	1,600	0.136 *	N-S(2): 0.141 *
	LT	0.00	86	1,600	0.054	E-W(1): 0.220
Westbound	RT	0.00	112	1,600	0.070 *	E-W(2): 0.274 *
	TH	2.00	50	1,600	0.034	
	LT	0.00	5	1,600	0.003	V/C: 0.415
Northbound	RT	0.00	7	0	0.000	Lost Time: 0.000
	TH	1.00	35	1,600	0.031	ITS: 0.000
	LT	0.00	8	1,600	0.005 *	
Eastbound	RT	0.00	14	0	0.000	ICU: 0.415
	TH	2.00	7	1,600	0.217	
	LT	0.00	326	1,600	0.204 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	265	0	0.000	N-S(1): 0.085
	TH	1.00	28	1,600	0.243 *	N-S(2): 0.248 *
	LT	0.00	95	1,600	0.059	E-W(1): 0.021
Westbound	RT	0.00	84	1,600	0.053 *	E-W(2): 0.411 *
	TH	2.00	21	1,600	0.014	
	LT	0.00	1	1,600	0.001	V/C: 0.659
Northbound	RT	0.00	4	0	0.000	Lost Time: 0.000
	TH	1.00	29	1,600	0.026	ITS: 0.000
	LT	0.00	8	1,600	0.005 *	
Eastbound	RT	0.00	2	0	0.000	ICU: 0.659
	TH	2.00	63	3,200	0.020	
	LT	1.00	572	1,600	0.358 *	LOS: B

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 12 Beckwith Road & Telegraph Road Description: Existing plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	72	0	0.000	N-S(1): 0.061 * N-S(2): 0.050 E-W(1): 0.200 E-W(2): 0.267 *
	TH	1.00	4	1,600	0.048	
	LT	1.00	72	1,600	0.045 *	
Westbound	RT	1.00	50	1,600	0.000	V/C: 0.328 Lost Time: 0.000 ITS: 0.000
	TH	1.00	402	1,600	0.251 *	
	LT	1.00	110	1,600	0.069	
Northbound	RT	0.00	22	0	0.000	ICU: 0.328
	TH	1.00	1	1,600	0.016 *	
	LT	0.00	3	1,600	0.002	
Eastbound	RT	0.00	27	0	0.000	LOS: A
	TH	1.00	182	1,600	0.131	
	LT	1.00	26	1,600	0.016 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	20	0	0.000	N-S(1): 0.130 * N-S(2): 0.027 E-W(1): 0.365 * E-W(2): 0.146
	TH	1.00	1	1,600	0.013	
	LT	1.00	62	1,600	0.039 *	
Westbound	RT	1.00	67	1,600	0.003	V/C: 0.495 Lost Time: 0.000 ITS: 0.000
	TH	1.00	168	1,600	0.105	
	LT	1.00	18	1,600	0.011 *	
Northbound	RT	0.00	117	0	0.000	ICU: 0.495
	TH	1.00	5	1,600	0.091 *	
	LT	0.00	23	1,600	0.014	
Eastbound	RT	0.00	3	0	0.000	LOS: A
	TH	1.00	563	1,600	0.354 *	
	LT	1.00	65	1,600	0.041	

* - Denotes critical movement

CUMULATIVE BASE (YEAR 2031)

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		1 10th Street (SR-150) & Harvard Boulevard				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	150	0	0.000	N-S(1): 0.360
	TH	1.00	729	1,600	0.549 *	N-S(2): 0.570 *
	LT	1.00	32	1,600	0.020	E-W(1): 0.422 *
Westbound	RT	0.00	20	0	0.000	E-W(2): 0.361
	TH	1.00	436	1,600	0.285	V/C: 0.992
	LT	1.00	194	1,600	0.121 *	Lost Time: 0.000
Northbound	RT	0.00	113	0	0.000	ITS: 0.000
	TH	1.00	398	1,600	0.340	ICU: 0.992
	LT	0.00	33	1,600	0.021 *	LOS: E
Eastbound	RT	0.00	102	0	0.000	
	TH	1.00	380	1,600	0.301 *	
	LT	1.00	121	1,600	0.076	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	173	0	0.000	N-S(1): 0.570 *
	TH	1.00	454	1,600	0.392	N-S(2): 0.418
	LT	1.00	40	1,600	0.025 *	E-W(1): 0.463 *
Westbound	RT	0.00	42	0	0.000	E-W(2): 0.457
	TH	1.00	517	1,600	0.349	V/C: 1.033
	LT	1.00	191	1,600	0.119 *	Lost Time: 0.000
Northbound	RT	0.00	157	0	0.000	ITS: 0.000
	TH	1.00	673	1,600	0.545 *	ICU: 1.033
	LT	0.00	42	1,600	0.026	LOS: F
Eastbound	RT	0.00	76	0	0.000	
	TH	1.00	474	1,600	0.344 *	
	LT	1.00	173	1,600	0.108	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		2 8th Street & Main Street				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	87	0	0.000	N-S(1): 0.160 N-S(2): 0.211 * E-W(1): 0.212 * E-W(2): 0.192
	TH	1.00	226	1,600	0.196 *	
	LT	1.00	49	1,600	0.031	
Westbound	RT	0.00	24	0	0.000	V/C: 0.423 Lost Time: 0.000 ITS: 0.000
	TH	1.00	193	1,600	0.147	
	LT	0.00	18	1,600	0.011 *	
Northbound	RT	0.00	32	0	0.000	ICU: 0.423
	TH	1.00	175	1,600	0.129	
	LT	1.00	24	1,600	0.015 *	
Eastbound	RT	1.00	34	1,600	0.006	LOS: A
	TH	1.00	249	1,600	0.201 *	
	LT	0.00	72	1,600	0.045	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	68	0	0.000	N-S(1): 0.207 * N-S(2): 0.157 E-W(1): 0.289 * E-W(2): 0.270
	TH	1.00	147	1,600	0.134	
	LT	1.00	37	1,600	0.023 *	
Westbound	RT	0.00	44	0	0.000	V/C: 0.496 Lost Time: 0.000 ITS: 0.000
	TH	1.00	262	1,600	0.213	
	LT	0.00	34	1,600	0.021 *	
Northbound	RT	0.00	70	0	0.000	ICU: 0.496
	TH	1.00	224	1,600	0.184 *	
	LT	1.00	36	1,600	0.023	
Eastbound	RT	1.00	60	1,600	0.015	LOS: A
	TH	1.00	338	1,600	0.268 *	
	LT	0.00	91	1,600	0.057	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Cumulative Base						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	152	1,600	0.029	N-S(1): 0.108 * N-S(2): 0.085 E-W(1): 0.200 E-W(2): 0.279 *
	TH	1.00	34	1,600	0.074	
	LT	0.00	84	1,600	0.053 *	
Westbound	RT	0.00	42	0	0.000	V/C: 0.387 Lost Time: 0.000 ITS: 0.000
	TH	2.00	639	3,200	0.213 *	
	LT	1.00	27	1,600	0.017	
Northbound	RT	0.00	36	0	0.000	ICU: 0.387
	TH	1.00	35	1,600	0.055 *	
	LT	0.00	17	1,600	0.011	
Eastbound	RT	0.00	20	0	0.000	LOS: A
	TH	2.00	564	3,200	0.183	
	LT	1.00	105	1,600	0.066 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	105	1,600	0.000	N-S(1): 0.140 * N-S(2): 0.072 E-W(1): 0.260 E-W(2): 0.352 *
	TH	1.00	30	1,600	0.066	
	LT	0.00	75	1,600	0.047 *	
Westbound	RT	0.00	79	0	0.000	V/C: 0.492 Lost Time: 0.000 ITS: 0.000
	TH	2.00	761	3,200	0.263 *	
	LT	1.00	39	1,600	0.024	
Northbound	RT	0.00	62	0	0.000	ICU: 0.492
	TH	1.00	77	1,600	0.093 *	
	LT	0.00	10	1,600	0.006	
Eastbound	RT	0.00	6	0	0.000	LOS: A
	TH	2.00	748	3,200	0.236	
	LT	1.00	143	1,600	0.089 *	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		4 Palm Avenue & Main Street				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph			N-S Split Phase :	N	
Left Lane:	1600 vph			E-W Split Phase :	N	
Double Lt Penalty:	20 %			Lost Time (% of cycle) :	0	
ITS:	0 %			V/C Round Off (decs.) :	3	
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	48	0	0.000	N-S(1): 0.211
	TH	1.00	420	1,600	0.311 *	N-S(2): 0.352 *
	LT	0.00	30	1,600	0.019	E-W(1): 0.255 *
Westbound	RT	0.00	19	0	0.000	E-W(2): 0.163
	TH	1.00	181	1,600	0.125	V/C: 0.607
	LT	1.00	138	1,600	0.086 *	Lost Time: 0.000
Northbound	RT	1.00	164	1,600	0.016	ITS: 0.000
	TH	1.00	307	1,600	0.192	ICU: 0.607
	LT	1.00	65	1,600	0.041 *	LOS: B
Eastbound	RT	1.00	97	1,600	0.020	
	TH	1.00	271	1,600	0.169 *	
	LT	1.00	60	1,600	0.038	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	44	0	0.000	N-S(1): 0.247
	TH	1.00	327	1,600	0.243 *	N-S(2): 0.274 *
	LT	0.00	18	1,600	0.011	E-W(1): 0.295 *
Westbound	RT	0.00	30	0	0.000	E-W(2): 0.197
	TH	1.00	228	1,600	0.161	V/C: 0.569
	LT	1.00	127	1,600	0.079 *	Lost Time: 0.000
Northbound	RT	1.00	250	1,600	0.077	ITS: 0.000
	TH	1.00	377	1,600	0.236	ICU: 0.569
	LT	1.00	49	1,600	0.031 *	LOS: A
Eastbound	RT	1.00	75	1,600	0.016	
	TH	1.00	346	1,600	0.216 *	
	LT	1.00	57	1,600	0.036	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		5 Palm Avenue & Harvard Boulevard				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	134	0	0.000	N-S(1): 0.294
	TH	1.00	457	1,600	0.369 *	N-S(2): 0.463 *
	LT	1.00	76	1,600	0.048	E-W(1): 0.294 *
Westbound	RT	1.00	90	1,600	0.009	E-W(2): 0.237
	TH	2.00	554	3,200	0.173	
	LT	1.00	201	1,600	0.126 *	V/C: 0.757
Northbound	RT	0.00	96	0	0.000	Lost Time: 0.000
	TH	1.00	298	1,600	0.246	ITS: 0.000
	LT	1.00	150	1,600	0.094 *	
Eastbound	RT	1.00	193	1,600	0.027	ICU: 0.757
	TH	2.00	537	3,200	0.168 *	
	LT	1.00	103	1,600	0.064	LOS: C
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	131	0	0.000	N-S(1): 0.450 *
	TH	1.00	312	1,600	0.277	N-S(2): 0.415
	LT	1.00	99	1,600	0.062 *	E-W(1): 0.284
Westbound	RT	1.00	91	1,600	0.000	E-W(2): 0.307 *
	TH	2.00	702	3,200	0.219 *	
	LT	1.00	119	1,600	0.074	V/C: 0.757
Northbound	RT	0.00	163	0	0.000	Lost Time: 0.000
	TH	1.00	457	1,600	0.388 *	ITS: 0.000
	LT	1.00	220	1,600	0.138	
Eastbound	RT	1.00	179	1,600	0.000	ICU: 0.757
	TH	2.00	672	3,200	0.210	
	LT	1.00	140	1,600	0.088 *	LOS: C

* - Denotes critical movement

2031 Cummulative Base AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.589
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 14.1
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lane counts.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each movement.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. for each movement.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.630
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 16.7
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Lane counts (0, 1, 0, 1, 0).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across 12 lanes.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for 12 lanes.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ for 12 lanes.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		7 Steckel Drive & Harvard Boulevard				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph			N-S Split Phase :	N	
Left Lane:	1600 vph			E-W Split Phase :	N	
Double Lt Penalty:	20 %			Lost Time (% of cycle) :	0	
ITS:	0 %			V/C Round Off (decs.) :	3	
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	79	0	0.000	N-S(1): 0.191
	TH	1.00	38	1,600	0.174 *	N-S(2): 0.198 *
	LT	0.00	161	1,600	0.101	E-W(1): 0.187
Westbound	RT	0.00	216	0	0.000	E-W(2): 0.246 *
	TH	2.00	440	3,200	0.205 *	V/C: 0.444
	LT	1.00	27	1,600	0.017	Lost Time: 0.000
Northbound	RT	0.00	65	0	0.000	ITS: 0.000
	TH	1.00	40	1,600	0.090	ICU: 0.444
	LT	0.00	39	1,600	0.024 *	LOS: A
Eastbound	RT	0.00	10	0	0.000	
	TH	2.00	534	3,200	0.170	
	LT	1.00	66	1,600	0.041 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	69	0	0.000	N-S(1): 0.153
	TH	1.00	36	1,600	0.147 *	N-S(2): 0.161 *
	LT	0.00	130	1,600	0.081	E-W(1): 0.271
Westbound	RT	0.00	192	0	0.000	E-W(2): 0.327 *
	TH	2.00	682	3,200	0.273 *	V/C: 0.488
	LT	1.00	62	1,600	0.039	Lost Time: 0.000
Northbound	RT	0.00	68	0	0.000	ITS: 0.000
	TH	1.00	25	1,600	0.072	ICU: 0.488
	LT	0.00	22	1,600	0.014 *	LOS: A
Eastbound	RT	0.00	41	0	0.000	
	TH	2.00	700	3,200	0.232	
	LT	1.00	87	1,600	0.054 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Cumulative Base Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	124	0	0.000	N-S(1):	0.264
	TH	1.00	558	1,600	0.426 *	N-S(2):	0.460 *
	LT	1.00	149	1,600	0.093	E-W(1):	0.231 *
Westbound	RT	1.00	159	1,600	0.006	E-W(2):	0.212
	TH	1.00	244	1,600	0.153	V/C:	0.691
	LT	1.00	224	1,600	0.140 *	Lost Time:	0.000
Northbound	RT	1.00	165	1,600	0.000	ITS:	0.000
	TH	1.00	274	1,600	0.171	ICU:	0.691
	LT	1.00	55	1,600	0.034 *	LOS:	B
Eastbound	RT	0.00	99	0	0.000		
	TH	2.00	191	3,200	0.091 *		
	LT	1.00	94	1,600	0.059		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	83	0	0.000	N-S(1):	0.371 *
	TH	1.00	318	1,600	0.251	N-S(2):	0.284
	LT	1.00	87	1,600	0.054 *	E-W(1):	0.243 *
Westbound	RT	1.00	112	1,600	0.016	E-W(2):	0.237
	TH	1.00	222	1,600	0.139	V/C:	0.614
	LT	1.00	187	1,600	0.117 *	Lost Time:	0.000
Northbound	RT	1.00	408	1,600	0.138	ITS:	0.000
	TH	1.00	507	1,600	0.317 *	ICU:	0.614
	LT	1.00	52	1,600	0.033	LOS:	B
Eastbound	RT	0.00	95	0	0.000		
	TH	2.00	307	3,200	0.126 *		
	LT	1.00	156	1,600	0.098		

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Main (as Part of Intersection 8) Description: Cumulative Base						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.026 * N-S(2): 0.000 E-W(1): 0.191 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	41	1,600	0.026 *	
Westbound	RT	1.00	64	1,600	0.014	V/C: 0.217 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	305	1,600	0.191 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.217 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 * N-S(2): 0.000 E-W(1): 0.113 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	23	1,600	0.014 *	
Westbound	RT	1.00	23	1,600	0.000	V/C: 0.127 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	181	1,600	0.113 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.127 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		9 Peck Road & Faulkner Road				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	SBR, EBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	618	1,600	0.299 *	N-S(1): 0.223
	TH	1.00	240	1,600	0.150	N-S(2): 0.351 *
	LT	0.00	0	0	0.000	E-W(1): 0.001
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.088 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.439
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	357	1,600	0.223	ITS: 0.000
	LT	1.00	83	1,600	0.052 *	
Eastbound	RT	1.00	85	1,600	0.001	ICU: 0.439
	TH	0.00	0	0	0.000	
	LT	1.00	140	1,600	0.088 *	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	383	1,600	0.112	N-S(1): 0.499 *
	TH	1.00	224	1,600	0.140	N-S(2): 0.189
	LT	0.00	0	0	0.000 *	E-W(1): 0.015
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.128 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.627
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	798	1,600	0.499 *	ITS: 0.000
	LT	1.00	79	1,600	0.049	
Eastbound	RT	1.00	103	1,600	0.015	ICU: 0.627
	TH	0.00	0	0	0.000	
	LT	1.00	204	1,600	0.128 *	LOS: B

* - Denotes critical movement

2031 Cummulative Base AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.516
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.2
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.298
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 97.6
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Cummulative Base AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.071
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 56.3
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Cummulative Base PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.664
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 14.1
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module:

Table showing volume adjustments: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table showing saturation flow adjustments: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[12.3]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: C[16.9]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gp and FollowUpTim for each approach.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		13 Briggs Road & Telegraph Road				
Description:		Cumulative Base				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.220
	TH	1.00	353	1,600	0.245 *	N-S(2): 0.284 *
	LT	0.00	29	1,600	0.018	E-W(1): 0.203 *
Westbound	RT	0.00	72	0	0.000	E-W(2): 0.177
	TH	1.00	204	1,600	0.173	V/C: 0.487
	LT	1.00	152	1,600	0.095 *	Lost Time: 0.000
Northbound	RT	0.00	42	0	0.000	ITS: 0.000
	TH	1.00	219	1,600	0.202	ICU: 0.487
	LT	0.00	62	1,600	0.039 *	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	114	1,600	0.108 *	
	LT	1.00	7	1,600	0.004	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.272 *
	TH	1.00	196	1,600	0.146	N-S(2): 0.162
	LT	0.00	34	1,600	0.021 *	E-W(1): 0.293 *
Westbound	RT	0.00	18	0	0.000	E-W(2): 0.112
	TH	1.00	141	1,600	0.099	V/C: 0.565
	LT	1.00	63	1,600	0.039 *	Lost Time: 0.000
Northbound	RT	0.00	89	0	0.000	ITS: 0.000
	TH	1.00	287	1,600	0.251 *	ICU: 0.565
	LT	0.00	26	1,600	0.016	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	348	1,600	0.254 *	
	LT	1.00	20	1,600	0.013	

* - Denotes critical movement

2031 Cumulative Base AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[13.3]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across four approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across four approaches.

Note: Queue reported is the number of cars per lane.

2031 Cummulative Base PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[14.3]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each approach.

Critical Gap Module table showing Critical Gp and FollowUpTim for each approach.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each approach.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each approach.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 6.7 Worst Case Level Of Service: C[19.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table showing Critical Gp and FollowUpTim for four approaches.

Capacity Module table showing Cnflict Vol, Potent Cap., Move Cap., and Volume/Cap for four approaches.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for four approaches.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: C[15.5]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table showing Critical Gp and FollowUpTim values for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for various movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

2031 Cumulative Base AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 8.3 Worst Case Level Of Service: B[11.7]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table showing Critical Gp and FollowUpTim for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for different movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

2031 Cummulative Base PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 9.7 Worst Case Level Of Service: B[13.7]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the four approaches.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows correspond to the four approaches.

Capacity Module table with columns for Cnflict Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the four approaches.

Note: Queue reported is the number of cars per lane.

CUMULATIVE PLUS PROJECT (YEAR 2031)

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		1 10th Street (SR-150) & Harvard Boulevard				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	170	0	0.000	N-S(1): 0.364
	TH	1.00	755	1,600	0.578 *	N-S(2): 0.599 *
	LT	1.00	32	1,600	0.020	E-W(1): 0.438 *
Westbound	RT	0.00	20	0	0.000	E-W(2): 0.375
	TH	1.00	455	1,600	0.297	V/C: 1.037
	LT	1.00	206	1,600	0.129 *	Lost Time: 0.000
Northbound	RT	0.00	115	0	0.000	ITS: 0.000
	TH	1.00	402	1,600	0.344	ICU: 1.037
	LT	0.00	34	1,600	0.021 *	LOS: F
Eastbound	RT	0.00	112	0	0.000	
	TH	1.00	383	1,600	0.309 *	
	LT	1.00	124	1,600	0.078	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	177	0	0.000	N-S(1): 0.603 *
	TH	1.00	459	1,600	0.398	N-S(2): 0.431
	LT	1.00	40	1,600	0.025 *	E-W(1): 0.479 *
Westbound	RT	0.00	42	0	0.000	E-W(2): 0.474
	TH	1.00	520	1,600	0.351	V/C: 1.082
	LT	1.00	193	1,600	0.121 *	Lost Time: 0.000
Northbound	RT	0.00	170	0	0.000	ITS: 0.000
	TH	1.00	702	1,600	0.578 *	ICU: 1.082
	LT	0.00	53	1,600	0.033	LOS: F
Eastbound	RT	0.00	78	0	0.000	
	TH	1.00	495	1,600	0.358 *	
	LT	1.00	196	1,600	0.123	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		2 8th Street & Main Street				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	87	0	0.000	N-S(1): 0.160 N-S(2): 0.211 * E-W(1): 0.214 * E-W(2): 0.206
	TH	1.00	226	1,600	0.196 *	
	LT	1.00	49	1,600	0.031	
Westbound	RT	0.00	24	0	0.000	V/C: 0.425 Lost Time: 0.000 ITS: 0.000
	TH	1.00	216	1,600	0.161	
	LT	0.00	18	1,600	0.011 *	
Northbound	RT	0.00	32	0	0.000	ICU: 0.425
	TH	1.00	175	1,600	0.129	
	LT	1.00	24	1,600	0.015 *	
Eastbound	RT	1.00	34	1,600	0.006	LOS: A
	TH	1.00	252	1,600	0.203 *	
	LT	0.00	72	1,600	0.045	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	68	0	0.000	N-S(1): 0.207 * N-S(2): 0.157 E-W(1): 0.305 * E-W(2): 0.272
	TH	1.00	147	1,600	0.134	
	LT	1.00	37	1,600	0.023 *	
Westbound	RT	0.00	44	0	0.000	V/C: 0.512 Lost Time: 0.000 ITS: 0.000
	TH	1.00	266	1,600	0.215	
	LT	0.00	34	1,600	0.021 *	
Northbound	RT	0.00	70	0	0.000	ICU: 0.512
	TH	1.00	224	1,600	0.184 *	
	LT	1.00	36	1,600	0.023	
Eastbound	RT	1.00	60	1,600	0.015	LOS: A
	TH	1.00	363	1,600	0.284 *	
	LT	0.00	91	1,600	0.057	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Cumulative plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	152	1,600	0.029	N-S(1): 0.108 * N-S(2): 0.085 E-W(1): 0.202 E-W(2): 0.298 *
	TH	1.00	34	1,600	0.074	
	LT	0.00	84	1,600	0.053 *	
Westbound	RT	0.00	42	0	0.000	V/C: 0.406 Lost Time: 0.000 ITS: 0.000
	TH	2.00	699	3,200	0.232 *	
	LT	1.00	27	1,600	0.017	
Northbound	RT	0.00	36	0	0.000	ICU: 0.406
	TH	1.00	35	1,600	0.055 *	
	LT	0.00	17	1,600	0.011	
Eastbound	RT	0.00	20	0	0.000	LOS: A
	TH	2.00	573	3,200	0.185	
	LT	1.00	105	1,600	0.066 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	105	1,600	0.000	N-S(1): 0.140 * N-S(2): 0.072 E-W(1): 0.281 E-W(2): 0.355 *
	TH	1.00	30	1,600	0.066	
	LT	0.00	75	1,600	0.047 *	
Westbound	RT	0.00	79	0	0.000	V/C: 0.495 Lost Time: 0.000 ITS: 0.000
	TH	2.00	771	3,200	0.266 *	
	LT	1.00	39	1,600	0.024	
Northbound	RT	0.00	62	0	0.000	ICU: 0.495
	TH	1.00	77	1,600	0.093 *	
	LT	0.00	10	1,600	0.006	
Eastbound	RT	0.00	6	0	0.000	LOS: A
	TH	2.00	815	3,200	0.257	
	LT	1.00	143	1,600	0.089 *	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		4 Palm Avenue & Main Street				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	70	0	0.000	N-S(1): 0.212 N-S(2): 0.372 * E-W(1): 0.257 * E-W(2): 0.178
	TH	1.00	429	1,600	0.331 *	
	LT	0.00	30	1,600	0.019	
Westbound	RT	0.00	19	0	0.000	V/C: 0.629 Lost Time: 0.000 ITS: 0.000
	TH	1.00	204	1,600	0.139	
	LT	1.00	138	1,600	0.086 *	
Northbound	RT	1.00	164	1,600	0.016	ICU: 0.629 LOS: B
	TH	1.00	308	1,600	0.193	
	LT	1.00	65	1,600	0.041 *	
Eastbound	RT	1.00	97	1,600	0.020	
	TH	1.00	274	1,600	0.171 *	
	LT	1.00	63	1,600	0.039	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	48	0	0.000	N-S(1): 0.253 N-S(2): 0.277 * E-W(1): 0.311 * E-W(2): 0.215
	TH	1.00	328	1,600	0.246 *	
	LT	0.00	18	1,600	0.011	
Westbound	RT	0.00	30	0	0.000	V/C: 0.588 Lost Time: 0.000 ITS: 0.000
	TH	1.00	232	1,600	0.164	
	LT	1.00	127	1,600	0.079 *	
Northbound	RT	1.00	250	1,600	0.077	ICU: 0.588 LOS: A
	TH	1.00	387	1,600	0.242	
	LT	1.00	49	1,600	0.031 *	
Eastbound	RT	1.00	75	1,600	0.016	
	TH	1.00	371	1,600	0.232 *	
	LT	1.00	81	1,600	0.051	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 5 Palm Avenue & Harvard Boulevard Description: Cumulative plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	143	0	0.000	N-S(1): 0.294
	TH	1.00	457	1,600	0.375 *	N-S(2): 0.469 *
	LT	1.00	76	1,600	0.048	E-W(1): 0.297 *
Westbound	RT	1.00	90	1,600	0.009	E-W(2): 0.262
	TH	2.00	629	3,200	0.197	
	LT	1.00	201	1,600	0.126 *	V/C: 0.766
Northbound	RT	0.00	96	0	0.000	Lost Time: 0.000
	TH	1.00	298	1,600	0.246	ITS: 0.000
	LT	1.00	150	1,600	0.094 *	
Eastbound	RT	1.00	193	1,600	0.027	ICU: 0.766
	TH	2.00	548	3,200	0.171 *	
	LT	1.00	104	1,600	0.065	LOS: C
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	132	0	0.000	N-S(1): 0.450 *
	TH	1.00	312	1,600	0.278	N-S(2): 0.416
	LT	1.00	99	1,600	0.062 *	E-W(1): 0.310
Westbound	RT	1.00	91	1,600	0.000	E-W(2): 0.317 *
	TH	2.00	715	3,200	0.223 *	
	LT	1.00	119	1,600	0.074	V/C: 0.767
Northbound	RT	0.00	163	0	0.000	Lost Time: 0.000
	TH	1.00	457	1,600	0.388 *	ITS: 0.000
	LT	1.00	220	1,600	0.138	
Eastbound	RT	1.00	179	1,600	0.000	ICU: 0.767
	TH	2.00	756	3,200	0.236	
	LT	1.00	150	1,600	0.094 *	LOS: C

* - Denotes critical movement

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.632
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.2
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Min. Green/Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across 12 lanes.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for 12 lanes.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ for 12 lanes.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.698
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.6
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name (Steckel Drive, Main Street), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L, T, R), Control (Stop Sign), Rights (Include), and Min. Green values.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume for each approach.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for each approach.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ values.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		7 Steckel Drive & Harvard Boulevard				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	84	0	0.000	N-S(1): 0.191
	TH	1.00	38	1,600	0.177 *	N-S(2): 0.201 *
	LT	0.00	161	1,600	0.101	E-W(1): 0.193
Westbound	RT	0.00	216	0	0.000	E-W(2): 0.288 *
	TH	2.00	571	3,200	0.246 *	V/C: 0.489
	LT	1.00	27	1,600	0.017	Lost Time: 0.000
Northbound	RT	0.00	65	0	0.000	ITS: 0.000
	TH	1.00	40	1,600	0.090	ICU: 0.489
	LT	0.00	39	1,600	0.024 *	LOS: A
Eastbound	RT	0.00	10	0	0.000	
	TH	2.00	553	3,200	0.176	
	LT	1.00	67	1,600	0.042 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	70	0	0.000	N-S(1): 0.153
	TH	1.00	36	1,600	0.148 *	N-S(2): 0.162 *
	LT	0.00	130	1,600	0.081	E-W(1): 0.316
Westbound	RT	0.00	192	0	0.000	E-W(2): 0.338 *
	TH	2.00	705	3,200	0.280 *	V/C: 0.500
	LT	1.00	62	1,600	0.039	Lost Time: 0.000
Northbound	RT	0.00	68	0	0.000	ITS: 0.000
	TH	1.00	25	1,600	0.072	ICU: 0.500
	LT	0.00	22	1,600	0.014 *	LOS: A
Eastbound	RT	0.00	41	0	0.000	
	TH	2.00	846	3,200	0.277	
	LT	1.00	92	1,600	0.058 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Cumulative plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	194	0	0.000	N-S(1): 0.265
	TH	1.00	564	1,600	0.474 *	N-S(2): 0.524 *
	LT	1.00	149	1,600	0.093	E-W(1): 0.242
Westbound	RT	1.00	159	1,600	0.006	E-W(2): 0.298 *
	TH	1.00	373	1,600	0.233 *	
	LT	1.00	230	1,600	0.144	V/C: 0.822
Northbound	RT	1.00	166	1,600	0.000	Lost Time: 0.000
	TH	1.00	275	1,600	0.172	ITS: 0.000
	LT	1.00	80	1,600	0.050 *	
Eastbound	RT	0.00	104	0	0.000	ICU: 0.822
	TH	2.00	210	3,200	0.098	
	LT	1.00	104	1,600	0.065 *	LOS: D
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	96	0	0.000	N-S(1): 0.375 *
	TH	1.00	319	1,600	0.259	N-S(2): 0.294
	LT	1.00	87	1,600	0.054 *	E-W(1): 0.300 *
Westbound	RT	1.00	112	1,600	0.016	E-W(2): 0.300 *
	TH	1.00	244	1,600	0.153 *	
	LT	1.00	188	1,600	0.118 *	V/C: 0.675
Northbound	RT	1.00	415	1,600	0.142	Lost Time: 0.000
	TH	1.00	514	1,600	0.321 *	ITS: 0.000
	LT	1.00	56	1,600	0.035	
Eastbound	RT	0.00	130	0	0.000	ICU: 0.675
	TH	2.00	452	3,200	0.182 *	
	LT	1.00	235	1,600	0.147 *	LOS: B

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Main (as Part of Intersection 8) Description: Cumulative plus Project						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.026 * N-S(2): 0.000 E-W(1): 0.231 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	41	1,600	0.026 *	
Westbound	RT	1.00	64	1,600	0.014	V/C: 0.257 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	370	1,600	0.231 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.257
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 * N-S(2): 0.000 E-W(1): 0.121 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	23	1,600	0.014 *	
Westbound	RT	1.00	23	1,600	0.000	V/C: 0.135 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	193	1,600	0.121 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.135
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		9 Peck Road & Faulkner Road				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	SBR, EBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	631	1,600	0.295 *	N-S(1): 0.228
	TH	1.00	244	1,600	0.153	N-S(2): 0.420 *
	LT	0.00	0	0	0.000	E-W(1): 0.000
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.099 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.519
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	365	1,600	0.228	ITS: 0.000
	LT	1.00	200	1,600	0.125 *	
Eastbound	RT	1.00	105	1,600	0.000	ICU: 0.519
	TH	0.00	0	0	0.000	
	LT	1.00	159	1,600	0.099 *	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	389	1,600	0.105	N-S(1): 0.499 *
	TH	1.00	255	1,600	0.159	N-S(2): 0.222
	LT	0.00	0	0	0.000 *	E-W(1): 0.099
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.138 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.637
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	799	1,600	0.499 *	ITS: 0.000
	LT	1.00	100	1,600	0.063	
Eastbound	RT	1.00	258	1,600	0.099	ICU: 0.637
	TH	0.00	0	0	0.000	
	LT	1.00	221	1,600	0.138 *	LOS: B

* - Denotes critical movement

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.727
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 16.6
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Peck Road (North/South Bound) and SR-126 EB On/Off-Ramps (East/West Bound).

Volume Module:

Table showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, Final Volume.

Saturation Flow Module:

Table showing saturation flow metrics: Adjustment, Lanes, Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.458
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 127.3
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.185
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 66.9
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.769
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.4
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 5.2 Worst Case Level Of Service: C[21.0]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 7.1 Worst Case Level Of Service: E[40.1]

Table with columns for Street Name (Beckwith Road, Telegraph Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Stop Sign, Uncontrolled), Rights (Include), and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across various movements.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across various movements.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various movements.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		13 Briggs Road & Telegraph Road				
Description:		Cumulative plus Project				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.240
	TH	1.00	353	1,600	0.245 *	N-S(2): 0.284 *
	LT	0.00	29	1,600	0.018	E-W(1): 0.223 *
Westbound	RT	0.00	72	0	0.000	E-W(2): 0.179
	TH	1.00	208	1,600	0.175	V/C: 0.507
	LT	1.00	157	1,600	0.098 *	Lost Time: 0.000
Northbound	RT	0.00	74	0	0.000	ITS: 0.000
	TH	1.00	219	1,600	0.222	ICU: 0.507
	LT	0.00	62	1,600	0.039 *	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	142	1,600	0.125 *	
	LT	1.00	7	1,600	0.004	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.276 *
	TH	1.00	196	1,600	0.146	N-S(2): 0.162
	LT	0.00	34	1,600	0.021 *	E-W(1): 0.318 *
Westbound	RT	0.00	18	0	0.000	E-W(2): 0.132
	TH	1.00	173	1,600	0.119	V/C: 0.594
	LT	1.00	98	1,600	0.061 *	Lost Time: 0.000
Northbound	RT	0.00	95	0	0.000	ITS: 0.000
	TH	1.00	287	1,600	0.255 *	ICU: 0.594
	LT	0.00	26	1,600	0.016	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	353	1,600	0.257 *	
	LT	1.00	20	1,600	0.013	

* - Denotes critical movement

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[13.7]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes (0 0 1! 0 0).

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across four approaches.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across four approaches.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across four approaches.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across four approaches.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[14.8]

Table with columns for Street Name (Briggs Road, Faulkner Road), Approach (North Bound, South Bound, East Bound, West Bound), Movement (L-T-R), Control (Uncontrolled, Stop Sign), Rights (Include), and Lanes.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume for each movement.

Critical Gap Module table showing Critical Gp and FollowUpTim for each movement.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap for each movement.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS for each movement.

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: C[21.0]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 WB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table showing Critical Gp and FollowUpTim values for different movements.

Capacity Module table showing Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. for various movements.

Level Of Service Module table showing 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: C[16.7]

Street Name:	Briggs Road						SR-126 WB On/Off-Ramps															
Approach:	North Bound			South Bound			East Bound			West Bound												
Movement:	L	T	R	L	T	R	L	T	R	L	T	R										
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign												
Rights:	Include			Include			Include			Include												
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Volume Module:

Base Vol:	0	378	53	288	66	0	0	0	0	0	23	0	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	378	53	288	66	0	0	0	0	0	23	0	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	378	53	288	66	0	0	0	0	0	23	0	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	378	53	288	66	0	0	0	0	0	23	0	54

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	6.5	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	431	xxxx	xxxx	xxxx	xxxx	xxxx	1047	1047	405
Potent Cap.:	xxxx	xxxx	xxxx	1139	xxxx	xxxx	xxxx	xxxx	xxxx	255	230	651
Move Cap.:	xxxx	xxxx	xxxx	1139	xxxx	xxxx	xxxx	xxxx	xxxx	196	161	651
Volume/Cap:	xxxx	xxxx	xxxx	0.25	xxxx	xxxx	xxxx	xxxx	xxxx	0.12	0.00	0.08

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	1.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	9.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	384	xxxx
SharedQueue:	xxxx	xxxx	xxxx	1.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.7	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	9.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	16.7	xxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				16.7	
ApproachLOS:	*			*			*				C	

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 8.8 Worst Case Level Of Service: B[12.2]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume across various movements.

Critical Gap Module table with columns for Critical Gp and FollowUpTim across various movements.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap across various movements.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS across various movements.

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 9.8 Worst Case Level Of Service: B[13.8]

Table with columns for Street Name, Approach, Movement, Control, Rights, and Lanes. Rows include Briggs Road and SR-126 EB On/Off-Ramps with sub-rows for North, South, East, and West bounds.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, and Final Volume. Rows correspond to the movements defined in the previous table.

Critical Gap Module table with columns for Critical Gp and FollowUpTim. Rows correspond to the movements defined in the previous table.

Capacity Module table with columns for Cnflct Vol, Potent Cap., Move Cap., and Volume/Cap. Rows correspond to the movements defined in the previous table.

Level Of Service Module table with columns for 2Way95thQ, Control Del, LOS by Move, Movement, Shared Cap., SharedQueue, Shrd ConDel, Shared LOS, ApproachDel, and ApproachLOS. Rows correspond to the movements defined in the previous table.

Note: Queue reported is the number of cars per lane.

**CUMULATIVE PLUS PROJECT
PLUS MITIGATION (YEAR 2031)**

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Cumulative plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	170	0	0.000	N-S(1): 0.364 N-S(2): 0.599 * E-W(1): 0.438 * E-W(2): 0.375
	TH	1.00	755	1,600	0.578 *	
	LT	1.00	32	1,600	0.020	
Westbound	RT	0.00	20	0	0.000	V/C: 1.037 Lost Time: 0.000 ITS: 0.000
	TH	1.00	455	1,600	0.297	
	LT	1.00	206	1,600	0.129 *	
Northbound	RT	0.00	115	0	0.000	ICU: 1.037 LOS: F
	TH	1.00	402	1,600	0.344	
	LT	0.00	34	1,600	0.021 *	
Eastbound	RT	0.00	112	0	0.000	
	TH	1.00	383	1,600	0.309 *	
	LT	1.00	124	1,600	0.078	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	177	0	0.000	N-S(1): 0.603 * N-S(2): 0.431 E-W(1): 0.479 * E-W(2): 0.474
	TH	1.00	459	1,600	0.398	
	LT	1.00	40	1,600	0.025 *	
Westbound	RT	0.00	42	0	0.000	V/C: 1.082 Lost Time: 0.000 ITS: 0.000
	TH	1.00	520	1,600	0.351	
	LT	1.00	193	1,600	0.121 *	
Northbound	RT	0.00	170	0	0.000	ICU: 1.082 LOS: F
	TH	1.00	702	1,600	0.578 *	
	LT	0.00	53	1,600	0.033	
Eastbound	RT	0.00	78	0	0.000	
	TH	1.00	495	1,600	0.358 *	
	LT	1.00	196	1,600	0.123	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Cumulative plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	NBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	194	0	0.000	N-S(1): 0.179
	TH	2.00	564	3,200	0.237 *	N-S(2): 0.287 *
	LT	1.00	149	1,600	0.093	E-W(1): 0.242
Westbound	RT	1.00	159	1,600	0.006	E-W(2): 0.298 *
	TH	1.00	373	1,600	0.233 *	
	LT	1.00	230	1,600	0.144	V/C: 0.585
Northbound	RT	1.00	166	1,600	0.000	Lost Time: 0.000
	TH	2.00	275	3,200	0.086	ITS: 0.000
	LT	1.00	80	1,600	0.050 *	
Eastbound	RT	0.00	104	0	0.000	ICU: 0.585
	TH	2.00	210	3,200	0.098	
	LT	1.00	104	1,600	0.065 *	LOS: A
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	96	0	0.000	N-S(1): 0.215 *
	TH	2.00	319	3,200	0.130	N-S(2): 0.165
	LT	1.00	87	1,600	0.054 *	E-W(1): 0.300 *
Westbound	RT	1.00	112	1,600	0.016	E-W(2): 0.300 *
	TH	1.00	244	1,600	0.153 *	
	LT	1.00	188	1,600	0.118 *	V/C: 0.515
Northbound	RT	1.00	415	1,600	0.142	Lost Time: 0.000
	TH	2.00	514	3,200	0.161 *	ITS: 0.000
	LT	1.00	56	1,600	0.035	
Eastbound	RT	0.00	130	0	0.000	ICU: 0.515
	TH	2.00	452	3,200	0.182 *	
	LT	1.00	235	1,600	0.147 *	LOS: A

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		8 Peck Road & Main (as Part of Intersection 8)				
Description:		Cumulative plus Project Mitigation				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.026 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	41	1,600	0.026 *	E-W(1): 0.231 *
Westbound	RT	1.00	64	1,600	0.014	E-W(2): 0.014
	TH	0.00	0	0	0.000	
	LT	1.00	370	1,600	0.231 *	V/C: 0.257
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.257
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	23	1,600	0.014 *	E-W(1): 0.121 *
Westbound	RT	1.00	23	1,600	0.000	E-W(2): 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	194	1,600	0.121 *	V/C: 0.135
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.135
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 10 Peck Road & SR-126 EB ramps Description: Cumulative plus Project Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	183	1,600	0.000	N-S(1): 0.101 * N-S(2): 0.051 E-W(1): 0.026 E-W(2): 0.359 *
	TH	1.00	69	1,600	0.043	
	LT	1.00	93	1,600	0.058 *	
Westbound	RT	0.00	122	0	0.000	V/C: 0.460 Lost Time: 0.000 ITS: 0.000
	TH	1.00	54	1,600	0.110 *	
	LT	1.00	5	1,600	0.003	
Northbound	RT	0.00	8	0	0.000	ICU: 0.460
	TH	1.00	60	1,600	0.043 *	
	LT	1.00	13	1,600	0.008	
Eastbound	RT	0.00	28	0	0.000	LOS: A
	TH	1.00	8	1,600	0.023	
	LT	1.00	398	1,600	0.249 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	354	1,600	0.000	N-S(1): 0.105 * N-S(2): 0.046 E-W(1): 0.049 E-W(2): 0.541 *
	TH	1.00	55	1,600	0.034	
	LT	1.00	103	1,600	0.064 *	
Westbound	RT	0.00	91	0	0.000	V/C: 0.646 Lost Time: 0.000 ITS: 0.000
	TH	1.00	23	1,600	0.071 *	
	LT	1.00	1	1,600	0.001	
Northbound	RT	0.00	4	0	0.000	ICU: 0.646
	TH	1.00	62	1,600	0.041 *	
	LT	1.00	19	1,600	0.012	
Eastbound	RT	0.00	8	0	0.000	LOS: B
	TH	1.00	68	1,600	0.048	
	LT	1.00	752	1,600	0.470 *	

* - Denotes critical movement

2031 Plus Project Mitigation AM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.599
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.1
Optimal Cycle: 0 Level Of Service: C

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Faulkner Road (North/South Bound) and SR-126 WB On/Off-Ramps (East/West Bound).

Volume Module:

Table showing traffic volume metrics: Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module:

Table showing saturation flow metrics: Adjustment, Lanes, and Final Sat.

Capacity Analysis Module:

Table showing capacity analysis metrics: Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

2031 Plus Project Mitigation PM

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.388
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 12.8
Optimal Cycle: 0 Level Of Service: B

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include North Bound, South Bound, East Bound, and West Bound movements.

Volume Module table showing Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across various movements.

Saturation Flow Module table showing Adjustment, Lanes, and Final Sat. values for different movements.

Capacity Analysis Module table showing Vol/Sat, Crit Moves, Delay/Veh, Delay Adj, AdjDel/Veh, LOS by Move, ApproachDel, Delay Adj, ApprAdjDel, LOS by Appr, and AllWayAvgQ.

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		12 Beckwith Road & Telegraph Road				
Description:		Cumulative plus Project Mitigation				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	78	0	0.000	N-S(1): 0.070 *
	TH	1.00	9	1,600	0.054	N-S(2): 0.058
	LT	1.00	73	1,600	0.046 *	E-W(1): 0.255 *
Westbound	RT	1.00	53	1,600	0.000	E-W(2): 0.226
	TH	1.00	333	1,600	0.208	V/C: 0.325
	LT	1.00	156	1,600	0.098 *	Lost Time: 0.000
Northbound	RT	0.00	30	0	0.000	ITS: 0.000
	TH	1.00	1	1,600	0.024 *	ICU: 0.325
	LT	0.00	7	1,600	0.004	LOS: A
Eastbound	RT	0.00	51	0	0.000	
	TH	1.00	200	1,600	0.157 *	
	LT	1.00	28	1,600	0.018	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	22	0	0.000	N-S(1): 0.184 *
	TH	1.00	2	1,600	0.015	N-S(2): 0.046
	LT	1.00	66	1,600	0.041 *	E-W(1): 0.349 *
Westbound	RT	1.00	66	1,600	0.000	E-W(2): 0.161
	TH	1.00	187	1,600	0.117	V/C: 0.533
	LT	1.00	30	1,600	0.019 *	Lost Time: 0.000
Northbound	RT	0.00	168	0	0.000	ITS: 0.000
	TH	1.00	11	1,600	0.143 *	ICU: 0.533
	LT	0.00	49	1,600	0.031	LOS: A
Eastbound	RT	0.00	8	0	0.000	
	TH	1.00	520	1,600	0.330 *	
	LT	1.00	70	1,600	0.044	

* - Denotes critical movement

**CUMULATIVE PLUS PROJECT WITHOUT BECKWITH EXTENSION
(YEAR 2031)**

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	174	0	0.000	N-S(1): 0.363 N-S(2): 0.595 * E-W(1): 0.433 * E-W(2): 0.375
	TH	1.00	744	1,600	0.574 *	
	LT	1.00	32	1,600	0.020	
Westbound	RT	0.00	20	0	0.000	V/C: 1.028 Lost Time: 0.000 ITS: 0.000
	TH	1.00	455	1,600	0.297	
	LT	1.00	199	1,600	0.124 *	
Northbound	RT	0.00	114	0	0.000	ICU: 1.028 LOS: F
	TH	1.00	400	1,600	0.343	
	LT	0.00	34	1,600	0.021 *	
Eastbound	RT	0.00	112	0	0.000	
	TH	1.00	383	1,600	0.309 *	
	LT	1.00	124	1,600	0.078	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	177	0	0.000	N-S(1): 0.590 * N-S(2): 0.429 E-W(1): 0.478 * E-W(2): 0.476
	TH	1.00	457	1,600	0.396	
	LT	1.00	40	1,600	0.025 *	
Westbound	RT	0.00	42	0	0.000	V/C: 1.068 Lost Time: 0.000 ITS: 0.000
	TH	1.00	520	1,600	0.351	
	LT	1.00	192	1,600	0.120 *	
Northbound	RT	0.00	162	0	0.000	ICU: 1.068 LOS: F
	TH	1.00	689	1,600	0.565 *	
	LT	0.00	53	1,600	0.033	
Eastbound	RT	0.00	78	0	0.000	
	TH	1.00	495	1,600	0.358 *	
	LT	1.00	200	1,600	0.125	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 2 8th Street & Main Street Description: Cumulative plus Project without Beckwith Extension Date/Time: AM PEAK HOUR							
Thru Lane:	1600 vph					N-S Split Phase :	N
Left Lane:	1600 vph					E-W Split Phase :	N
Double Lt Penalty:	20 %					Lost Time (% of cycle) :	0
ITS:	0 %					V/C Round Off (decs.) :	3
OLA Movements :							
FF Movements:							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	87	0	0.000	N-S(1):	0.160
	TH	1.00	226	1,600	0.196 *	N-S(2):	0.211 *
	LT	1.00	49	1,600	0.031	E-W(1):	0.214 *
Westbound	RT	0.00	24	0	0.000	E-W(2):	0.211
	TH	1.00	224	1,600	0.166	V/C:	0.425
	LT	0.00	18	1,600	0.011 *	Lost Time:	0.000
Northbound	RT	0.00	32	0	0.000	ITS:	0.000
	TH	1.00	175	1,600	0.129	ICU:	0.425
	LT	1.00	24	1,600	0.015 *	LOS:	A
Eastbound	RT	1.00	34	1,600	0.006		
	TH	1.00	253	1,600	0.203 *		
	LT	0.00	72	1,600	0.045		
Date/Time: PM PEAK HOUR							
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS	
Southbound	RT	0.00	68	0	0.000	N-S(1):	0.207 *
	TH	1.00	147	1,600	0.134	N-S(2):	0.157
	LT	1.00	37	1,600	0.023 *	E-W(1):	0.311 *
Westbound	RT	0.00	44	0	0.000	E-W(2):	0.273
	TH	1.00	267	1,600	0.216	V/C:	0.518
	LT	0.00	34	1,600	0.021 *	Lost Time:	0.000
Northbound	RT	0.00	70	0	0.000	ITS:	0.000
	TH	1.00	224	1,600	0.184 *	ICU:	0.518
	LT	1.00	36	1,600	0.023	LOS:	A
Eastbound	RT	1.00	60	1,600	0.015		
	TH	1.00	373	1,600	0.290 *		
	LT	0.00	91	1,600	0.057		

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 3 8th Street & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	152	1,600	0.029	N-S(1): 0.108 * N-S(2): 0.085 E-W(1): 0.202 E-W(2): 0.299 *
	TH	1.00	34	1,600	0.074	
	LT	0.00	84	1,600	0.053 *	
Westbound	RT	0.00	42	0	0.000	V/C: 0.407 Lost Time: 0.000 ITS: 0.000
	TH	2.00	702	3,200	0.233 *	
	LT	1.00	27	1,600	0.017	
Northbound	RT	0.00	36	0	0.000	ICU: 0.407
	TH	1.00	35	1,600	0.055 *	
	LT	0.00	17	1,600	0.011	
Eastbound	RT	0.00	20	0	0.000	LOS: A
	TH	2.00	573	3,200	0.185	
	LT	1.00	105	1,600	0.066 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	105	1,600	0.000	N-S(1): 0.140 * N-S(2): 0.072 E-W(1): 0.282 E-W(2): 0.355 *
	TH	1.00	30	1,600	0.066	
	LT	0.00	75	1,600	0.047 *	
Westbound	RT	0.00	79	0	0.000	V/C: 0.495 Lost Time: 0.000 ITS: 0.000
	TH	2.00	772	3,200	0.266 *	
	LT	1.00	39	1,600	0.024	
Northbound	RT	0.00	62	0	0.000	ICU: 0.495
	TH	1.00	77	1,600	0.093 *	
	LT	0.00	10	1,600	0.006	
Eastbound	RT	0.00	6	0	0.000	LOS: A
	TH	2.00	819	3,200	0.258	
	LT	1.00	143	1,600	0.089 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 4 Palm Avenue & Main Street Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	71	0	0.000	N-S(1): 0.212
	TH	1.00	429	1,600	0.331 *	N-S(2): 0.372 *
	LT	0.00	30	1,600	0.019	E-W(1): 0.258 *
Westbound	RT	0.00	19	0	0.000	E-W(2): 0.183
	TH	1.00	212	1,600	0.144	V/C: 0.630
	LT	1.00	138	1,600	0.086 *	Lost Time: 0.000
Northbound	RT	1.00	164	1,600	0.016	ITS: 0.000
	TH	1.00	308	1,600	0.193	ICU: 0.630
	LT	1.00	65	1,600	0.041 *	LOS: B
Eastbound	RT	1.00	97	1,600	0.020	
	TH	1.00	275	1,600	0.172 *	
	LT	1.00	63	1,600	0.039	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	48	0	0.000	N-S(1): 0.253
	TH	1.00	328	1,600	0.246 *	N-S(2): 0.277 *
	LT	0.00	18	1,600	0.011	E-W(1): 0.317 *
Westbound	RT	0.00	30	0	0.000	E-W(2): 0.216
	TH	1.00	233	1,600	0.164	V/C: 0.594
	LT	1.00	127	1,600	0.079 *	Lost Time: 0.000
Northbound	RT	1.00	250	1,600	0.077	ITS: 0.000
	TH	1.00	387	1,600	0.242	ICU: 0.594
	LT	1.00	49	1,600	0.031 *	LOS: A
Eastbound	RT	1.00	75	1,600	0.016	
	TH	1.00	381	1,600	0.238 *	
	LT	1.00	83	1,600	0.052	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 5 Palm Avenue & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	143	0	0.000	N-S(1): 0.294
	TH	1.00	457	1,600	0.375 *	N-S(2): 0.469 *
	LT	1.00	76	1,600	0.048	E-W(1): 0.298 *
Westbound	RT	1.00	90	1,600	0.009	E-W(2): 0.263
	TH	2.00	634	3,200	0.198	
	LT	1.00	201	1,600	0.126 *	V/C: 0.767
Northbound	RT	0.00	96	0	0.000	Lost Time: 0.000
	TH	1.00	298	1,600	0.246	ITS: 0.000
	LT	1.00	150	1,600	0.094 *	
Eastbound	RT	1.00	193	1,600	0.027	ICU: 0.767
	TH	2.00	549	3,200	0.172 *	
	LT	1.00	104	1,600	0.065	LOS: C
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	132	0	0.000	N-S(1): 0.450 *
	TH	1.00	312	1,600	0.278	N-S(2): 0.416
	LT	1.00	99	1,600	0.062 *	E-W(1): 0.312
Westbound	RT	1.00	91	1,600	0.000	E-W(2): 0.318 *
	TH	2.00	716	3,200	0.224 *	
	LT	1.00	119	1,600	0.074	V/C: 0.768
Northbound	RT	0.00	163	0	0.000	Lost Time: 0.000
	TH	1.00	457	1,600	0.388 *	ITS: 0.000
	LT	1.00	220	1,600	0.138	
Eastbound	RT	1.00	179	1,600	0.000	ICU: 0.768
	TH	2.00	761	3,200	0.238	
	LT	1.00	150	1,600	0.094 *	LOS: C

* - Denotes critical movement

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.630
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.2
Optimal Cycle: 0 Level Of Service: C

Street Name:	Steckel Drive						Main Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	55	92	90	38	141	138	60	230	74	115	307	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	55	92	90	38	141	138	60	230	74	115	307	10
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	92	90	38	141	138	60	230	74	115	307	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	92	90	38	141	138	60	230	74	115	307	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	92	90	38	141	138	60	230	74	115	307	10

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.46	0.78	0.76	0.12	0.44	0.44	0.33	1.26	0.41	0.53	1.42	0.05
Final Sat.:	207	357	373	60	224	219	158	622	207	257	706	23

Capacity Analysis Module:

Vol/Sat:	0.27	0.26	0.24	0.63	0.63	0.63	0.38	0.37	0.36	0.45	0.43	0.43
Crit Moves:	****				****		****			****		
Delay/Veh:	12.8	12.4	11.5	20.1	20.1	20.1	14.0	13.5	13.0	15.3	14.7	14.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	12.8	12.4	11.5	20.1	20.1	20.1	14.0	13.5	13.0	15.3	14.7	14.4
LOS by Move:	B	B	B	C	C	C	B	B	B	C	B	B
ApproachDel:		12.2			20.1			13.5			14.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.2			20.1			13.5			14.8	
LOS by Appr:		B			C			B			B	
AllWayAvgQ:	0.3	0.3	0.3	1.4	1.4	1.4	0.5	0.5	0.5	0.7	0.7	0.7

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #6 Steckel Drive & Main Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.708
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 18.9
Optimal Cycle: 0 Level Of Service: C

Street Name:	Steckel Drive						Main Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	1	0	0	0	1	0	0	1	0

Volume Module:

Base Vol:	37	147	66	22	112	110	183	472	48	85	275	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	147	66	22	112	110	183	472	48	85	275	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	147	66	22	112	110	183	472	48	85	275	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	147	66	22	112	110	183	472	48	85	275	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	147	66	22	112	110	183	472	48	85	275	21

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.29	1.18	0.53	0.09	0.46	0.45	0.52	1.34	0.14	0.45	1.44	0.11
Final Sat.:	127	519	242	42	213	209	259	689	71	206	682	53

Capacity Analysis Module:

Vol/Sat:	0.29	0.28	0.27	0.53	0.53	0.53	0.71	0.68	0.67	0.41	0.40	0.40
Crit Moves:	****				****		****			****		
Delay/Veh:	13.7	13.3	12.7	17.9	17.9	17.9	24.9	23.0	22.0	15.2	14.7	14.4
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.7	13.3	12.7	17.9	17.9	17.9	24.9	23.0	22.0	15.2	14.7	14.4
LOS by Move:	B	B	B	C	C	C	C	C	C	C	B	B
ApproachDel:		13.2			17.9			23.4			14.8	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		13.2			17.9			23.4			14.8	
LOS by Appr:		B			C			C			B	
AllWayAvgQ:	0.4	0.3	0.3	1.0	1.0	1.0	2.1	1.8	1.8	0.6	0.6	0.6

Note: Queue reported is the number of cars per lane.

Project Title: Santa Paula West Business Park Specific Plan Intersection: 7 Steckel Drive & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	82	0	0.000	N-S(1): 0.191
	TH	1.00	38	1,600	0.176 *	N-S(2): 0.200 *
	LT	0.00	161	1,600	0.101	E-W(1): 0.193
Westbound	RT	0.00	216	0	0.000	E-W(2): 0.289 *
	TH	2.00	577	3,200	0.248 *	V/C: 0.489
	LT	1.00	27	1,600	0.017	Lost Time: 0.000
Northbound	RT	0.00	65	0	0.000	ITS: 0.000
	TH	1.00	40	1,600	0.090	ICU: 0.489
	LT	0.00	39	1,600	0.024 *	LOS: A
Eastbound	RT	0.00	10	0	0.000	
	TH	2.00	554	3,200	0.176	
	LT	1.00	66	1,600	0.041 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	70	0	0.000	N-S(1): 0.153
	TH	1.00	36	1,600	0.148 *	N-S(2): 0.162 *
	LT	0.00	130	1,600	0.081	E-W(1): 0.318
Westbound	RT	0.00	192	0	0.000	E-W(2): 0.338 *
	TH	2.00	706	3,200	0.281 *	V/C: 0.500
	LT	1.00	62	1,600	0.039	Lost Time: 0.000
Northbound	RT	0.00	68	0	0.000	ITS: 0.000
	TH	1.00	25	1,600	0.072	ICU: 0.500
	LT	0.00	22	1,600	0.014 *	LOS: A
Eastbound	RT	0.00	41	0	0.000	
	TH	2.00	853	3,200	0.279	
	LT	1.00	91	1,600	0.057 *	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 8 Peck Road & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	173	0	0.000	N-S(1): 0.267
	TH	1.00	593	1,600	0.479 *	N-S(2): 0.592 *
	LT	1.00	149	1,600	0.093	E-W(1): 0.269
Westbound	RT	1.00	159	1,600	0.006	E-W(2): 0.277 *
	TH	1.00	342	1,600	0.214 *	
	LT	1.00	266	1,600	0.166	V/C: 0.869
Northbound	RT	1.00	171	1,600	0.000	Lost Time: 0.000
	TH	1.00	279	1,600	0.174	ITS: 0.000
	LT	1.00	180	1,600	0.113 *	
Eastbound	RT	0.00	123	0	0.000	ICU: 0.869
	TH	2.00	205	3,200	0.103	
	LT	1.00	101	1,600	0.063 *	LOS: D
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	91	0	0.000	N-S(1): 0.395 *
	TH	1.00	326	1,600	0.261	N-S(2): 0.310
	LT	1.00	87	1,600	0.054 *	E-W(1): 0.327 *
Westbound	RT	1.00	112	1,600	0.016	E-W(2): 0.280
	TH	1.00	237	1,600	0.148	
	LT	1.00	196	1,600	0.123 *	V/C: 0.722
Northbound	RT	1.00	454	1,600	0.161	Lost Time: 0.000
	TH	1.00	546	1,600	0.341 *	ITS: 0.000
	LT	1.00	78	1,600	0.049	
Eastbound	RT	0.00	236	0	0.000	ICU: 0.722
	TH	2.00	417	3,200	0.204 *	
	LT	1.00	211	1,600	0.132	LOS: C

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		8 Peck Road & Main (as Part of Intersection 8)				
Description:		Cumulative plus Project without Beckwith Extension				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.026 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	41	1,600	0.026 *	E-W(1): 0.236 *
Westbound	RT	1.00	64	1,600	0.014	E-W(2): 0.014
	TH	0.00	0	0	0.000	
	LT	1.00	377	1,600	0.236 *	V/C: 0.262
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.262
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 *
	TH	1.00	0	1,600	0.000	N-S(2): 0.000
	LT	1.00	23	1,600	0.014 *	E-W(1): 0.121 *
Westbound	RT	1.00	23	1,600	0.000	E-W(2): 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	194	1,600	0.121 *	V/C: 0.135
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	0.00	0	0	0.000 *	ITS: 0.000
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	ICU: 0.135
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	LOS: A

* - Denotes critical movement

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		9 Peck Road & Faulkner Road				
Description:		Cumulative plus Project without Beckwith Extension				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	SBR, EBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	708	1,600	0.304 *	N-S(1): 0.258
	TH	1.00	251	1,600	0.157	N-S(2): 0.403 *
	LT	0.00	0	0	0.000	E-W(1): 0.000
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.138 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.541
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	413	1,600	0.258	ITS: 0.000
	LT	1.00	158	1,600	0.099 *	
Eastbound	RT	1.00	96	1,600	0.000	ICU: 0.541
	TH	0.00	0	0	0.000	
	LT	1.00	221	1,600	0.138 *	LOS: A
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	453	1,600	0.091	N-S(1): 0.504 *
	TH	1.00	311	1,600	0.194	N-S(2): 0.253
	LT	0.00	0	0	0.000 *	E-W(1): 0.059
Westbound	RT	0.00	0	0	0.000	E-W(2): 0.192 *
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	V/C: 0.696
Northbound	RT	0.00	0	0	0.000	Lost Time: 0.000
	TH	1.00	807	1,600	0.504 *	ITS: 0.000
	LT	1.00	95	1,600	0.059	
Eastbound	RT	1.00	190	1,600	0.059	ICU: 0.696
	TH	0.00	0	0	0.000	
	LT	1.00	307	1,600	0.192 *	LOS: B

* - Denotes critical movement

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.739
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.0
Optimal Cycle: 0 Level Of Service: C

Street Name:	Peck Road						SR-126 EB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	0	1	0	0	1	0	1	0	0	1	0

Volume Module:

Base Vol:	13	60	8	93	69	181	405	8	28	5	54	122
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	60	8	93	69	181	405	8	28	5	54	122
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	60	8	93	69	181	405	8	28	5	54	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	60	8	93	69	181	405	8	28	5	54	122
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	13	60	8	93	69	181	405	8	28	5	54	122

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.16	0.74	0.10	0.27	0.20	0.53	1.00	0.87	0.13	0.06	0.94	1.00
Final Sat.:	82	378	50	168	124	326	548	524	76	29	495	587

Capacity Analysis Module:

Vol/Sat:	0.16	0.16	0.16	0.56	0.56	0.56	0.74	0.02	0.37	0.17	0.11	0.21
Crit Moves:	****			****			****			****		
Delay/Veh:	10.3	10.3	10.3	14.6	14.6	14.6	24.3	8.9	8.9	9.9	9.9	9.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	10.3	10.3	10.3	14.6	14.6	14.6	24.3	8.9	8.9	9.9	9.9	9.7
LOS by Move:	B	B	B	B	B	B	C	A	A	A	A	A
ApproachDel:	10.3			14.6			23.0			9.8		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	10.3			14.6			23.0			9.8		
LOS by Appr:	B			B			C			A		
AllWayAvgQ:	0.1	0.1	0.1	1.0	1.0	1.0	2.3	0.1	0.1	0.1	0.2	0.2

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #10 Peck Road & SR-126 EB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.453
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 126.6
Optimal Cycle: 0 Level Of Service: F

Table with columns for Street Name, Approach, Movement, Control, Rights, Min. Green, and Lanes. Rows include Peck Road (North/South Bound) and SR-126 EB On/Off-Ramps (East/West Bound).

Volume Module: Table showing traffic volume metrics such as Base Vol, Growth Adj, Initial Bse, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume across different movements.

Saturation Flow Module: Table showing adjustment factors and saturation flow values for different movements.

Capacity Analysis Module: Table showing delay, LOS, and queue length metrics for various movements.

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 1.186
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 66.8
Optimal Cycle: 0 Level Of Service: F

Street Name:	Faulkner Road						SR-126 WB On/Off-Ramps						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign			
Rights:	Include			Include			Include			Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Lanes:	0	1	0	0	1	0	0	1	0	1	0	1	0

Volume Module:

Base Vol:	89	21	243	28	9	0	0	51	19	657	185	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	21	243	28	9	0	0	51	19	657	185	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	21	243	28	9	0	0	51	19	657	185	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	21	243	28	9	0	0	51	19	657	185	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	21	243	28	9	0	0	51	19	657	185	28

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.81	0.19	1.00	1.00	1.00	0.00	1.00	1.46	0.54	1.00	1.74	0.26
Final Sat.:	400	94	584	449	479	0	438	693	267	554	1037	160

Capacity Analysis Module:

Vol/Sat:	0.22	0.22	0.42	0.06	0.02	xxxx	0.00	0.07	0.07	1.19	0.18	0.18
Crit Moves:			****	****				****		****		
Delay/Veh:	11.9	11.9	13.0	11.0	10.2	0.0	0.0	10.6	10.3	123.4	9.9	9.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	11.9	13.0	11.0	10.2	0.0	0.0	10.6	10.3	123.4	9.9	9.7
LOS by Move:	B	B	B	B	B	*	*	B	B	F	A	A
ApproachDel:		12.7			10.8			10.5			95.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.7			10.8			10.5			95.6	
LOS by Appr:		B			B			B			F	
AllWayAvgQ:	0.3	0.3	0.7	0.1	0.0	0.0	0.0	0.1	0.1	17.6	0.2	0.2

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.858
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 21.1
Optimal Cycle: 0 Level Of Service: C

Street Name:	Faulkner Road						SR-126 WB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	1	0	1	0	1

Volume Module:

Base Vol:	37	41	202	73	14	1	2	246	93	425	75	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	41	202	73	14	1	2	246	93	425	75	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	41	202	73	14	1	2	246	93	425	75	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	41	202	73	14	1	2	246	93	425	75	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	41	202	73	14	1	2	246	93	425	75	52

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.47	0.53	1.00	1.00	0.98	0.02	1.00	1.45	0.55	1.00	1.18	0.82
Final Sat.:	220	243	528	419	435	10	443	706	277	496	624	466

Capacity Analysis Module:

Vol/Sat:	0.17	0.17	0.38	0.17	0.03	0.10	0.00	0.35	0.34	0.86	0.12	0.11
Crit Moves:	****			****			****			****		
Delay/Veh:	11.5	11.5	12.8	12.3	10.5	10.5	10.5	13.3	12.8	38.5	10.2	9.6
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	11.5	12.8	12.3	10.5	10.5	10.5	13.3	12.8	38.5	10.2	9.6
LOS by Move:	B	B	B	B	B	B	B	B	B	E	B	A
ApproachDel:	12.4			12.0			13.2			31.9		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	12.4			12.0			13.2			31.9		
LOS by Appr:	B			B			B			D		
AllWayAvgQ:	0.2	0.2	0.5	0.2	0.0	0.0	0.0	0.5	0.5	3.9	0.1	0.1

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: C[21.1]

Street Name:	Beckwith Road						Telegraph Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	0	1	0	0	0	1	0

Volume Module:

Base Vol:	3	1	23	78	4	78	28	212	28	111	424	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	1	23	78	4	78	28	212	28	111	424	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	3	1	23	78	4	78	28	212	28	111	424	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	1	23	78	4	78	28	212	28	111	424	54

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	996	982	226	940	942	424	478	xxxx	xxxxx	240	xxxx	xxxxx
Potent Cap.:	225	251	818	246	265	634	1095	xxxx	xxxxx	1339	xxxx	xxxxx
Move Cap.:	178	223	818	218	235	634	1095	xxxx	xxxxx	1339	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.03	0.36	0.02	0.12	0.03	xxxx	xxxx	0.08	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	1.5	xxxx	xxxxx	0.1	xxxx	xxxxx	0.3	xxxx	xxxxx
Control Del:	25.5	xxxx	xxxxx	30.5	xxxx	xxxxx	8.4	xxxx	xxxxx	7.9	xxxx	xxxxx
LOS by Move:	D	*	*	D	*	*	A	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	736	xxxx	xxxx	586	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	0.1	xxxxx	xxxx	0.5	xxxxx	xxxx	xxxxx	0.3	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	10.1	xxxxx	xxxx	12.1	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx
Shared LOS:	*	*	B	*	*	B	*	*	*	A	*	*
ApproachDel:	11.8			21.1			xxxxxx			xxxxxx		
ApproachLOS:	B			C			*			*		

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #12 Beckwith Road & Telegraph Road

Average Delay (sec/veh): 5.6 Worst Case Level Of Service: E[39.3]

Street Name:	Beckwith Road						Telegraph Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	1	0	0	1	0	0	1	0	0	0	1	0

Volume Module:

Base Vol:	24	5	118	67	1	22	70	614	3	18	201	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	24	5	118	67	1	22	70	614	3	18	201	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	24	5	118	67	1	22	70	614	3	18	201	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	24	5	118	67	1	22	70	614	3	18	201	72

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	1040	1065	616	1054	994	201	273	xxxx	xxxxx	617	xxxx	xxxxx
Potent Cap.:	210	225	495	206	247	845	1302	xxxx	xxxxx	973	xxxx	xxxxx
Move Cap.:	193	209	495	145	229	845	1302	xxxx	xxxxx	973	xxxx	xxxxx
Volume/Cap:	0.12	0.02	0.24	0.46	0.00	0.03	0.05	xxxx	xxxx	0.02	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.4	xxxx	xxxxx	2.1	xxxx	xxxxx	0.2	xxxx	xxxxx	0.1	xxxx	xxxxx	
Control Del:	26.3	xxxx	xxxxx	49.4	xxxx	xxxxx	7.9	xxxx	xxxxx	8.8	xxxx	xxxxx	
LOS by Move:	D	*	*	E	*	*	A	*	*	A	*	*	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx	468	xxxx	xxxx	757	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	1.0	xxxxx	xxxx	0.1	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	15.4	xxxxx	xxxx	9.9	xxxxx	xxxx	xxxxx	8.8	xxxx	xxxxx	
Shared LOS:	*	*	C	*	*	A	*	*	*	A	*	*	
ApproachDel:	17.2			39.3			xxxxxx			xxxxxx			
ApproachLOS:	C			E			*			*			

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		13 Briggs Road & Telegraph Road				
Description:		Cumulative plus Project without Beckwith Extension				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	10	0	0.000	N-S(1): 0.243
	TH	1.00	353	1,600	0.245 *	N-S(2): 0.284 *
	LT	0.00	29	1,600	0.018	E-W(1): 0.216 *
Westbound	RT	0.00	72	0	0.000	E-W(2): 0.178
	TH	1.00	206	1,600	0.174	V/C: 0.500
	LT	1.00	157	1,600	0.098 *	Lost Time: 0.000
Northbound	RT	0.00	79	0	0.000	ITS: 0.000
	TH	1.00	219	1,600	0.225	ICU: 0.500
	LT	0.00	62	1,600	0.039 *	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	131	1,600	0.118 *	
	LT	1.00	7	1,600	0.004	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	3	0	0.000	N-S(1): 0.276 *
	TH	1.00	196	1,600	0.146	N-S(2): 0.162
	LT	0.00	34	1,600	0.021 *	E-W(1): 0.321 *
Westbound	RT	0.00	18	0	0.000	E-W(2): 0.124
	TH	1.00	160	1,600	0.111	V/C: 0.597
	LT	1.00	104	1,600	0.065 *	Lost Time: 0.000
Northbound	RT	0.00	95	0	0.000	ITS: 0.000
	TH	1.00	287	1,600	0.255 *	ICU: 0.597
	LT	0.00	26	1,600	0.016	LOS: A
Eastbound	RT	0.00	58	0	0.000	
	TH	1.00	351	1,600	0.256 *	
	LT	1.00	20	1,600	0.013	

* - Denotes critical movement

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[13.8]

Street Name:	Briggs Road						Faulkner Road								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R			
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign					
Rights:	Include			Include			Include			Include					
Lanes:	0	0	1!	0	0	0	0	1!	0	0	0	0	1!	0	0

Volume Module:

Base Vol:	4	386	14	11	451	1	0	0	0	13	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	386	14	11	451	1	0	0	0	13	0	14
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	4	386	14	11	451	1	0	0	0	13	0	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	386	14	11	451	1	0	0	0	13	0	14

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	6.4	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	452	xxxx	xxxxx	400	xxxx	xxxxx	882	882	452	875	875	393
Potent Cap.:	1119	xxxx	xxxxx	1170	xxxx	xxxxx	269	287	612	323	290	660
Move Cap.:	1119	xxxx	xxxxx	1170	xxxx	xxxxx	261	284	612	319	286	660
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.00	0.04	0.00	0.02

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	8.2	xxxx	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	0	xxxxx	xxxx	436	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.8	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			13.8					
ApproachLOS:	*			*			*			B					

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #14 Briggs Road & Faulkner Road

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: B[14.9]

Street Name:	Briggs Road						Faulkner Road													
Approach:	North Bound			South Bound			East Bound			West Bound										
Movement:	L	T	R	L	T	R	L	T	R	L	T	R								
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign										
Rights:	Include			Include			Include			Include										
Lanes:	0	0	1!	0	0	0	1	0	0	0	0	0	1!	0	0	0	0	1!	0	0

Volume Module:

Base Vol:	2	424	21	14	321	0	2	0	4	12	0	8
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	424	21	14	321	0	2	0	4	12	0	8
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	424	21	14	321	0	2	0	4	12	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	424	21	14	321	0	2	0	4	12	0	8

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	321	xxxx	xxxxx	445	xxxx	xxxxx	792	798	321	790	788	435
Potent Cap.:	1250	xxxx	xxxxx	1126	xxxx	xxxxx	310	321	724	311	326	626
Move Cap.:	1250	xxxx	xxxxx	1126	xxxx	xxxxx	302	317	724	305	321	626
Volume/Cap:	0.00	xxxx	xxxx	0.01	xxxx	xxxx	0.01	0.00	0.01	0.04	0.00	0.01

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.9	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	494	xxxxx	xxxx	384	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.2	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	12.4	xxxxx	xxxxx	14.9	xxxxx			
Shared LOS:	*	*	*	A	*	*	*	B	*	*	B	*			
ApproachDel:	xxxxxx			xxxxxx			12.4			14.9					
ApproachLOS:	*			*			B			B					

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 6.8 Worst Case Level Of Service: C[21.2]

Street Name:	Briggs Road						SR-126 WB On/Off-Ramps																	
Approach:	North Bound			South Bound			East Bound			West Bound														
Movement:	L	T	R	L	T	R	L	T	R	L	T	R												
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign														
Rights:	Include			Include			Include			Include														
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	315	27	396	68	0	0	0	0	0	33	0	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	315	27	396	68	0	0	0	0	0	33	0	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	315	27	396	68	0	0	0	0	0	33	0	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	315	27	396	68	0	0	0	0	0	33	0	90

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	6.5	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxx	342	xxxx	xxxx	xxxx	xxxx	xxxx	1189	1189	329
Potent Cap.:	xxxx	xxxx	xxxx	1228	xxxx	xxxx	xxxx	xxxx	xxxx	210	190	718
Move Cap.:	xxxx	xxxx	xxxx	1228	xxxx	xxxx	xxxx	xxxx	xxxx	142	111	718
Volume/Cap:	xxxx	xxxx	xxxx	0.32	xxxx	xxxx	xxxx	xxxx	xxxx	0.23	0.00	0.13

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	1.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
Control Del:	xxxx	xxxx	xxxx	9.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	344	xxxx			
SharedQueue:	xxxx	xxxx	xxxx	1.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1.6	xxxx			
Shrd ConDel:	xxxx	xxxx	xxxx	9.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	21.2	xxxx			
Shared LOS:	*	*	*	A	*	*	*	*	*	*	C	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			21.2					
ApproachLOS:	*			*			*			C					

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #15 Briggs Road & SR-126 WB On/Off-Ramps

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: C[16.9]

Street Name:	Briggs Road						SR-126 WB On/Off-Ramps																
Approach:	North Bound			South Bound			East Bound			West Bound													
Movement:	L	T	R	L	T	R	L	T	R	L	T	R											
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign													
Rights:	Include			Include			Include			Include													
Lanes:	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Volume Module:

Base Vol:	0	378	53	294	66	0	0	0	0	0	23	0	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	378	53	294	66	0	0	0	0	0	23	0	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	378	53	294	66	0	0	0	0	0	23	0	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	378	53	294	66	0	0	0	0	0	23	0	54

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	xxxx	xxxx	xxxx	6.4	6.5	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxx	431	xxxx	xxxx	xxxx	xxxx	xxxx	1059	1059	405
Potent Cap.:	xxxx	xxxx	xxxx	1139	xxxx	xxxx	xxxx	xxxx	xxxx	251	226	651
Move Cap.:	xxxx	xxxx	xxxx	1139	xxxx	xxxx	xxxx	xxxx	xxxx	191	157	651
Volume/Cap:	xxxx	xxxx	xxxx	0.26	xxxx	xxxx	xxxx	xxxx	xxxx	0.12	0.00	0.08

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	1.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
Control Del:	xxxx	xxxx	xxxx	9.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx			
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	378	xxxx			
SharedQueue:	xxxx	xxxx	xxxx	1.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.8	xxxx			
Shrd ConDel:	xxxx	xxxx	xxxx	9.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	16.9	xxxx			
Shared LOS:	*	*	*	A	*	*	*	*	*	*	C	*			
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.9					
ApproachLOS:	*			*			*			C					

Note: Queue reported is the number of cars per lane.

2031 Plus Project AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 8.9 Worst Case Level Of Service: B[12.2]

Street Name:	Briggs Road						SR-126 EB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0

Volume Module:

Base Vol:	22	34	0	0	47	49	315	0	44	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	22	34	0	0	47	49	315	0	44	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	34	0	0	47	49	315	0	44	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	22	34	0	0	47	49	315	0	44	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	96	xxxx	xxxxx	xxxx	xxxx	xxxxx	150	150	72	xxxx	xxxx	xxxxx
Potent Cap.:	1510	xxxx	xxxxx	xxxx	xxxx	xxxxx	847	746	996	xxxx	xxxx	xxxxx
Move Cap.:	1510	xxxx	xxxxx	xxxx	xxxx	xxxxx	838	735	996	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.38	0.00	0.04	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	854	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.1	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			12.2			xxxxxx					
ApproachLOS:	*			*			B			*					

Note: Queue reported is the number of cars per lane.

2031 Plus Project PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #16 Briggs Road & SR-126 EB On/Off-Ramps

Average Delay (sec/veh): 9.8 Worst Case Level Of Service: B[13.8]

Street Name:	Briggs Road						SR-126 EB On/Off-Ramps										
Approach:	North Bound			South Bound			East Bound			West Bound							
Movement:	L	T	R	L	T	R	L	T	R	L	T	R					
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign							
Rights:	Include			Include			Include			Include							
Lanes:	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Volume Module:

Base Vol:	30	73	0	0	23	59	382	0	18	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	30	73	0	0	23	59	382	0	18	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	30	73	0	0	23	59	382	0	18	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	30	73	0	0	23	59	382	0	18	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflict Vol:	82	xxxx	xxxxx	xxxx	xxxx	xxxxx	186	186	53	xxxx	xxxx	xxxxx
Potent Cap.:	1528	xxxx	xxxxx	xxxx	xxxx	xxxxx	808	712	1021	xxxx	xxxx	xxxxx
Move Cap.:	1528	xxxx	xxxxx	xxxx	xxxx	xxxxx	796	698	1021	xxxx	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.48	0.00	0.02	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
Control Del:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	804	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.8	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	13.8	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*			
ApproachDel:	xxxxxx			xxxxxx			13.8			xxxxxx					
ApproachLOS:	*			*			B			*					

Note: Queue reported is the number of cars per lane.

**CUMULATIVE PLUS PROJECT WITHOUT BECKWITH EXTENSION
PLUS MITIGATION (YEAR 2031)**

Project Title: Santa Paula West Business Park Specific Plan Intersection: 1 10th Street (SR-150) & Harvard Boulevard Description: Cumulative plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	174	0	0.000	N-S(1): 0.363 N-S(2): 0.595 * E-W(1): 0.433 * E-W(2): 0.375
	TH	1.00	744	1,600	0.574 *	
	LT	1.00	32	1,600	0.020	
Westbound	RT	0.00	20	0	0.000	V/C: 1.028 Lost Time: 0.000 ITS: 0.000
	TH	1.00	455	1,600	0.297	
	LT	1.00	199	1,600	0.124 *	
Northbound	RT	0.00	114	0	0.000	ICU: 1.028 LOS: F
	TH	1.00	400	1,600	0.343	
	LT	0.00	34	1,600	0.021 *	
Eastbound	RT	0.00	112	0	0.000	
	TH	1.00	383	1,600	0.309 *	
	LT	1.00	124	1,600	0.078	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	177	0	0.000	N-S(1): 0.590 * N-S(2): 0.429 E-W(1): 0.478 * E-W(2): 0.476
	TH	1.00	457	1,600	0.396	
	LT	1.00	40	1,600	0.025 *	
Westbound	RT	0.00	42	0	0.000	V/C: 1.068 Lost Time: 0.000 ITS: 0.000
	TH	1.00	520	1,600	0.351	
	LT	1.00	192	1,600	0.120 *	
Northbound	RT	0.00	162	0	0.000	ICU: 1.068 LOS: F
	TH	1.00	689	1,600	0.565 *	
	LT	0.00	53	1,600	0.033	
Eastbound	RT	0.00	78	0	0.000	
	TH	1.00	495	1,600	0.358 *	
	LT	1.00	200	1,600	0.125	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan						
Intersection: 8 Peck Road & Harvard Boulevard						
Description: Cumulative plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	NBR,					
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	173	0	0.000	N-S(1): 0.180
	TH	2.00	593	3,200	0.239 *	N-S(2): 0.352 *
	LT	1.00	149	1,600	0.093	E-W(1): 0.269
Westbound	RT	1.00	159	1,600	0.006	E-W(2): 0.277 *
	TH	1.00	342	1,600	0.214 *	
	LT	1.00	266	1,600	0.166	V/C: 0.629
Northbound	RT	1.00	171	1,600	0.000	Lost Time: 0.000
	TH	2.00	279	3,200	0.087	ITS: 0.000
	LT	1.00	180	1,600	0.113 *	
Eastbound	RT	0.00	123	0	0.000	ICU: 0.629
	TH	2.00	205	3,200	0.103	
	LT	1.00	101	1,600	0.063 *	LOS: B
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	91	0	0.000	N-S(1): 0.225 *
	TH	2.00	326	3,200	0.130	N-S(2): 0.179
	LT	1.00	87	1,600	0.054 *	E-W(1): 0.327 *
Westbound	RT	1.00	112	1,600	0.016	E-W(2): 0.280
	TH	1.00	237	1,600	0.148	
	LT	1.00	196	1,600	0.123 *	V/C: 0.552
Northbound	RT	1.00	454	1,600	0.161	Lost Time: 0.000
	TH	2.00	546	3,200	0.171 *	ITS: 0.000
	LT	1.00	78	1,600	0.049	
Eastbound	RT	0.00	236	0	0.000	ICU: 0.552
	TH	2.00	417	3,200	0.204 *	
	LT	1.00	211	1,600	0.132	LOS: A

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan						
Intersection: 8 Peck Road & Main (as Part of Intersection 8)						
Description: Cumulative plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.026 * N-S(2): 0.000 E-W(1): 0.236 * E-W(2): 0.014
	TH	1.00	0	1,600	0.000	
	LT	1.00	41	1,600	0.026 *	
Westbound	RT	1.00	64	1,600	0.014	V/C: 0.262 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	377	1,600	0.236 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.262 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	0	0	0.000	N-S(1): 0.014 * N-S(2): 0.000 E-W(1): 0.121 * E-W(2): 0.000
	TH	1.00	0	1,600	0.000	
	LT	1.00	23	1,600	0.014 *	
Westbound	RT	1.00	23	1,600	0.000	V/C: 0.135 Lost Time: 0.000 ITS: 0.000
	TH	0.00	0	0	0.000	
	LT	1.00	194	1,600	0.121 *	
Northbound	RT	0.00	0	0	0.000	ICU: 0.135 LOS: A
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	
Eastbound	RT	0.00	0	0	0.000	
	TH	0.00	0	0	0.000 *	
	LT	0.00	0	0	0.000	

* - Denotes critical movement

Project Title: Santa Paula West Business Park Specific Plan Intersection: 10 Peck Road & SR-126 EB ramps Description: Cumulative plus Project without Beckwith Extension Mitigation						
Date/Time: AM PEAK HOUR						
Thru Lane:	1600 vph					N-S Split Phase : N
Left Lane:	1600 vph					E-W Split Phase : N
Double Lt Penalty:	20 %					Lost Time (% of cycle) : 0
ITS:	0 %					V/C Round Off (decs.) : 3
OLA Movements :						
FF Movements:						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	181	1,600	0.000	N-S(1): 0.101 * N-S(2): 0.051 E-W(1): 0.026 E-W(2): 0.363 *
	TH	1.00	69	1,600	0.043	
	LT	1.00	93	1,600	0.058 *	
Westbound	RT	0.00	122	0	0.000	V/C: 0.464 Lost Time: 0.000 ITS: 0.000
	TH	1.00	54	1,600	0.110 *	
	LT	1.00	5	1,600	0.003	
Northbound	RT	0.00	8	0	0.000	ICU: 0.464
	TH	1.00	60	1,600	0.043 *	
	LT	1.00	13	1,600	0.008	
Eastbound	RT	0.00	28	0	0.000	LOS: A
	TH	1.00	8	1,600	0.023	
	LT	1.00	405	1,600	0.253 *	
Date/Time: PM PEAK HOUR						
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	1.00	341	1,600	0.000	N-S(1): 0.105 * N-S(2): 0.046 E-W(1): 0.049 E-W(2): 0.542 *
	TH	1.00	55	1,600	0.034	
	LT	1.00	103	1,600	0.064 *	
Westbound	RT	0.00	91	0	0.000	V/C: 0.647 Lost Time: 0.000 ITS: 0.000
	TH	1.00	23	1,600	0.071 *	
	LT	1.00	1	1,600	0.001	
Northbound	RT	0.00	4	0	0.000	ICU: 0.647
	TH	1.00	62	1,600	0.041 *	
	LT	1.00	19	1,600	0.012	
Eastbound	RT	0.00	8	0	0.000	LOS: B
	TH	1.00	68	1,600	0.048	
	LT	1.00	754	1,600	0.471 *	

* - Denotes critical movement

2031 Plus Project Mitigation AM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.600
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 15.1
Optimal Cycle: 0 Level Of Service: C

Street Name:	Faulkner Road						SR-126 WB On/Off-Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0	1	0	0	1	0	0	1	0	1	0	1

Volume Module:

Base Vol:	89	21	243	28	9	0	0	51	19	657	185	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	21	243	28	9	0	0	51	19	657	185	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	89	21	243	28	9	0	0	51	19	657	185	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	21	243	28	9	0	0	51	19	657	185	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	21	243	28	9	0	0	51	19	657	185	28

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.81	0.19	1.00	1.00	1.00	0.00	1.00	1.46	0.54	2.00	0.87	0.13
Final Sat.:	392	92	571	436	462	0	418	659	253	1094	520	79

Capacity Analysis Module:

Vol/Sat:	0.23	0.23	0.43	0.06	0.02	xxxx	0.00	0.08	0.07	0.60	0.36	0.36
Crit Moves:			****	****				****		****		
Delay/Veh:	11.9	11.9	12.9	11.0	10.1	0.0	0.0	10.7	10.4	18.2	11.7	11.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.9	11.9	12.9	11.0	10.1	0.0	0.0	10.7	10.4	18.2	11.7	11.7
LOS by Move:	B	B	B	B	B	*	*	B	B	C	B	B
ApproachDel:		12.6			10.7			10.6			16.6	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.6			10.7			10.6			16.6	
LOS by Appr:		B			B			B			C	
AllWayAvgQ:	0.3	0.3	0.7	0.1	0.0	0.0	0.0	0.1	0.1	1.4	0.5	0.5

Note: Queue reported is the number of cars per lane.

2031 Plus Project Mitigation PM
Without Grade Crossing

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #11 Faulkner Road & SR-126 WB On/Off-Ramps

Cycle (sec): 100 Critical Vol./Cap.(X): 0.434
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 13.1
Optimal Cycle: 0 Level Of Service: B

Street Name:	Faulkner Road						SR-126 WB On/Off-Ramps											
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	T	R	L	T	R	L	T	R	L	T	R						
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign								
Rights:	Include			Include			Include			Include								
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0						
Lanes:	0	1	0	0	1	0	0	1	0	1	0	1	0	2	0	0	1	0

Volume Module:

Base Vol:	37	41	202	73	14	1	2	246	93	425	75	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	37	41	202	73	14	1	2	246	93	425	75	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	37	41	202	73	14	1	2	246	93	425	75	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	41	202	73	14	1	2	246	93	425	75	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	37	41	202	73	14	1	2	246	93	425	75	52

Saturation Flow Module:

Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.47	0.53	1.00	1.00	0.98	0.02	1.00	1.45	0.55	2.00	0.59	0.41
Final Sat.:	224	249	543	428	444	10	451	719	282	979	322	223

Capacity Analysis Module:

Vol/Sat:	0.16	0.16	0.37	0.17	0.03	0.10	0.00	0.34	0.33	0.43	0.23	0.23
Crit Moves:			****	****				****		****		
Delay/Veh:	11.3	11.3	12.4	12.0	10.3	10.3	10.3	13.1	12.5	15.0	10.9	10.9
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.3	11.3	12.4	12.0	10.3	10.3	10.3	13.1	12.5	15.0	10.9	10.9
LOS by Move:	B	B	B	B	B	B	B	B	B	B	B	B
ApproachDel:		12.1			11.7			12.9			14.0	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		12.1			11.7			12.9			14.0	
LOS by Appr:		B			B			B			B	
AllWayAvgQ:	0.2	0.2	0.5	0.2	0.0	0.0	0.0	0.5	0.4	0.7	0.3	0.3

Note: Queue reported is the number of cars per lane.

Project Title:		Santa Paula West Business Park Specific Plan				
Intersection:		12 Beckwith Road & Telegraph Road				
Description:		Cumulative plus Project without Beckwith Extension Mitigation				
Date/Time:		AM PEAK HOUR				
Thru Lane:	1600 vph				N-S Split Phase :	N
Left Lane:	1600 vph				E-W Split Phase :	N
Double Lt Penalty:	20 %				Lost Time (% of cycle) :	0
ITS:	0 %				V/C Round Off (decs.) :	3
OLA Movements :	0					
FF Movements:	0					
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	78	0	0.000	N-S(1): 0.066 *
	TH	1.00	4	1,600	0.051	N-S(2): 0.053
	LT	1.00	78	1,600	0.049 *	E-W(1): 0.219
Westbound	RT	1.00	54	1,600	0.000	E-W(2): 0.283 *
	TH	1.00	424	1,600	0.265 *	V/C: 0.349
	LT	1.00	111	1,600	0.069	Lost Time: 0.000
Northbound	RT	0.00	23	0	0.000	ITS: 0.000
	TH	1.00	1	1,600	0.017 *	ICU: 0.349
	LT	0.00	3	1,600	0.002	LOS: A
Eastbound	RT	0.00	28	0	0.000	
	TH	1.00	212	1,600	0.150	
	LT	1.00	28	1,600	0.018 *	
Date/Time:		PM PEAK HOUR				
APPROACH	MVMT	LANES	VOLUME	CAPACITY	V/C	ICU ANALYSIS
Southbound	RT	0.00	22	0	0.000	N-S(1): 0.134 *
	TH	1.00	1	1,600	0.014	N-S(2): 0.029
	LT	1.00	67	1,600	0.042 *	E-W(1): 0.397 *
Westbound	RT	1.00	72	1,600	0.003	E-W(2): 0.170
	TH	1.00	201	1,600	0.126	V/C: 0.531
	LT	1.00	18	1,600	0.011 *	Lost Time: 0.000
Northbound	RT	0.00	118	0	0.000	ITS: 0.000
	TH	1.00	5	1,600	0.092 *	ICU: 0.531
	LT	0.00	24	1,600	0.015	LOS: A
Eastbound	RT	0.00	3	0	0.000	
	TH	1.00	614	1,600	0.386 *	
	LT	1.00	70	1,600	0.044	

* - Denotes critical movement

**APPENDIX D:
FREEWAY LEVEL OF SERVICE WORKSHEETS**

EXISTING

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	932	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	259	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	527	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	527	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	7.5	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1471	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	409	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	831	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	831	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1509	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	419	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	853	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	853	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.2	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1105	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	307	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	624	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	624	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	8.9	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Palm Av to 10th St (SR-150)
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1136	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	316	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	642	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	642	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	9.2	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1882	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	523	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1063	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1063	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	15.2	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2102	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	584	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1188	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1188	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.0	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1412	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	392	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	798	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	798	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1253	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	348	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	708	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	708	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	10.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2204	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	612	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1245	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1245	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.8	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Palm Av to Peck Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2429	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	675	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1372	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1372	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.7	mi/h
Number of lanes, N	2	
Density, D	19.7	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1557	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	433	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	880	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	880	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1354	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	376	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	765	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	765	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	10.9	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2681	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	745	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1515	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1515	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.8	mi/h
Number of lanes, N	2	
Density, D	22.0	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2802	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	778	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1583	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1583	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.3	mi/h
Number of lanes, N	2	
Density, D	23.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1674	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	465	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	946	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	946	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Wells Rd to Briggs Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1410	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	392	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	797	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	797	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Wells Rd to Briggs Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2739	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	761	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1548	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1548	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.6	mi/h
Number of lanes, N	2	
Density, D	22.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Briggs Rd to Wells Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	2820	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	783	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1593	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1593	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.2	mi/h
Number of lanes, N	2	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Briggs Rd to Wells Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing Conditions

Flow Inputs and Adjustments

Volume, V	1729	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	480	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	977	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	977	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.0	pc/mi/ln
Level of service, LOS	B	

EXISTING PLUS PROJECT

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	947	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	263	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	535	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	535	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	7.6	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1620	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	450	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	915	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	915	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.1	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1612	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	448	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	911	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	911	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.0	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1123	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	312	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	634	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	634	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	9.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Palm Av to 10th St (SR-150)
Jurisdiction:
Analysis Year: 2015
Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1158	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	322	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	654	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	654	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	9.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2051	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	570	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1159	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1159	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	16.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2253	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	626	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1273	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1273	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1439	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	400	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	813	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	813	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Peck Rd to Palm Av
Jurisdiction:
Analysis Year: 2015
Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1275	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	354	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	720	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	720	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	10.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2373	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	659	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1341	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1341	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.8	mi/h
Number of lanes, N	2	
Density, D	19.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2580	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	717	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1458	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1458	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.2	mi/h
Number of lanes, N	2	
Density, D	21.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1584	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	440	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	895	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	895	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.8	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1463	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	406	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	827	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	827	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.8	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2701	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	750	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1526	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1526	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.8	mi/h
Number of lanes, N	2	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2816	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	782	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1591	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1591	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.2	mi/h
Number of lanes, N	2	
Density, D	23.3	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1796	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	499	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1015	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1015	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1551	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	431	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	876	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	876	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Wells Rd to Briggs Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2765	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	768	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1562	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1562	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.5	mi/h
Number of lanes, N	2	
Density, D	22.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
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Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Briggs Rd to Wells Rd
Jurisdiction:
Analysis Year: 2015
Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	2839	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	789	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1604	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1604	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.1	mi/h
Number of lanes, N	2	
Density, D	23.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions

Flow Inputs and Adjustments

Volume, V	1886	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	524	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1066	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1066	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	15.2	pc/mi/ln
Level of service, LOS	B	

EXISTING PLUS PROJECT WITHOUT BECKWITH EXTENSION

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	948	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	263	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	536	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	536	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	7.7	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1594	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	443	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	901	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	901	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1619	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	450	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	915	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	915	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	13.1	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
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Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1125	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	313	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	636	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	636	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	9.1	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1156	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	321	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	653	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	653	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	9.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2038	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	566	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1151	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1151	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	16.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2241	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	623	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1266	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1266	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1438	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	399	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	812	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	812	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1273	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	354	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	719	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	719	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	10.3	pc/mi/ln
Level of service, LOS	A	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2360	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	656	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1333	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1333	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.8	mi/h
Number of lanes, N	2	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2568	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	713	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1451	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1451	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.3	mi/h
Number of lanes, N	2	
Density, D	20.9	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1583	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	440	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	894	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	894	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.8	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1470	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	408	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	831	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	831	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2703	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	751	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1527	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1527	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.8	mi/h
Number of lanes, N	2	
Density, D	22.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2819	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	783	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1593	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1593	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.2	mi/h
Number of lanes, N	2	
Density, D	23.4	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1802	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	501	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1018	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1018	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1563	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	434	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	883	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	883	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2767	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	769	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1563	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1563	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.5	mi/h
Number of lanes, N	2	
Density, D	22.8	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2842	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	789	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1606	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1606	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.1	mi/h
Number of lanes, N	2	
Density, D	23.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2015
 Description: Existing + Project Conditions WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1898	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	527	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1072	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1072	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	15.3	pc/mi/ln
Level of service, LOS	B	

CUMULATIVE BASE (YEAR 2031)

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	1472	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	409	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	832	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	832	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	11.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2306	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	641	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1303	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1303	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2193	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	609	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1239	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1239	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.7	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	1786	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	496	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1009	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1009	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	1775	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	493	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1003	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1003	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.3	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2906	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	807	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1642	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1642	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	67.7	mi/h
Number of lanes, N	2	
Density, D	24.2	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2971	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	825	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1679	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1679	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	67.3	mi/h
Number of lanes, N	2	
Density, D	24.9	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2213	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	615	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1250	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1250	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2009	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	558	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1135	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1135	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	16.2	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Peck Rd to Palm Av
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	3195	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	888	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1805	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1805	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	65.8	mi/h
Number of lanes, N	2	
Density, D	27.5	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	3248	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	902	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1835	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1835	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	65.3	mi/h
Number of lanes, N	2	
Density, D	28.1	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2474	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	687	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1398	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1398	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	2	
Density, D	20.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Briggs Rd to Peck Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2106	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	585	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1190	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1190	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.0	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	3776	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1049	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2133	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2133	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	59.9	mi/h
Number of lanes, N	2	
Density, D	35.6	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	3702	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1028	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2092	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2092	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	60.8	mi/h
Number of lanes, N	2	
Density, D	34.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2624	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	729	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1483	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1483	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.1	mi/h
Number of lanes, N	2	
Density, D	21.5	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2357	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	655	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1332	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1332	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.8	mi/h
Number of lanes, N	2	
Density, D	19.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	4081	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1134	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2306	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2306	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	2	
Density, D	41.3	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	3997	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1110	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2258	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2258	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	57.0	mi/h
Number of lanes, N	2	
Density, D	39.6	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Briggs Rd to Wells Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Base Conditions

Flow Inputs and Adjustments

Volume, V	2853	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	793	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1612	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1612	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.0	mi/h
Number of lanes, N	2	
Density, D	23.7	pc/mi/ln
Level of service, LOS	C	

CUMULATIVE PLUS PROJECT (YEAR 2031)

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	1487	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	413	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	840	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	840	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.0	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2421	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	673	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1368	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1368	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.7	mi/h
Number of lanes, N	2	
Density, D	19.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2296	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	638	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1297	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1297	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	1804	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	501	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1019	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1019	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	1797	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	499	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1015	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1015	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Palm Av to 10th St (SR-150)
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3075	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	854	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1737	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1737	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	66.7	mi/h
Number of lanes, N	2	
Density, D	26.1	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3122	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	867	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1764	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1764	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	66.3	mi/h
Number of lanes, N	2	
Density, D	26.6	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2240	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	622	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1266	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1266	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Peck Rd to Palm Av
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2031	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	564	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1148	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1148	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	16.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Peck Rd to Palm Av
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3364	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	934	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1901	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1901	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	64.3	mi/h
Number of lanes, N	2	
Density, D	29.6	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3399	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	944	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1920	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1920	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	64.0	mi/h
Number of lanes, N	2	
Density, D	30.0	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Palm Av to Peck Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2501	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	695	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1413	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1413	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	2	
Density, D	20.3	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: AM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Briggs Rd to Peck Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2215	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	615	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1251	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1251	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Briggs Rd to Peck Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3796	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1054	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2145	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2145	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	2	
Density, D	36.0	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3716	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1032	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2100	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2100	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	60.6	mi/h
Number of lanes, N	2	
Density, D	34.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Peck Rd to Briggs
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2746	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	763	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1551	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1551	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.6	mi/h
Number of lanes, N	2	
Density, D	22.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	2498	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	694	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1411	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1411	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	2	
Density, D	20.3	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 EB
From/To: Wells Rd to Briggs Rd
Jurisdiction:
Analysis Year: 2015
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	4107	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1141	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2320	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2320	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	55.4	mi/h
Number of lanes, N	2	
Density, D	41.8	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	4016	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1116	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2269	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2269	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	56.7	mi/h
Number of lanes, N	2	
Density, D	40.0	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
Agency or Company: Fehr & Peers
Date Performed: 3/2/2015
Analysis Time Period: PM Peak Hour
Freeway/Direction: SR-126 WB
From/To: Briggs Rd to Wells Rd
Jurisdiction:
Analysis Year: 2031
Description: Cumulative Plus Project

Flow Inputs and Adjustments

Volume, V	3010	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	836	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1701	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1701	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	67.1	mi/h
Number of lanes, N	2	
Density, D	25.4	pc/mi/ln
Level of service, LOS	C	

**CUMULATIVE PLUS PROJECT WITHOUT BECKWITH EXTENSION
(YEAR 2031)**

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1488	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	413	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	841	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	841	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	12.0	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: 10th St (SR-150) to Hallock Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2429	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	675	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1372	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1372	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.7	mi/h
Number of lanes, N	2	
Density, D	19.7	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2303	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	640	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1301	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1301	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.9	mi/h
Number of lanes, N	2	
Density, D	18.6	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Hallock Rd to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1806	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	502	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1020	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1020	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.6	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	1795	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	499	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1014	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1014	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	14.5	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Palm Av to 10th St (SR-150)
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3062	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	851	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1730	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1730	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	66.7	mi/h
Number of lanes, N	2	
Density, D	25.9	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3110	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	864	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1757	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1757	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	66.4	mi/h
Number of lanes, N	2	
Density, D	26.5	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: 10th St (SR-150) to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2239	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	622	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1265	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1265	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	18.1	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2029	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	564	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1146	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	16.4	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Peck Rd to Palm Av
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3351	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	931	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1893	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1893	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	64.4	mi/h
Number of lanes, N	2	
Density, D	29.4	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3387	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	941	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1914	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1914	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	64.1	mi/h
Number of lanes, N	2	
Density, D	29.9	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Palm Av to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2500	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	694	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1413	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1413	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.5	mi/h
Number of lanes, N	2	
Density, D	20.3	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2222	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	617	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1255	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1255	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	70.0	mi/h
Number of lanes, N	2	
Density, D	17.9	pc/mi/ln
Level of service, LOS	B	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Briggs Rd to Peck Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3798	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1055	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2146	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2146	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	2	
Density, D	36.0	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3719	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1033	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2101	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2101	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	60.6	mi/h
Number of lanes, N	2	
Density, D	34.7	pc/mi/ln
Level of service, LOS	D	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Peck Rd to Briggs
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2752	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	764	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1555	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1555	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	68.5	mi/h
Number of lanes, N	2	
Density, D	22.7	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	2510	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	697	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1418	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1418	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	69.4	mi/h
Number of lanes, N	2	
Density, D	20.4	pc/mi/ln
Level of service, LOS	C	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 EB
 From/To: Wells Rd to Briggs Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	4109	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1141	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5*	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2322	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2322	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	55.4	mi/h
Number of lanes, N	2	
Density, D	41.9	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: AM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	4019	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1116	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	2271	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	2271	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	56.7	mi/h
Number of lanes, N	2	
Density, D	40.1	pc/mi/ln
Level of service, LOS	E	

Phone: Fax:
E-mail:

Operational Analysis

Analyst: FR
 Agency or Company: Fehr & Peers
 Date Performed: 3/2/2015
 Analysis Time Period: PM Peak Hour
 Freeway/Direction: SR-126 WB
 From/To: Briggs Rd to Wells Rd
 Jurisdiction:
 Analysis Year: 2031
 Description: Cumulative Plus Project WITHOUT BECKWITH EXTENSION

Flow Inputs and Adjustments

Volume, V	3022	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	839	v
Trucks and buses	3	%
Recreational vehicles	1	%
Terrain type:	Level	
Grade	-	%
Segment length	-	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.983	
Driver population factor, fp	1.00	
Flow rate, vp	1707	pc/h/ln

Speed Inputs and Adjustments

Lane width	-	ft
Right-side lateral clearance	-	ft
Total ramp density, TRD	-	ramps/mi
Number of lanes, N	2	
Free-flow speed:	Measured	
FFS or BFFS	70.0	mi/h
Lane width adjustment, fLW	-	mi/h
Lateral clearance adjustment, fLC	-	mi/h
TRD adjustment	-	mi/h
Free-flow speed, FFS	70.0	mi/h

LOS and Performance Measures

Flow rate, vp	1707	pc/h/ln
Free-flow speed, FFS	70.0	mi/h
Average passenger-car speed, S	67.0	mi/h
Number of lanes, N	2	
Density, D	25.5	pc/mi/ln
Level of service, LOS	C	

**APPENDIX E:
TRAFFIC SIGNAL WARRANTS**

EXISTING PLUS PROJECT WITH MITIGATION

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: SR-126 EB On/Off-Ramps
 Minor Street: Peck Road
 Scenario: Existing Plus Project

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	NO	8th Highest Hour
80% Combination	1C	8	YES	NO	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: Telegraph Road
 Minor Street: Beckwith Road
 Scenario: Existing Plus Project

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	NO	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

**EXISTING PLUS PROJECT WITHOUT BECKWITH EXTENSION
MITIGATION**

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: SR-126 EB On/Off-Ramps
 Minor Street: Peck Road
 Scenario: Existing Plus Project without Beckwith Extension

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	NO	8th Highest Hour
80% Combination	1C	8	YES	NO	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: Telegraph Road
 Minor Street: Beckwith Road
 Scenario: Existing Plus Project without Beckwith Extension

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	NO	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	YES	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

CUMULATIVE BASE PLUS PROJECT WITH MITIGATION

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: SR-126 EB On/Off-Ramps
 Minor Street: Peck Road
 Scenario: Cumulative Plus Project (Year 2031)

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	NO	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: Telegraph Road
 Minor Street: Beckwith Road
 Scenario: Cumulative Plus Project (Year 2031)

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	YES	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

**CUMULATIVE BASE PLUS PROJECT WITHOUT BECKWITH EXTENSION
WITH MITIGATION**

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: SR-126 EB On/Off-Ramps
 Minor Street: Peck Road
 Scenario: Cumulative Plus Project without Beckwith Extension (Year 2031)

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	YES	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	NO	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

SUMMARY OF TRAFFIC SIGNAL WARRANT ANALYSIS

Major Street: Telegraph Road
 Minor Street: Beckwith Road
 Scenario: Cumulative Plus Project without Beckwith Extension (Year 2031)

SUMMARY OF RESULTS

Warrant	MUTCD Warrant Number	Caltrans Warrant Number	Requested for Analysis?	Volumes Satisfy Warrant?	Applicable Time Period
Eight Hour Vehicular Volume	1				
Minimum Vehicular Volume	1A	1	YES	NO	8th Highest Hour
Interruption of Continuous Traffic	1B	2	YES	YES	8th Highest Hour
80% Combination	1C	8	YES	YES	8th Highest Hour
Four Hour Volume	2	9	YES	YES	4th Highest Hour
Peak Hour Volume	3	11	YES	YES	Peak Hour
Estimated Average Daily Traffic	n/a	n/a			
Minimum Vehicular Volume			NO	n/a	Daily
Interruption of Continuous Traffic			NO	n/a	Daily
80% Combination			NO	n/a	Daily

APPENDIX 4.14

**Draft Water Supply Assessment & Water Supply Verification Report for the
Proposed Santa Paula West Business Park Specific Plan Project**

**Santa Paula West
Business Park
Specific Plan**

November 2015

Prepared by:



Santa Paula West Business Park Specific Plan

Domestic Water

Technical Report

Santa Paula, CA

Prepared for:

***McGaelic Group
&
Bender Realty Ltd***

November 2015

Prepared by:

Jensen Design & Survey
1672 Donlon Street
Ventura, CA 93003
(805) 654-6977

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Figure 8, Santa Paula West Business Park Domestic Water Technical Report Layout

Appendix A, Fire Flow Testing from WREA

Introduction

The Santa Paula West project is a planned commercial and industrial development containing a mixture of industrial, research and development, retail, office and commercial uses. The Specific Plan project site is located just outside the limits, but within the sphere of influence, of the City of Santa Paula. The land use to the west and to the south is agriculture. Highway 126 runs along the south edge of the specific plan area, and to the east is existing industrial and commercial development. To the north is Telegraph Road and residential development. The Regional Location Map is shown below as Figure 1.



FIGURE 1 - REGIONAL LOCATION MAP

Access to the site is provided by Beckwith Road, Telegraph Road, and Faulkner Road. Figure 2 shows the project location.

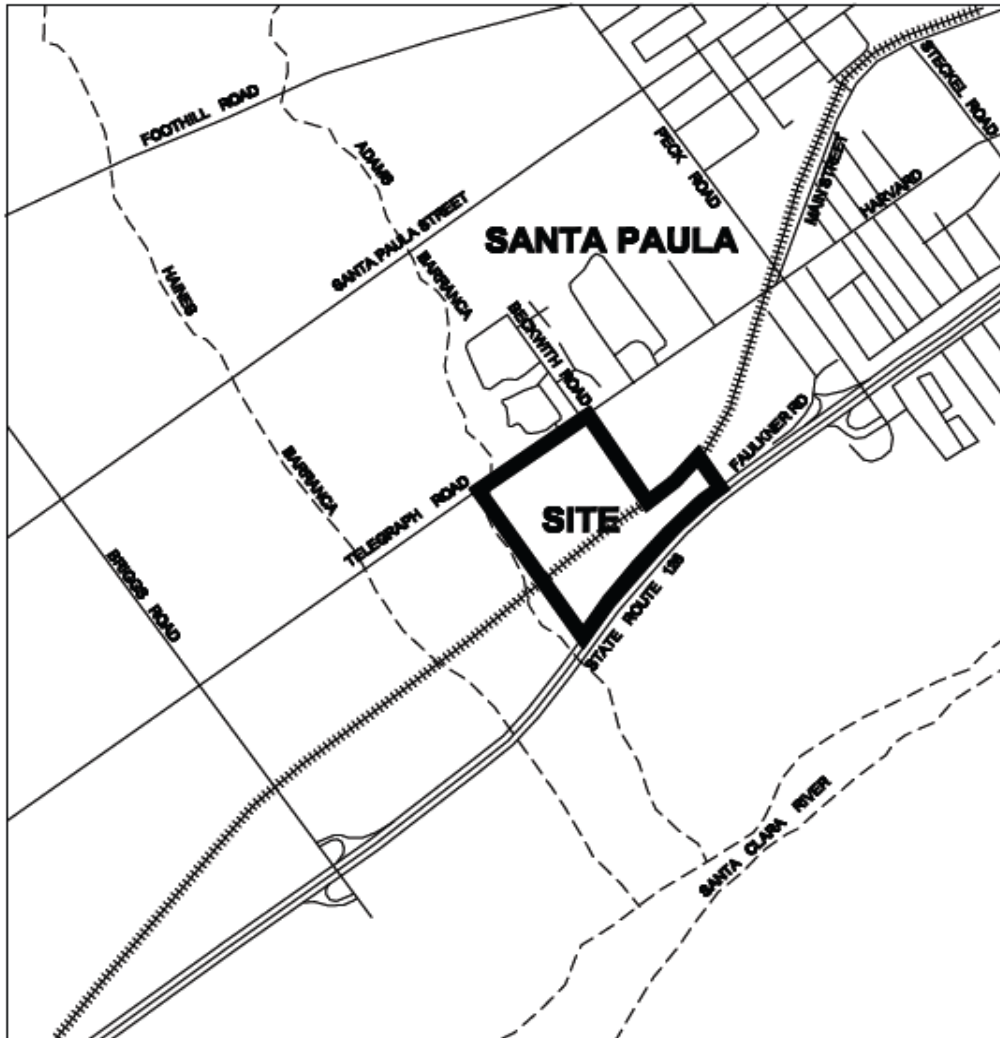


FIGURE 2 – PROJECT LOCATION MAP

Existing Conditions

The Santa Paula West Project lies within the City of Santa Paula for domestic water services. Even though the existing land use is mainly agricultural in nature, systems of water mains exist in the streets surrounding the project, Faulkner Road and Telegraph Road. All of the City's water supply comes from 5 existing wells that pump from the Santa Paula Groundwater Basin that is recharged by Santa Clara River, Santa Paula Creek, and other local streams. This water supply is either treated at the Steckel Conditioning Facility or has the capacity to remove iron and manganese at the well site. The domestic water system in Telegraph Road is a 10" ACP line and a 12" PVC line is located at the end Faulkner Road at Todd Lane. This portion of the existing City system will service the specific plan area. These domestic water systems have sufficient quantities of water necessary for the Santa Paula West Business Park development for domestic and fire requirements. A flow test was completed by WREA on June 25, 2009 to verify pressures within the existing system. These flow tests were used for the water system analysis in this report.

The City of Santa Paula commissioned a domestic water study for reviewing the City's entire water system, both domestic and recycled. This study, "Potable Water System Master Plan" prepared by Boyle Engineering, was subsequently completed in October 2005 with an amendment in 2012. The "Potable Water System Master Plan" identifies Santa Paula Business Park (Santa Paula West 2) as a future expansion area. It projected an area of 60.75 acres of commercial development. The Specific Plan for the Santa Paula West project shows 53.81 acres of Industrial business park (See Figure 5A). Once annexed, Santa Paula Business Park (Santa Paula West 2) will be within the City's sphere of influence and anticipates demand from the Santa Paula West project as well as other notable projects in and around the City of Santa Paula.

Objectives

The objective of this study is to provide a blueprint for the design of a single zone scenario domestic water system within the Santa Paula West Business Park. The Santa Paula West project will be designed to meet or exceed the City of Santa Paula's domestic water design criterion as established in the "Potable Water System Master Plan". The design guidelines set forth in this report are consistent with those set forth in the City's "Potable Water System Master Plan".

Procedure

The Santa Paula West domestic water system was developed utilizing the following 6 basic design steps:

1. Define Design Parameters

Design parameters for the domestic water system were developed from the City of Santa Paula Potable Water System Master Plan, October 2005, Table 3-10 in Section 3 value of 15 gal/SF/yr has been changed to its equivalent of 2 AF/acre/yr as a more convenient value for use in the exhibits. Fire flow requirements were taken from Table 3-1. The design parameters are also referenced in Figure 3 of this report. A preliminary water layout is shown on Figure 8. The elevations of the waterlines used in the report were taken from elevations shown on Figure 8 with an assumed pipe depth of 5 feet.

2. Define Land Use Types and Locations

Land uses were defined utilizing the Specific Plan for Santa Paula West, specifically Chapter 2 – Land Use and Circulation. The land use types used in this report can be seen in Figure 5. During the tentative map stage, a specific water system model will be developed and processed. The modeling included herein will provide for an upper boundary (most conservative) analysis should the ultimate development proceed.

3. Assign Domestic Water Consumption Factors

Based on the aforementioned design parameters, specific domestic water consumption rates were applied. The domestic water consumption rates are shown in Figure 4. The consumption rates were then logically spread out to junctions (nodes) within the domestic water system and quantities are shown in Figures 6A & 6B.

4. Model Domestic Water System

After each individual junction received a domestic water consumption rate, the resultant water demands were logically linked together in a model. Pipes connecting the various junctions were developed based on potential phasing of the project, demand types and locations, and internal system redundancy. Maximum Day and Peak Hour runs were analyzed for steady state conditions. A fire flow of 4,500 gpm was added to the system along with the Maximum Day Demand (MDD) loading for a

single hydrant (both steady state run and 2-hour extended period run). The results of these models can be seen in Figures 7A, 7B, and 7C. See Figure 8 for pipe and junction locations.

5. Prepare Summary Graphic

After demands were logically linked together in a model a resultant water system graphic was prepared. The results of this model can be seen in Figure 8 Water Layout.

Proposed Domestic Water System

The Santa Paula West Business Park Specific Plan anticipates a looped system for the specific plan area. The main system loop starts at the existing end of Faulkner Road and extends west along Faulkner Road and through the north-south road with dual cul de sacs, Road 'A' and Road 'B', connecting to Telegraph Road. A second backbone system will be located in the north-south through road, Beckwith Road. Beckwith Road's existing 8" ACP line will remain in place. These domestic water lines are 12" and 10" diameter facilities, respectively. Each building will have its own domestic water master meter and fire system connected to the main trunk line and in a location that is within City Right of Way.

Results

The Water System Analysis in Figure 7 shows calculated demands with the resulting steady state pressures and velocities for the 0, 1, 2, 3, and 4 hour extended period run for each fire hydrant and building demands. All water mains within the project were designed so that the Peak Hour and Maximum Day usage had a pressure range above 43 psi (pounds per square inch) and below 150 psi per Table 3-10 in the *City of Santa Paula Potable Water System Master Plan*, October 2005. Since the Potable Water System Master Plan states that the maximum pressure at a residence or other structure is 80 psi and our average pressure at the junctions is 100 psi, it is recommended that pressure reducers are installed at the meter locations to each building. Fire flow pressure at location J-7 is 81 psi which is greater than the required minimum of 20 psi.

Proposed Reclaimed Water System

SANTA PAULA WEST BUSINESS PARK DOMESTIC WATER TECHNICAL REPORT

The proposed Recycled Water Plan is shown on Figure 6B. The Santa Paula West Business Park Specific Plan recycled water system would operate via a proposed 12” distribution main as called for in the City’s Recycled Water Plan. This 12” distribution main will be constructed in Telegraph Road, within the city limits. This terminus becomes the main point of connection (POC) for the Santa Paula West Business Park Specific Plan project. From the POC a new recycled water system will proceed throughout into the Santa Paula West Business Park Specific Plan site. The proposed distribution system will be comprised of 6” mains from the POC of the City’s recycled water system. Anticipated demand for recycled water in the Santa Paula West Business Park Specific Plan project is estimated at 17.9 AFY as shown in table below.

Recycled Water Use Summary Table

Area acres	Percent Landscaped	Annual Use	
		**AF/ac/yr	AF
53.81	15	2.22	17.9

**From "Water Supply Assesment, East Area One Specific Plan" by Impact Science, April 2007

According to the City’s Potable Water System Master Plan, the City will in the future develop a recycled water system conveyance plan that will include a line in Telegraph Road. The project includes an onsite recycled water distribution system to irrigate greenbelt and irrigation areas. This will allow the Santa Paula West Business Park Specific Plan to make use of recycled water when the City completes its planned recycled water plan and extends a line to the point of connection in the railroad right of way at Beckwith Road.

Conclusions

Based on the modeling prepared by Jensen Design & Survey, the Santa Paula West Business Park domestic water system depicted in Figure 8 is in accordance with City of Santa Paula design guidelines for maximum fire flows, peak hour demands, and maximum daily demands. Flow testing for the model was completed on June 25, 2009.

References

- Boyle Engineering Corporation, October 2005, “City of Santa Paula Potable Water System Master Plan”
- City of Santa Paula, June 2012, “2005 City of Santa Paula Potable Water System Master Plan Amendment”
- Jensen Design & Survey, Inc., October 2015, “Santa Paula West Business Park Specific Plan”
- Milner-Villa Consulting, June 2011, “Final 2010 Urban Water Management Plan Update”

**FIGURE 3
SANTA PAULA WEST
SUMMARY OF DOMESTIC WATER DESIGN CRITERIA**

Average Domestic Water Consumption Rates	
Commercial Uses	2 AF/ac/yr [2]
Industrial Uses	2 AF/ac/yr [2]
Demand Cases	
Studied Cases include the following two design scenarios: PHD & MDD+FF	
Maximum Day Demand (MDD)	MDD = 1.5 x Average Day Demand
Peak Hour Demand (PHD)	PHD = 1.8 x Maximum Day Demand
Fire Flow (FF)	Assumed 4,500 gpm, 4 hour duration [1]
Pipeline Design Parameters	
Minimum Pipe Size = 8" PVC	
Hazen - Williams Coefficient = 120 (6" to 12" pipes)	
Hazen - Williams Coefficient = 130 (12" and larger pipes)	

[1] - City of Santa Paula Potable Water System Master Plan Table 3-1

[2] - City of Santa Paula Potable Water System Master Plan 3-10 (converted from 15gal/SF/Year)

FIGURE 4
SANTA PAULA WEST BUSINESS PARK
SUMMARY OF ULTIMATE DOMESTIC WATER LAND USES AND DEMANDS

<u>PROPOSED LAND USE</u>	<u>CONSUMPTION RATE</u>	<u>ACRES</u>	<u>Annual Demand (AF)</u>	<u>AVERAGE DAILY FLOW (GPM)</u>	<u>MAXIMUM DAY DEMAND (GPM)</u>	<u>PEAK HOUR DEMAND (GPM)</u>
PLANNING AREA						
Commerical/Light Industrial/Retail/Office	2 AF/acre/year [1]	53.81	108	66.72	100.08	180.14
TOTAL				66.72	100.08	180.14

NOTES

[1] From Table 3-10 of "City of Santa Paula Potable Water System Master Plan" Units are revised, see page 4

**FIGURE 5
SANTA PAULA WEST
SUMMARY OF LAND USE**

Land Use Type	Acres	% of Site
Industrial Business Park (north Hwy 126)	43.06	74%
Roadways (Approximate)	6.95	12%
Open Space/Passive	3.8	7%
Sum	53.81	92%
Rialroad Right of Way	4.60	8%
Gross Site Area	58.41	100%

**FIGURE 6A
SANTA PAULA WEST
SUMMARY OF JUNCTION DEMANDS**

JUNCTION NODE	Acres	AVERAGE DAILY DEMAND (GPM)	PEAK HOUR DEMAND (GPM)	MAX DAILY DEMAND (GPM)
J8	5.91	7.33	19.8	11.0
J10	6.46	8.01	21.6	12.0
J13	9.73	12.06	32.6	18.1
J16	18.00	22.32	60.3	33.5
J20	8.41	10.43	28.2	15.6
J21	5.30	6.57	17.7	9.9

***All other junctions are either angle points or fire hydrants

**Santa Paula West
SPECIFIC PLAN**



NODE	AREA (AC)
J8	5.91
J10	6.46
J13	9.73
J16	18.0
J20	8.41
J21	5.30

Notes:
Water Demand for proposed Santa Paula West Specific Plan only.

LEGEND

	Existing water main to remain
	Proposed 12" water main
	Proposed 10" water main
	Proposed 6" reclaimed water main
	Proposed 8" water main



Scale: 1"=300'

**FIGURE 6B
Water Plan**

FIGURE 7A
 Scenario: PHD Domestic Pump 3
 Active Scenario: PHD Domestic Pump 3

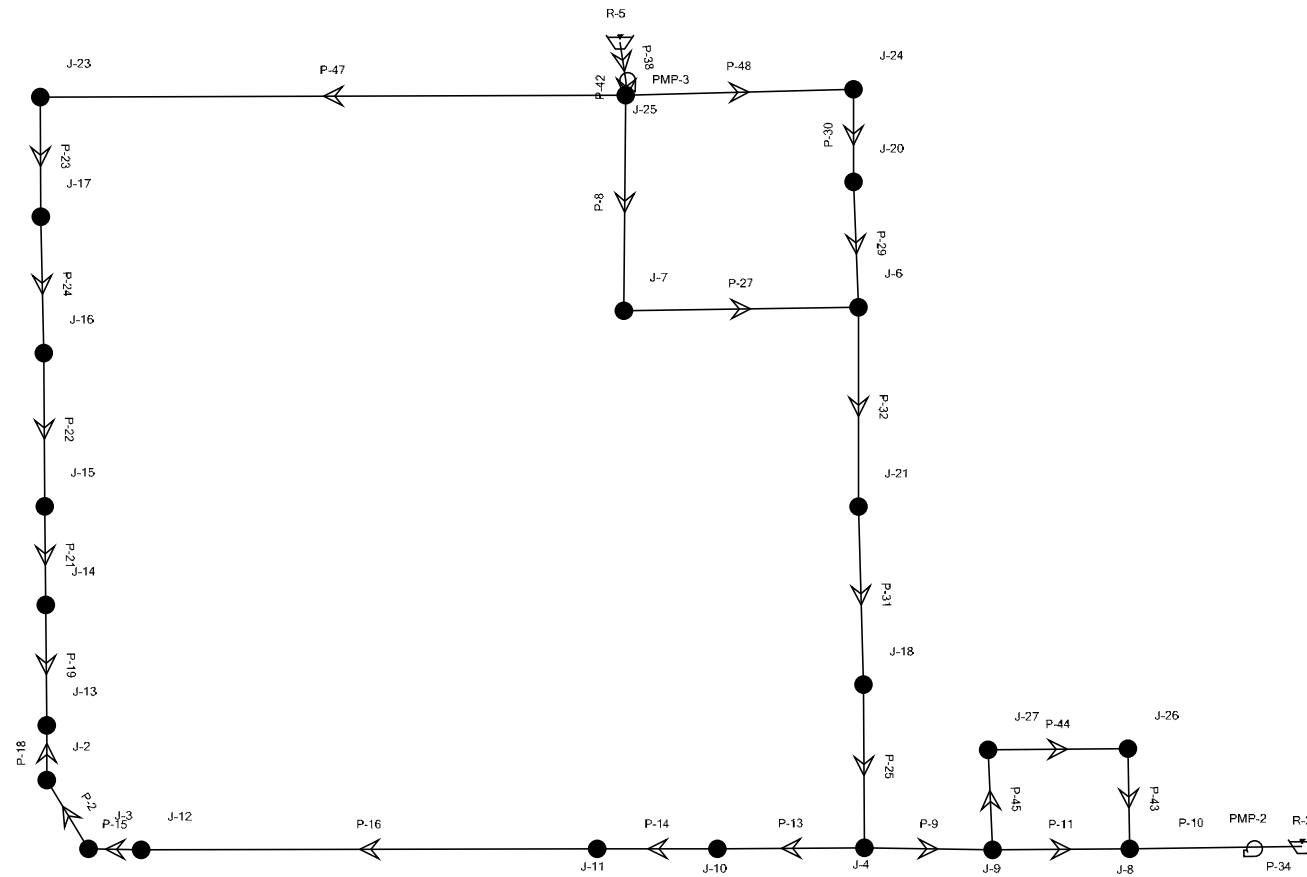


FIGURE 7B
Fire Flow Node FlexTable: Fire Flow Report
Active Scenario: Fire Pump 3

Current Time: 0.000 hours

Label	Zone	Fire Flow Iterations	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)
J-2	Zone	(N/A)	(N/A)	4,500	(N/A)
J-3	Zone	(N/A)	(N/A)	4,500	(N/A)
J-4	Zone	(N/A)	(N/A)	4,500	(N/A)
J-6	Zone	(N/A)	(N/A)	4,500	(N/A)
J-8	Zone	(N/A)	(N/A)	4,500	(N/A)
J-9	Zone	(N/A)	(N/A)	4,500	(N/A)
J-10	Zone	(N/A)	(N/A)	4,500	(N/A)
J-11	Zone	(N/A)	(N/A)	4,500	(N/A)
J-12	Zone	(N/A)	(N/A)	4,500	(N/A)
J-13	Zone	(N/A)	(N/A)	4,500	(N/A)
J-14	Zone	(N/A)	(N/A)	4,500	(N/A)
J-15	Zone	(N/A)	(N/A)	4,500	(N/A)
J-16	Zone	(N/A)	(N/A)	4,500	(N/A)
J-17	Zone	(N/A)	(N/A)	4,500	(N/A)
J-18	Zone	(N/A)	(N/A)	4,500	(N/A)
J-20	Zone	(N/A)	(N/A)	4,500	(N/A)
J-21	Zone	(N/A)	(N/A)	4,500	(N/A)
J-7	Zone	2	True	4,500	5,000
J-23	<None>	(N/A)	(N/A)	4,500	(N/A)
J-24	<None>	(N/A)	(N/A)	4,500	(N/A)
J-25	<None>	(N/A)	(N/A)	4,500	(N/A)
J-26	<None>	(N/A)	(N/A)	4,500	(N/A)
J-27	<None>	(N/A)	(N/A)	4,500	(N/A)
Flow (Total Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Residual Lower Limit) (psi)	Pressure (Calculated Residual) (psi)	Pressure (Zone Lower Limit) (psi)	Pressure (Calculated Zone Lower Limit) (psi)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)
(N/A)	(N/A)	20.0	(N/A)	0.0	(N/A)

FIGURE 7C
FlexTable: Pipe Table
Active Scenario: PHD Domestic Pump 3

Current Time: 0.000 hours

ID	Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)
133	P-2	26	J-2	J-3	12.0
134	P-10	40	PMP-2	J-8	12.0
135	P-9	41	J-9	J-4	12.0
136	P-11	44	J-8	J-9	12.0
137	P-13	47	J-10	J-4	12.0
138	P-14	39	J-11	J-10	12.0
139	P-15	17	J-3	J-12	12.0
140	P-16	147	J-12	J-11	12.0
141	P-18	18	J-13	J-2	12.0
142	P-19	39	J-14	J-13	12.0
143	P-21	32	J-15	J-14	12.0
144	P-22	49	J-16	J-15	12.0
145	P-23	38	J-23	J-17	12.0
146	P-24	44	J-17	J-16	12.0
147	P-25	52	J-4	J-18	10.0
148	P-29	40	J-6	J-20	10.0
149	P-30	30	J-20	J-24	10.0
150	P-31	57	J-18	J-21	10.0
151	P-32	64	J-21	J-6	10.0
152	P-34	16	R-2	PMP-2	12.0
156	P-27	76	J-7	J-6	10.0
157	P-38	13	R-5	PMP-3	10.0
167	P-8	69	J-7	J-25	10.0
168	P-42	4	J-25	PMP-3	10.0
170	P-43	32	J-8	J-26	6.0
172	P-44	45	J-26	J-27	6.0
173	P-45	32	J-27	J-9	6.0
175	P-47	189	J-23	J-25	10.0
176	P-48	73	J-25	J-24	10.0
Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)
PVC	130.0	False	0.000	-1	0.00
PVC	130.0	False	0.000	0	0.00
PVC	130.0	False	0.000	-20	0.06
PVC	130.0	False	0.000	-6	0.02
PVC	130.0	False	0.000	-22	0.06
PVC	130.0	False	0.000	-1	0.00
PVC	130.0	False	0.000	-1	0.00
PVC	130.0	False	0.000	-1	0.00
PVC	130.0	False	0.000	-1	0.00
PVC	130.0	False	0.000	32	0.09
PVC	130.0	False	0.000	32	0.09
PVC	130.0	False	0.000	32	0.09
PVC	130.0	False	0.000	92	0.26

FIGURE 7C
FlexTable: Pipe Table
Active Scenario: PHD Domestic Pump 3

Current Time: 0.000 hours

Material	Hazen-Williams C	Has Check Valve?	Minor Loss Coefficient (Local)	Flow (gpm)	Velocity (ft/s)
PVC	130.0	False	0.000	92	0.26
PVC	120.0	False	0.000	-42	0.17
PVC	120.0	False	0.000	-22	0.09
PVC	120.0	False	0.000	-50	0.20
PVC	120.0	False	0.000	-42	0.17
PVC	120.0	False	0.000	-60	0.24
PVC	130.0	False	0.000	0	0.00
PVC	120.0	False	0.000	38	0.16
PVC	120.0	False	0.000	180	0.74
PVC	120.0	False	0.000	-38	0.16
PVC	120.0	False	0.000	-180	0.74
PVC	150.0	False	0.000	-14	0.16
PVC	150.0	False	0.000	-14	0.16
PVC	150.0	False	0.000	-14	0.16
Asbestos Cement	140.0	False	0.000	-92	0.38
Asbestos Cement	140.0	False	0.000	50	0.20

Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
0.000	True	83
0.000	True	266
0.000	True	157
0.000	True	319
0.000	True	195
0.000	True	202
0.000	True	123
0.000	True	380
0.000	True	67
0.000	True	55
0.000	True	929
0.000	True	328
0.000	True	283
0.000	True	146
0.000	True	292
0.000	True	415
0.000	True	216
0.000	True	403
0.000	True	245
0.000	True	1
0.000	True	527
0.000	True	1
0.000	True	634

FIGURE 7C
FlexTable: Pipe Table
Active Scenario: PHD Domestic Pump 3
Current Time: 0.000 hours

Headloss Gradient (ft/ft)	Has User Defined Length?	Length (User Defined) (ft)
0.000	True	1
0.000	True	1
0.000	True	1
0.000	True	1
0.000	True	385
0.000	True	524

FIGURE 7C
FlexTable: Junction Table
Active Scenario: PHD Domestic Pump 3
Current Time: 0.000 hours

ID	Label	Elevation (ft)	Zone	Demand Collection	Demand (gpm)
107	J-2	221.00	Zone	<Collection: 0 items>	0
108	J-3	221.00	Zone	<Collection: 0 items>	0
109	J-4	221.00	Zone	<Collection: 0 items>	0
110	J-6	235.00	Zone	<Collection: 0 items>	0
111	J-8	221.00	Zone	<Collection: 1 items>	20
112	J-9	221.00	Zone	<Collection: 0 items>	0
113	J-10	221.00	Zone	<Collection: 1 items>	22
114	J-11	221.00	Zone	<Collection: 0 items>	0
115	J-12	221.00	Zone	<Collection: 0 items>	0
116	J-13	223.00	Zone	<Collection: 1 items>	33
117	J-14	223.00	Zone	<Collection: 0 items>	0
118	J-15	231.00	Zone	<Collection: 0 items>	0
119	J-16	235.00	Zone	<Collection: 1 items>	60
120	J-17	239.00	Zone	<Collection: 0 items>	0
121	J-18	223.00	Zone	<Collection: 0 items>	0
122	J-20	237.00	Zone	<Collection: 1 items>	28
123	J-21	226.00	Zone	<Collection: 1 items>	18
124	J-7	233.00	Zone	<Collection: 0 items>	0
164	J-23	246.00	<None>	<Collection: 0 items>	0
165	J-24	245.00	<None>	<Collection: 0 items>	0
166	J-25	246.00	<None>	<Collection: 0 items>	0
169	J-26	221.00	<None>	<Collection: 0 items>	0
171	J-27	221.00	<None>	<Collection: 0 items>	0
Hydraulic Grade (ft)		Pressure (psi)			

FIGURE 7C

FlexTable: Junction Table

Active Scenario: PHD Domestic Pump 3

Current Time: 0.000 hours

Hydraulic Grade (ft)	Pressure (psi)
455.96	101.7
455.96	101.7
455.96	101.7
455.98	95.6
455.96	101.7
455.96	101.7
455.96	101.7
455.96	101.7
455.96	101.7
455.96	100.8
455.96	100.8
455.96	97.3
455.96	95.6
455.97	93.9
455.96	100.8
455.98	94.7
455.97	99.5
455.99	96.5
455.97	90.8
455.99	91.3
456.00	90.9
455.96	101.7
455.96	101.7

FIGURE 7D-PUMP 2
 Pump Definition Detailed Report: Pump Definition - 1
 Active Scenario: PHD Domestic

Element Details			
ID	62	Notes	
Label	Pump Definition - 1		
Pump Definition Type			
Pump Definition Type	Standard (3 Point)	Design Head	207.90 ft
Shutoff Flow	0 gpm	Maximum Operating Flow	4,605 gpm
Shutoff Head	231.00 ft	Maximum Operating Head	46.20 ft
Design Flow	1,500 gpm		
Pump Efficiency Type			
Pump Efficiency Type	Constant Efficiency	Motor Efficiency	100.0 %
Constant Efficiency	100.0 %	Is Variable Speed Drive?	False
Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft ²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

FIGURE 7D-PUMP 2
Pump Definition Detailed Report: Pump Definition - 1
Active Scenario: PHD Domestic

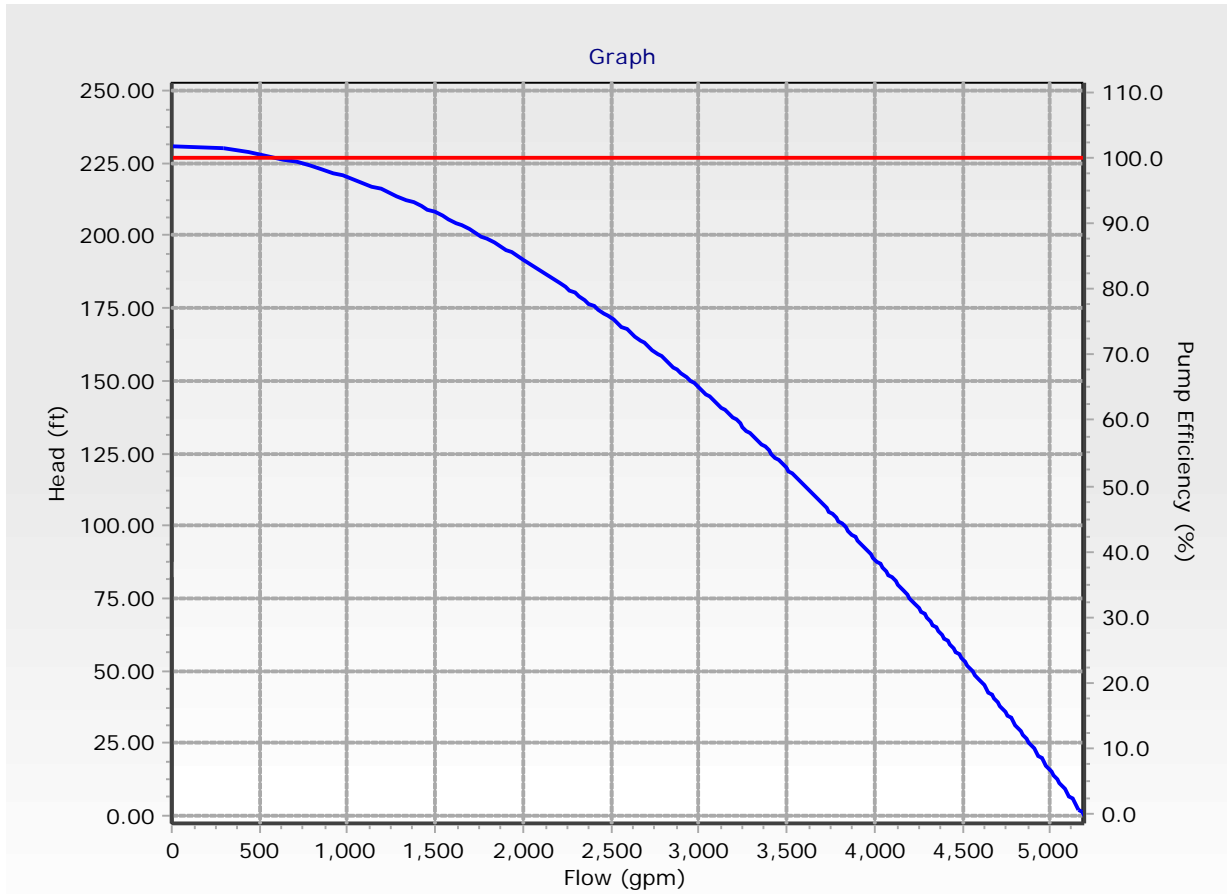
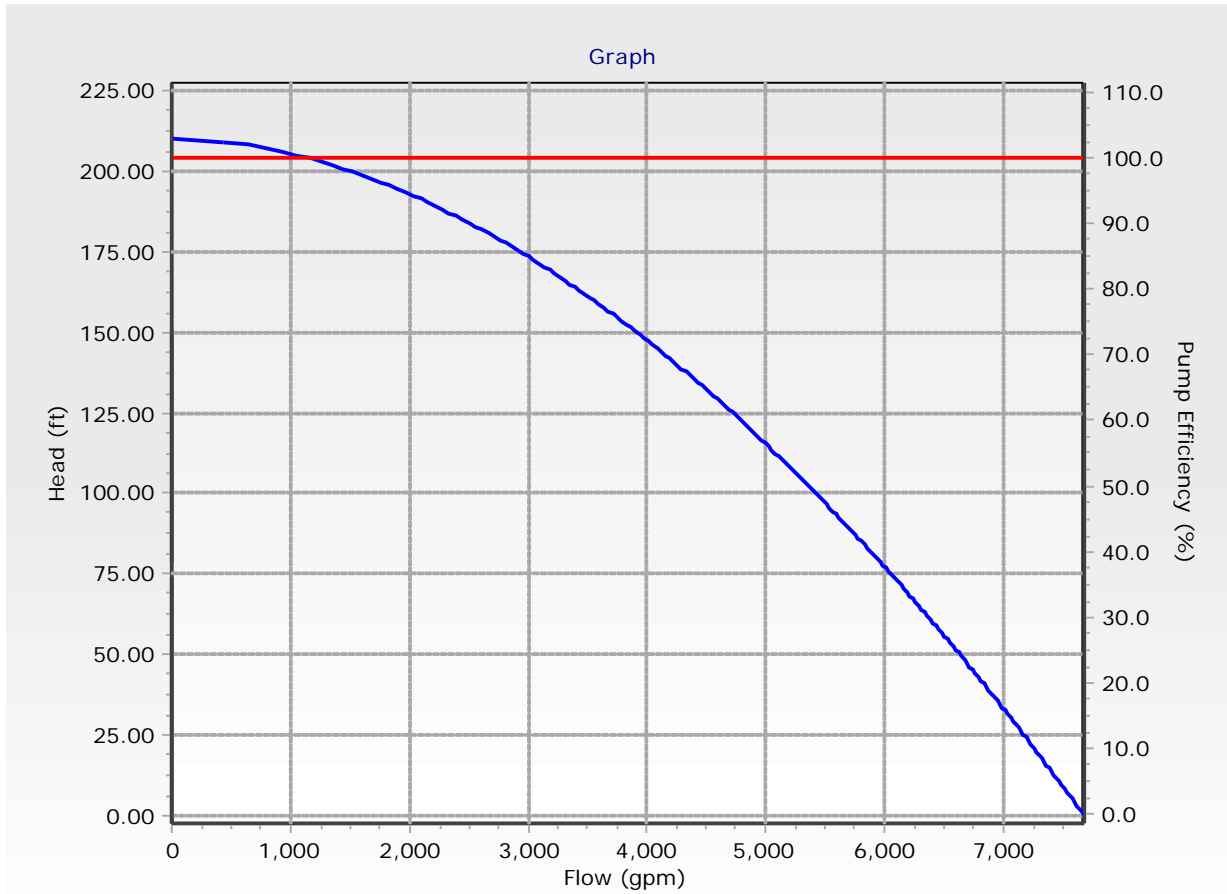


FIGURE 7D-PUMP 3
 Pump Definition Detailed Report: Pump Definition - 2
 Active Scenario: PHD Domestic

Element Details			
ID	63	Notes	
Label	Pump Definition - 2		
Pump Definition Type			
Pump Definition Type	Standard (3 Point)	Design Head	200.97 ft
Shutoff Flow	0 gpm	Maximum Operating Flow	6,716 gpm
Shutoff Head	210.20 ft	Maximum Operating Head	46.20 ft
Design Flow	1,423 gpm		
Pump Efficiency Type			
Pump Efficiency Type	Constant Efficiency	Motor Efficiency	100.0 %
Constant Efficiency	100.0 %	Is Variable Speed Drive?	False
Transient (Physical)			
Inertia (Pump and Motor)	0.000 lb·ft ²	Specific Speed	SI=25, US=1280
Speed (Full)	0 rpm	Reverse Spin Allowed?	True

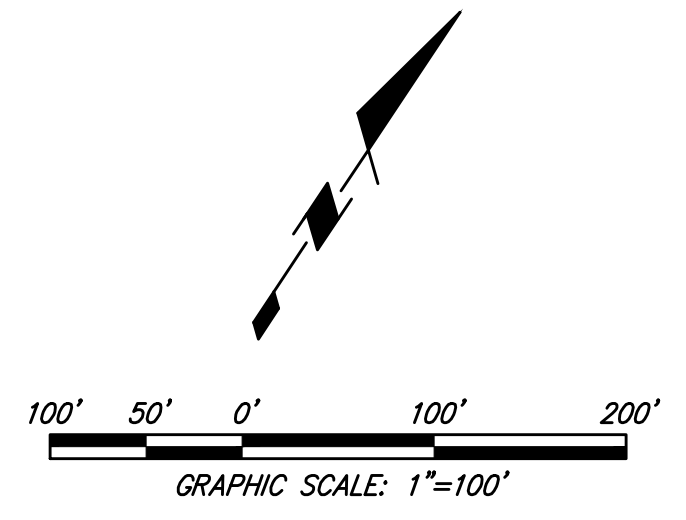
FIGURE 7D-PUMP 3
Pump Definition Detailed Report: Pump Definition - 2
Active Scenario: PHD Domestic






LEGEND

- PROPOSED WATER LAYOUT
- PROPERTY LINE
- FINISH GRADE
- PIPE REACH
- JUNCTION
- ELEVATION



 <p>JENSEN DESIGN & SURVEY, INC. www.jdsdvl.com</p>	1672 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979	<p>WATER LAYOUT FOR SANTA PAULA WEST BUSINESS PARK</p>	<p>FIGURE 8</p>
	SCALE: 1"=100' DATE: Nov 11, 2015	J.M.: PAR144992 DWG. NAME: 4492_Water_Service_Figure 8.dwg	<p>City of Santa Paula COUNTY OF VENTURA STATE OF CALIFORNIA</p>

C:\PAR14492\Planning\Specific Plan\Water\4492_Water_Service_Figure 8.dwg Nov 11, 2015, 8:54am bluejpy



WATER RESOURCE ENGINEERING ASSOCIATES
 CONSULTING CIVIL AND ENVIRONMENTAL ENGINEERS IN WATER AND WASTEWATER
 COLLECTION, CONSERVATION, DISTRIBUTION AND TREATMENT
 2300 ALESSANDRO DR, SUITE 215, VENTURA, CA. 93001 (805) 653-7900 1-800-25-WATER FAX: (805) 653-0610

FIREFLOW TEST DATA

PROJECT: Santa Paula, West Fire Flows ASSESSORS PARCEL NO.: _____
 PROJECT NO.: 2183 DEVELOPER: _____
 FIRE DEPT: City of Santa Paula OBSERVERS: Barney Caudill, Steve Cattanach
 WATER PURV: City of Santa Paula FIRM: Water Resource Engineering Associates (WREA)

Test No.	Location	Time		c	d (in)	Pressure (PSI)			Flow Rates (GPM)		
		Date	Time			P _s	p	P _R	Q _o	M	Q 20
1	957 Faulkner (Flow) and 300 ft East (Test)	6/25/09	10:10	.9	2.5	100	80	90	1500	3.07	4605
2	FH 423 (Flow) FH 422 (Test) on Beckwith	6/25/09	10:25	.9	2.5	91	72	87	1423	4.72	6716

- c = Nozzle Coefficient of Discharge
- d = Diameter of Outlet in Inches
- P_s = Static Pressure
- P_R = Residual Pressure
- p = Pitot Gage Pressure in PSI
- Q_o = Observed Flow
- Q₂₀ = Extrapolated Flow at 20 PSI Residual
- M = Multiplier for Extrapolated Flow

Formula for Multiplier:

$$M = \frac{(P_s - 20)^{0.64}}{(P_s - P_R)^{0.64}}$$

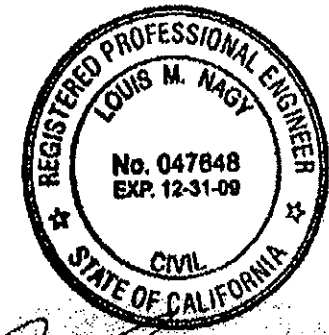
Formula for Extrapolated Flow at 20 PSI Residual:


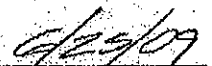
$$Q_{20} = Q_o \times M$$

Formula for Observed Discharge:

$$Q_o = 29.83cd^2 \sqrt{p}$$

Note: This fire flow test data is provided for information only. Use of the results is solely at the user's risk. The Engineer makes no guarantee that the results of this test can be repeated, except to state that at the time and date indicated, the test yielded the results indicated.





 Testing & Calculations Checked and Certified _____ Date _____

Jun 26 2009 6:44PM Water Resource Engineering Inc 8056530610 P.3

**Santa Paula West
Business Park
Specific Plan**

November 2015

Prepared by:



Santa Paula West Business Park Specific Plan

Sanitary Sewer

Technical Report

Santa Paula, CA

Prepared for:

***McGaelic Group
&
Bender Realty Ltd***

November 2015

Prepared by:

Jensen Design & Survey
1672 Donlon Street
Ventura, CA 93003
(805) 654-6977

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SANTA PAULA WEST BUSINESS PARK SANITARY SEWER TECHNICAL REPORT

Introduction

The Santa Paula West project is a planned commercial and industrial development containing a mixture of industrial, research and development, retail, office and commercial uses. The Specific Plan project site is located just outside the limits, but within the sphere of influence, of the City of Santa Paula. The land use to the west and to the south is agriculture. Highway 126 runs along the south edge of the specific plan area, and to the east is existing industrial and commercial development. To the north is Telegraph Road and residential development. The Regional Location Map is shown below as Figure 1.



FIGURE 1 - REGIONAL LOCATION MAP

Access to the site is provided by Beckwith Road, Telegraph Road, and Faulkner Road. Figure 2 shows the project location.

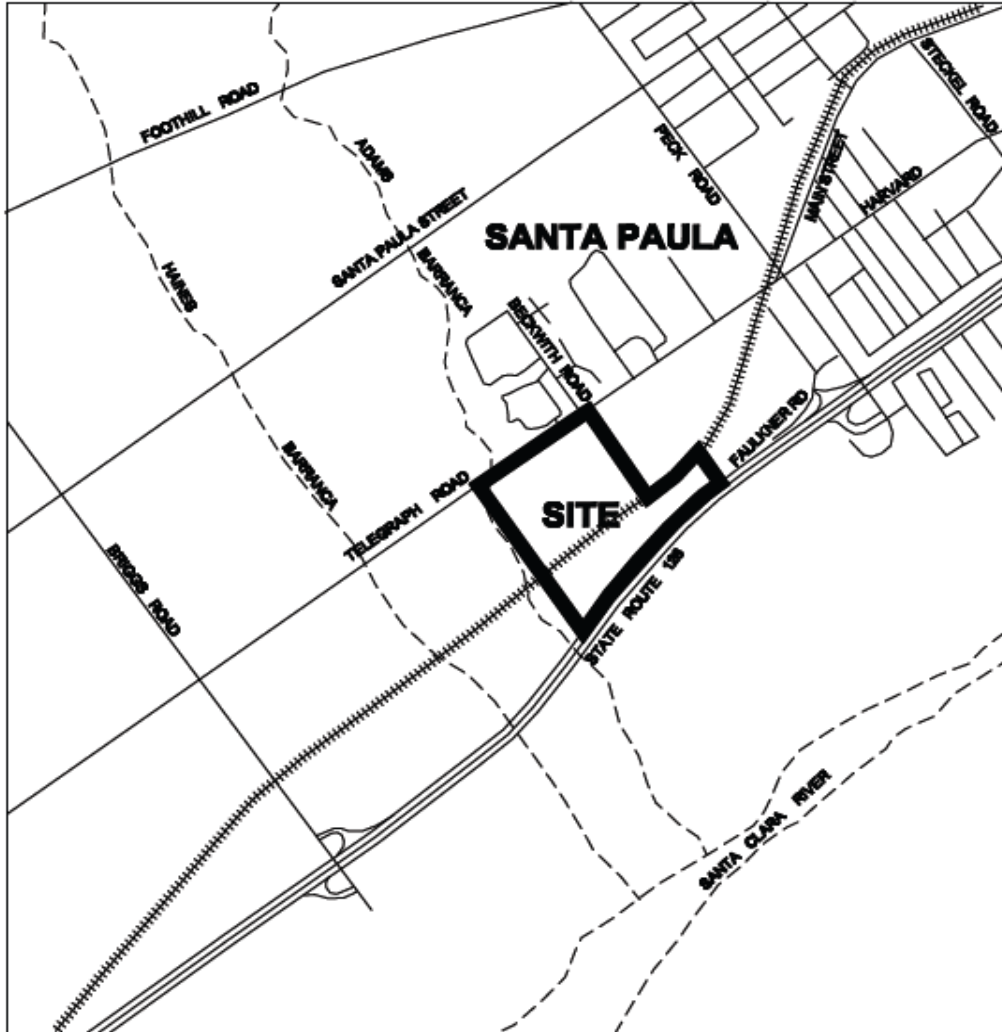


FIGURE 2 – PROJECT LOCATION MAP

Existing Conditions

The Santa Paula West Business Park project lies within the City of Santa Paula for wastewater services. The existing land use is currently agricultural. The existing sewer system in the area does not allow the site to connect into the surrounding system because of elevation constraints. The new City of Santa Paula Water Recycling Facility (WRF) is only 0.34 miles (1,800 LF) south of the project.

The City of Santa Paula commissioned a sewer study for reviewing the City's entire sewer system. This study, "Wastewater System Master Plan" prepared by Jensen Design & Survey, Inc. in June 2012. The "Wastewater System Master Plan" identifies Santa Paula West as a future expansion area. Once annexed, Santa Paula West will be within the City's limits and this report will demonstrate anticipated flows from Santa Paula West as well as other notable projects in and around the Santa Paula West project.

The Santa Paula West Business Park project will be connecting to the existing 12" sewer in Faulkner Road, which connects to a 15" sewer that travels under Highway 126 towards Corporation Street. The existing 15" sewer connects to an existing 42" sewer that ultimately leads to the Santa Paula WRF. The proposed connection and existing sewer configuration are shown in Exhibit 9A and the existing and future sewer capacities for these lines are listed in Figure 9B.

Objectives

The objective of this study is to provide a blueprint for the design of the sanitary system within the Santa Paula West Business Park project as well as developing conceptual design parameters. The Santa Paula West project will be designed to meet or exceed the City of Santa Paula's sewer design criterion as established in the City's "Wastewater System Master Plan" and City Standard Plan.

Procedure

The Santa Paula West sewer system was developed utilizing the following 6 basic design steps:

1. Define Design Parameters

Design parameters for the sewer system were developed from the City's "Wastewater System Master Plan" as set forth in Chapter 6 – Sewer Flow Model. The criterion used in this analysis follows those set forth in Table 6-1. The design parameters used for this report can be seen in Figure 3.

2. Define Land Use Types and Locations

Land uses were defined utilizing the Specific Plan for Santa Paula West, specifically Chapter 2 – Land Use and Circulation. The land use types used in this report can be seen in Figure 5A and 5B. During the tentative map stage, a specific sewer system model will be developed and processed. The modeling included herein will provide for an upper boundary (most conservative) analysis should the ultimate development proceed.

3. Assign Sewer Generation Factors

Based on the aforementioned design parameters, specific sewer generation rates were applied. The sewer generation rate is considered 75% of the annual water demand based on Section 3 of the City's "Wastewater Master Plan". The sewer generation factors can be seen in Figure 4.

4. Model Sewer Flows / Link Flows

After gross acreage was calculated for each contributing area they received a sewer generation rate based on the factors in Figure 4. The resultant sewer flows were calculated using Flowmaster, preliminary design slopes and pipe sizes. The results of this model can be seen in Figures 6 and 7.

5. Prepare Summary Graphic

After flows were logically linked together in a model, a resultant sewer system graphic was prepared. The results of this model can be seen in Figure 8. A schematic detail of the connection to the existing sewer main in Faulkner Road leading to the City of Santa Paula WRF is shown in Figure 9A.

Proposed Sewer System

The Santa Paula West Business Park Specific Plan is located in an area with minimal sewer service. The project is proposing the best fit alignment connecting to the existing 12” sewer main in Faulkner Road, leading to the City of Santa Paula WRF given the site design constraints. Onsite sewer will drain through one new 12” main running east/west along the southerly property line in Faulkner Road. The gravity system continue east along Faulkner Road to a lift station located at the southeast corner of the site. The lift station will pump flows approximately 8’ vertically after the undercrossing of the existing 72” storm drain system located at the intersection of Todd Lane and Faulkner Road. The 12” sewer main will connect to the existing 12” sewer main in Faulkner Road. Refer to Figure 8 for the proposed onsite sewer layout. The proposed connection to the existing 12” sewer is shown in Exhibit 9A and the existing and proposed sewer capacities for the existing sewer lines at the connection point are listed in Exhibit 9B. As shown in Exhibit 9B, the proposed connection does not increase the depths in the existing sewer past the acceptable limits: 67% pipe diameter for pipes less than 12” and 75% pipe diameter for pipes 12” and greater.

The proposed project’s physical constraints and point of connection at the sewer main in Faulkner Road will not accommodate a gravity line using standard allowable design slopes and good design practices. Therefore, a lift station is proposed for the system at the southeast corner of the project site. The lift station will be designed to City of Santa Paula standards being automated with redundant pumps and adequate alarm systems. Complete design will be done during project improvement plan preparation.

Line A (reaches 1-7): Line A serves as the backbone for conveying the flows from the entire development to the connection to the existing sewer in Faulkner Road and ultimately to the water recycling facility. It runs from the existing manhole in Faulkner Road to the end future intersection of Beckwith Road and Faulkner Road.

Line B (reaches 7-22): Line B mainly serves the west side of the development. It connects into Line A at the future intersection of Beckwith Road and Faulkner Road.

Line C (reaches 23-30): Line C mainly serves the east side of the development. It connects into Line A at the future intersection of Beckwith Road and Faulkner Road.

Conclusions

Based on the modeling prepared by Jensen Design & Survey the Santa Paula West Business Park sewer system depicted in Figure 8 is in accordance with City of Santa Paula design guidelines. The Santa Paula West sewer system is in agreement with the design flows anticipated within the

City's Wastewater Master Plan for this development. Also, the main backbone, Line A, has additional capacity before reaching 50% pipe utilization of 465 gpm (1.04 cfs) for future connections.

References

- Jensen Design & Survey, Inc., October 2015, "Santa Paula West Business Park Specific Plan"
- Jensen Design & Survey, Inc., June 2012, "City of Santa Paula Wastewater System Master Plan"

**FIGURE 3
SANTA PAULA WEST BUSINESS PARK
SUMMARY OF WASTEWATER DESIGN CRITERIA**

Peak Flow Equation

	For average flow less than 2 cfs	$Q_{\text{peak}}=2.5*Q_{\text{ADWF}}$
	For average flow between 2 cfs and 8 cfs	$Q_{\text{peak}}=2.25*Q_{\text{ADWF}}$
	For average flow greater than 8 cfs	$Q_{\text{peak}}=2.0*Q_{\text{ADWF}}$

Maximum Depth to Diameter Ratio (d/D) for Peaked Dry Weather Flow (PDWF)

	12-in. sewer and smaller	d/D=50%
	15-in. sewer and larger	d/D=67%

Minimum Gravity Sewer Design Slope

	6-inch	0.008 ft/ft
	8-inch	0.0044 ft/ft
	10-inch	0.0036 ft/ft
	12-inch	0.0024 ft/ft
	15-inch	0.0016 ft/ft
	18-inch	0.0014 ft/ft
	21-inch and larger	0.0010 ft/ft

Velocity

	Minimum	2fps at d/D=50%
	Maximum	8fps

Manning's "n" Values

	VCP	0.013
	PVC/HDPE	0.011

Manning's Equations

	$Q=1.486/n AR^{2/3}S^{1/2}$	
--	-----------------------------	--

Manhole Placement

		<p align="center">Maximum 350' Changes of slope Changes in horizontal alignment Points of reverse curve Junctions in mains Upstream ends of all mains longer than 200'</p>
--	--	--

**FIGURE 4
SANTA PAULA WEST BUSINESS PARK
SUMMARY OF ULTIMATE WASTEWATER FLOWS**

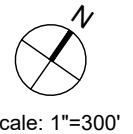
<u>PROPOSED LAND USE</u>	<u>WATER DEMAND</u> <u>(AF/ac/yr) ^[4]</u>	<u>GENERATION RATE</u>	<u>ACRES ^[3]</u>	<u>AVERAGE</u> <u>DAILY FLOW</u> <u>(GPM)</u>	<u>PEAK DRY</u> <u>DAILY FLOW</u> <u>(GPM)</u>	<u>PEAK WET</u> <u>WEATHER DAILY</u> <u>FLOW (GPM)</u>	<u>AVERAGE DAILY</u> <u>FLOW (MGD)</u>
Commerical/Light Industrial/Retail/Office	2	0.93 gpm/AC ^{[1][2]}	53.81	50.04	125.11	150.13	0.072
TOTAL			53.81	50.04	125.11	150.13	0.072

- NOTES:
- [1] Commerical sewer generation rate is 75% of the water demand rate based on Section 3 of the City of Santa Paula Wastewater Master Plan
 - [2] Generation Rate conversion from AF/ac/yr to gpm/AC = 0.93
 - [3] Flows calculated based on site acreage not including railroad right of way
 - [4] Refer to Domestic Water Technical Report for Santa Paula West Business Park

**FIGURE 5A
SANTA PAULA WEST
SUMMARY OF LAND USE**

Land Use Type	Acres	% of Site
Industrial Business Park	43.06	74%
Roadways (Approximate)	6.95	12%
Open Space/Passive	3.80	7%
Sum	53.81	92%
Railroad Right of Way	4.60	8%
Gross Site Area	58.41	100%

**Santa Paula West
SPECIFIC PLAN**

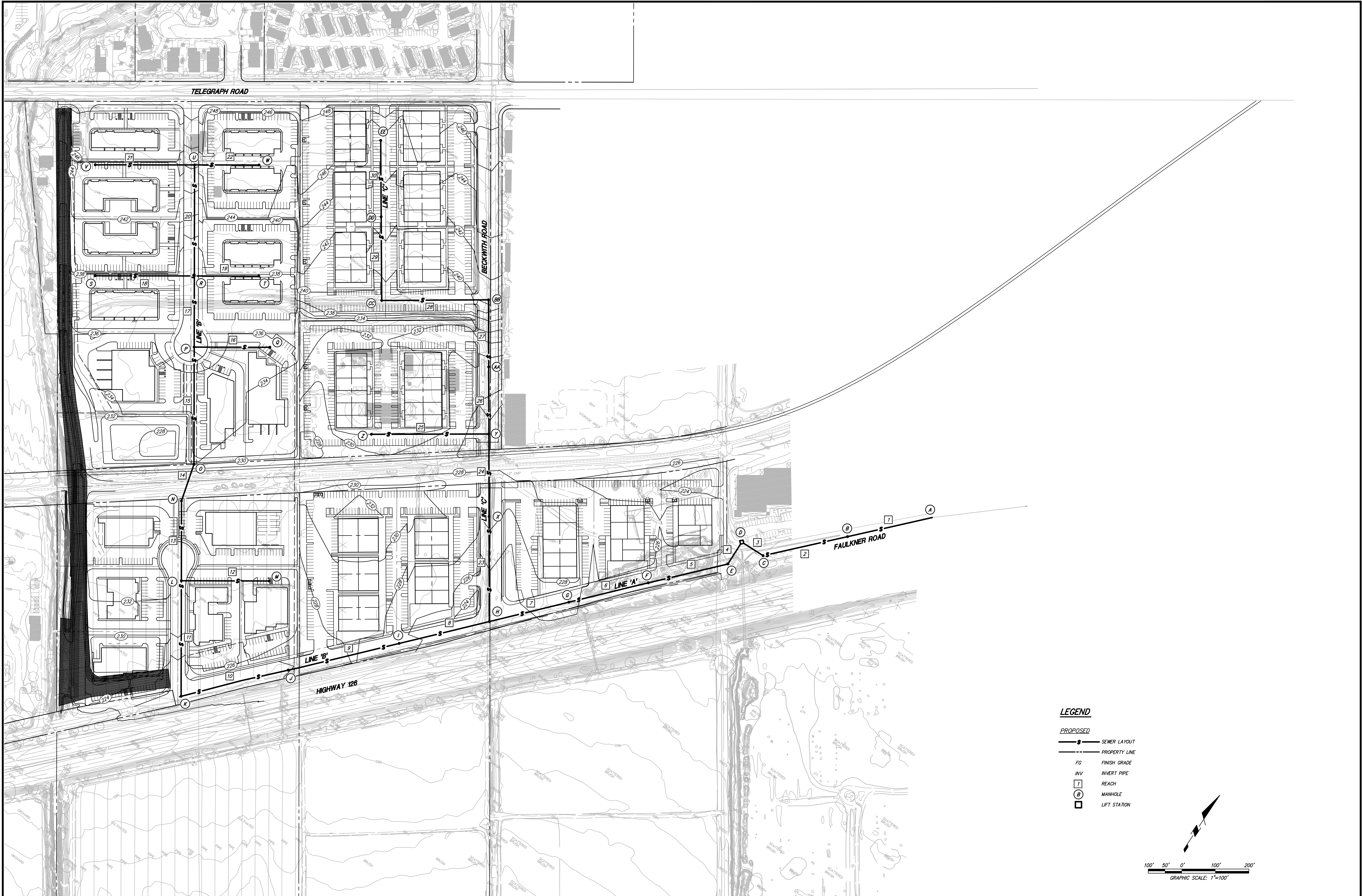


**FIGURE 6
SEWER MANHOLE DEPTHS
ULTIMATE CONDITION**

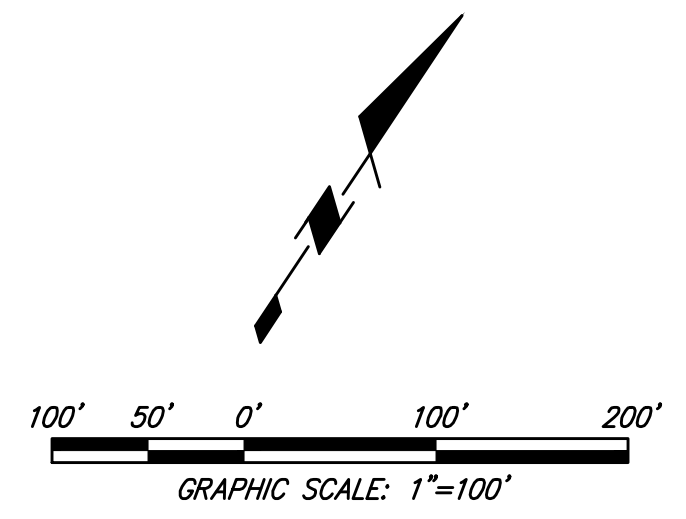
MH	FS ELEV (FT)	INVERT ELEV (FT)	DEPTH TO INVERT (FT)	COMMENTS
A	227.00	220.84	6.16	
B	225.50	221.40	4.10	
C	225.00	221.95	3.05	
D	223.00	213.67	9.33	LIFT STATION LOCATION
E	223.00	214.00	9.00	
F	226.00	217.33	8.67	
G	226.00	218.55	7.45	
H	226.00	220.57	5.43	
I	226.00	221.37	4.63	
J	227.00	222.15	4.85	
K	226.00	222.97	3.03	
L	228.00	223.65	4.35	
M	229.00	224.85	4.15	
N	230.00	224.13	5.87	
O	234.00	224.36	9.64	
P	235.00	228.14	6.86	
Q	234.50	229.43	5.07	
R	236.00	228.68	7.32	
S	237.00	229.72	7.28	
T	237.00	229.53	7.47	
U	244.00	230.00	14.00	
V	245.00	231.53	13.47	
W	245.00	231.25	13.75	
X	228.00	221.84	6.16	
Y	228.50	222.35	6.15	
Z	232.00	225.56	6.44	
AA	235.50	226.58	8.92	
BB	240.00	228.40	11.60	
CC	239.00	233.20	5.80	
DD	243.00	237.27	5.73	
EE	245.00	238.64	6.36	

**FIGURE 7
SEWER REACH LENGTHS
ULTIMATE CONDITION**

REACH NO	MH TO MH (LOW TO HIGH)	LENGTH (FT)	SLOPE	LOW INVERT ELEV (FT)	HIGH INVERT ELEV (FT)	CONTRIBUTING GROSS AREA (acres)	AVERAGE FLOW RATE (gpm)	AVERAGE FLOW RATE (cfs)	PEAK DRY FLOW RATE (cfs)	PEAK DRY VELOCITY (fps)	CALCULATED PIPE UTILIZATION (%)	PIPE DIAMETER (PVC)
1	A-B	258.28	0.0021	220.84	221.40	53.81	50.04	0.111	0.279	1.87	24.5	12"
2	B-C	258.28	0.0021	221.40	221.95	53.81	50.04	0.111	0.279	1.87	24.5	12"
3	C-D	68.4	-0.1211	221.95	213.67	53.81	50.04	0.111	0.279			8" FORCE MAIN
4	D-E	70	0.0047	213.67	214.00	53.81	50.04	0.111	0.279	2.49	20.0	12"
5	E-F	244	0.0136	214.00	217.33	53.81	50.04	0.111	0.279	3.62	15.4	12"
6	F-G	244	0.0050	217.33	218.55	53.81	50.04	0.111	0.279	2.54	19.7	12"
7	G-H	243	0.0083	218.55	220.57	50.76	47.21	0.105	0.263	2.99	16.9	12"
8	H-I	276.8	0.0029	220.57	221.37	37.04	34.45	0.077	0.192	1.88	18.8	12"
9	I-J	340	0.0023	221.37	222.15	34.05	31.67	0.071	0.176	1.69	19.1	12"
10	J-K	328.9	0.0025	222.15	222.97	30.59	28.45	0.063	0.158	1.68	17.6	12"
11	K-L	344.7	0.0020	222.97	223.65	30.59	28.45	0.063	0.158	1.55	18.6	12"
12	L-M	262	0.0046	223.65	224.85	3.05	2.84	0.006	0.016	1.15	12.3	6"
13	L-N	238.4	0.0020	223.65	224.13	24.22	22.52	0.050	0.125	1.45	16.7	12"
14	N-O	115.2	0.0020	224.13	224.36	20.86	19.40	0.043	0.108	1.39	15.5	12"
15	O-P	349.6	0.0108	224.36	228.14	20.86	19.40	0.043	0.108	2.51	10.4	12"
16	P-Q	225.9	0.0057	228.14	229.43	2.89	2.68	0.006	0.015	1.22	11.4	6"
17	P-R	212.3	0.0025	228.14	228.68	14.28	13.28	0.030	0.074	1.35	12.2	12"
18	R-S	295.8	0.0035	228.68	229.72	3.13	2.91	0.006	0.016	1.01	9.1	8"
19	R-T	192.4	0.0044	228.68	229.53	2.56	2.38	0.005	0.013	1.02	7.9	8"
20	R-U	331.2	0.0040	228.68	230.00	8.58	7.98	0.018	0.044	1.43	14.2	8"
21	U-V	296.1	0.0052	230.00	231.53	3.15	2.93	0.007	0.016	1.21	11.9	6"
22	U-W	192.4	0.0065	230.00	231.25	2.57	2.39	0.005	0.013	1.22	10.3	6"
23	H-X	313.5	0.0041	220.57	221.84	13.72	12.76	0.028	0.071	1.58	10.7	12"
24	X-Y	246.2	0.0021	221.84	222.35	13.72	12.76	0.028	0.071	1.25	12.5	12"
25	Y-Z	350	0.0092	222.35	225.56	5.30	4.93	0.011	0.027	1.65	9.3	8"
26	Y-AA	200	0.0051	225.56	226.58	8.42	7.83	0.017	0.044	1.56	13.4	8"
27	AA-BB	200.3	0.0091	226.58	228.40	8.42	7.83	0.017	0.044	1.91	11.7	8"
28	BB-CC	318.7	0.0151	228.40	233.20	8.42	7.83	0.017	0.044	2.28	10.4	8"
29	CC-DD	249.7	0.0163	233.20	237.27	8.42	7.83	0.017	0.044	2.34	10.2	8"
30	DD-EE	227.6	0.0060	237.27	238.64	4.85	4.51	0.010	0.025	1.65	12.9	6"

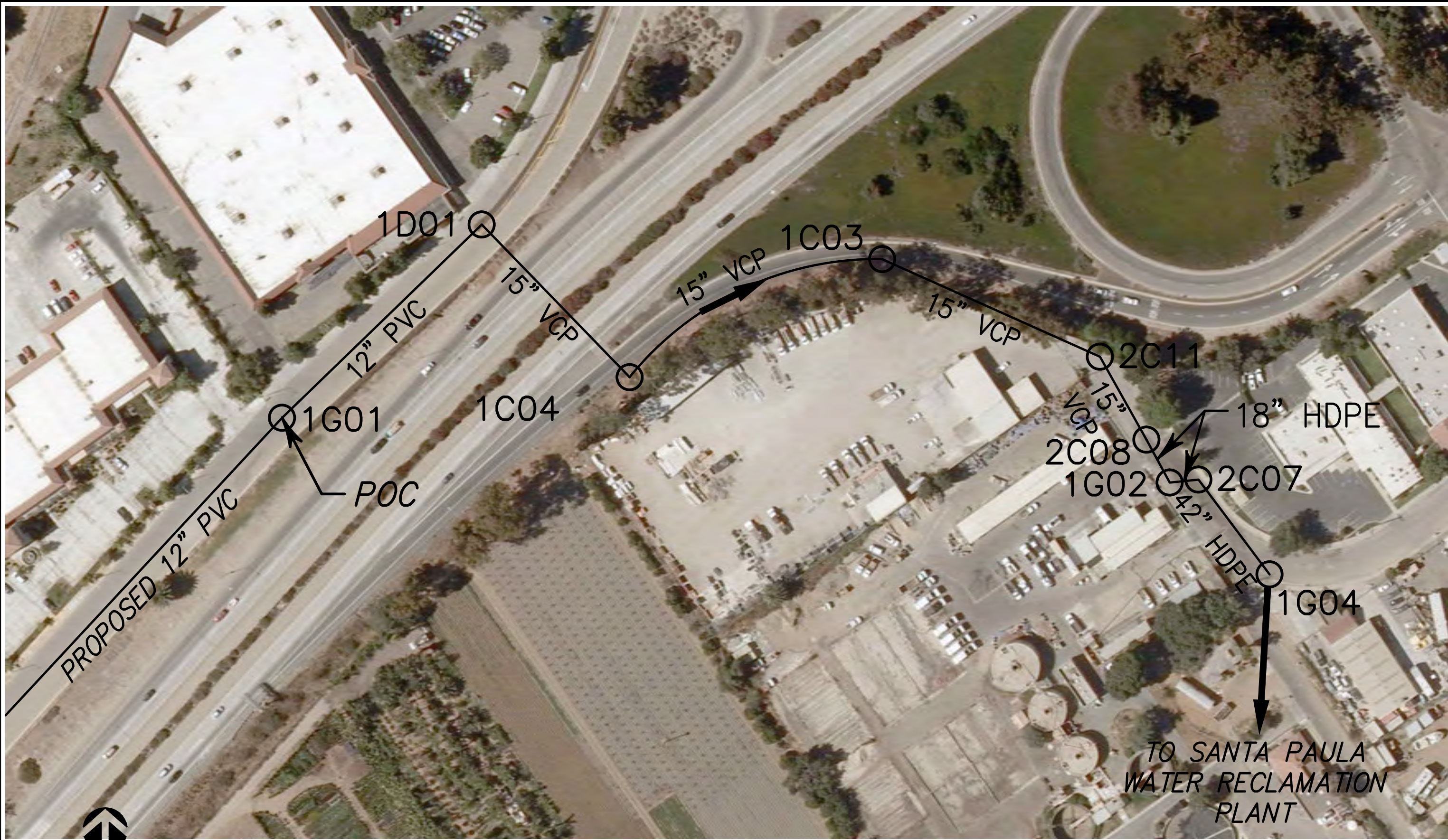


- LEGEND**
- PROPOSED**
- SEWER LAYOUT
 - PROPERTY LINE
 - FINISH GRADE
 - INVERT PIPE
 - REACH
 - MANHOLE
 - LIFT STATION

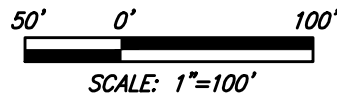


<p>JENSEN DESIGN & SURVEY, INC. www.jdsurvey.com</p>	<p>1872 DONLON STREET VENTURA, CALIF. 93003 PHONE 805/654-6977 FAX 805/654-6979</p>	<p>SEWER LAYOUT FOR SANTA PAULA WEST BUSINESS PARK</p> <p>City of Santa Paula COUNTY OF VENTURA STATE OF CALIFORNIA</p>	<p>FIGURE 8</p>
	<p>SCALE: 1"=100' DATE: Nov 11, 2015</p>		

J:\PAR14492\Planning\Specific Plan\Sewer\4492_Sewer Service_Figure 8.dwg Nov 11, 2015, 9:26am blw/jpy



TO SANTA PAULA
WATER RECLAMATION
PLANT



1672 DONLON STREET
VENTURA, CALIF. 93003
PHONE 805/654-6977
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SEWER PLAN
SANTA PAULA WEST

FIGURE 9A
Nov 11, 2015

**FIGURE 9B
FAULKNER ROAD SEWER CONNECTION
EXISTING & FUTURE SEWER CAPACITIES**

START MH	END MH	PIPE D (in)	SLOPE	EXISTING PEAK FLOW (MGD)	EXISTING PEAK FLOW (cfs)	FUTURE PEAK FLOW (MGD)	FUTURE PEAK FLOW (cfs)	EXISTING NORMAL DEPTH (ft)	FUTURE NORMAL DEPTH (ft)	EXISTING % FULL	FUTURE % FULL
1G01	1D01	12	0.00574	0.200	0.309	0.445	0.689	0.21	0.32	21.0%	32.0%
1D01	1C04	15	0.00405	0.710	1.099	0.956	1.479	0.44	0.52	35.2%	41.6%
1C04	1C03	15	0.00124	0.710	1.099	0.956	1.479	0.61	0.73	48.8%	58.4%
1C03	2C11	15	0.00124	0.710	1.099	0.956	1.479	0.61	0.73	48.8%	58.4%
2C11	2C08	15	0.00124	0.710	1.099	0.956	1.479	0.61	0.73	48.8%	58.4%
2C08	1G02	18	0.00400	0.710	1.099	0.956	1.479	0.38	0.44	25.3%	29.3%
1G02	2C07	18	0.05500	0.710	1.099	0.956	1.479	0.20	0.23	13.3%	15.3%
2C07	1G04	42	0.00510	6.944	10.744	9.733	15.059	0.84	1.00	24.0%	28.6%

Draft

Water Supply Assessment

For the Proposed

Santa Paula West Business Park

Specific Plan

Prepared for:

City of Santa Paula
Planning Department
970 Ventura Street
Santa Paula, California

Prepared by:

Meridian Consultants, LLC
860 Hampshire Road, Suite P
Westlake Village, California 91361

November 2016

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EXECUTIVE SUMMARY

The purpose of this water supply assessment and verification (WSA/WSV) is to document the sufficiency of the local water supply to meet the demand of developed that could occur under the Santa Paula West Business Park Specific Plan (“Specific Plan” or “Project”). The Specific Plan area (“Project Site”) covers an area of approximately 53.81 acres of the West Area 2 Expansion Area of the City of Santa Paula’s General Plan. The Project includes the annexation of the Specific Plan area into the incorporated City limits. The Project includes a series of related actions, such as an amendment to the City’s General Plan Land Use Element and the zoning designations from the rezoning of the annexation area.

The Project land use designations, zoning, development standards, and other related land use specifications will govern future permitting of developments within the Specific Plan area. The Specific Plan designates the Project Site for light industrial and commercial uses, which is consistent with existing City rezoning and General Plan designations. These designations allow for the development of land uses consistent with offices, manufacturing, research and development, professional office, and limited commercial retail uses. Under the Specific Pan, these land use areas designated for development are integrated into one cohesive business park type of layout, complete with vehicular circulation, pedestrian walkways, and utility infrastructure.

The City’s General Plan requires the preparation and adoption of a Specific Plan for any identified expansion area prior to the City initiating annexation of the area to the City. Prior to considering the proposed Specific Plan for approval, the City is required to comply with the California Environmental Quality Act (CEQA). The City is currently preparing an Environmental Impact Report (EIR) to comply with CEQA.

The California Water Code (Sections 10910 through 10915) defines a “Project” as subject to the Code and thereby requiring a WSA. Section 10912 of the Water Code defines a “Project” under the law This includes any mixed-use project including more than 250,000 floor area of commercial space. by the public water system supplier that would provide water to a project. The goal of a WSA is to provide information on the availability of water supplies to be included in EIRs.

The City of Santa Paula Public Works Department, Water Division, provides water service in the City of Santa Paula and would provide water service to the proposed Project after annexation of the site to the City. Currently the Santa Paula Groundwater Basin (“Santa Paula Basin”) is the City’s sole source of water supply. Rights to withdraw groundwater from the Santa Paula Basin have been adjudicated, and the Santa Paula Basin is managed in accordance with this adjudication to ensure a safe groundwater yield. Recent

demand for water for the existing agricultural and associated uses on Santa Paula West Specific Plan site has averaged approximately 281.1 acre-feet per year (afy).

The eastern boundary of the Santa Paula Basin also demarcates the western boundary of the Fillmore Groundwater Basin (“Fillmore Basin”), which is generally located to the northeast of the Santa Paula Basin and upstream in relation to the Santa Clara River, which flows across both basins.

The City is required under California Water Code (Sections 10610 to 10656) to assess citywide water supply and demand over the next 20 years in 5-year increments in its Urban Water Management Plan (UWMP). The City completed its most recent update in 2010. The 2010 UWMP accomplishes water planning, including recycled water, over a 20-year period in 5-year increments; identifies and quantifies adequate water supplies for existing and future water demands in normal, dry, and multiple dry years; identifies actions to prepare for and implement during a catastrophic interruption of water supplies; and implements conservation and efficient use of urban water supplies. No decrease in availability of groundwater supplies is anticipated through the year 2035.

Conservative assumptions concerning future water demand are used in this WSA. The City’s 2010 UWMP provides per capita and specific use (commercial, industrial, and residential) demand rates for estimating future water demand. This WSA utilizes the commercial, industrial, and residential rates provided in the UWMP.

The City has constructed a new Water Recycling Facility (WRF). The City WRF will produce recycled water that meets California Title 22 regulations. The capacity of the City WRF is 4.2 million gallons per day (mgd), of which 1,622 afy is anticipated to produce recycled water. Recycled water is anticipated to be available for irrigation of landscape areas in 2015.

In order to estimate water demand for the type and amount of land uses that would be permitted by the proposed Project, the water demand factors contained in the City’s 2010 UWMP were used. Based on these factors, the annual average water demand for the proposed Project is approximately 39.8 afy (20.5 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation).

The allocated supply to West Area 2 per the 2010 UWMP Update is 88.8 afy.¹ The potable demand of 22.0 afy for the Commercial/Light Industrial and Light Industrial uses is 25 percent of the West Area 2 total

1 City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 204, p. 16 (1,906,000 square feet of development at 2.03 afy).

supply allocation. The landscape areas will be irrigated using reclaimed water to be delivered from the City's wastewater treatment plant.

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently, agricultural uses on the Project Site use approximately 281.1 afy (average over the past 5 years; see **Table 3**). As such, the proposed Project's consumption will be a net reduction in total water use of 241.3 afy.

It should be noted that the West Area 2 Planning Area has been allocated a supply of 88.8 afy based on future development. The proposed Project could utilize a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can utilize a portion of the existing water currently used for irrigation. Existing wells will be utilized for construction water as the site is graded, in accordance with the Specific Plan, and then will be abandoned pursuant to state and local regulations.

The Project will use reclaimed water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City forecasts having between 400 afy (2015) and 1,622 afy (2035) of reclaimed water available for use (see **Table 13**). The Project will require only a portion (0.7 percent in 2017 and 2.6 percent in 2035).

The Santa Paula West Business Park recycled water system would operate via a proposed 12-inch distribution main called for by the City's Recycled Water Plan. This will allow the project to use recycled water when the City extends a recycled water line to the site and the plant is producing sufficient recycled water to supply the site.

In accordance with the City of Santa Paula Municipal Code, landowners or developers are required to either provide water rights sufficient to serve the property or pay an equivalent in-lieu fee as a condition of project approval or when the property is annexed. Upon annexation, the applicants will transfer a portion of these rights in sufficient quantity to meet all the anticipated water demands of the project.

In summary, this Water Supply Assessment for the proposed Project concludes that the City of Santa Paula's projected water supply for the 20-year period from 2017 to 2037 is adequate to meet the demand projected for the project, existing and planned future uses in the City in normal, single dry, and multiple dry years.

1.0 INTRODUCTION

The environmental review of the proposed Project is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The City of Santa Paula (City), the Public Water System (PWS) for the proposed Project, has determined that a water supply assessment (WSA) is necessary to complete the proposed Project's CEQA process and that a written water supply verification (WSV) is needed prior to any necessary County of Ventura (County) and/or other City approvals for the proposed Project.

1.1 PURPOSE OF DOCUMENT

The purpose of this water assessment is to document the sufficiency of the local water supply to meet the demand associated with the proposed land uses of the Santa Paula West Business Park Specific Plan (proposed Project). It should be noted that this WSA/WSV addresses the overall water supply available to the City to meet the demands of existing customers and other future demands.

Adequacy of the delivery system is addressed in the City's 2010 Urban Water Management Plan Update (UWMP 2010 Update). The WSA/WSV reviews and makes a finding of reasonable sufficiency of water supplies that either are available or will be available to the City to meet future demands. The California Water Code requires a determination for a 20-year period (2017–2037) from the start of project development.

1.1.1 Water Supply Assessment

Requirements for the preparation of a WSA are set forth in Section 10910 of the California Water Code ("Water Code") in accordance with SB 610, which was enacted in 2001 and became effective January 1, 2002. The Water Code requires a WSA be prepared for any project, which would consist of one or more of the following:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A hotel or motel with more than 500 rooms

- An industrial, manufacturing or processing plant, or industrial park planned to house more than 1,000 people, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- A mixed-use project that includes one or more of the projects specified above
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project
- For public water systems with fewer than 5,000 service connections, a project that meets the following criteria:
 - A proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of a public water system’s existing service connections
 - A mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections

The proposed development is a “project,” as defined by Water Code Section 10912, and requires a WSA because it consists of an industrial park occupying more than 40 acres of land.

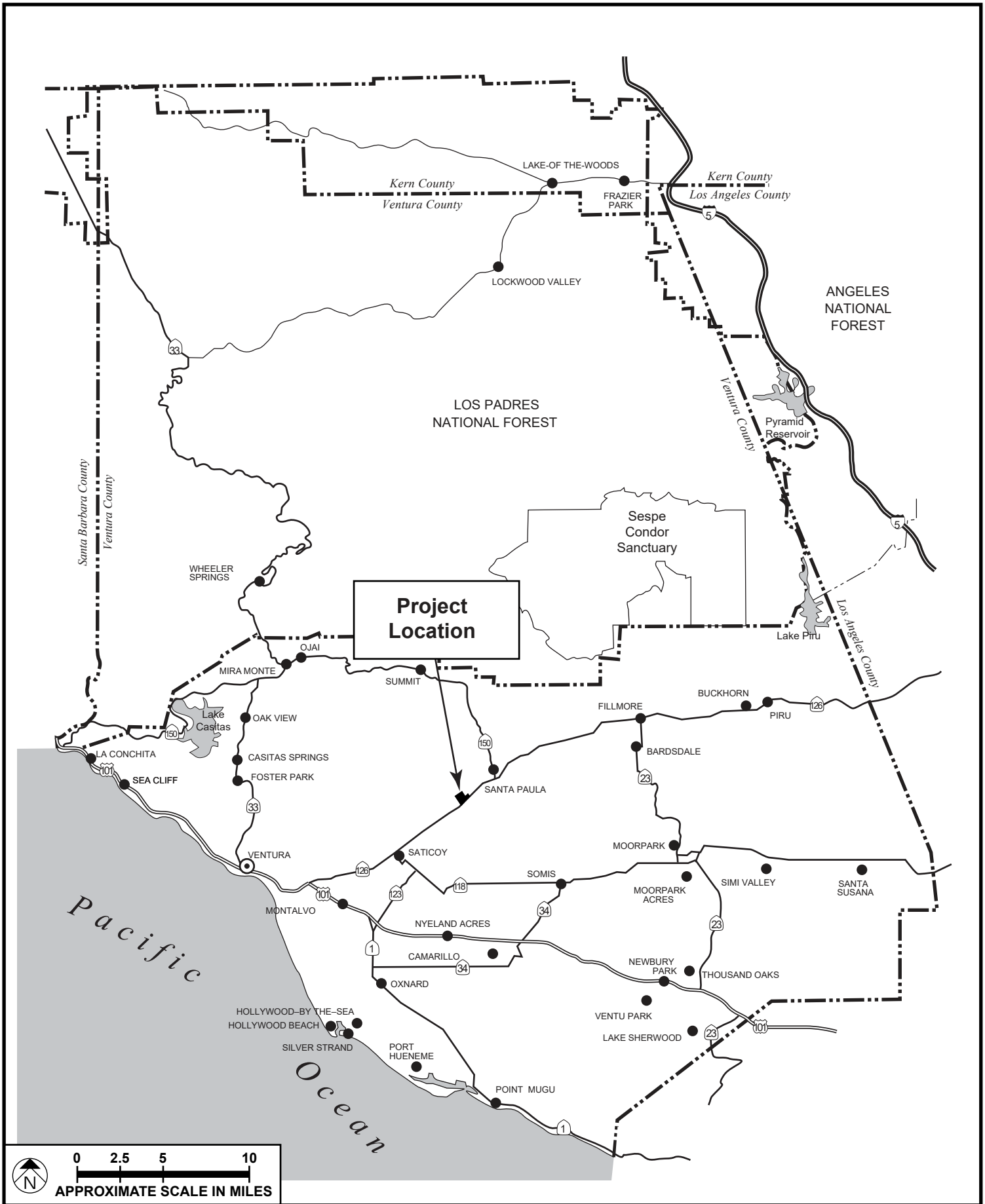
Section 10657 of the California Water Code requires cities and counties to request specific information on water supplies from the PWS that would serve any project that is subject to CEQA and is defined as a project in Water Code Section 10912. This information is to be incorporated into the environmental review document prepared pursuant to CEQA.

1.2 LOCATION

1.2.1 Regional Setting

The Santa Paula West Business Park Specific Plan area is directly adjacent to the western boundary of the City of Santa Paula, within the City Urban Restriction Boundary (CURB) of the City.

The City encompasses 4.5 square miles of incorporated area located approximately 17 miles inland from the Pacific Ocean in central Ventura County, as shown in **Figure 1, Regional Location Map**. The City lies within the Santa Clara River Valley, approximately 12 miles east of the City of San Buenaventura and approximately 9 miles west of the City of Fillmore.



SOURCE: Meridian Consultants – 2015

FIGURE 1



Regional Location Map

1.2.2 Community Setting

The Project Site is bound to the north by Telegraph Road, to the east by existing industrial and commercial development in the existing Santa Paula city limits, to the south by agriculture, and to the west by the Adams Barranca.

The Santa Paula West Business Park is located within the CURB of the City of Santa Paula, with frontage along State Route 126 and Telegraph Road, and is bisected by the railroad right-of-way as illustrated on **Figure 2, Project Location Map**. While it is just west of the Santa Paula City limits, it is within the City of Santa Paula Sphere of influence, and is outside of the Santa Paula-Ventura Greenbelt. Annexation of the Santa Paula West Business Park into the City of Santa Paula is planned to occur as part of the Specific Plan approval process.

1.3 PROJECT DESCRIPTION

1.3.1 Specific Plan Overview

The proposed Project consists of a specific plan for 53.81 acres of area located within the City's Sphere of Influence. The uses envisioned within the Santa Paula West Business Park will be a mix of low-intensity industrial (such as light manufacturing or research and development), professional office and supporting commercial businesses that are currently permitted in the Commercial/Light industrial and Light Industrial Zones of the City of Santa Paula.

The Santa Paula West Business Park Specific Plan would be adopted by the City, which would approve any request for annexation into the City. The Specific Plan would establish the necessary plans, development standards, regulations, infrastructure requirements, design guidelines, and implementation programs on which subsequent project-related development activities would be founded.

It is intended that local public works projects, design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or discretionary approval applicable to the Project Site would be consistent with the Specific Plan.

The 20-year scenario is used to illustrate total Project demand within the required 20-year WSA time frame (2017-2037) established by SB 610.

1.3.2 Land Use Plan

The proposed Project would be a mix of low-intensity industrial (such as light manufacturing or research and development), professional office, and supporting commercial businesses that are currently

permitted in the Commercial/Light industrial (C-LI) and Light Industrial Zones (LI) of the City of Santa Paula. These uses would cover approximately 41.96 acres, as shown in **Figure 3, Zoning Implementation Plan**. In addition, the Project would have approximately 4.9 acres of open space and approximately 6.95 acres of roadways that would not require any use of water. The Project Site would total approximately 53.81 acres, as shown in **Table 1, Land Use Summary**.

Table 1
Land Use Summary

Land Use Type	Acres	Percent of Site
Commercial/Light Industrial	41.96	78.0%
Roadways (Approximate)	6.95	12.9%
Open Space/Passive	4.90	9.1%
Gross Area of SP West BP	53.81	100.0%

The Santa Paula West Business Park Specific Plan includes lists of permitted uses, including those permitted without any conditions and those that require conditional use permits (CUPs) and public use permits. All development within the Santa Paula West Business Park will adhere to the standards of the Specific Plan.

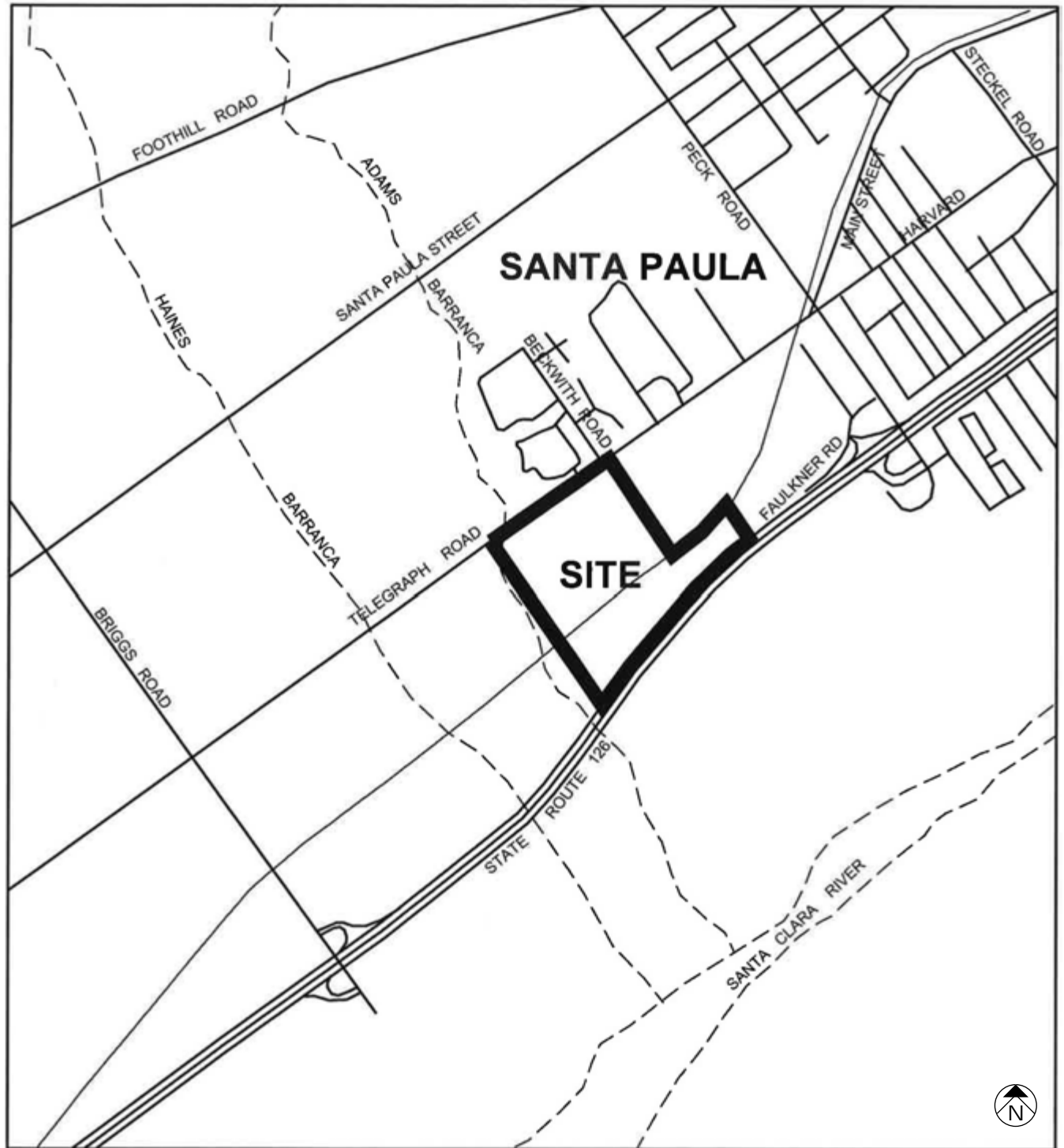
1.3.3 Water and Wastewater

Public Water Supply

Surface water and groundwater resources within the City of Santa Paula are managed by the United Water Conservation District. However, the City is responsible for water supply and distribution within its 4.5-square-mile service area. The Project is located outside of the City's corporate boundary but within the West Area 2 identified in the General Plan for future expansion. A portion of the Project area is currently located in the City's water service area, and the entire site would be located within the City's service area after annexation of the site to the City.

The City currently has approximately 7,278 domestic water connections, and total 2010 water demand within the City was 4,416 acre-feet. The City does not generally provide wholesale water to any other agencies, nor purchase water from any wholesale agency. However, in 2010 the City provided 39 af to the Middleroad Mutual Water Company. The City does not use potable supplies for saline barriers, groundwater recharge, conjunctive use, raw water, or recycled water uses.²

² City of Santa Paula, Final 2010 UWMP Update (June 2011),18.



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2

M H/P

TELEGRAPH ROAD

LEGEND

-  Railroad (RR Overlay Zone - Not a Part)
200,122 S.F. = 4.59 Acres
-  C/LI (Commercial / Light Industrial)
1,264,982.4 S.F. = 29.04 Acres
-  LI (Light Industrial)
562,795.2 S.F. = 12.92 Acres
-  Open Space/Passive
100,000 S.F. = 2.27 Acres

COUNTY AG

COUNTY AG

C/LI

C/LI

RAILROAD - RW (NOT A PART)

C/H

C/LI

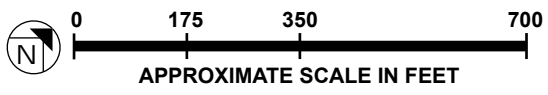
PROPOSED ST. B

FAULKNER ROAD

STATE ROUTE 126

BECKWITH ROAD

BECKWITH ROAD



SOURCE: Jensen Design and Survey – October 2016

FIGURE 3

Development in the City has been dependent on groundwater as a source of supply. However, the demand for groundwater is within the limits of natural recharge of the Santa Paula Basin.

Potable Water

The City of Santa Paula would provide water service for the Project Site. Existing wells will be utilized for construction water as the site is graded, in accordance with the Specific Plan, and then will be abandoned pursuant to state and local regulations.

As shown on **Figure 4, Conceptual Domestic and Recycled Water Plan**, the system for the Specific Plan domestic water system would operate entirely within the City's 200 Zone, and would receive water via proposed 12-inch distribution mains as called for in the City's Potable Water System Master Plan. The point of connection (POC) for the Project will be at Faulkner Road and Telegraph Road. The existing 8-inch ACP located in Beckwith Road will remain in place.

From the POC, a new 12-inch line will proceed north through the proposed Project. The proposed distribution system will be comprised of 8-inch through 12-inch mains. The water mains located in Beckwith Road, Road "A", and Faulkner Road will be publicly owned and maintained, while the remaining onsite domestic and fire will be master metered.

Irrigation and Fire Suppression System

A water system analysis would be prepared during the final construction documents to ensure that the required fire flow is provided at each fire hydrant and each fire sprinkler system. Every building would be required to provide an approved fire sprinkler system and all system designs would follow the guidelines identified in the CVWD Design Manual.

Wastewater

The City of Santa Paula would provide service for the Project Site. The City's wastewater system includes over 60 miles of sewer lines and the new City Water Recycling Facility (WRF). The estimated amount of City potable water that becomes wastewater is 47 percent based on 2010 City data.³ Estimated 2010 City wastewater generation rate is 58 gallons per capita per day (City). The WRF is reporting an average daily flow of 1.97 MGD for the year of 2011-2012.⁴

There is no existing sewer system in the Santa Paula West Business Park Specific Plan area. The City's *Wastewater System Management Plan* identifies a new off-site mainline that will need to be completed prior to implementation of the Specific Plan. These improvements would bring the POC for sewer service

3 City of Santa Paula, *Final UWMP Update* (June 2011), 45.

4 City of Santa Paula, *Wastewater System Master Plan* (June 2012).

of the Santa Paula West Business Park to the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Santa Paula West Business Park area. **Figure 5, Conceptual Sewer Plan**, identifies the lines, directions, and points of connection.

1.4 PROJECT SPECIFIC WATER DEMAND

To estimate water demand for the type and amount of land uses that would be permitted by the proposed Specific Plan, the water demand factors contained in the City's 2010 UWMP Update were used.

The unit water usage for this WSA/WSV are based on indoor water use performance standard as provided in the California Water Code for residential water demand; the American Water Works Association Research Foundation for commercial water demands; and the City's Landscape Ordinance which meets the water conservation goals of the California Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance (MWELO). The overall goal of the ordinance is to reduce landscape water use, reduce or eliminate runoff in streets, and limit turf.

The Project planning area includes a total of 53.81 acres within located with West Area 2 in the City's Planning Area. To provide a more accurate estimate of the proposed Project's water demand, a site-specific analysis was completed. Potable water demand was calculated for all uses based on Project-specific estimates.

The projected water demands are distinguished between indoor and outdoor usage. **Table 2, Estimated Project Water Demands**, summarizes the indoor water demands of the residential portion of the Project.

Table 2
Estimated Project Water Demands

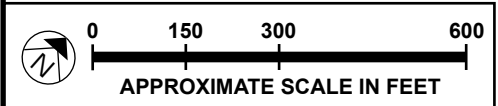
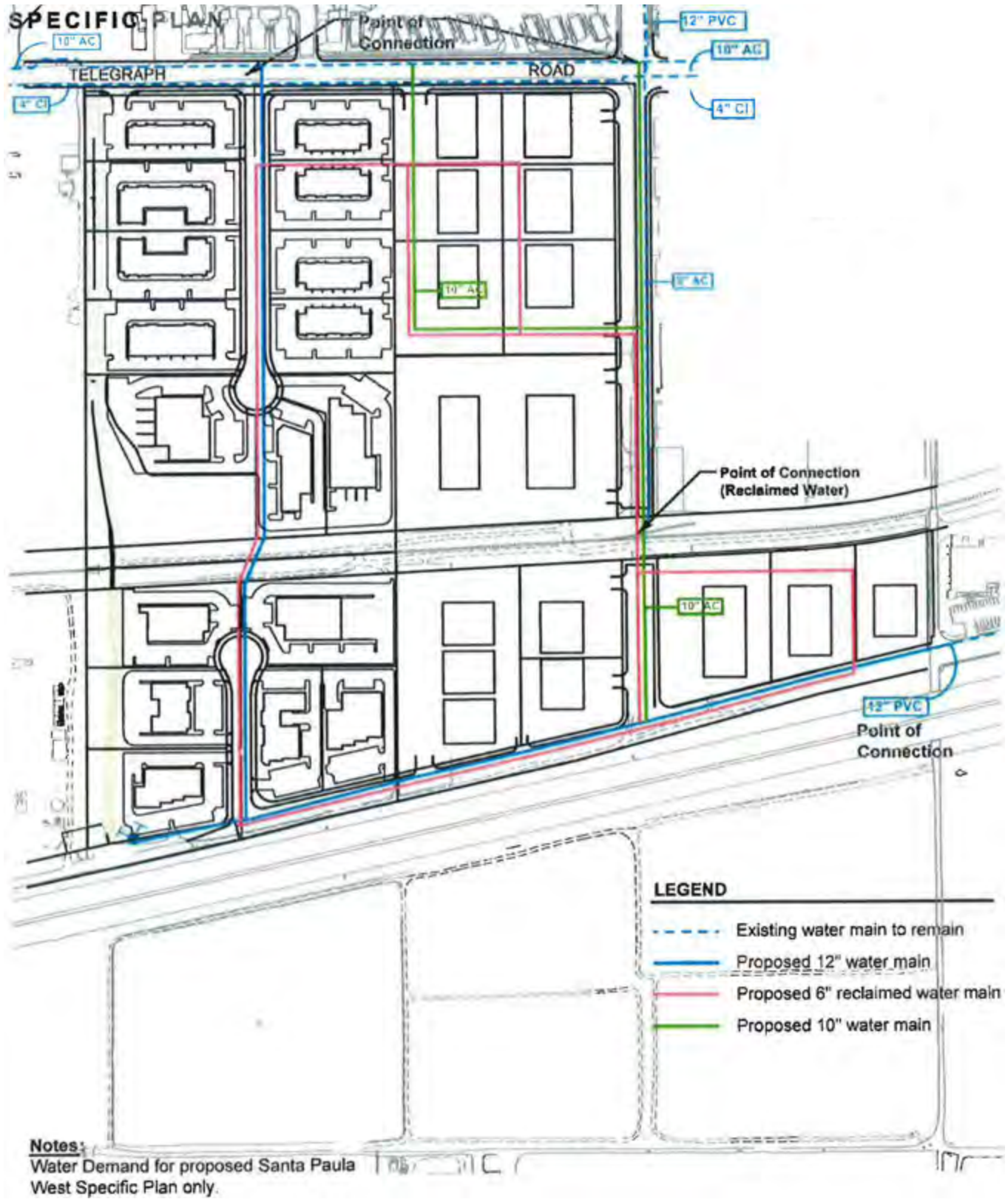
Land Use	Sq. Ft./ Acreage	Demand Rate ^a	Annual Demand (afy)
Commercial/Light Industrial ^b	442,743.84	15.1 gal./sq. ft./yr.	20.5
Light Industrial ^b	196,978.3	2.49 gal./sq. ft./yr.	1.5
Landscaped areas ^c	8.07	2.2 AF/acre/yr.	<u>17.8</u>
Total Estimated Demand			39.8

Notes: afy = acre-feet per year; gal./sq. ft./yr. = gallons per square foot per year.

^aDemand Rates per City of Santa Paula, Final UWMP Update (June 2011).

^bBuilding square footage for C-LI and LI land uses found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.

^cLandscaped areas assume 15% of total area or 8.07 acres per the October 2016 Specific Plan.



SOURCE: Jensen Design and Survey – October 2016

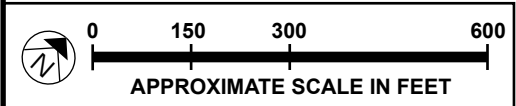
FIGURE 4



LEGEND

- - - Existing sewer main
- Proposed sewer main

Proposed Lift Station
 Point of Connection
 approximately 500'
 northeast at existing
 sewer manhole in
 Faulkner Road



SOURCE: Jensen Design and Survey – October 2016

FIGURE 5

The allocated supply to West Area 2 per the 2010 UWMP Update is 88.8 acre-feet per year (afy).⁵ The estimated potable demand for the proposed Project is approximately 25 percent of the West Area 2 total supply. The landscaped areas will be irrigated using reclaimed water to be delivered from the City's wastewater treatment plant. Construction is expected to begin in 2017 and be completed by 2020.

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption.

In addition to the previously described City-specific water conservation measures, Project developers shall be required to implement the following features to assure the most efficient use of water resources throughout the life of the Project:⁶

- Develop a budget for landscape irrigation use, pursuant to Section 5.304.1 of the City's Municipal Code.
- For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code §535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.
- Automatic irrigation system controllers (weather with rain sensors or soil moisture based) installed at the time of final inspection.
- All planted landscape areas within the Santa Paula West Business Park will have irrigation systems that are fully automatic and employ the latest "Low Volume" water conservation design criteria. No overspray of irrigation water onto walkways, common area hardscape areas, or any architectural walls will be allowed.
- Landscape plant and tree materials will be chosen for aesthetic quality and will consist of at least 75% low maintenance, California or drought tolerant, and ability to retain and treat storm water runoff.

1.5 REGULATORY SETTING

1.5.1 California Department of Water Resources

The DWR released its *State Water Project Final Delivery Capability Report* ("Report") in July 2015. The Report updates the estimated water delivery capacity of the SWP for current conditions and two decades

5 City of Santa Paula, *Final UWMP Update* (June 2011), Table 204, pg. 16 (1,906,000 square feet of development at 2.03 afy).

6 California Green Building Code (2013), tit. 24, pt. 11, Revision Record for the State of California (July 1, 2015).

from 2015.⁷ The estimates include the best-known future effects of climate change and the anticipated changes in Sacramento River basin land uses. The assessment of current and future SWP reliability allows DWR to plan for reliable future water supplies in California.

1.5.2 Comprehensive Water Legislation

In November 2009, four legislative bills (SBX7-1, SBX7-6, SBX7-7, and SBX7-8) and the supporting bond bill (SBX7-2), creating a comprehensive water package designed to meet California’s water challenges, were approved by Governor Schwarzenegger.⁸ The legislation establishes the governmental framework to achieve the co-equal goals of providing a more reliable water supply to California and restoring and enhancing the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (“Bay-Delta”) ecosystem. The package includes requirements to improve the management of our water resources by monitoring groundwater basins, developing agricultural water management plans, reducing statewide per capita water consumption 20 percent by 2020, and reporting water diversions and uses in the Delta. It also appropriates \$250 million for grants and expenditures for projects to reduce dependence on the Delta if the bond issue is approved by the voters in the future.

The Safe, Clean, and Reliable Drinking Water Supply Act of 2010 (SBX7-2) was placed and passed on the November 2014 ballot as California Proposition 1, the Water Bond (Assembly Bill [AB] 1471). AB 1471 provides funding for California’s aging water infrastructure, as well as for projects and programs to improve the ecosystem and water supply reliability for California. The bond bill includes \$2.7 billion for actions improving Bay-Delta sustainability. These investments will help to reduce seismic risk to Bay-Delta water supplies, protect drinking water quality, and reduce conflict between water management and environmental protection.

Part of the comprehensive water package included SBX7-7 (Steinberg, Chapter 4, Statutes of 2009—Statewide Water Conservation). This bill creates a framework for future planning and actions by urban and agricultural water suppliers to reduce California’s water use. SBX7-7 requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020. CVWD has included the provisions of SBX7-7 in its 2010 UWMP and has reduced water demand by 20 percent since 2006.

7 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015*, July 1, 2015 <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

8 (DWR, *California Water Plan Update 2009*, vol. 4 (December 2009). Reference Guide, Legislation, 2009 Comprehensive Water Package, Special Session Policy Bills and Bond Summary, (November 2009).

On January 17, 2014, California Governor Brown declared a drought state of emergency, and directed state officials to take all necessary actions to prepare for these drought conditions.⁹ State agencies, led by the Department of Water Resources, are in the process of executing a statewide water conservation campaign, calling on Californians to reduce their water usage by 20 percent.

1.5.3 Recent Regulations, Executive Orders and SWRCB Actions

Executive Orders

On January 17, 2014, Governor Edmund G. Brown Jr. declared a drought state of emergency.¹⁰ On April 25, 2014, the governor signed Executive Order B-26-14¹¹ (April 2014 Proclamation) stating, among other things, that

“severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.”

On December 22, 2014, Governor Brown issued Executive Order B-28-14,¹² which extended the suspension of certain activities subject to CEQA contained in the January 2014 and April 2014 Proclamations, including the SWRCB adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers—those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, excluding wholesalers—to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

9 Office of the Governor, “Governor Brown Declares Drought State of Emergency” (January 17, 2014), <http://gov.ca.gov/news.php?id=18368>.

10 Office of the Governor, “Governor Brown Declares Drought State of Emergency” (January 17, 2014), <http://gov.ca.gov/news.php?id=18368>.

11 Office of the Governor, “Governor Brown Issues Executive Order to Redouble State Drought Actions” (April 25, 2014), <http://gov.ca.gov/news.php?id=18496>.

12 Office of the Governor, “Executive Order B-28-14” (December 22, 2014), <https://www.gov.ca.gov/news.php?id=18815>.

On April 1, 2015, Governor Brown signed Executive Order B-29-15,¹³ directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage, compared to the amount used in 2013, through February 2016. The governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the governor's January 17, 2014, Proclamation, April 25, 2014, Proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

State Water Resources Control Board

In 2014, the State Water Resources Control Board (SWRCB) determined that an emergency existed due to severe drought conditions and that adoption of the proposed emergency regulation was necessary to address the emergency. California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all the demands for water in the State.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015.¹⁴ The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers, each of which is assigned a conservation standard, ranging between 4 and 36 percent.¹⁵

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB; from March to June 2016, the City had achieved 24.2 percent water savings. The Governor issued

13 State of California, Executive Department, "Executive Order B-29-15" (April 1, 2015), http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf

14 State Water Resources Control Board, Resolution No. 2015-2032, Emergency Regulation for Statewide Urban Water Conservation (adopted May 5, 2015).

15 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015). http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approve_d_regs2015.pdf.

new Executive Order, as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions, and the City now has a zero percent conservation standard.¹⁶

Legislative Actions

Sustainable Groundwater Management Act

In September 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history. SGMA empowers local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities.

The three bills that make up SGMA are AB 1739 (Dickinson), SB 1168 (Pavley) and SB 1319 (Pavley).

AB 1739—Groundwater Management

AB 1739 (Dickinson) authorizes the DWR or a groundwater sustainability agency (GSA) to provide technical assistance to entities that extract or use groundwater to promote water conservation and protect groundwater resources. This bill requires the DWR, by January 1, 2017, to publish on its Internet website best management practices for the sustainable management of groundwater, and requires the DWR to prepare and release a report by December 31, 2016, on the agency's best estimate of water available for replenishment of groundwater in the state.

AB 1739 requires a GSA to submit a groundwater sustainability plan (GSP) to DWR for review upon adoption. The bill authorizes a local agency to submit to DWR for evaluation and assessment an alternative that the local agency believes satisfies the objectives of these provisions. AB 1739 also requires DWR to review any of the above-described submissions at least every 5 years after initial submission to DWR.

In addition, AB 1739 requires that prior to the adoption or any substantial amendment of a general plan, the planning agency review and consider a GSP; groundwater management plan; groundwater management court order, judgment, or decree; adjudication of water rights; or a certain order or interim plan by the SWRCB. AB 1739 requires the planning agency to refer a proposed action to adopt or

¹⁶ State Water Resources Control Board, Self-Certification Conservation Standards—"Stress-test" (by supplier), http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf. Accessed October 18, 2016.

substantially amend a general plan to any GSA that has adopted a GSP or local agency that otherwise manages groundwater, and to the SWRCB if it has adopted an interim plan that includes territory within the planning area.

SB 1168—Groundwater Management

SB 1168 (Pavley) notes that the policy of the state is that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. This bill states that sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

SB 1168 requires DWR to categorize each basin as high, medium, low, or very low priority. The initial priority for each basin was to be established no later than January 31, 2015. The bill authorizes a local agency to request that DWR revise the boundaries of a basin and required DWR to adopt by January 1, 2016, regulations on the methodology and criteria to be used to evaluate the proposed revision.

In addition, all groundwater basins designated as high- or medium-priority basins by the DWR that are designated as basins subject to critical conditions of overdraft are to be managed under a GSP or coordinated GSPs by January 31, 2020; all other groundwater basins designated as high- or medium-priority basins are to be managed under a GSP or coordinated GSPs by January 31, 2022.

This bill would authorize any local agency, as defined, or combination of local agencies to elect to be a GSA and would require, within 30 days of electing to be or forming a GSA, said agency to inform the DWR of its election or formation and its intent to undertake sustainable groundwater management.

SB 1319—Groundwater

SB 1319 (Pavley) prohibits the SWRCB from establishing an interim plan to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters until January 1, 2025. This provision delays the similar provision in AB 1739 from 2022 to 2025. The bill further requires the SWRCB to exclude any portion of a basin in compliance with groundwater management requirements

from probationary status. This provision narrows the similar provision in AB 1739 to only apply to the portion of the basin that is out of compliance.

The bill requires the SWRCB to include any element of a GSP or the entire plan in its interim plan if SWRCB finds it would help meet the sustainability goal. This provision revises the similar provision in AB 1739 to allow for the inclusion of local plans when developing interim plans for basins with probationary status.

A GSP has not yet been adopted for the Santa Paula Basin pursuant to SGMA and is not required until 2022.

SB 1262 (Pavley)—Water Supply Planning

In September 2016, Governor Brown signed SB 1262 (Pavley), which states that if a water supply for a proposed project includes groundwater from a basin that is not adjudicated and is designated as medium or high priority, the following additional information must be included in the WSA: whether DWR has identified the basin as being subject to critical conditions of overdraft; and if a GSA has adopted a (GSP) or approved an alternative plan under the SGMA, a copy of the GSP, or an alternative plan. For a basin that is not adjudicated and is designated by DWR as low or very low priority, the WSA must include information as to whether DWR has identified the basin as being overdrafted or projected that the basin will become overdrafted if present management conditions continue.

SB 1262 is not effective until January 1, 2017. However, as noted earlier, pursuant to SB 1262 and the amended Water Code Section 10910, the Santa Paula Basin is an adjudicated Basin of which the DWR has not indicated is in overdraft.¹⁷

1.5.4 United Water Conservation District

The United Water Conservation District (UWCD or District) is a public agency that encompasses nearly 213,000 acres of central and southern Ventura County. The District covers the downstream (Ventura County) portion of the valley of the Santa Clara River, as well as the Oxnard Plain. The District serves as a steward for managing the surface water and groundwater resources for all or portions of eight interconnected groundwater sub-basins. The developed areas of the District are a mix of agriculture and urban areas, with prime agricultural land supporting high-dollar crops such as avocados, berries, row crops, tomatoes, lemons, oranges, flowers, ornamental nursery stock, and sod. Approximately 370,000 people live within the District boundaries, including those living in the cities of Oxnard, Port Hueneme, Santa Paula, Fillmore, and eastern Ventura.

17 California's Groundwater Bulletin 118, Santa Clara River Valley Basin Santa Paula Subbasin, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/4-4.04.pdf.

The District is authorized under its principal act (California Water Code Section 74000 et. Seq.) to exercise multiple powers; including the authority to conduct water resource investigations, acquire water rights, build facilities to store and recharge water, construct wells and pipelines for water deliveries, commence actions involving water rights and water use, prevent interference with or diminution of stream/river flows and their associated natural subterranean supply of water, and to acquire and operate recreational facilities in connection with dams, reservoirs, or other District works.

1.5.4 City of Santa Paula

2010 Urban Water Management Plan Update

Section 10610 et seq. of the California Water Code, known as the Urban Water Management Planning Act, calls for creation and periodic update of UWMPs by all urban water suppliers and sets forth the requirements for such plans, including definition of relevant terms.

Under the definition given in Section 10617, an urban water supplier is an entity “providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.” Water for this development will be supplied from the City of Santa Paula’s existing water system which is supplied via groundwater wells throughout the City.

In 2011, the City of Santa Paula completed an UWMP update that included the portions of the East Area 2 Annexation Area located east of the City, south of the Ventura County Transportation Commission railroad, surrounds Hallock Drive area, but excluded the triangle area north of Hallock Drive.¹⁸ This UWMP did not discuss the specific development and activities contemplated by the Santa Paula West Business Park, although it did discuss, in general terms, the nature and extent of the long-term water supply for the City for the West Area 2 and included an estimated 1,906,000 square feet of commercial/industrial/institutional uses on approximately 125 acres. Much of this general discussion is cited and paraphrased in this WSA. The UWMP contains an analysis of the factors required by Government Code section 66437.7 (a)(2), and such factors apply to this WSA.

Accordingly, this WSA, in concert with the UWMP prepared by the City, includes all necessary data and analyses required by California Water Code section 10910 et seq. and by Government Code section 66437.7 et seq.

The 2010 UWMP is currently being updated to meet the DWR’s requirements for the 5-year update for 2015; a revised update is anticipated in early 2017.

18 City of Santa Paula, *General Plan*, “Land Use Element” (2013), LU-24.

2.0 WATER DEMANDS

2.1 HISTORICAL AND CURRENT CONDITIONS

2.1.1 Existing Land Use

The local economy is composed of agricultural, industrial, and commercial interests. Residential development is currently the single largest land use, encompassing over 37 percent of the land within the City. Santa Paula currently has a housing stock totaling approximately 8,500 units. Of these, 68 percent are single-family houses or condos, 22 percent are multifamily units, and 9 percent are mobile homes and trailers. Because a significant amount of its residential growth occurred prior to 1970, more than half of the housing stock in Santa Paula is over 30 years old. Commercial development comprises less than 5 percent of the City's area and industrial uses comprise approximately 6 percent.¹⁹ City water demands in 2005 were 5,046 acre-feet. Single-family residential accounts, the largest account class, represented 46 percent of water demands. Water demands were 4,416 acre-feet in 2010²⁰ and projected water demands in 2015 are 5,178 acre-feet.²¹

Future land uses are based on the City's General Plan. Within the City's existing limits and planning areas there is a potential for the following: 2,445 residential dwelling units (single- and multifamily); 131 acres of new commercial, industrial, and institutional development; and 411 acres of parks, recreation, golf courses, and open space.²²

The City's General Plan anticipates approval of an amendment of the City's 1978 Sphere of Influence to include six Expansion Areas, with a variety of land uses. Amending the Sphere of Influence boundary and annexing the Expansion Areas to the City requires the authorization of the Local Agency Formation Commission (LAFCO); previous LAFCO hearings approved Adams Canyon, Fagan Canyon, East Area 1, East Area 2, and West Area 2 for inclusion into the City's Sphere of Influence. Annexation of each Expansion Area will occur on a case-by-case basis after the completion of a Specific Plan and a market and fiscal evaluation; the City has recently completed annexation of two of these identified areas (East Area 1 [2010] and East Area 2 [2013]). In addition, each annexation area will require environmental review in accordance with CEQA. Ultimate build-out of residential units will be in accordance with the City's existing Growth Management Ordinance adopted in 1985. Type and amount of development that actually occurs will depend on many factors.

19 City of Santa Paula, *General Plan*, "Land Use Element" (rev. January 22, 2013), City Council Resolution No. 6821.

20 City of Santa Paula, *Final UWMP Update* (June 2011), 17.

21 *2010 Urban Water Management Plan Data—Tables*; DOST Table 11: Past, Current, and Projected Total Water Use, revised data as of October 22, 2014.

22 City of Santa Paula, *General Plan*, "Land Use Element." Rev 1/22/13, City Council Resolution No. 6821.

The proposed Project is located within the boundaries of the West Area 2 Expansion Area. The City's 2010 UWMP Update projects a water demand of 88.8 afy for West Area 2.²³ At approximately 53.81 acres, the Santa Paula West Business Park Specific Plan would take up approximately 43 percent of the 125-acre West Area 2 planned expansion as designed in the General Plan.²⁴ As such, based on a pro rata share of the proposed development contemplated in the General Plan for West Area 2 and the corresponding water demand estimated in the 2010 UWMP Update, the proposed Project has a projected demand of 39.4 afy.

The Santa Paula West Business Park Specific Plan site is currently in agricultural use.²⁵ Water is currently supplied by a single on-site water well, which supply water for both domestic and agricultural irrigation use.

2.1.2 Existing Water Supply and Demand

The existing land uses within the Specific Plan area includes approximately 54 acres of agricultural land, fallow agricultural land, and a small amount of industrial uses.

Water supply for irrigation on the Specific Plan area has been historically supplied from an on-site well that overlies the Santa Paula Basin. The existing well in the area (E11S) is owned and operated by McGaelic Group and Bender combined.

Approximately 49 acres of the Santa Paula West Specific Plan site is under cultivation for avocados, herbs, and a variety of row crops. Production records for the irrigation well for the period 2010 to 2014 are shown on **Table 3, Existing Well Pumping Records 2010 – 2014**. Water usage has been from one well but delivered to several parcels including McGaelic West (McGrath owners), Ilan Bender, and Jaime Santana; only the McGaelic West and Bender parcels are within the Project Site.²⁶ As shown on **Table 3**, over the last 5 years (2010 to 2014), the total water used on site has averaged 281.1 afy.

23 City of Santa Paula, *Final UWMP Update* (June 2011), Table 2-4, p. 16.

24 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

25 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

26 Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015), June 9, 2015.

Table 3
Existing Well Pumping Records 2010–2014

Year	McGaelic West (acre-feet)	Bender (acre-feet)	Total Usage (acre-feet)
2010	N/A	112.9	112.9
2011	122.9	89.4	212.3
2012	176.5	162.9	339.4
2013	187.8	232.7	420.5
2014	120.8	199.6	320.4
Total	608.0	797.5	1,405.5
2010–2014 Average per year	121.6	159.5	281.1

Source: Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015).

2.2 WATER CONSERVATION MEASURES

2.2.1 State of California Measures

The State of California Assembly Bill (AB) 1881 was enacted in 2009 to help California move forward as a leader in sustainable landscaping and water efficiency and to address the danger of our drought situation. Many residential and commercial properties currently use outdated irrigation technology; AB 1881 is a forward-thinking standard that prevents excessive or wasteful irrigation techniques by emphasizing the use and application of modern irrigation technology.²⁷

With current drought conditions persisting, emergency regulation amendments are proposed.

Mandatory Prohibitions on Water Wasting

Water “waste” can be defined as any excessive, unnecessary or unwarranted use of water, including, but not limited to, any use that causes unnecessary runoff beyond the boundaries of any property as served by its meter and any failure to repair as soon as reasonably possible any leak or rupture in any water pipes, faucets, valves, plumbing fixtures, or other water service appliances.

California Code of Regulations: Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted in January 1, 2010, to, but not limited, promote the conservation and efficient use of water and to prevent the waste of water; establish a

²⁷ Assembly Bill No. 1881, ch. 559 (January 23, 2006; approved, September 28, 2006; filed, September 28, 2006).

structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects; establish provisions for water management practices and water waste prevention for existing landscapes; and to encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered-rate structure.²⁸

California Green Building Standards Code (CALGreen)

The purpose of California Green Building Standards Code (“CALGreen”) is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental quality

The residential mandatory measures are provided in chapter 4 and the non-residential ones in chapter 5 of the CALGreen Code.

In response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and the Executive Order B-29-15 (issued April 1, 2015), California Department of Housing and Community Development (HCD) proposed emergency building standard regulations pertaining to the reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. HCD, in coordination with the California Building Standards Commission (CBSC),

Department of Water Resources (DWR), the Division of the State Architect, and other stakeholders developed emergency regulations that amend the 2016 CALGreen Code.²⁹

CALGreen provides mandatory residential measures, such as stormwater drainage and retention systems, which are thought to prevent flooding of adjacent properties and prevent pollution from stormwater

28 California Code of Regulations, tit. 23, Waters, div. 2, Department of Water Resources, ch. 2.7, Model Water Efficient Landscape Ordinance.

29 California Department of Housing and Community Development, Finding of Emergency Regarding the 2013 California Green Building Standards Code (CALGreen), California Code of Regulations, tit. 24, pt. 11.

runoff by retaining soil on site or by providing filtering to restrict sedimentation from reaching stormwater drainage systems and receiving streams or rivers. To comply, the retention basin must be sized and shown on the site plan, and water has to be filtered and routed to a public drainage system. The new residential structure also must comply with local stormwater ordinances. The drainage system must also be shown on the site plan (swales, drain piping, retention areas, and groundwater recharge).

The code also requires a 20 percent reduction of indoor water use, and it utilizes both a prescriptive and performance method. The prescriptive method provides some technical features that must be followed:

- Showerheads \leq 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi)
- Lavatory faucets \leq 0.5 gpm at 60 psi
- Kitchen faucets \leq 1.8 gpm at 60 psi
- Urinals \leq 0.5 gal/flush
- Water closets \leq 1.28 gallon/flush

CALGreen also specifies acceptable performance standards for plumbing fixtures with reduced water usage. Fixtures can be installed if they meet standards listed in the code.

Outdoor water usage is also regulated. CALGreen requires irrigation controls to be weather or soil moisture based and to automatically adjust irrigation in response to changes in plants' needs as weather conditions change, or have rain sensors or communication systems that account for local rainfall.

2.2.2 City of Santa Paula

2010 Urban Water Management Plan (UWMP) Update

The City of Santa Paula has implemented water conservation measures to ensure that customers use water efficiently and that negligent use will have appropriate consequences. Water conservation policies are described in the 2010 Urban Water Management Plan Update.³⁰

Below is a partial list of current adopted water conservation policies:

- Water survey programs for single-family residential and multifamily residential customers
- Metering with commodity rates for all new connections
- Large landscape conservation programs and incentives
- Conservation programs for commercial, industrial, and institutional accounts
- Wholesale agency assistance programs
- Conservation pricing

³⁰ City of Santa Paula, *Final UWMP Update* (June 2011).

The combined effect of these policies places responsibility for water conservation on both the developer and the City.

The 2010 UWMP is currently being updated to meet the DWR's requirements for the 5-year update for 2015; a revised update is anticipated in early 2017.

City Municipal Code, Ordinance 993 Section 52.038—Water Waste

“No person shall [un]lawfully or neglectfully waste water in any manner whatsoever. Continued wasting of water after mailing of [City] notice by registered mail to the customer of record at the mailing address of record by the [City] Director may result in discontinued water service.”³¹ This Code is a beneficial tool to curb misuse and waste of potable water within the City. The provisions of the Code can be utilized during periods of normal water supply and supply deficiency. Violation of this Code is subject to City penalties.

City Municipal Code, Ordinance 1223, Chapter 59—Landscape Water Conservation Standards

In accordance with Government Code 65565(c) for the purpose of complying with California law and promoting water conservation the City maintains Ordinance 1223, Landscape Water Conservation Standards, to be utilized in conjunction with the City of Santa Paula Land Development Provisions for Landscaping and the Guidelines for Implementation of Water Efficient Landscape.³² Compliance with the guidelines and Landscape Water conservation Standards is mandatory for all new development projects that are subject to discretionary review by the City of Santa Paula.

Water Shortage Contingency Plan

The City's Water Shortage Contingency Plan was originally prepared to comply with AB 11x (1991). The bill required every urban water supplier to file a plan due to the worsening 1986-1992 drought.

The City has several options for meeting future water demands, including increased deliveries of local groundwater, increased deliveries of imported water, evaluating recycled water, and supporting water demand management programs. This has allowed the City, to date, to meet demands in spite of the prior drought conditions. Water shortages can be triggered by a hydrologic limitation in supply (i.e., a prolonged period of below-normal precipitation and runoff), limitations or failure of supply and treatment

31 City of Santa Paula, Santa Paula Municipal Code, Ordinance 993, sec. 52.038—Water Waste.

32 City of Santa Paula, Santa Paula Municipal Code, Ordinance 1223, ch. 59—Landscape Water Conservation Standards Ordinance (December 2009).

infrastructure, or both. Hydrologic or drought limitations tend to develop and abate more slowly, whereas infrastructure failure tends to happen quickly and relatively unpredictably.

Drought periods going back to 1929 have caused pumping levels to decrease, however there never has been a necessity to implement mandatory restrictions of water use. More efficient use of water was encouraged during the 1976 to 1977 period. An even greater awareness of water conservation occurred during the 1987 to 1992 drought. This increased awareness resulted in more efficient use of water.

Additional supply reductions could be caused by regional power outage, terrorist activity, earthquake, tsunami or other significant meteorological event. The City prepared an Emergency Response Plan (2004) which provides details of emergency responses for numerous significant events that may affect the City's water system.

Reductions in Santa Paula Basin Production Required by the Stipulated Judgment

According to the Judgment if it is found that the safe yield of the Santa Paula Basin is less than the total pumping allocations, then the pumping allocations shall be reduced. The Judgment specified that reductions in pumping will be required in the order of priority specified in **Table 4, Water Shortage Contingency—Rationing Stages to Address Water Supply Shortages**.

Table 4
Water Shortage Contingency—Rationing Stages to Address Water Supply Shortages

Stage	Water Supply Conditions
1	All uses in excess of the pumping allocations will be cut back to the approved allocations
2	Cumulative pumping allocation of the Santa Paula Basin Pumpers Association (SPBPA) will be reduced by 500 af annually. This reduction will reflect reasonable conservation that can be achieved. The SPBPA will determine how a reduction in its cumulative allocation will be implemented
3	Pumping allocation of the City of San Buenaventura shall be reduced to 1,141 af per year. This allocation reflects the City of San Buenaventura’s historical maximum annual production prior to the Judgment
4	The remaining pumping allocations of all parties to the Judgment will be further reduced simultaneously. The SPBPA will reduce their total annual allocations by 2,000 af. The City of San Buenaventura will reduce their total annual allocations by 500 AF
5	The City of San Buenaventura will cease pumping from the Santa Paula Basin
6	The remaining pumping allocations of the SPBPA will be reduced by the amount required to bring production into balance with the revised safe yield of the Santa Paula Basin

Source: City of Santa Paula, 2010 UWMP Update (June 2011), 57.

Proposed Water Demand Reduction Program

The City is establishing a water demand reduction program for worst-case planning purposes consisting of the implementation of a three-stage water demand reduction program. Stage 1 would impose a voluntary 15 percent water demand reduction goal, Stage 2 would impose an additional 15 percent mandatory reduction goal (total of 30 percent), and Stage 3 would impose an additional 20 percent mandatory reduction goal, for an overall reduction in water demand of 50 percent. Each stage would be implemented as needed based on actual or anticipated supply reductions. It would be the responsibility of the City’s Public Works Director to monitor water supplies and demands on a daily basis. This would allow the City to determine the effects of reductions on water production within the system. If evidence of a shortage exists, the Public Works Director would determine the extent of the severity and recommend the applicable stage. The Public Works Director would notify the City Council of the water supply situation, and the Council would be responsible for ratifying the proposed measures. The water shortage restriction program and water rationing rate structure would be adopted by the City Council as a new City ordinance.

Proposed specific water demand reduction measures and triggering mechanisms for each stage are listed in the 2010 UWMP Update and presented below.³³

³³ City of Santa Paula, *Final UWMP Update* (June 2011).

Stage 1: 15 Percent Reduction—Supply Watch

Stage 1 would be implemented when 5 to 15 percent reduction in water production capacity (or supplies) occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. All restrictions during Stage 1 are voluntary. The goal for Stage 1 is 15 percent reduction in water demand. Measures to be implemented during this stage include but are not limited to the following:

- City to communicate to the customers through press releases, brochures, mail-outs, and/or water bills the need to voluntarily conserve water and the many ways possible to conserve without affecting their overall lifestyles.
- Water customers requested to voluntarily limit the irrigation of landscaped areas.
- Water customers requested to voluntary limit non-essential water use. Non-essential water used defined as:
 - Use of water to wash any motor vehicle, motorbike, airplane, or other vehicle.
 - Use of water to wash down sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas.
 - Use of water to wash down buildings or structures for purposes other than immediate fire protection.
 - Flushing gutters or permitting water to run or accumulate in any gutter or street.
 - Use of water to fill, refill, or add to any outdoor or indoor swimming pools, or Jacuzzi-type pools.
 - Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life.
 - Failure to repair a controllable leak within a reasonable period after having been given notice directing the repair of such leak.

Stage 2: 30 Percent Mandatory Reduction—Supply Warning

Stage 2 would be implemented when a 15 to 30 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. All restrictions in Stage 2 are mandatory. The goal for Stage 2 is 30 percent reduction in water demand. Measures to be implemented during this stage include but are not limited to the following:

- Continue to maintain Stage 1 measures; however, they become mandatory in Stage 2.
- City to mail information to water customers regarding the importance of significant water use reductions.

- Implement a 30 percent decrease in water allocation based on a yearly average for metered services. For those users who exceed their allocation, impose a 25 percent penalty for the excess volume. Charge an additional \$25 “excess user” fee and install a flow restrictor for repeat offenders of excessive use.
- Enforce the non-essential water use discussed in Stage 1 and assess a \$25 fee to offenders.
- Irrigation shall be by means of hand-held hoses, hand-held buckets, soaker hoses, or drip irrigation only. The use of hose-end sprinklers or permanently installed automatic sprinkler systems are prohibited at all times.
- Prohibit watering landscape between 10 AM to 4 PM.
- All restaurants are prohibited from serving water to patrons except upon request of the patron.
- Appoint a Water Conservation Coordinator. This can be an individual already working for the City with related duties.

Stage 3: 50 Percent Mandatory Reduction – Supply Emergency

Stage 3 would be implemented when a 30 to 50 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. The goal for this stage is 50 percent reduction in water demand. Measures to be implemented during this stage include but are not limited to the following:

- Perform an evaluation of Stage 2 water conservation measures and implement those not completed. Public Works Director to report to the City Council as appropriate.
- Implement a 50 percent decrease in water allocations for metered water services and charge a \$50 “excess user” fee for repeat offenders.
- Prohibit watering landscape between 8 AM to 6 PM.
- All water use not required for health and safety is prohibited.

3.0 WATER SUPPLY ASSESSMENT

A WSA is required to identify and describe the water supply sources of the PWS that will serve the project.

State Water Code Section 10910(d) requires a WSA to include identification of any existing SWP water, water rights, or water service contracts relevant to the identified water supply for the proposed Project. A complete discussion of SWP source and Table A allocations is provided, as well as a description of the quantities of water received in prior years by the PWS is also to be provided.³⁴

3.1 IDENTIFICATION OF WATER SOURCES

3.1.1 Primary Water Source

The City of Santa Paula will provide water service to the proposed Project.³⁵ The City currently has secured water rights from two sources: groundwater allocation from the Santa Paula Basin and a surface water wheeling agreement with the Canyon Irrigation Company. Surface water from Santa Paula Creek was a major source of potable water supply for the City's service area until wells were drilled into the Santa Paula Basin to augment the supply from Santa Paula Creek. Currently the Santa Paula Basin is the City's sole source of water supply.

3.1.2 Analysis of Water Supply

Groundwater

As previously stated, the City of Santa Paula has been dependent primarily on groundwater as a source of domestic water supply. Groundwater is also used to supply water for crop irrigation and commercial and industrial uses within the City.

Water Code Section 10910 (f) requires additional information when a groundwater basin is cited as the water supply source for a project including a description of the basin, the rights of the PWS to use the basin, the overdraft status of the basin, any past or planned overdraft mitigation efforts, historical use of the basin by the PWS, projected use of the basin by the project, and a sufficiency analysis of the basin.

Description of the Aquifer

The Santa Paula Basin is a subbasin of the larger Santa Clara River Valley Groundwater Basin. Other subbasins within the Santa Clara River Valley Groundwater Basin include the Fillmore, Piru, Mound, and Oxnard Subbasins. Each of the five subbasins is an alluvial basin recharged, in part, by the Santa Clara

³⁴ California Water Code, sec. 10910–10915, 10910(b).

³⁵ City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

River.³⁶ For the sake of simplicity, and because the subbasins are subject to varying forms of management, this WSA refers to the Santa Paula Basin as basin rather than subbasin.

The Santa Paula Basin underlies the City of Santa Paula and unincorporated areas to the southwest of the City within the Santa Clara River Valley. The basin is bounded by the impervious rocks of the Topatopa Mountains to the north, impervious rocks of Oak Ridge and South Mountain, the Oak Ridge fault, and Saticoy fault on the south.³⁷ The eastern edge of the basin is marked by a bedrock constriction, with the boundary placed at the position of maximum rising water. The western boundary separates the Santa Paula basin from the Mound and Oxnard subbasins, with the western boundary placed where there is a distinct change in the slope of the water table. Ground surface elevations range from 140 feet above sea level in the west to about 1,000 feet above sea level along the Santa Paula Creek drainage. The Santa Clara River and Santa Paula Creek drain the valley westward toward the Pacific Ocean. Average annual precipitation ranges from 14 to 18 inches.

The principal fresh water-bearing strata of the Santa Paula basin are the Pleistocene San Pedro Formation, Pleistocene river deposits of the ancient Santa Clara River, alluvial fan deposits shed from the uplifted mountain blocks, and recent river and stream sediments deposited locally along the Santa Clara River and its tributaries. These water-bearing sediments are underlain by relatively impermeable Pliocene and older units. The sediments of the basin have been warped into a syncline that is oriented in a northeast-southwest direction along the center of the basin. To the east, the Santa Paula basin is in hydraulic connection with the Fillmore basin, its' primary source of recharge. To the south, the Oak Ridge fault forms a partial barrier to groundwater movement. On the north, the portion of the aquifer represented by the San Pedro Formation is exposed in an outcrop along the Sulphur Mountain foothills.

The western boundary of the Santa Paula Basin is more complex, with local uplift, artesian conditions, and faults mapped by some investigators. Although there is general agreement that there is hydraulic connection between Santa Paula Basin, the Oxnard Forebay Basin, and the Mound Basin, the degree of connection is uncertain. The Santa Paula Basin has a storage capacity of approximately 754,000 acre-feet. The basin is estimated to be approximately 90 percent full, for about 675,000 acre-feet of groundwater in storage.³⁸

36 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118 Update 2003 (October 2003).

37 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118 Update 2003 (October 2003).

38 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118, Santa Clara River Valley Basin: Santa Paula Subbasin (February 2004).

As reported by the Ventura County Watershed Protection District, the 2014 total precipitation was 6.13 inches. The accumulated total rainfall to date for 2015 is 8.36, approximately 47 percent of normal, (17.66 inches).³⁹

The Basin is recharged by percolation of surface flow from the Santa Clara River, Santa Paula Creek, and other minor tributary streams, as well as subsurface flow from the Fillmore Basin.⁴⁰ Some of the surface flow in the Santa Clara River originates as release from Lake Piru and contains natural runoff of precipitation and imported State Water Project water, it is important to note that there has not been a release from Lake Piru in the last year due to drought.⁴¹ Control of the quagga mussel is another limiting factor for water release.⁴² Percolation of precipitation and unused irrigation waters provide additional recharge. Groundwater in the Santa Paula Basin generally flows toward the southwest.⁴³

Groundwater Extraction

While there have been periodic declines in water levels within the Santa Paula Groundwater Basin, the Basin is not considered to be in a state of overdraft. The “assumed initial yield” of the basin is 33,500 afy. Under the terms of the Judgment, a 7-year study period (1996 to 2003) formed the basis for determining actual safe yield. After 7 years, water use data was analyzed to refine the assumed initial yield of 33,500 afy. United Water Conservation District prepared a report (UWCD, 2003) on the status of the Santa Paula Basin. The UWCD Report concluded that the average groundwater production over the period 1983 to 1995 was 26,000 af. According to the Report, no overdraft was observed at the documented production rates over the period 1983 to 1995. The Report also identified that over the period 1997 to 2003 parties to the Judgment had cumulatively produced 42,111 af less than their combined total allocation for this period. Yield of the Santa Paula Groundwater Basin appeared to be no less than 26,000 afy (UWCD, 2003). Approximately 12,000 acres of agricultural land is irrigated by groundwater in the Santa Paula Basin. Groundwater extractions are reported on the semi-annual groundwater production statements filed with UWCD’s Finance Department by individual pumpers. These production statements constitute all known pumping from the Santa Paula basin. In calendar year 2011, 24,202 acre-feet of groundwater was extracted from the Santa Paula basin. A summary of the 2011 extractions is shown in **Table 5, Summary of Recent Groundwater Extractions**. The 2014 reported

39 Ventura County Watershed Protection District, Watershed Resource and Technology Division, *Automated Daily Rainfall Report: Current Rain Totals and Percent of Normal* (June 9, 2015).

40 United Water Conservation District, *Combined 2013 and 2014 Santa Paula Basin Annual Report*. Professional Paper 2016-01, prepared by Santa Paula Basin Technical Advisory Committee (January 2016).

41 United Water Conservation District, Groundwater Resources Department, *Groundwater and Surface Water Conditions Report—2013* (May 2014).

42 Dive Assessment of the Quagga Mussel Infestation at Lake Piru (February 2014), <http://www.unitedwater.org/images/stories/Lake-Piru/Quagga-Mussel/DiveAssessmentRptPiruFeb2014.pdf>.

43 State of California, Resources Agency, Department of Water Resources, *California Groundwater*, Bulletin 118 Update 2003, October 2003.

groundwater extractions of 27,437 acre-feet were greater than the average for the period of record (1980 to 2014) average of 25,771.⁴⁴ In addition to this information, the Urban Water Management Plan provides supplemental Groundwater pumping data for the City of Santa Paula as a whole, including projected pumping figures ongoing until 2035.

Table 5
Summary of Recent Groundwater Extractions

Pumper	2013 Extractions (AF)	2014 Extractions (AF)
City of San Buenaventura	901	791
Santa Paula Basin Pumpers Association (SPBPA) Pumpers with Individual Party Allocations (adjusted extractions)	25,530	26,610
SPBPA Pumpers with Individual Party Allocations (reported extractions)	25,554	26,613
Non-stipulated Parties	14	17
De Minimis Pumpers	16	16
Total Production		
Adjusted by SPBPA	26,461	27,434
Reported to UWCD)	26,485	27,437

Source: Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

Long-term, gradual declines in water levels have been observed in many parts of the basin. These declines have not been rapid, and are relatively small, however, they are indicative of changing hydrologic conditions in the basin that warrant further monitoring, and if the trend persists, the development of alternative basin management strategies.

Water production for the period 2000 to 2010 is presented in **Table 6, City of Santa Paula Water Production**. According to City Water Division staff, total water produced in 2010 was 4,455 acre-feet (af). City water production in 2005 was 5,047 af (more than 591 compared to 2010). The highest annual water demand for the period 2000 to 2010 was recorded in 2002 with 5,359 af produced. Groundwater production during 2011 was less than the average in recent years, and precipitation was above average. This resulted in water level rises or stable water levels from 2010 to 2011.

⁴⁴ Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

Table 6
City of Santa Paula Water Production

Year	Groundwater Production from City Wells (acre-feet)
2000	5,254
2001	4,952
2002	5,359
2003	5,096
2004	5,208
2005	5,047
2006	5,143
2007	5,347
2008	5,290
2009	4,902
2010	4,455

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 4-2.

The City's current groundwater supply includes production from five active wells. Domestic water is pumped from Well Nos. 1-B, 11, 12, 13, and 14. **Table 7, City of Santa Paula Groundwater Resources**, summarizes the City's groundwater resources by well including current status, well capacity, and 2010 production. The City no longer operates Wells Nos. 2, 8, and 9 due to a history of elevated nitrate levels in water extracted from these sources. These wells were sold to an agricultural enterprise.⁴⁵

Table 7
City of Santa Paula Groundwater Resources

Well No.	Status	Capacity (gpm)	2010 Production (acre-feet)
1-B	Active	1,288	114.9
11	Active	1,232	393.2
12	Active	1,448	1,768.8
13	Active	1,932	353.3
14	Active	3,219	1,825.5
Total		9,119	4,455.5

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 4-3.

⁴⁵ City of Santa Paula, Final UWMP Update (June 2011).

Pumping Allocations

The Judgment governs groundwater production on a seven-year rolling average, which allows parties to produce more or less allocation in any particular year so long as their rolling seven-year average does not exceed their allocation. The average is a rolling average, in 2014 the average extraction amount will be based on the period from 2008 to 2014.

The total combined pumping allocations of the SPBPA (party and non-party) and the City of San Buenaventura (Ventura) are now at 30,771.6 acre-feet/year. Amendments to the Judgment in 2010 provided the Santa Paula Basin Pumpers Association with an additional 280.2 acre-feet of allocation, which was granted to pumpers that were not previously parties to or identified within the Judgment. The current allocations were calculated and granted using the lesser of the following two options: 1) the average production reported to UWCD from calendar years 2002 through 2008; or 2) the average production reported to UWCD prior to the Judgment (1989 to 1995). Additionally, a total of 40.7 acre-feet of SPBPA's allocation is held in "reserve" by the SPBPA for nonparty pumpers have declined to stipulate and become parties to the Judgment. In addition, the City of Ventura has acquired 225.8 acre-feet of prior SPBPA allocation through water allocation transfers to the City.⁴⁶

The SPBPA's calendar year 2013 and 2014 allocations were 27,545.8 acre-feet/year (excluding non-parties) distributed among its members with a seven-year average surplus of 2,123.8 acre-feet from pumping below the allocation. The City of San Ventura's 2013 and 2014 allocations were 3,000 acre-feet plus 225.8 acre-feet of prior Santa Paula Basin Pumpers Association allocation with a seven-year average surplus of 2,293.6 acre-feet from pumping below its allocation.⁴⁷

The Judgment also allows for de minimis production by landowners that are not allocated an Individual Party Allocation, which allows these landowners to produce groundwater for uses on their overlying property so long as such use does not exceed 5 acre-feet in any particular year. In calendar years 2013 and 2014, there were five de minimis producers.⁴⁸

Historical Groundwater Levels

Historically, water level trends in the Santa Paula basin were summarized through the use of a Groundwater Level Index. The index includes nine key wells in the basin that were selected for their relatively long record and geographic distribution across the basin. The following observations were made of the Groundwater Level Index graph:

46 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

47 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

48 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

- 1983 to drought period of 1990 and 1991 - declining index that directly mimics the declining cumulative departure from average precipitation trend;
- 1991 to 1998 – characterized as a wetter period than previous with an increasing index and cumulative departure from average precipitation;
- 1998 to 2011 – a net positive cumulative departure from average precipitation during this period with partial rebounds in in the groundwater level index during particularly wet water years 2005 and 2011;
- 2011 to 2014 – a steep decline in groundwater level index, corresponding to below-average precipitation since water year 2012, including the driest back-to-back water years 2013 and 2014 recorded since 1898 and 1899.

Since 2005 there have been three above average precipitation years, including 2011, and five below average precipitation years. In general, the trend in the Groundwater Level Index tends to follow the trend in the cumulative departure from average precipitation curve, i.e., trending down during drier-than-average periods and trending up during wetter-than-average periods.⁴⁹ As an update, since the year 2012, rainfall has declined to drought conditions. Total annual precipitation data for the Santa Paula area from 2010-2015 is presented in **Table 8, Annual Precipitation Totals: 2010–2015**.

Table 8
Annual Precipitation Totals: 2010–2015

Calendar Year	Total Annual Precip. Station 173A (in.)	Total Annual Precip. Station 245B (in.)	Total Annual Precip. Station 018B (in.)
2010	27.09	(18.48*)	—
2011	31.76	25.76	27.35
2012	12.55	9.85	6.52
2013	8.35	5.96	9.38
2014	9.67	6.15	—
2015	NA	11.22	NA

Source: Exported from Ventura County Watershed Protection District Hydrologic Data Server, Annual Rainfall Totals.

- Data from Station 245B (Santa Paula-Wilson Ranch), #173A (Santa Paula-Ferndale Ranch), and #018B (Santa Paula-Limoneira Ranch)

*Data from Station #245A (Santa Paula-UWCD)

Historical Groundwater Extraction

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The historical groundwater extractions for the Santa Paula basin are shown in **Table 9, Historical Santa Paula Basin Groundwater Extractions**. The extractions vary from a high of 33,453 acre-feet in 1990 during the peak of the last drought to a low of 16,710 acre-feet during the very wet year of 1983. The extractions during 2010 (a wet year) were reportedly 4,322 acre-feet below what was extracted in 2014 which received about one-third less water during the rainfall year.

Table 9
Historical Santa Paula Basin Groundwater Extractions

Calendar Year	Groundwater Extractions (acre-feet)	Calendar Year	Groundwater Extractions (acre-feet)	Calendar Year	Groundwater Extractions (acre-feet)
1980	26,820	1992	24,355	2004	27,306
1981	27,545	1993	26,998	2005	24,700
1982	22,925	1994	26,244	2006	24,830
1983	16,710	1995	25,042	2007	28,077
1984	29,455	1996	26,008	2008	26,686
1985	26,533	1997	28,961	2009	25,820
1986	21,617	1998	21,622	2010	23,115
1987	24,852	1999	27,700	2011	24,202
1988	25,370	2000	26,798	2012	25,824
1989	29,362	2001	22,530	2013	26,485
1990	33,453	2002	27,259	2014	27,437
1991	27,056	2003	22,280	Average	25,695

Source: Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016))

While there have been periodic declines in water levels within the Santa Paula Basin, members of the SPBPA agree that the Santa Paula Basin is not in a state of overdraft. The parties agreed that the “assumed initial yield” of the basin is 33,500 acre-feet per year (afy). Under the terms of the Judgment, a 7-year study period (1996 to 2003) formed the basis for determining actual safe yield. After 7 years, water use data was analyzed to refine the assumed initial yield of 33,500 afy. United Water Conservation District prepared a report (UWCD, 2003) on the status of the Santa Paula Basin. The UWCD Report concluded that the average groundwater production over the period 1983 to 1995 was 26,000 af. According to the Report, no overdraft was observed at the documented production rates over the period 1983 to 1995. The Report also identified that over the period 1997 to 2003 parties to the Judgment had cumulatively produced

42,111 af less than their combined total allocation for this period. Yield of the Santa Paula Groundwater Basin appeared to be no less than 26,000 afy (UWCD, 2003).⁵⁰

Aquifer Adjudication

Disagreement over the issue of safe yield of groundwater between the UWCD and other parties using water from the Santa Paula Basin, including the City of Santa Paula and the City of San Buenaventura (Ventura), led to the adjudication of groundwater rights within the Santa Paula Basin in 1996. A stipulated judgment was agreed to by the parties, and after review and approval by the Ventura County Superior Court, was entered as a final judgment (Judgment) to adjudicate groundwater rights within the basin. In summary, the Judgment adjudicates groundwater rights, regulates individual and collective pumping, provides for basin management through a Technical Advisory Committee (TAC), and reserves jurisdiction in the Superior Court to resolve future disputes and provide for supplementary orders as necessary.⁵¹

The Judgment allocates the use of groundwater in the Santa Paula Basin between the City of Ventura and the SPBPA, which is a consortium of water users in the Santa Paula area, including the City and farming interests. UWCD is also a party to the Judgment. Although UWCD does not produce water from the Santa Paula Basin, the Basin is located within its boundaries and UWCD is authorized to engage in groundwater management and replenishment activities and to act to protect water supplies that are of common benefit to the lands and residents within UWCD.⁵²

Currently, the SPBPA possesses a collective groundwater right allocation of 27,515 afy that it holds in trust for its membership. The Judgment further subdivides the collective 27,515 afy allocation as sub-allocations to each of the SPBPA members and a few non-parties.⁵³ The allocations and sub-allocations are summarized in **Table 10, Santa Paula Basin Water Allocations (2010)**.

Pursuant to the terms of the Judgment, the City of Santa Paula has a sub-allocation of 5,483.3 afy available for urban uses. However, the City transferred 673 afy to Canyon Irrigation Company in January 1998. This amount could be adjusted if the terms of the Judgment are modified, or if the City acquires additional water rights from areas subject to development or from other users within the SPBPA.⁵⁴

50 City of Santa Paula, *Final UWMP Update* (June 2011).

51 City of Santa Paula, *Final UWMP Update* (June 2011).

52 City of Santa Paula, *Final UWMP Update* (June 2011).

53 City of Santa Paula, *Final UWMP Update* (June 2011).

54 City of Santa Paula, *Final UWMP Update* (June 2011).

Table 10
Santa Paula Basin Water Allocations (2010)

Water User	Allocation (afy)
Santa Paula Basin Pumpers Association	
City ^a	5,483
Canyon Irrigation Company	673
Farmers Irrigation Company	9,913
Limoneira	3,611
Alta Mutual Water Company	758
All Other SPBPA Users ^b	7,077
Subtotal SPBPA	27,515
City of San Buenaventura	3,000
Unallocated Reserve	2,985
Total	33,500

Source: City of Santa Paula, Final 2010UWMP Update (June 2011).

^a The City's current allocation is 5,483. State of California, Superior Court (2010). Amended and Restated Judgment, United Water Conservation District vs. City of San Buenaventura.

^b Includes Bender and McGaelic Farms.

The City of Ventura has an allocation to pump on average 3,000 afy under a Class II Emergency. A long-term drought situation affecting surface water supplies would be considered a Class II Emergency. In addition, the Judgment also provides for an unallocated reserve of 3,000 afy.⁵⁵

Water on the Project Site used for irrigation has been historically supplied from on-site wells. All wells are listed in the Judgment as being within the Santa Paula Basin. Withdrawals from all of the wells have been accounted for under the Santa Paula Basin Judgment. Currently, the members of the SPBPA have a cumulative allocation to pump on average 27,515 afy.⁵⁶ The Judgment sets forth an "assumed initial yield" of the basin at 33,500 afy, subject to modification if credible technical information demonstrates a need for a change. The Judgment also set forth a seven-year study period to evaluate the appropriateness of the assumed initial basin yield of 33,500 afy, which began on January 1, 1996. The average is a rolling average so in 2011 the average extraction amount will be based on the period from 2005 to 2011. After

55 City of Santa Paula, Final UWMP Update (June 2011).

56 City of Santa Paula, Final UWMP Update (June 2011), Appendix D, Exhibit C-1-b (July 2, 2010).

the 7-year study period, UWCD and the other member of the TAC collaborated to produce a study of the basin's groundwater conditions and the implications for the initial 33,500 afy yield allocation.⁵⁷

Groundwater production during 2014 was greater than the average in recent years, and precipitation was less than average. Production has remained less than the pumping allocations.⁵⁸ The observed decline in groundwater levels is a matter of some concern, but the decline has not been abrupt and further monitoring and research is in process to determine the cause of the decline and the most appropriate and cost-effective remedial action should this trend continue without stabilizing. More in-depth monitoring and research is underway to correlate annual basin recharge, discharge, and water level changes used to understand and determine the basin status.

UWCD has historical groundwater elevation data for 150 wells, 90 of which extensive records exist.⁵⁹ The other wells either have been destroyed or are no longer being monitored. Recorded groundwater level highs in 2009 and 2010 are below the recorded groundwater level highs seen in 1998. From 1998 to 2009, 47 wells show groundwater level declines, one well shows a groundwater level rise, one well shows no change in groundwater level and 26 wells have no groundwater level measurements in 1998 or 2009. From 1998 to 2010, 49 wells show groundwater level declines, one well shows a groundwater level rise, two wells show no change in groundwater levels and 23 wells have no groundwater level measurements in 1998 or 2010.

Since 1998, the basin has experienced only two significant wet years: 2001 at 26.54 inches of precipitation, and 2005 at 40.54 inches of precipitation.⁶⁰ The next highest precipitation years were in 2011 at 23.80, 2003 at 19.94 inches, and at 2010 at 19.33 inches. The groundwater level declines in the basin since 1998 are in response to this relatively dry period. If the basin is operating within a yield, groundwater levels should recover to 1998 levels or at least to 2005 levels with the onset of a wet period.⁶¹

The estimated subsurface outflow was reported by DWR in Bulletin 118 to be 7,200 afy. Average annual extraction was estimated to be 21,612 afy in Bulletin 118.⁶² Based on the most recent data from 2003, the average annual pumping rate of approximately 26,000 afy for the period from 1983 through 1995 is considered sustainable.⁶³ Furthermore, it is the opinion of the Santa Paula Technical Advisory Committee

57 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield*, prepared for Santa Paula Basin Technical Advisory Committee, July 2003.

58 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

59 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

60 UWCD, *2011 Santa Paula Basin Annual Report*, Professional Paper 2011-001 (September 2013).

61 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

62 California Department of Water Resources, *California's Groundwater Bulletin 118* (February 2004).

63 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield*, prepared for Santa Paula Basin Technical Advisory Committee (July 2003).

that the yield of the basin is greater than the average annual production of 26,000 acre-feet. Fluctuations in groundwater levels correlate with precipitation trends, and long-term observations suggest that the Basin was not in a state of overdraft.⁶⁴ However, the TAC recommended that the yield remain at 33,500 afy.⁶⁵

Water Code section 10631 requires that this WSA (a) identify whether the DWR has determined, in the most recent official department bulletin, whether the Santa Paula Basin is presently in a state of overdraft or at risk of becoming overdrafted under current conditions; and (b) provide an analysis of the sufficiency of the Basin's groundwater supply to meet the projected water demands of the of the proposed Project. DWR's most recent assessment of conditions in the Santa Paula Basin was issued as part of DWR's Bulletin 118, Update 2003, which does not state that any portion of the Santa Paula Basin is presently, or was previously, in a state of overdraft.⁶⁶ Bulletin 118 does, however, report as follows:

Hydrographs from the Santa Paula Subbasin show a range of up to 55 feet in water level elevation since 1975. The hydrographs show an annual cyclic rise and fall of water level of about 20 feet with longer-term variations apparently following precipitation cycles. The subbasin was at a low level in 1991 and 1992, then recovered by 1994 and has remained stable since then.

A basin yield study by experts for the City of Ventura, SPBPA, and UWCD suggests that the safe yield of the basin is probably near the historic pumping amount.⁶⁷

The 2013 and 2014 Combined Annual Report for the Santa Paula Basin concluded that the majority of the wells monitored in the Santa Paula basin have experienced a gradual groundwater level decline; however, the changes vary from well to well and period to period with some wells showing a slight increase in groundwater levels, but the majority of wells showing a modest decline in water levels."⁶⁸

As the forgoing discussion illustrates the Santa Paula Basin is comprehensively managed by the TAC, UWCD, and the reserved jurisdiction of the Court, as provided in the Judgment. The basin's water tables have stabilized and appear to be sufficient to support the allocation of groundwater rights set forth within the Judgment. Moreover, groundwater production rights are defined and limited as a collective whole and in relation to each of SPBPA's individual members. This confinement and definition of the

64 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

65 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

66 State of California, Resources Agency, Department of Water Resources, *California Groundwater*, Bulletin 118, Update 2003 (October 2003).

67 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

68 Combined 2013 and 2014 Santa Paula Basin Annual Report (January 2016)

groundwater rights existing within the Basin provides additional certainty for the long-term reliability of the groundwater supply from the Basin.

Groundwater Allocation Transfers from Developed Properties

In accordance with City Municipal Code section 52.021 (Water Resource In-Lieu Fee Ordinance No. 1058), landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. The intent of the Ordinance is to ensure that new urban land users provide sufficient water resources for their needs without taxing existing users. If the associated water rights are not sufficient to serve the proposed development's anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This ordinance applies to water rights within City limits as well as parcels outside City limits who must receive service from the City Water Enterprise.

The City identified 1,925 afy of potential groundwater allocations that could be transferred to the City from overlying landowners within the City General Plan boundary. One property includes a reserve of 110 afy for agricultural uses. Thus, the maximum potential net groundwater transfer is 1,815 afy. **Table 11, Existing and Potential City Water Resources and Demand**, contains a summary of existing and potential water resources. These transfers will occur in phases during the next 20 years as development occurs within the City. Transfers of allocations will need to be reported to the Technical Advisory Committee in accordance with the Judgment. The SPBPA will then transfer the applicable number of memberships (allocations) when transfers are between association members; a membership is equal to 1 afy of groundwater allocation.⁶⁹

69 City of Santa Paula, *Final UWMP Update* (June 2011).

Table 11
Existing and Projected City Water Resources and Demand (afy)

Percent	2015	*2017	2020	2025	*2027	2030	2035	*2037
Existing Supplies								
City Wells	5,483	5,483	5,483	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek	500	500	500	500	500	500	500	500
Subtotal	5,983	5,983	5,983	5,983	5,983	5,983	5,983	5,983
Projected Supplies								
Groundwater Allocation Transfers	454	544.8	908	1,362	1,816	1,816	1,816	1,816
Purchased Groundwater Allocations	200	225	300	400	497	497	497	497
SWP	0	0	0	0	0	0	0	0
Recycled Water	400	480	800	1,200	1,622	1,622	1,622	1,622
Subtotal	1,054	1,244.8	2,008	2,962	3,935	3,935	3,935	3,935
Total Projected Supplies	7,037	7,228	7,991	8,945	9,918	9,918	9,918	9,918
Estimated Demand								
City of Santa Paula	4,840	4,925	5,265	5,689	6,113	6,113	6,113	6,113
West Area 2 Allocation	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
Projected Santa Paula West Project Area	0	39.8	39.8	39.8	39.8	39.8	39.8	39.8
Total Estimated Demand (Projected + City Demand)	4,840.0	4,964.8	5,304.8	5,728.8	6,152.8	6,152.8	6,152.8	6,152.8
Project Demand as % of West Area 2	0%	44.82%	44.82%	44.82%	44.82%	44.82%	44.82%	44.82%
Project Demands as % of Total City Supply	0%	0.81%	0.76%	0.70%	0.65%	0.65%	0.65%	0.65%
Difference (Supply less Demand)	2,197	2,263	2,686	3,216	3,765	3,765	3,765	3,765

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011).

*Projected data

Notes:

All values rounded to the nearest 1 af.

Santa Paula West Area Business Park Specific Plan would start construction in 2017 and be completed by 2027. Conservatively assumed full build-out Project Demand numbers in 2017.

The City's current (2011) allocation is 5,483 afy.

The City currently wheels the 500 afy of surface water from Santa Paula Creek to farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.

Total of 1,815 afy allocation transfers achieved over four equal 5-year periods (approximately 454 afy per 5-year period).

The City anticipates purchasing groundwater allocations. It is anticipated that approximately 200 afy could be developed by 2015, 300 afy by 2020, 400 afy by 2025, and 497 afy by 2030.

The City has rights to 2,198 afy. However, actual delivery may be only 60 percent of water rights (DWR, 2010) in an average year, 7 percent in a single dry year, and 34 percent in multiple dry years. For the purposes of this UWMP, the City does not anticipate receiving SWP water in the near future.

The City purchased the WRF in 2015, however, currently there is no infrastructure to supply recycled water to the City. The 2010 UWMP anticipated that approximately 400 afy could be developed by 2015, 800 afy by 2020, 1,200 afy by 2025, and 1,622 afy by 2030.

The 2010 UWMP Update anticipates that the City will acquire through allocation transfers 454 afy by 2015, 908 afy by 2020, 1,362 afy by 2025, and 1,815 afy by 2030 and 2035 through allocation transfers within the Santa Paula Basin as provided for in the Judgment.⁷⁰

Implementation of these water supply programs is anticipated to provide the City with sufficient water supplies to meet future water demand. As shown in **Table 11**, the potential water supplies available to the City exceed the estimated water demand at City build-out conditions.

Purchased Groundwater Allocations

In 2005, it was determined that there were 497 afy of potentially available groundwater allocations held by others within the Santa Paula Groundwater Basin boundary that were not being utilized). The City has the option to independently pursue the acquisition of groundwater allocations at any time in the future. It is anticipated that the City will purchase 200 afy by 2015, 300 afy by 2020, 400 afy by 2025, and 497 afy by 2030.

State Water Project Water

The SWP's California Aqueduct is owned and operated by DWR. Ventura County contracted for 20,000 afy of SWP water with 5,000 afy of that amount subcontracted to the UWCD. The UWCD has designated 2,198 afy of SWP water for use by the City.⁷¹

DWR estimates it will be able to deliver 60 percent, or 2,527,629 acre-feet, of requested SWP water in 2016.⁷² The estimated demands by SWP contractors for deliveries of Table A water, 4,172 thousand acre-feet per year, is assumed to be the maximum delivery SWP delivery amount for the 2016 Delivery Capability Report. DWR considered several factors, including existing conditions, SWP operational constraints such as the conditions of the recent Biological Opinions for Delta Smelt, Salmonids and Longfin Smelt incidental take permit, and 2016 contractor demands. DWR may revise allocations if warranted by the year's developing hydrologic and water supply conditions.

Historical allocation made by the SWP for the State as a whole and for the Ventura County WD are represented in the **Table 12, SWP Historical Deliveries: 2010–2016**.

⁷⁰ City of Santa Paula, Final 2010 UWMP Update (June 2011).

⁷¹ City of Santa Paula, 2010 UWMP Update (June 2011), 42.

⁷² Department of Water Resources, California State Water Project, "Notice to State Water Project Contractors No. 16-06: 2016 State Water Project Allocation Increase—60 Percent (April 21, 2016).

For planning purposes, the City does not anticipate directly receiving SWP water in the near future. However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Table 12
SWP Historical Deliveries: 2010–2016
(acre-feet)

Calendar Year	Percent Allocation	Total State Allocation	Ventura County WPD Approved Allocation
2010	50%	2,086,000	10,000
2011	80%	3,337,701	16,000
2012	65%	2,711,967	13,000
2013	35%	1,460,342	7,000
2014	5%	208,628	1,000
2015	20%	839,566	4,000
2016	60%	2,527,629	12,000

DWR, SWPAO – Water Deliveries, Notice to Contractors, Historical State Water Project Table A Allocations Calendar Year 2010–2016.
<http://www.water.ca.gov/swpao/deliveries.cfm>

Surface Water

The Santa Paula Creek has been and remains a valuable source of water for the City. The Creek has a drainage area of approximately 40 square miles (SPWW, 1995). The City owned the rights to the first 12 cubic feet per second (5,386 gallons per minute) of flow within the Santa Paula Creek (SPWW, 1993).⁷³

Santa Paula Creek facilities are located off the east side of Highway 150 approximately 3.5 miles north of Highway 126. Water is diverted to a 27-inch concrete pipe and flows by gravity into the 500,000 gallon Canyon Reservoir. From the Canyon Reservoir water either flows by gravity or is pumped by each irrigation customer.⁷⁴

On 17 February 1998, the City entered into a lease and agreement with the Canyon Irrigation Company concerning the operation, maintenance, and capacity rights of the Canyon Irrigation System and associated surface and groundwater rights. Per the terms of the agreement (City, 1998c), the City transferred: (1) its obligation to provide irrigation water service to the Canyon Irrigation System customers; (2) its financial obligation of implementing system maintenance and capital facilities replacement and repairs; (3) all real property and appurtenant facilities necessary for operation of the

⁷³ City of Santa Paula, Final 2010 UWMP Update (June 2011),

⁷⁴ City of Santa Paula, Final 2010 UWMP Update (June 2011),

system; and (4) groundwater rights to the Santa Paula Basin of 673 af. Additionally, the City leased the full capacity of the Canyon Irrigation System and the exclusive right to divert surface water sources flowing in the Santa Paula Creek to the Canyon Irrigation Company. In accordance with the lease and agreement, the City will purchase an annual average of 500 afy of surface water from Santa Paula Creek, (or, at the option of the Canyon Irrigation Company, water from other sources, which is surplus to the irrigation needs of its members), for a total of no less than 5,000 af over a 10-year period commencing 17 February 1998. During the subsequent 20-year period, the City has the right to continue to purchase an average of 500 afy of surplus water supplies. If available, the City may also purchase additional surplus water supplies beyond the 500 afy mentioned previously from the Canyon Irrigation Company throughout the next 30 years.⁷⁵

The City currently wheels the 500 afy of surface water from Santa Paula Creek to Farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.⁷⁶

Recycled Water

Construction of the new Santa Paula Water Recycling Facility (WRF) was completed early 2010. The city of Santa Paula purchased the facility on May 1, 2015. The treatment capacity of the City WRF is 4.2 mgd, or 4,704 afy. The City WRF produces water that meets California Title 22 regulations for recycled water. At present, recycled water is available within the City of Santa Paula area however, there is no infrastructure. The 2010 UWMP estimated recycled water urban demand within the City (and adjacent areas) would be approximately 1,622 afy. The recycled water demand could be fully met with recycled water from the new WRF, as identified in **Table 13, Projected City of Santa Paula Recycled Water Demand (afy)**.

75 City of Santa Paula, Final 2010 UWMP Update (June 2011)..

76 City of Santa Paula, Final 2010 UWMP Update (June 2011).

Table 13
Projected City of Santa Paula Recycled Water Demand (afy)

Potential Use	2015	2020	2025	2030	2035
Landscape Irrigation	400	800	1,200	1,622	1,622
Groundwater Recharge	— ^a	— ^a	— ^a	— ^a	— ^a
Agricultural Irrigation	— ^a	— ^a	— ^a	— ^a	— ^a
Other	— ^a	— ^a	— ^a	— ^a	— ^a
Total	400	800	1,200	1,622	1,622

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011). Table 4-6.

Note: All values rounded to the nearest af.

^a Undetermined.

Additional recycled water demand may be generated by groundwater recharge, agricultural irrigation, and commercial/industrial recycled water use. The City has not yet prepared a recycled water master plan to evaluate potential users, demand, recharge feasibility, and economic feasibility within the City water service area. It is anticipated that the City would gradually develop a recycled water system to meet the objectives of identified recycled water demand.⁷⁷

The Judgment does not preclude the recharge of the Santa Paula Basin, and indeed includes provisions for potential recharge. According to the Judgment, such storage would require approval of the TAC, must not adversely impact the water quality of the Santa Paula Basin, and must not cause injury to any vested rights. In the event the storage of water causes the Santa Paula Basin to spill, the first water lost to the Santa Paula Basin is deemed to be the stored water. Furthermore, title is retained to water stored underground, and stored water (minus losses) may be pumped in addition to the approved pumping allocations, provided no injury is caused to any intervener or party to the Judgment. In other words, if the City recharged 1,000 afy to the basin, they would be entitled to pump an additional 1,000 afy above and beyond their stipulated allocation. The necessary infrastructure to implement this option is not currently in place. At a minimum, construction of a pump station and approximately 4 to 5 miles of pipeline would be necessary to transport the recycled water to recharge basins.⁷⁸

Currently there are no recycled water systems in the proposed Project vicinity. However, the 2012 Wastewater Master Plan has included West Area 2 to have a future wastewater flow of 0.082 million

⁷⁷ City of Santa Paula, Final 2010 UWMP Update (June 2011),

⁷⁸ City of Santa Paula, Final 2010 UWMP Update (June 2011),

gallons per day or 919 acre feet per year during average dry weather season.⁷⁹ The proposed Project includes an onsite recycled water distribution system to irrigate the greenbelt and other irrigation areas. This will allow the Santa Paula West Business Park to make use of recycled water when the City completes its planned recycled water plan and extends a line to the point of connection in the railroad right of way at Beckwith Road.⁸⁰

The proposed Specific Plan recycled water system would operate via a proposed 12-inch distribution main constructed in Telegraph Road, within the City limits. This terminus would become the main POC for the proposed Project. The proposed distribution system will be comprised of 6-inch mains from the POC of the City's recycled water system.

3.2 ANALYSIS OF WATER SUPPLY AND DEMAND

The available supplies and water demands for the City's service area were analyzed to assess its ability to satisfy demands during three scenarios: a normal water year, a single dry year, and multiple dry years.

This WSA/WSV addresses the City's water supply and demand as it relates to a variety of concerns including:

1. Information and data available from the City's 2010 UWMP Update,
2. Issues related to water supply reliability relating to nongroundwater sources (Santa Paula Creek, and State Water Project water),
3. Consideration of information available from the DWR's *State Water Project Final Delivery Capability Report July 2015*.

Table 14, Projected Supply Reliability by Source, illustrates the assumptions associated with projected supply reliability by source and is used in the following discussion of City water supply and demand scenarios as they relate to the proposed Project.

79 City of Santa Paula, *Wastewater System Master Plan* (June 2012)

80 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

Table 14
Projected Supply Reliability by Source

Supply Sources	Normal Water	Single Dry	Multiple Dry Years		
	Year	Year	Year 1	Year 2	Year 3
City Wells	100%	100%	100%	100%	100%
Santa Paula Creek	100%	100%	100%	100%	100%

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011),

Average and Dry Year Water Supply and Demand

The following tables provide the City’s projected urban water supplies and demands in an average year, a single dry year, and multiple dry years.

Table 15, Supply and Demand Comparison—Average Year (afy), shows the City’s projected urban water supplies and demands in an average year.

Table 16, Supply and Demand Comparison—Single Dry Year (afy), shows the City’s projected urban water supplies and demands in a single dry year.

Table 17, Supply and Demand Comparison—Multiple Dry-Years (afy), shows CVWD’s projected urban water supplies and demand through 2035. According to the UWMP, the aquifer and other sources of supply are adequate for a single dry year and also multiple dry years, for a 20-year period.

Table 15
Supply and Demand Comparison—Average Year (afy)

Supply	2015	2020	2025	2030	2035
Existing Supply Sources					
City Wells	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek	500	500	500	500	500
Subtotal	5,983	5,983	5,983	5,983	5,983
Proposed Supply Sources					
Groundwater Allocation Transfers	454	908	1,362	1,816	1,816
Purchased Groundwater Allocations	200	300	400	497	497
State Water Project	0	0	0	0	0
Recycled Water	400	800	1,200	1,622	1,622
Subtotal	1,054	2,008	2,962	3,935	3,935
Supply Total	7,037	7,991	8,945	9,918	9,918
Demand Total	4,840	5,265	5,689	6,113	6,113
Difference	2,197	2,726	3,256	3,805	3,805

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011),

Table 16
Supply and Demand Comparison—Single Dry Year (afy)

Supply	2015	2020	2025	2030	2035
Existing Supply Sources					
City Wells	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek	500	500	500	500	500
Subtotal	5,983	5,983	5,983	5,983	5,983
Proposed Supply Sources					
Groundwater Allocation Transfers	454	908	1,362	1,816	1,816
Purchased Groundwater Allocations	200	300	400	497	497
State Water Project	0	0	0	0	0
Recycled Water	400	800	1,200	1,622	1,622
Subtotal	1,054	2,008	2,962	3,935	3,935
Supply Total	7,037	7,991	8,945	9,918	9,918
Demand Total	4,840	5,265	5,689	6,113	6,113
Difference	2,197	2,726	3,256	3,805	3,805

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011),

Table 17
Supply and Demand Comparison—Multiple Dry-Years (afy)

		2015	2020	2025	2030	2035
Multiple Dry Year First-Year Supply	Supply Totals	7,037	7,991	8,845	9,918	9,918
	Demand Totals	4,840	5,265	5,689	6,113	6,113
	Difference	2,197	2,726	3,256	3,805	3,805
Multiple Dry Year Second-Year Supply	Supply Totals	7,037	7,991	8,845	9,918	9,918
	Demand Totals	4,840	5,265	5,689	6,113	6,113
	Difference	2,197	2,726	3,256	3,805	3,805
Multiple Dry Year Third-Year Supply	Supply Totals	7,037	7,991	8,845	9,918	9,918
	Demand Totals	4,840	5,265	5,689	6,113	6,113
	Difference	2,197	2,726	3,256	3,805	3,805

Source: City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 5-16.

Project Supply and Demand

The proposed Project will demand 39.8 afy at full build-out (see **Table 2**).

The allocated supply to West Area 2 per the 2010 UWMP Update is 88.8 afy.⁸¹ The estimated potable demand for the proposed Project is approximately 40.6 afy (20.5 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation). The potable demand of 22.0 afy for the Commercial/Light Industrial and Light Industrial uses is 25 percent of the West Area 2 total supply allocation. The landscaped areas will be irrigated using reclaimed water to be delivered from the City's wastewater treatment plant.

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently agricultural uses on the Project Site use approximately 281.1 afy (average over the past 5 years; see **Table 3**). As such, the proposed Project's consumption will be a net reduction in total water use of 241.3 afy.

It should be noted that the West Area 2 Planning Area has been allocated a supply of 88.8 afy based on future development. The proposed Project could utilize a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can use a portion of the existing water currently used for irrigation. It should be noted that that this portion of the pumped water will be pumped instead by the City from other wells, and not from the current well on site.

The Project will use reclaimed water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City forecast having between 400 afy (2015) and 1,622 afy (2035) of reclaimed water available for use (see **Table 13**). The Project will require only a portion of the recycled water (2.9 percent in 2017 and 1.1 percent in 2035).

As shown on **Table 18, Project Supply and Demand Comparison—Average Year (afy)**, shows the proposed Project water demand as a percent of total supply throughout various milestones in the build-out schedule. By 2027 (build-out), the Project is estimated to demand 39.8 afy of water. Water demand from the Project represents 0.81 percent of the City's total projected urban water demand in 2017, decreasing to 0.65 percent in 2037.

The 2010 UWMP Update projects total water demands for the Santa Paula Business Park through 2035 and demonstrates that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands.

81 City of Santa Paula, *Final UWMP Update* (June 2011), Table 204, p. 16. (1,906,000 square feet of development at 2.03 afy).

Table 18
Project Supply and Demand Comparison—Average Year
(afy)

	2015	2017	2020	2025	2027	2030	2035	2037
Total City Supply ^a	7,037.0	7,419 ^b	7,991.0	8,945.0	9,334.2 ^c	9,918.0	9,918.0	9,918.0 ^d
West Area 2 Allocation ^e	88.8	88.8	88.8	88.8	88.8	88.8	88.8	88.8
Existing Agricultural Use ^f	281.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Project Demand ^g	0	39.8	39.8	39.8	39.8	39.8	39.8	39.8
Percent of City's Total Supply	0%	0.81%	0.76%	0.70%	0.65%	0.65%	0.65%	0.65%
Net change from agricultural use	0	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)	(241.3)
Available reclaimed water	400	600 ^b	800	1,200	1,368.8 ^c	1,622	1,622	1,622 ^d
Project demand for reclaimed water	0	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Percent of available reclaimed water	0.00%	2.97%	2.23%	1.48%	1.30%	1.10%	1.10%	1.10%

Notes:

^a City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 4-4, p. 41.

^b value extrapolated from 2015 and 2020 data.

^c Value extrapolated from 2025 and 2030 data.

^d Value carried over from 2035 data.

^e City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 2-4, p. 16.

^f See Table 3.

^g See Table 2.

^h City of Santa Paula, Final 2010 UWMP Update (June 2011), Table 4-6, p. 47.

3.3 CONCLUSIONS

City of Santa Paula Service Area

Based on the information, analysis, and findings documented in this WSA/WSV, substantial evidence exists to support a determination that there will be sufficient water supplies to meet the current and future demands of the Project in addition to all forecasted demands for the 20-year period from initial development (2017 to 2037). This is based on the volume of water available in the Santa Paula Basin, and water rights and water supply contracts. The City has committed sufficient resources to further implement the primary elements of the 2010 UWMP Update, which include the purchase of additional water supplies, water conservation, and source substitution (use of agricultural irrigation water and reclaimed water).

The domestic water supply (potable) for the Project will be supplied by water from on-site water well pumping from the Santa Paula Basin that will ultimately be transferred to the City, encompassing the City of Santa Paula. Groundwater storage will be used in dry years to make up the difference between supply and demand. The Santa Paula groundwater basin has an “assumed initial yield” of the basin is 33,500 afy and currently contains about 26 million acre-feet and acts as a very large reservoir. It is capable of meeting the water demands of the City for extended normal and drought periods.

As discussed in the 2010 UWMP Update, and this WSA/WSV, the City of Santa Paula has many programs to eliminate overdraft and maximize the water resources recycled wastewater, and water conservation including water rates, landscaping ordinance, outreach and education.

The proposed Project falls within the boundaries of the West Area 2 Expansion Area. At 53.81 acres, the Santa Paula West Business Park Specific Plan would take up approximately 43 percent of the 125-acre planned expansion. The City’s General Plan projects a water demand of 88.8 afy for West Area 2. As such, the proposed Project has a projected demand of 39.8 afy, which is included in the General Plan.⁸² However, the Project will replace existing agricultural uses that extract well water from the Santa Paula Basin; as such, the Project will result in a net reduction (241.3 afy) of water use on site at build-out.

Currently, the entire potable water supply for the City is obtained by pumping from the Santa Paula Basin. The City has obtained additional groundwater pumping rights through a wheeling agreement with the Canyon Irrigation Company. The potential future water supplies include groundwater rights transfers to the City as new development occurs, City acquisition of potentially available groundwater allocations within the Santa Paula Basin, recycled water, and groundwater production from the Fillmore Basin.

82 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

The SPBPA and TAC monitor current and future groundwater pumping within the Santa Paula Basin. The City is not limited to its allocation in any single year, but may produce as much as seven times its annual average allocations over a seven-year period. There are no restrictions regarding pumping in single dry- or multiple dry-water years subject to court order. As discussed earlier, the Santa Paula Basin Yield Study did not recommend that restrictions be imposed on the amount of groundwater that can be pumped during dry periods. Therefore, groundwater pumping by the City is not anticipated to be subject to any reductions in the dry year analysis.

Recycled water production will not be affected by single dry or multiple dry water years. Recycled water supply is directly related to wastewater generation, which is generally associated with indoor potable water use. Currently, there are no restrictions within the City regarding the use of potable water during dry periods. Additionally, the currently proposed uses of recycled water are restricted to non-potable irrigation that, if reduced during dry periods, would have little or no impact on the community. Therefore, it is not anticipated that the recycled water supply will be reduced during dry periods.

State Water Project dry-year restrictions are not known due to the lack of specificity regarding how the water will be delivered. For the purposes of this analysis, it is assumed that no State Water Project water will be delivered in the near future. However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Project Water Requirements

As shown in this WSA/WSV analysis, the projected demand for the proposed Project will account for only a small fraction of the total projected demands set forth in the City's General Plan, Land Use Element, for the total projected demands through 2037.

The proposed Project-specific water demand at build-out is 39.8 afy, which includes 22 afy of potable use and 17.8 afy for landscape irrigation that can be supplied with reclaimed water.

The proposed Project incorporates a number of features that reduce the overall water demand and provide for a reduction in use. As previously explained, it is assumed that Project water demand is included within the allowable West Area 2 supply and demand projections necessary to recharge the groundwater basin. In 2037, the proposed Project would utilize approximately 0.65 percent of the total City projected available water supply for 2037. As such, the proposed Project's demand is within the allowable demand necessary to manage the groundwater basin.

4.0 LIST OF ACRONYMS

AB	Assembly Bill
af	acre-feet, equal to approximately 325,851 gallons
afy	acre-feet per year
CEQA	California Environmental Quality Act
DWR	California Department of Water Resources
gpd	gallons per day
gpm	gallons per minute
mgd	million gallons per day
psi	pounds per square inch
PWS	public water system
SB	Senate Bill
SWP	State Water Project
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSV	Water Supply Verification

5.0 REFERENCES

The following sources were used during the preparation of this water supply assessment:

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California Code of Regulations, tit. 23, Waters, div. 2, Department of Water Resources, ch. 2.7, Model Water Efficient Landscape Ordinance.

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California Water Code, sec. 10910–10915, 10910(b).

City of Santa Paula, *Final UWMP Update* (June 2011).

City of Santa Paula, *General Plan, "Land Use Element"* (rev. January 22, 2013)

City of Santa Paula, Santa Paula Municipal Code, Ordinance 993, sec. 52.038—Water Waste.

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City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

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Final
Environmental Impact Report

Santa Paula West Business Park Specific Plan Project

City of Santa Paula

(SCH No. 2014081104)

Prepared for:

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December 2018

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1.0 INTRODUCTION

1.1 PURPOSE

The City of Santa Paula (“City”) prepared this Final Environmental Impact Report (“Final EIR”) to evaluate the proposed Santa Paula West Business Park Specific Plan (“Specific Plan”), which is a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of a portion of the West Area 2 Expansion Area (“West Area 2”) of the City of Santa Paula General Plan. The Specific Plan and off-site improvements proposed to support the development of the Specific Plan Area are collectively referred to as the “Project” in this Final EIR.

As the Lead Agency, the City prepared this Final EIR pursuant to the California Environmental Quality Act (CEQA; California Public Resources Code, Section 21000, et seq.) and in accordance with the *Guidelines for the Implementation of the California Environmental Quality Act* (“State CEQA Guidelines”; California Code of Regulations, Title 14, Section 15000, et seq.). The State CEQA Guidelines require the City to prepare an EIR for any project that may result in significant effects on the environment. Upon preliminary review, the City determined the Project may have significant effects on the environment; therefore, the City prepared a Draft EIR and circulated it for review in November 2016.

This Final EIR has been prepared pursuant to Section 15089 of the State CEQA Guidelines and incorporates the November 2016 Draft EIR by reference; comments on the Draft EIR received during the 45-day public comment period; written responses to those comments; and changes to the text of the Draft EIR. Because this Final EIR incorporates the Draft EIR by reference, a disc containing the Draft EIR is attached to this Final EIR on the inside back cover. The Draft EIR also may also be viewed electronically on the City’s website at <http://www.ci.santa-paula.ca.us/>.

1.2 ORGANIZATION OF THE FINAL EIR

As required by the State CEQA Guidelines Section 15132, this Final EIR includes of the following components:

- The Draft EIR or a revision of the draft (incorporated by reference);
- A list of persons, organizations, and public agencies commenting on the Draft EIR (see **Section 3.0: Comment Letters and Responses to Comments**);
- Comments and recommendations received on the Draft EIR (see **Section 3.0**);
- Responses to significant environmental points raised in the review and consultation process (see **Section 3.0**);
- Revisions to the Draft EIR (**Section 4.0: Revisions to the Draft EIR** and **Appendix A: Revisions to the Draft EIR—Utilities**); and

- Additional information is also provided, including a description of the public hearing (**Section 2.0: EIR Summary**).

1.3 ENVIRONMENTAL REVIEW PROCESS

On August 29, 2014, the City circulated a Notice of Preparation (NOP; State Clearinghouse Number No. 2014081104) of EIR for this Project for review and comment by the public and by responsible and reviewing agencies. The 30-day NOP review period ended on September 29, 2014. A scoping meeting was held on September 9, 2014, during the NOP review period, to provide an opportunity for comment on the potential environmental effects of the Project by the public and public agencies.

The purpose of public and agency review of the NOP is to assist in identifying potential environmental effects of the Project, and to assist the Lead Agency in:

1. Focusing the EIR on the effects determined to be potentially significant;
2. Identifying the effects determined not to be significant;
3. Explaining the reasons for determining that potentially significant effects would not be significant; and
4. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the Project's environmental effects.

During the 30-day NOP comment period, a total of 15 written comment letters were received from public agencies, private organizations, and individuals. The Draft EIR provided analysis of topics related to the potential environmental effects of the Project in accordance with CEQA.

The Draft EIR was released for a 45-day review period on November 4, 2016, which ended on December 19, 2016. On November 4, 2016, a Notice of Availability (NOA) of the Draft EIR for review was published in the City in the *Santa Paula Times*. A Notice of Completion (NOC) of the Draft EIR was also submitted on November 4, 2016 to the State Clearinghouse.

The Draft EIR provided analysis of the following topics:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gases
- Hazards and Hazardous Waste
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services
- Transportation and Traffic
- Utilities and Service Systems

The City accepted written comments on the Draft EIR by mail and in person to the City's Planning Department. The comments received by the City during the public review period are provided in this Final EIR, along with responses to comments.

This Final EIR for the Project is being distributed directly to all public agencies that submitted comments on the Draft EIR in accordance with Section 21092.5 of CEQA. The Final and Draft EIRs are also available for review at the following location:

City of Santa Paula
Planning Department
200 South 10th Street
Santa Paula, California 93060

In addition, the Final EIR and Draft EIR are available on the City's website at:

<http://www.ci.santa-paula.ca.us/>

Prior to considering approval of the Project, the State CEQA Guidelines require the City to certify that:

- The Final EIR was completed in compliance with CEQA;
- The Final EIR was presented to the City in a public meeting, and the City reviewed and considered the information contained in the Final EIR prior to considering the Project; and
- The Final EIR reflects the City's independent judgment and analysis (State CEQA Guidelines Section 15090).

In conjunction with certification of the Final EIR, the City must adopt one or more of the following written Findings of Fact for each significant environmental impact identified in the EIR:

- The Project was changed (including adoption of mitigation measures) to avoid or substantially reduce the magnitude of the impact;
- Changes to the Project are within another agency's jurisdiction and have been or should be adopted; or
- Specific considerations make mitigation measures or alternatives infeasible.

For impacts identified in the Final EIR as significant and unavoidable, the City is also required to adopt a Statement of Overriding Considerations identifying the specific social, economic, or other factors determined to outweigh the unavoidable adverse environmental effects of the Project.

2.0 EIR SUMMARY

This section provides information on the background of the Project assessed in the EIR and a summary of the information in the EIR identifying the potential environmental impacts of the Project, the measures identified to mitigate these impacts, and the alternatives evaluated to provide additional information on ways to avoid or lessen these impacts.

2.1 PROJECT OVERVIEW

The Santa Paula West Business Park Specific Plan (“Specific Plan”) is a proposed comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of a portion of the West Area 2 Expansion Area (“West Area 2”) as defined in the City of Santa Paula (“City”) General Plan. The Specific Plan and off-site improvements proposed to support the development of the Specific Plan Area are collectively referred to as the “Project” in this Final EIR.

The Specific Plan would guide future development on approximately 53.81 acres of the City’s 125-acre West Area 2 Expansion Area. West Area 2 was identified as an expansion area in the City’s 1998 General Plan to provide land needed for manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The land uses envisioned within the Specific Plan will be a mix of low-intensity industrial (such as light manufacturing or research and development), professional offices, and supporting commercial businesses. These uses are allowed in the City’s Commercial/Light Industrial and Light Industrial zones.

The Specific Plan was prepared to implement the City’s General Plan for a portion of West Area 2 in accordance with the requirements of the California Government Code (Sections 65450–65457) and Chapter 16.216 of the City of Santa Paula Development Code. The Specific Plan would establish the regulations, programs, and procedures required to implement the General Plan goals and polices for this expansion area of the City. The Specific Plan would facilitate development within the Project Site as a master-planned business park that includes a variety of light industrial and commercial uses.

The Project includes the following discretionary actions:

- General Plan Amendment for the West Area 2 Expansion Area;
- Specific Plan Approval and Rezoning;
- Approval of the Master Vesting Tentative Map;
- Annexation to the City of Santa Paula;

- Encroachment permit by the California Department of Transportation for the construction of roadway and utility improvements in the State right-of-way; and
- California Public Utilities Commission approval for an at-grade crossing of the Ventura County Transportation Commission (VCTC) railroad.

2.2 PROJECT OBJECTIVES

The following Project objectives are based on the overall intent of the City's General Plan and the existing physical, environmental, demographic, and market conditions:

1. Help revitalize the existing built environment and economic climate of the City by permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula;
2. Provide for light industrial and commercial uses that complement existing uses adjacent to the Project area; and
3. Provide suitable sites for light industrial and commercial buildings that meet the needs of the community but which are not presently available in the City of Santa Paula.

2.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

A summary of the potential environmental impacts of the Project and the measures identified to mitigate those impacts is provided in **Table 2.0-1: Summary of Project Impacts**, for each topic addressed in the Draft EIR. **Table 2.0-1** was arranged into four columns: the identified impact under each EIR issue area; the level of significance prior to implementation of mitigation; mitigation measures that would avoid or reduce the level of impacts; and the level of significance after implementation of mitigation measures, if applicable. Compliance with existing City ordinances, programs, practices, and procedures is assumed for purposes of determining the level of significance prior to mitigation.

A summary of the alternatives to the Project to promote informed decision making follows **Table 2.0-1**.

**Table 2.0-1
Summary of Project Impacts**

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Aesthetics			
<i>Threshold: Have a substantial adverse effect on a scenic vista?</i>			
Construction activities within the Project Site and off-site improvements, such as along Beckwith Road and Faulkner Road, could potentially be visible from State Route 126 (SR 126) and Telegraph Road and other vantage points that currently have views of these areas. Additionally, initial land development including, site clearing, grading, roadway construction, and improvements of the Project Site are anticipated to occur over approximately a 4-month period starting in sometime in 2019. For purposes of the analysis within this EIR, construction of individual buildings is assumed to occur over approximately 10 years in response to market conditions.	Potentially Significant	The impact is temporary and there are no feasible measures available to mitigate these temporary impacts.	Potentially Significant and Unavoidable on a Temporary Basis
The Project would provide for the development of commercial and light industrial uses, along with roadways and open space across the 53.81-acre Project Site. Building heights would be consistent with 1- to 2-story buildings having similar uses to the east of the Project Site, with a maximum building height of 35 feet and 45 feet for commercial/light industrial and industrial uses, respectively. Views of the agricultural fields from the SR 126 would be	Less than Significant	No mitigation measures required.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>replaced with views of commercial and industrial uses related to the Project. Scenic aspects of the Project Site of the Project Site also include the agricultural lands and Adams Barranca west of the Site. While implementation of the Project would result in the loss of views of the existing agricultural lands in the immediate foreground with the addition of structures, circulation system, and supporting infrastructure, the urbanized appearance is similar to the adjacent uses. More distant scenic vistas of the Santa Clara River Valley would not be significantly altered upon the development of structures on the Project Site. Therefore, the Project would result in less than significant adverse impacts to scenic vistas.</p>			
<p>Threshold: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</p>			
<p>The Project would incorporate various open space/passive uses into the Project design to preserve the visual quality of Adams Barranca, would not remove visually important trees or geologic features, and since the segment of SR 126 that is adjacent to the Project Site is not eligible for designation as a scenic highway, implementation of the Project would not damage scenic resources within a designated state scenic highway.</p>	<p>Less than Significant</p>	<p>No mitigation measures required.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Substantially degrade the existing visual character or quality of the site and its surroundings?			
<p>The existing visual character and quality of the Project Site is predominantly agricultural in nature, with ancillary agricultural facilities, row crops, and orchards. Due to the Project Site’s relatively low and flat elevations, many off-site vantage points of the Project Site are obstructed by existing structures and buildings. However, development within the Project Site can be seen from vantage points that are located immediately adjacent to the Project Site, such as those along SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road. Furthermore, while elevations of the Project Site would remain relatively flat and at low elevations, and although the Specific Plan development standards will be required to ensure a consistent and compatible aesthetic character with the developments to the east, the existing open space and agricultural character of the Project Site would substantially change. The altered views from the public viewpoints that immediately surround the Project Site are considered significant and unavoidable.</p>	Significant	No mitigation measures.	Significant and Unavoidable
Threshold: Create a new source of substantial light or glare which would adversely affect day or nighttime views of the area?			
<p>The Project’s development standards establish the types of materials that can be used for various types of structures on the Project Site; reflective, glare-producing materials are prohibited. Daytime sources of glare would include the sun reflecting off glass windows of structures and vehicles.</p>	Potentially Significant	AES-1: Before the City issues grading permits, the applicant must prepare and submit a Lighting Plan to the City of Santa Paula Planning Director for approval that identifies the types of shielding that will be used for outside lighting and must comply with all applicable dark sky ordinances/regulations.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Glare produced from these sources would be brief and intermittent. Therefore, impacts related to glare would be less than significant.</p> <p>The Project’s nighttime sources of light would include outdoor lights, such as mounted lights and lighted signs on the buildings, parking lot lighting, interior building lights, and headlights of vehicles. Given that minimal outdoor lighting is currently emitted from the Project Site, these impacts related to the additional nighttime light and glare from the Project are considered to be potentially significant.</p>		<p>All exterior night lighting installed on the Project Site shall be of low-intensity, low-glare design, and hooded to direct light directly downward onto the area being lighted to prevent spillover onto adjacent parcels. Shielding must be included to eliminate uplighting. Exterior lighting fixtures must be kept to the minimum number and intensity needed to ensure public safety. These lights shall be dimmed after 10:00 PM to the maximum extent practical without compromising safety. Upward directed exterior lighting is prohibited.</p>	
Cumulative Impacts			
<p>In combination with the Project, all of the proposed expansion areas would change the visual character of the area over time from a more rural setting to one with more urbanized development, especially along the main travel corridors, such as SR 126. The cumulative development would transform the visual character of the City by reducing the amount of open space within the City limits and expanding the urban visual character. However, implementation of the Project and related projects would be consistent with the City’s General Plan. While the Santa Paula West Business Park Specific Plan would include various open space and would not affect the Adams Barranca, the development would contribute (albeit to a lesser degree) to the cumulative changes in visual character of the City in combination</p>	<p>Significant</p>	<p>No mitigation measures.</p>	<p>Significant and Unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>with the other relatively large scale related projects. Therefore, as with the Project, impacts related to the views and visual character of the City as a result of the Specific Plan amendment, are considered cumulatively considerable, and significant and unavoidable.</p>			
<p>Agricultural Resources</p>			
<p>Threshold: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</p>			
<p>According to the Farmland Mapping & Monitoring Program (FMMP) Important Farmland Map for the County of Ventura, there are approximately 44.22 acres of prime farmland and 4.88 acres of farmland of Statewide importance on the site (total of 49.1 acres). Implementation of the Specific Plan would result in the conversion of the 49.1 acres of both prime farmland and important farmland to urbanized uses.</p>	<p>Significant</p>	<p>AG-1: To reduce or minimize impacts to Prime Farmland, and Important Farmland, the Applicant shall provide mitigation through one, or some combination of, the following mitigation measures, prior to the issuance of a grading permit by the City:</p> <ol style="list-style-type: none"> 1. The Applicant shall secure a conservation easement in perpetuity, on land officially designated by the State of California as Prime Farmland and Important Farmland. The mitigation ratio shall be 1:1 for each class of designated farmland, resulting in a conservation easement being placed on a total of 44.20 acres of Prime Farmland, and 4.88 acres of Important Farmland, within the State of California. The applicant may satisfy the Important Farmland mitigation requirement by conserving Prime Farmland; or 2. The Applicant shall make payments to a local, regional, or Statewide organization whose purpose is to acquire agricultural conservation easements for Prime Farmland and Important Farmland and has demonstrated a successful track record in doing so, over at least 5 years. If the applicant elects to pursue this option alone, or in combination with option 1, the Applicant shall 	<p>Significant and Unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>demonstrate to the City Planning Director that it has paid funds sufficient to allow the state, regional, or local conservation organization to acquire conservation easements in perpetuity over Prime Farmland and important Farmland resulting in a mitigation conservation ratio or 1:1 for each class of Farmland.</p> <p>If, prior to the issuance of a grading permit, the Applicant contends that satisfying mitigation options 1 and/or 2 is not financially feasible, the Applicant shall provide substantial evidence to the City Planning Director, as that term is defined in the CEQA Guidelines, including but not limited to expert opinion evidence supported by facts, to support its contention that such mitigation is not financially feasible. The Applicant's substantial evidence shall be independently reviewed by the City's financial experts or outside consultant, the cost of which shall be paid by the Applicant. If the City concurs with the Applicant's conclusion that mitigation options 1 and or 2 are not financially feasible, the Applicant shall provide mitigation at less than a 1:1 ratio, to the extent feasible, to minimize or reduce the level of impacts to Prime Farmlands and important Farmland.</p>	
<p>Threshold: Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>			
<p>The County zoning designation for the Project area is Agricultural Exclusive (A-E) Urban Reserve for land currently in agricultural use. The Specific Plan area would be zoned Commercial/Light Industrial and Light Industrial in accordance with the Specific Plan's Zoning Implementation Plan and consistent with the City's Municipal Code for these designations. The development of a variety of manufacturing, research and development, office, and commercial uses that would be allowed under the Specific Plan</p>	<p>Less than Significant</p>	<p>No mitigation measures required.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>would be compatible with the proposed City's General Plan designations. There are no Williamson Act contracts preserving agricultural that govern any parcels within the Project area.</p>			
<p>Threshold: Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220 (g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g))?</p>			
<p>The Project Site would be zoned C/LI (Commercial Light Industrial) and LI (Light Industrial) for areas that would be developed under the Specific Plan. The Adams Barranca and related detention basin used for flood control would be preserved with an Open Space/Passive zoning designation.</p> <p>The Project Site is not zoned as forestland or timberland, and there is no timberland production within the vicinity of the Proposed Project.</p>	<p>No Impacts</p>	<p>No mitigation measures required.</p>	<p>No Impacts</p>
<p>Threshold: Result in the loss of forestland or conversion of forestland to non-forest use?</p>			
<p>The Project does not include any loss of forestland or conversion of such forestland to any other designations.</p>	<p>No Impacts</p>	<p>No mitigation measures required.</p>	<p>No Impacts</p>
<p>Threshold: Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forestland to non-forest use?</p>			
<p>On-Site Agriculture</p> <p>As stated previously, approximately 49 acres of the 53.81-acre Project Site are under agricultural cultivation and would be taken out of production as a result of implementation of the Specific Plan.</p>	<p>Significant for On-Site Agriculture</p>	<p>Implementation of mitigation measure AG-1.</p>	<p>Significant and Unavoidable for On-Site Agriculture</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Adjacent Agriculture</p> <p>Existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of SR 126, and near the western boundary of the Specific Plan area, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126. The Specific Plan would not readily accommodate outdoor recreational activities for the general public or provide residential habitation components. As such, residential and general public exposure to dust, noise, and odors associated with nearby farming activities is considered less than significant. Therefore, based on the nature of the Project and design features to reduce any conflicts with adjacent agricultural land, potential impacts related to the conversion of off-site farmland to nonagricultural uses would be less than significant.</p>	<p>Less than Significant for Adjacent Agriculture</p>		<p>Less than Significant for Adjacent Agriculture</p>
<p>Cumulative Impacts</p>			
<p>Implementation of the General Plan would result in a long-term commitment to nonagricultural uses in areas that currently support prime and important Farmland, particularly within the West Area 2 and East Area 2 Expansion Areas. Since both of these expansion areas include Statewide important farmland, development of these areas in accordance with the General Plan will result in cumulative impacts to agricultural resources within the City's Planning Area. While development of these areas would be</p>	<p>Significant</p>	<p>Implementation of mitigation measure AG-1.</p>	<p>Significant and Unavoidable</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
consistent with local planning policies, the cumulative impact on agricultural resources would be a significant and unavoidable impact.			
Air Quality			
Threshold: Conflict with or obstruct implementation of the applicable air quality plan?			
<p>According to the Ventura County Air Pollution Control District (VCAPCD) Guidelines, to be consistent with the South Coast Air Quality Management (SCAQMD) Air Quality Management Plan (AQMP), a project must conform to the local general plan and must not result in or contribute to an exceedance of the County's projected population growth forecast.</p> <p>The Project's addition of 1,510 employees would be consistent with the projections per Southern California Association of Governments (SCAG). The planned uses would also be consistent with the City's land use and zoning designation of the Project Site. As such, the Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in the County of Ventura.</p>	Less than Significant	No mitigation measures necessary.	Less than Significant
Threshold: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			
Construction			
The VCAPCD's 25 lb/day threshold for reactive organic gas (ROG) and nitrous oxide	Potentially Significant	AQ-1: During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>(NOx) does not apply to construction emissions because such emissions are temporary. Emissions of toxic air contaminants (TACs) are localized, not regional, in nature; impacts related to construction activities would be limited to the area immediately surrounding the construction site within the Project area, and the VCAPCD does not recommend any thresholds of significance for their associated emissions. Instead, the VCAPCD bases the determination of significance on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by the VCAPCD Guidelines are implemented for a project, then construction emissions are not considered significant. All construction activities would adhere to the VCAPCD Rule 50 for Opacity, Rule 51 for Nuisance, and Rule 55 for Fugitive Dust.</p>		<p>be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD (including without limitation, to VCAPCD Rule 50 (Opacity) and Rule 51 (Nuisance):</p> <ul style="list-style-type: none"> • On-site vehicle speed shall not to exceed 15 miles per hour (the Project Site will contain posted signs with the speed limit). • All on-site construction roads with vehicle traffic shall be watered as necessary to prevent excessive dust; • Streets adjacent to the Project reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust. • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust (contact the VCAPCD meteorologist for current information about average wind speeds). • All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. • The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. 	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>These control techniques shall be indicated on Project grading plans. The Applicant and/or its contractor shall be responsible for implementing these measures and compliance with this measure will be subject to periodic site inspections by the City.</p> <p>AQ-2: Project grading plans shall show that for the duration of construction, ozone precursor emissions from construction equipment vehicles must be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer’s specifications, to the satisfaction of the City Engineer. Compliance with this measure will be subject to periodic inspections of construction equipment vehicles by the Public Works Department.</p> <p>AQ-3: All trucks that will haul excavated or graded material on site shall comply with California Vehicle Code Section 23114 with special attention to subsections 2311(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.</p> <p>AQ-4: A comprehensive Fugitive Dust Control Plan shall be developed by the Applicant and approved by the VCAPCD before the applicant commences grading and excavation operations. The Plan shall include all feasible, but environmentally safe, dust control methods. If a particular dust control method is determined or believed not to be feasible, or if it would conflict with other regulations, justification for not including the subject method shall be provided at the time the Fugitive Dust Control Plan is submitted to the VCAPCD. The Plan shall identify all fugitive dust sources, the means by which fugitive dust from each identified source will be minimized, and the schedule of frequency that each dust control method will be applied for each identified source.</p>	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>AQ-5: The construction contractor shall adhere to VCAPCD Rule 74.2 (Architectural Coatings) for limiting volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements.</p>	
Operations			
<p>The Project would generate average daily operational emissions that exceed the thresholds of significance recommended by the VCAPCD for ROG. Many of the measures that the VCAPCD recommends to reduce significant operational impacts are features of the Project. The off-site transportation demand management (TDM) fund is a mitigation measure that can be used by project proponents for projects and program that exceed the ROG and NOx significance thresholds. The City of Santa Paula utilizes this program to mitigate the significant air quality impacts of projects with its jurisdiction. While impacts will be reduced with mitigation, they will remain significant and unavoidable.</p>	Significant	<p>AQ-6: Use low emission water heaters for commercial water heating (Emissions reduction of 11 percent for ROG and 9.5 percent for NOx).</p> <p>AQ-7: Construct pedestrian and transit friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, and bikeways and/or lanes and bike racks. Sidewalks and bikeways should be landscaped with trees (an approximately 4 percent emissions reduction).</p> <p>AQ-8: Provide shuttle/minibus service between the Project commercial and industrial land uses and the Santa Paula downtown area during the lunchtime period (11:00 AM to 2:00 PM).</p>	Significant and Unavoidable
<p>Threshold: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative threshold for ozone precursors)?</p>			
According to the VCAPCD, if an individual project results in air emissions of criteria	Significant	AQ-12: The Applicant and/or its contractor must plant and maintain shade trees to reduce heat build-up on structures.	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>pollutants that exceed VCAPCD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. By applying VCAPCD's cumulative air quality impact methodology, implementation of the Project would result in an increase of ROG, an ozone precursor, and NOx, such that significant cumulative impacts would occur. Accordingly, cumulative impacts would be potentially significant.</p>		<p>AQ-13: The Applicant and/or its contractor shall prepare a TDM for review and approval by the City and VCAPCD, before the City issues building permits. The plan shall incorporate reasonable and feasible measures to reduce Project-related traffic and vehicle miles traveled. At minimum, the TDM Program shall include the following measures:</p> <ul style="list-style-type: none"> • Provision of connections to identified adjacent City or regional trails. • Provision of adequate way-finding features to direct pedestrians and bicyclists to nearby Project and City destinations, such as school, retail, and civic facilities. • Provision of adequate setbacks and design features such that the proposed future enhancement of commuter rail opportunities is not hindered by Project design. • Construction of pedestrian- and transit-friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, bikeways, or lanes. Sidewalks and bikeways should be landscaped with trees. • Perform a traffic light synchronization study on streets impacted by Project development to reduce vehicle queuing time. <p>The Project shall offset the increase in daily emission over the 25 pounds of reactive organic compounds and nitrogen oxides per day either through the purchase of emission offsets or through the in-lieu fees shall be paid to fund off-site TDM facilities or services, if such a program has been established at that time. These fees can reduce emissions from non-Project-generated motor vehicle trips by funding programs to promote ridesharing, public transit, and</p>	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		bicycling. The amount of this financial contribution should be calculated on a pro-rate basis as determined to be equitable by the VCAPCD, and in accordance with the VCAPCD Guidelines. These fees should be paid prior to the issuance of building permits by the County. The applicant shall demonstrate the availability of the offsets or contribution to fund off-site TDM services to the VCAPCD through a contract or other agreement with the offset source(s), which binds the reduction to the Project.	
Threshold: Expose sensitive receptors to substantial pollutant concentrations?			
All but one study area intersection is projected to operate at level of service (LOS) D or better. This intersection is a freeway ramp and there are no sensitive receptors located within close proximity so as to be affected by vehicle emissions at this intersection. The closest residence is located approximately 200 feet east of the freeway ramp. Consequently, the Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be less than significant.	Less than Significant	No mitigation measures necessary.	Less than Significant
A health risk assessment (HRA) was prepared to determine whether diesel particulate emissions from construction within the Santa Paula West Specific Plan will cause significant impacts to nearby sensitive receptors. In comparison to the applicable 10 in 1 million threshold level, carcinogenic risks do not	Less than Significant	No mitigation measures necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
exceed the level posing no significant risk. Therefore, impacts are less than significant.			
An evaluation of the potential noncarcinogenic effects was also conducted. Results of the analysis demonstrate that construction of the Project will not generate any significant air quality impacts with regards to emissions of toxic air contaminants.	Less than Significant	No mitigation measures necessary.	Less than Significant
Grading will include earth-moving activities during the grading phase that will cut soil and use as fill at the Project Site. These activities could be considered conducive to disturbing the <i>Coccidioides immitis</i> spores if they are present. The fungus is not likely to be found in soil that has been or is being cultivated and fertilized. Furthermore, the construction activities will be required to conform to Rule 403 to control fugitive dust, along with other rules, that will prevent significant dust. Use of enhanced dust control procedures such as continual soil wetting, use of supplemental binders, early paving, etc. can achieve a significant improvement in PM10 control efficiency. However, impacts related to exposure of people of Valley Fever during construction may be potentially significant.	Potentially Significant	<p>AQ-9: To the extent feasible, construction employees shall be hired from local populations, since it is more likely that they have been previously exposed to the fungus and are therefore immune. An individual is quite likely to be affected by valley fever if he or she lives in an area where the fungus is prevalent. A person (or animal) with a positive test has had a valley fever infection and has developed immunity to the fungus and therefore, will never contract valley fever again.</p> <p>AQ-10: During periods of high dust in the grading phase, crews must use respirators in accordance with California Department of Occupational Safety and Health regulations.</p> <p>AQ-11: The operator cab of area grading and construction Equipment must be enclosed and air-conditioned.</p>	Less than Significant
The uses allowed by the Santa Paula West Business Park Specific Plan do not include any operations that require amounts of hazardous materials that could pose a significant health risk. Accordingly, the Project will not result in a significant impact	Less than Significant	No mitigation measures necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
with respect to use of hazardous materials during long-term operations.			
Threshold: Create objectionable odors affecting a substantial number of people?			
Commercial and light industrial uses are not typically associated with objectionable odor complaints. However, the types of industrial activities that would occur with the Project are not known at this time, but would be evaluated at the time that permits to construct and operate are applied for from the VCAPCD. Therefore, the potential impacts associated with objectionable odors will be less than significant.	Less than Significant	No mitigation measures necessary.	Less than Significant
Cumulative Impacts			
<p>The Project would not have a cumulatively considerable contribution to this impact with respect to conflicting with or obstructing the implementation of the applicable air quality plan.</p> <p>Cumulative development activity within the City of Santa Paula would continue to implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the city is not expected to cause a significant impact associated with construction activities.</p> <p>However, because the County of Ventura is currently in nonattainment for ozone, related projects could exceed an air quality standard or contribute to an existing or projected air</p>	Significant	Implementation of mitigation measures AQ-6 through AQ-8 and AQ-12 through AQ-13 .	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
quality exceedance. Therefore, the emissions generated by the Project would be cumulatively considerable and are a significant and unavoidable impact.			
Biological Resources			
Threshold: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?			
The Project includes the dedication of Open Space for the areas identified as Mixed Willow Riparian, and no development would occur within the Mixed Willow Riparian habitat area, potential impacts to vegetation communities are considered less than significant.	Less than Significant	No mitigation measures necessary.	Less than Significant
Southern California black walnut (<i>Juglans californica</i>) is the only special-status plant species that was documented or determined to have a high likelihood of occurring within the Project Site. A total of 19 individual trees are located along the perimeter of the Project Site, mainly along the southwest boundary within the riparian habitat of the Adams Barranca and along the SR 126 right-of-way along the southeast boundary of the Project Site, however, the Project does not currently propose to remove any of the 19 Southern California black walnut trees. Impacts to special-status plant species (e.g. black walnut) are considered potentially significant.	Potentially Significant	BR-1 Before issuance of a grading permit, the Applicant must identify on grading plans, the locations of any protected trees (such as the Southern California black walnut, <i>Juglans californica</i>) and must include a report pertaining to preserving the tree(s) that could be affected by the grading activity. The report shall be prepared by a tree expert and shall evaluate the Applicant's proposals for protected tree preservation, including avoiding grading, land movement, or other activity within the drip line of any protected tree. Prior to grading, the drip line must be fenced to prevent earthmoving equipment from inadvertently entering the drip line. In the event protected tree cannot be avoided, then the Applicant must provide a tree report in accordance with the City's Tree Protection Ordinance and must provide for the replacement or relocation of any protected trees that are to be removed, or would be subject to landmoving or grading within its drip line.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The southwestern willow flycatcher breeds in dense riparian habits along rivers and streams, and almost all southwestern flycatchers breeding habitat is within close proximity of water or saturated soils. The Project includes construction activity that could result in a temporary impact to the species if members are foraging or in the unlikely event they nest near the Project Site at the time of construction. Therefore, impacts are considered potentially significant.</p>	<p>Potentially Significant</p>	<p>BR-3 To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be approved by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special-status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove. In addition, due to the potential for least Bell's vireo and southwest willow flycatcher to exist, protocol surveys should be completed prior to the start of construction.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>BR-4 If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the qualified biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.</p>	
<p>The least Bell’s vireo was not observed during the Project surveys; however, Adams Barranca provides potential habitat for the species. Impacts are considered potentially significant in the unlikely event this species nests on site or in the immediate vicinity and is subject to disturbance from construction activity.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure BR-3 and BR-4.</p>	<p>Less than Significant</p>
<p>Although, the Pallid bat was not observed during the Project surveys, Adams Barranca provides foraging and roosting habitat for the species. Construction under the Specific Plan</p>	<p>Potentially Significant</p>	<p>BR-6 To avoid potential impacts to the Pallid bat (<i>Antrozous pallidus</i>) and the Hoary Bat (<i>Lasiurus cinereus</i>), the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities. Thirty days before ground disturbance activities</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>could result in potentially significant impacts to pallid bats.</p> <p>The Hoary Bat was not observed during the Project Surveys, however, Adams Barranca provides foraging and roosting habitat for the species. This species is not expected to breed in Adams Barranca but may use the habitat for roosting, and the agricultural areas of Project Area for foraging.</p>		<p>associated with construction or grading, a qualified biologist shall conduct weekly surveys in accordance with standard protocols to determine if roosting western red bats are present in the construction zone or within 300 feet of the construction zone. Roosting bat surveys shall be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees and large shrubs in which this species is known to roost. Any bats found outside of the breeding season (May through August) shall be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 300 feet of the roost, shall be postponed or halted until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site shall be established in the field with flagging, fencing, or other appropriate barriers. Construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with</p>	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		applicable state and federal laws pertaining to the protection of these bat species.	
<p>The avocado orchard within the Project Site and the ecotone between the agricultural fields and Adams Barranca provides forging habitat for the American badgers, as they are most abundant in the drier, open stages of most shrub, forest, and herbaceous habitats with friable soils. Development under the Specific Plan could result in the loss of American badger habitat. Impacts are considered potentially significant.</p>	Potentially Significant	<p>BR-5 The Applicant shall retain a qualified biologist (approved by the City of Santa Paula) to survey the Project Site for the presence of the American badger no earlier than 1 day prior to any grading activity. In particular, the survey shall include an examination of the fallow agricultural field in the eastern portion of the site that will be impacted during project implementation.</p> <p>If American badger is located on site, potential loss of individual animals shall be mitigated through one of the following: (1) an on-site passive relocation program, through which badgers are excluded from occupied burrows by installation of a one-way door in burrow entrances, monitoring of the burrow for 1 week to confirm badger usage has been discontinued, and hand excavation and collapse of the burrow to prevent reoccupation; or (2) active trapping and relocation of badgers to suitable off-site habitat by a qualified biologist and in coordination with the California Department of Fish and Wildlife (CDFW), as approved by the City and CDFW.</p>	Less than Significant
<p>No active bird nests were observed at the time of survey; however, suitable nesting habitat is present within the avocado orchard, ornamental trees within the Project area, and adjacent trees to the Project Site and within Adams Barranca. However, impacts to nesting birds may be potentially significant.</p>	Potentially Significant	Implementation of mitigation measure BR-3 and BR-4.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Threshold: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?</p>			
<p>Development under the Specific Plan would require the removal of the agricultural drainage ditch that bisects the Project Site and is considered State Waters pursuant to the Fish and Wildlife Code and the Clean Water Act. Other state and federal jurisdictional waters (i.e., those within Adams Barranca) would be preserved through an Open Space dedication and the prohibition of construction activities within the Barranca. All Project impacts to United States (US) Army Corps of Engineers (ACOE) and CDFW jurisdictional areas are considered potentially significant, they would be mitigated to a less than significant level through the conditions imposed pursuant to the Project’s 404, 401, and 1602 permits/agreement as well as by mitigation measures imposed by this EIR.</p>	<p>Potentially Significant</p>	<p>BR-7 Before the issuance of a grading permit for areas that require state permits, the applicant shall coordinate with the CDFW to verify the impact to state-protected waters and associated vegetation on the Project Site. A Streambed Alteration Agreement (SAA) must be obtained, and mitigation measures recommended by the CDFW as part of the SAA shall be implemented. The SAA shall be provided to the City prior to issuance of a grading permit.</p> <p>The Applicant must mitigate for impacts to jurisdictional waters as administered by the CDFW jurisdiction by restoring habitats within those jurisdictions acceptable to the resource agency. Habitat must be mitigated onsite or within the same watershed, if feasible.</p> <ul style="list-style-type: none"> • The mitigation site(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas. • The mitigation area shall provide procedures to prepare soils in the mitigation area, provide detailed seeding/planting mixtures, provide seeding/planting methods, and other procedures that will be used for successful re-vegetation. • Impacts to jurisdictional waters shall be avoided to the extent feasible in the design phase of the Project. • Maintenance and monitoring requirements shall be established, including quarterly and annual monitoring reports to CDFW. <p>BR-8 Prior to the issuance of a grading permit for areas that require state or federal permits, the applicant and/or its contractor shall coordinate with the ACOE to verify the</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>impact to federally regulated waters on the Project Site. A Nationwide Permit (NWP) shall be obtained and mitigation measures recommended by the ACOE and National Marine Fisheries, as part of the NWP shall be implemented. The NWP shall be provided to the City prior to initiating construction of the bridge crossing Santa Paula Creek.</p> <p>Areas determined to be federally regulated by the ACOE shall also fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB), and a Clean Water Act Section 401 Water Quality Certification (401 Certification) will be required from the RWQCB for impacts to those areas.</p> <p>BR-9 For impacts to Regional Board jurisdiction, the Applicant shall:</p> <ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio) on site; or • Provide a one-time in-lieu fee to a Regional Board–approved mitigation bank and/or in-lieu fee program within the Santa Clara River Watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1.27 acres of Regional Board jurisdiction; or • A combination of on-site and/or off-site compensatory mitigation options, as described above. <p>BR-10 As mitigation impacts to CDFW jurisdiction, the Applicant shall:</p> <ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio acres of CDFW jurisdiction for loss of State Waters; or • Provide a one-time in-lieu fee to a CDFW-approved mitigation bank and/or in-lieu fee program within the 	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>Santa Clara River Watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1:1 CDFW jurisdiction area; or</p> <p>A combination of on-site and/or off-site compensatory mitigation options, as described above.</p>	
<p>The development of the Project Site would increase the number of nighttime light and glare sources on the site. Light and glare can “spill over” into adjacent open space areas, increasing the level of light currently experienced there. Nighttime light can disturb breeding and foraging behavior and can potentially alter foraging and breeding behavior of nocturnal birds, mammals, and invertebrates, which is considered a potentially significant impact. However, Section 4.6 of the Specific Plan for the proposed Project addresses lighting guidelines for the Project Site, including but not limited to, height of lighting, requirements for screened lighting, and submittal of a lighting plan to the police Chief or designee for approval prior to issuance of a building permit. Impacts from lighting and glare would be considered less than significant.</p>	Less than Significant	<p>No mitigation necessary.</p> <p>Implementation of mitigation AES-1 which includes the installation of low intensity, low-glare design, and hooded to direct light downward preventing spillover into adjacent areas would further reduce impact.</p>	Less than Significant
<p>Development under the Project can be expected to increase human activity near Adams Barranca, which could result in an increase in the frequency of human encroachment into the Barranca when compared to existing conditions. The Open</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Space area designations of the Specific Plan, upland buffers from the riparian area and development under the Project, and the Project characteristics that would provide predominantly indoor daytime work areas would minimize any potential for increase human disturbance to the Adams Barranca. Therefore, indirect impacts from human encroachment would be less than significant.</p>			
<p>Invasive exotic species introduced as landscaping could be dispersed by stormwater, wind, or wildlife, or by various other means to natural habitats in the area, including Adams Barranca and other downstream water bodies, such as the Santa Clara River. Impacts from the introduction of invasive exotic landscape plants could be potentially significant.</p>	<p>Potentially Significant</p>	<p>BR-2 Before issuance of a grading permit for development within the Specific Plan area, a landscaping and irrigation plan must be prepared and must incorporate the planting of native vegetation and use of water conserving irrigation. The landscaping and irrigation plan must be prepared by a licensed landscape architect, and use native plant and tree species. The landscape and irrigation plan must be submitted to the City of Santa Paula Planning Department for review and approval.</p> <p>Nonnative plants or vegetation must be avoided in future development areas. The landscaping plans within common areas of development areas must include appropriate provisions to prevent other invasive plant species from colonizing remaining natural areas. These provisions must include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) the monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species must be determined by a qualified botanist.</p> <p>For areas adjacent to Adams Barranca riparian corridors, the plan must provide for adequate landscaping to reduce</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		indirect impacts including attenuation of noise and reduction of nighttime lighting and glare.	
The Project includes the dedication of Open Space for the areas identified as Mixed Willow Riparian, and no development would occur within the Mixed Willow Riparian habitat area, potential impacts to vegetation communities are considered less than significant.	Less than Significant	No mitigation measures necessary.	Less than Significant
The Specific Plan is designed to include stormwater infiltration and treatment. This includes low-impact development (LID) best management practices (BMPs) to ensure that the Project does not result in adverse effects to water quality in the Adams Barranca or the Santa Clara River. The Santa Paula West Business Park Specific Plan Drainage Master Plan will provide storm drains and runoff directed to an on-site detention basin for passive treatment of runoff from the Project driveways and other hard surfaces. Overall, the BMPs and the Project Design Features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all applicable federal, state, and local water quality rules and regulations in order to effectively minimize the Project's impact on water quality. Accordingly, impacts would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			
Alteration of state-protected waters and associated riparian vegetation would require the acquisition of a Fish and Wildlife Code Section 1602 SAA from the CDFW. Due to the high habitat value that drainages and swales are known to provide for wildlife and because these areas are under the jurisdiction of the CDFW, the proposed removal of these waters is considered a potentially significant impact.	Potentially Significant	Implementation of mitigation measures BR-7, BR-8, BR-9, and BR-10.	Less than Significant
Threshold: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			
Adams Barranca, located along the western border of the Project Site could provide a wildlife movement corridor with linkage between the foothills of the mountains north of the City and the Santa Clara River, however, the Project does not propose to obstruct or develop in the Barranca. The Project would not result in potentially significant impacts to the movement of resident or migratory fish or terrestrial wildlife species. No historical or active raptor nests or communal roosts exist at the Project Site or within 100 feet of any area that is or will be subject to development within the Project Site. Raptors are mobile species with generally large home ranges, they are capable of compensating for the loss of small acreages of foraging habitat in a local area by moving to other suitable foraging habitats. Therefore, development of the Project would not eliminate significant raptor foraging	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>areas or limit raptors’ access to food resources, making potential impacts to raptors due to the development of the Project less than significant.</p>			
<p>Threshold: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</p>			
<p>The Project includes the dedication of approximately 4.9 acres (9.1 percent) of the Project Site as Open Space along the western boundary to preserve and provide a buffer area from the Adams Barranca. Therefore, the Project is consistent with the City General Plan Conservation and Open Space Element because it provides for the protection the City’s natural resources, and impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>The Project is consistent with the recovery plan for the least Bell’s vireo because the least Bell’s vireo habitat present on the site would not be impacted. The Project would result in potentially significant impacts to the least Bell’s vireo. However, mitigation measures are included within this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts to habitat for least Bell’s vireo individuals in the Santa Clara River Watershed.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure BR-2.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>All potential impacts to the southwestern willow flycatcher during construction would be mitigated by measures included in this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed. The southwestern willow flycatchers would not be permanently impacted, and therefore the Project is consistent with the recovery plan.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure BR-2.</p>	<p>Less than Significant</p>
<p>Cumulative Impacts</p>			
<p>Most wildlife species that could be expected to use the Project Site are species that are adapted to the disturbance that is caused by human-induced activities. Because of the present condition of the Project Site and the surrounding lands, it is unlikely that development of the site would contribute significantly to cumulative adverse impacts to regional flora and fauna. However, the loss of habitat associated with development of the Project area would contribute to the overall cumulative loss of biological resources in the Santa Paula region. Given that the impacted habitat within the Project area consists primarily of agricultural and urban developed land, and the impacted waters are small (less than 1 acre), the incremental contribution of the Project to this habitat loss is not cumulatively considerable.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Cultural Resources			
<i>Threshold: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</i>			
While a majority of the Project Site consists of younger Holocene alluvial soils, older Pleistocene alluvial deposits are presumed to underlie these younger soils. Because these depths of older alluvial soils are unknown, there is a moderate to high potential for development-related earthmoving activities and unauthorized fossil collecting within older alluvium on the Project Site to result in the loss of scientifically important fossil remains, currently unrecorded fossil sites, and associated specimen data and corresponding geologic and geographic site data.	Potentially Significant	CUL-1: Should unexpected paleontological resources be discovered during any ground-disturbance activities greater than 10 feet below existing grade of Project Site, work in the immediate area of the discovery shall be halted and the City shall require an assessment by a qualified paleontologist to determine the significance of the find.	Less than Significant
The Project Site consists in majority of younger alluvial soils, which are considered to have low potential of containing significant paleontological resources. At shallow depths, the younger alluvium is considered too young to contain remains old enough to be considered fossilized. As a result of the unlikelihood of significant fossil resources being found within these younger soils, ground-disturbing activities of less than 10 feet below the current grade of the Project Site are anticipated to have low potential to impact any paleontological resources.	Potentially Significant	Implementation of mitigation measure CUL-1 .	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Disturb any human remains, including those interred outside of formal cemeteries?			
<p>The nearest formal cemetery to the Project Site is the Pierce Brothers Santa Paula Cemetery, which is located approximately 1.4 miles northeast of the Site at 380 Cemetery Road. No known sites containing human remains exist within the Project area. However, currently unknown human remains potentially could be discovered during the construction of future projects within the Specific Plan. Project construction would require ground-disturbing activities, including grading and excavation, and the presence of construction equipment. These construction activities could potentially result in the discovery of previously unrecorded human remains, including Native American burials. Impacts related to construction would be limited to the construction area for each individual project within the Specific Plan.</p>	Potentially Significant	<p>CUL-2: In the event of a discovery of human bones, suspected human bones, or a burial, during ground-disturbing activities, all excavation in the vicinity must halt immediately and the area of the find protected until a qualified archaeologist determines whether the bone is human. If the qualified archaeologist determines the bones are human, the Ventura County Coroner must be notified before additional disturbance occurs. The construction contractor must ensure that the remains and vicinity of the find are protected against further disturbance until the Coroner has made a finding with regard to Public Resources Code (PRC) 5097 procedures, in compliance with Health and Safety Code Section 7050.5(b). If it is determined that the find is of Native American origin, the City will comply with the provisions of PRC Section 5097.98 regarding identification and involvement of the Native American Most Likely Descendant (MLD).</p>	Less than Significant
Threshold: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Government Code Section 15064.5?			
<p>A majority of the Project Site has been extensively farmed with various row crops and orchards, which has continually disturbed the surface of the soils. While the Project Site does not contain any known sensitive archaeological resources within the disturbance area, the general Santa Clara River Valley is considered sensitive, and there is potential for unknown resources to be</p>	Potentially Significant	<p>CUL-3: In the event that previously unidentified archaeological resources are discovered during building construction, the contractor must cease work in the immediate area and the City Planning Director shall be contacted. An independent qualified archaeologist, retained by the City at the expense of the applicant, must assess the significance of the find and make mitigation recommendations, which shall be implemented to the extent feasible.</p>	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
uncovered by activities, such as grading, that disturb the ground surface.			
Threshold: Cause a substantial adverse change in the significance of a historical resource as defined in Government Code Section 15064.5?			
The historic resource evaluation report concludes that while the development of the Project would result in an adverse impact by eliminating elements that contribute to a historic district, this impact would not cause a substantial change in the significance of the Santa Clara Valley rural historic district. Given the large size and complex nature of the historic district, the loss of a single employee residence and associated fields would not reduce the integrity of the historic district such that it could no longer convey historic significance. The Santa Clara Valley rural historic district would remain eligible for the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR). Therefore, the impact resulting from the Project would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Cumulative Impacts			
Other Specific Plan projects that would likely have similar potentially significant impacts to paleontological, archaeological, and historic resources include the remainder of West Area 2, Adams Canyon, Fagan Canyon, and the recently approved East Area 1 Specific Plan Amendment area. The Specific Plan, in combination with other currently planned projects, would result in the potential for a significant cumulative impact. Mitigation	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
measures would reduce the potentially significant cumulative contribution to paleontological, archaeological, and historical resources.			
Geology and Soils			
Threshold: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:			
a. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issue by the State Geologist for the area or based on other substantial evidence of known fault?			
The Specific Plan area is neither located within an established Alquist-Priolo Earthquake Fault Zone, nor is it crossed by a known active fault. The risk of loss, injury, or death associated with surface rupture of a known earthquake fault is considered very low, and impacts will be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
b. Strong seismic groundshaking?			
The Specific Plan area could be subject to strong ground shaking in the event of an earthquake originating along one of the nearby faults. Construction allowed by the Specific Plan will be required to comply with the version of the California Building Standards Code (CBC) in effect at the time individual building permits are obtained. The Project will not expose residents to unknown safety issues associated with seismicity (including ground shaking), and potential impacts are less than significant.	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
c. Seismic-related ground failure, including liquefaction?			
<p>Most of the Project Site lies within a liquefaction hazard zone, an area where the historic occurrence of liquefaction or groundwater conditions indicate a potential for ground displacements as a result of liquefaction, as designated by the State of California and the City of Santa Paula. Settlement caused by ground shaking is often not uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. Seismic settlement could occur on the site and is thus considered a potentially significant impact.</p>	Potentially Significant	<p>G-1: Additional explorations must be performed at the tentative tract map and grading plan review stages of the development planning. The purpose of the explorations would be to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement. The Project shall comply with all CBC/Uniform Building Code (UBC) requirements for seismic safety.</p>	Less than Significant
d. Landslides?			
<p>The topography of the project area is relatively flat and has no landforms where a landslide could form. Therefore, the potential for impacts from earthquake-induced landslides or other landslides (except lateral spread landslides) is considered less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Result in substantial soil erosion, or the loss of topsoil?			
<p>The native topsoil and alluvial soils in the annexation area may be moderately susceptible to erosion. Construction activities would comply with erosion control requirements, including existing grading and dust control measures, imposed by the City pursuant to grading permit regulations. After construction, the project may result in a</p>	Potentially Significant	<p>G-2: Detailed, design-level geotechnical investigation reports for all future subdivision and other discretionary development approvals must be submitted to the Public Works Director, or designee, for approval. In addition, grading plans and geotechnical reports prepared by a licensed Engineering Geologist (approved by the Public Works Director) must be provided to the Public Works Director, or designee, before the City issues grading building</p>	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>limited degree of soil erosion effects from vegetated areas. However, in accordance with National Pollutant Discharge Elimination System (NPDES) requirements, the project would be required to have a Standard Urban Stormwater Mitigation Plan (SUSMP) in place during the operational life of each development within the Specific Plan. While BMP design features would be developed with more refined engineering for each development prior to implementation of the above requirements, impacts associated with erosion and sedimentation are considered potentially significant.</p>		<p>permits for individual development projects within the Project Site. Requirements for the geotechnical reports and compliance are described below.</p> <ul style="list-style-type: none"> • The Engineering Geologist must make recommendations to address any seismically induced settlement within portions of the Project Site. In particular, seismically induced settlement must be addressed in the western parts of the Project Site, where preliminary geotechnical investigations determined that the area may experience up to several inches of seismically induced settlement in the event of strong ground motion. • The Engineering Geologist must inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with construction specifications, and make site-specific recommendations for grading, drainage installation, and foundation design, as appropriate. • The Public Works Director, or designee, must ensure that all soils and engineering report recommendations are incorporated into the project engineering and construction plans, including soils tests to ensure that it meets the soil classifications assumed in the soils reports, and that soils meet the CBC requirements. • All Project plans as determined necessary by the Public Works Director, or designee, including Grading and Construction Plans, must be reviewed and stamped by a Project soils engineer and submitted to the Public Works Director, or designee, for review and verification that all requirements are incorporated before the City issues grading or construction permits. 	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<ul style="list-style-type: none"> The Applicant and/or contractor must retain a licensed soils engineer acceptable to the Public Works Director, or designee, to review all construction plans for consistency with the soils reports and to monitor on-site grading and construction to ensure the conditions at the Project Site do not substantially change the requirements of report recommendations for design-level geotechnical investigations. The project soils engineer must monitor grading and construction activity and report observations to the Public Works Director, or designee. The Public Works Director, or designee, will conduct field inspections as needed. 	
<p>Threshold: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse; and be located on expansive soil, as defined in the Uniform Building Code, creating substantial risks to life or property?</p>			
<p>Expansive soils units may be found in the Qht deposits that could cause damage to foundations and walls due to repeated drying and wetting (shrink and swell). Therefore, geologic, soils, and geotechnical impacts would be potentially significant.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure G-2 and:</p> <p>G-3: The final grading and erosion control plan shall be designed to minimize erosion. The plan shall include, but not be limited to, the following:</p> <p>BMPs, such as temporary berms and sedimentation traps (such as silt fencing, straw bales, and sand bags), shall be installed in association with project grading. The BMPs shall be placed at the base of all cut/fill slopes and soil stockpile areas where potential erosion may occur and shall be maintained to ensure effectiveness. The sedimentation basins and traps shall be cleaned periodically, and the silt shall be removed and disposed of in a location approved by the City.</p> <p>Nonpaved areas shall be revegetated or restored (i.e. geotextile binding fabrics) immediately after grading and</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>installation of utilities to minimize erosion and to re-establish soil structure and fertility. Revegetation shall include drought-resistant, fast-growing vegetation that would quickly stabilize exposed ground surfaces. Alternative materials rather than reseeding (e.g., gravel) may be used, subject to review and approval by the City.</p> <p>Runoff shall not be directed across exposed slopes. All surface runoff shall be conveyed in accordance with the approved drainage plans.</p> <p>Energy dissipaters or similar devices shall be installed at the end of drainpipe outlets to minimize erosion during storm events.</p> <p>Grading shall occur during the dry season (April 15 to November 1) unless a City-approved erosion control plan is in place and all erosion control measures are in effect. Erosion control measures shall be identified on an erosion control plan and shall prevent runoff, erosion, siltation, and tracking of mud and soil onto City streets. All exposed graded surfaces shall be reseeded with ground cover vegetation to minimize erosion. Graded surfaces shall be reseeded within four (4) weeks of grading completion, with the exception of surfaces graded for the placement of structures. These surfaces shall be reseeded if construction of structures does not commence within four (4) weeks of grading completion.</p> <p>Site grading shall be completed such that permanent drainage away from foundations and slabs is provided and so that water shall not pond near proposed structures or pavements.</p>	
Cumulative Impacts			
At a minimum, all development occurring within the City of Santa Paula would be subject to CBC and construction standards	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>relative to seismic and other geologic conditions that are prevalent within the region. Also, individual project geotechnical investigation reports, required prior to permit approval, would provide recommendations to account for site-specific design requirements to avoid subjecting on- and off-site properties to geologic hazards, in accordance with the CBC. With regard to erosion and sedimentation, development under the Santa Paula West Specific Plan and related projects are required to implement a stormwater pollution prevention plan (SWPPP) during construction, as required by the NPDES permit, to minimize impacts to off-site properties from the effects of erosion. The Project will meet the applicable standards and will sufficiently reduce its incremental cumulative geology and soil impacts to a less than significant cumulative impact.</p>			
Greenhouse Gasses			
Threshold: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			
<p>All industrial land use projects that exceed 10,000 MTCO₂e per year would be considered potentially significant under the screening threshold. The estimated Project operational greenhouse gas (GHG) emissions with project design features would be 6,674.83 MTCO₂e per year, which would not exceed the screening threshold. In addition, the proposed Project would generate approximately 1,510 job opportunities and</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>would achieve a project-level efficiency target of 4.4 MTCO₂e per service population. This would be below the 4.8 MTCO₂e per service population threshold. Potential impacts would be less than significant based on the screening threshold.</p>			
<p>Threshold: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</p>			
<p>The Specific Plan would incorporate measures that reduce GHG emissions compared to a conventional project of similar size and scope. The Project would incorporate energy and water efficiency design features to enhance efficiency in all aspects of a building’s life cycle. These designs would increase the structures energy efficiency, water efficiency, and overall sustainability. These measures and features are consistent with existing recommendations to reduce GHG emissions. In addition, the Project would result in less than significant impact. Therefore, the Specific Plan would not conflict with the 2008 Scoping Plan and the 2014 Updated Scoping Plan.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Cumulative Impacts</p>			
<p>GHG emission reductions would be achieved through energy-efficient lighting and building design; installation of low-flow appliances; and water conservation. The methods used</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>to establish this relative reduction are consistent with the approach used in the CARB's Scoping Plan for the implementation of Assembly Bill (AB) 32 through 2020. The Project's features and GHG reduction measures make the Project consistent with the goals of AB 32. Therefore, the Project will result in a less than significant contribution to cumulatively significant GHG emissions.</p>			
<p>Hazards and Hazardous Materials</p>			
<p>Threshold: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</p>			
<p>Construction of the Project would involve deliveries and disposal of hazardous materials such as fuels, oils, solvents, and other equipment maintenance and building materials. Spills or leakages encountered during construction and hauling would be temporary and would be required to be remediated in accordance with the State and local regulations for hazardous waste cleanup. As such, impacts from the use and handling of hazardous materials would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>If the railroad is commissioned for service within the future, any transport of hazardous materials would comply with US Department of Transportation (USDOT) Federal Railroad Administration (FRA) safety regulations. Therefore, the probability of an accident involving the transport of hazardous materials within proximity to the Project Site</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
is considered to be very low. Impacts would be less than significant.			
Threshold: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			
Construction			
<p>During construction of the Project, delivered materials to the site could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. The event of a spill or release related to these hazardous materials could cause a short-term threat of exposure to nearby schools and residential areas along SR 126 and W. Telegraph Road. Therefore, the Project would have potentially significant impacts related to the transport of hazardous materials during construction activities.</p> <p>The Project Site has been historically used for agricultural uses for more than 75 years, it is possible that residual pesticides may be exposed during grading and excavation activities. The limited Phase II Environmental Site Assessment (ESA) conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate of every condition within the Project and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on site. Therefore, potential impacts related to the presence of hazardous substances would be potentially significant.</p>	Potentially Significant	<p>HM-1: Prior to demolition and construction activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that an asbestos survey has been conducted on any buildings and irrigation pipelines that are to be demolished or removed from the Project Site. If asbestos is found, the Applicant shall follow all procedural requirements and regulations of the VCAPCD Rule 62.7 to properly dispose of all on-site ACM’s before general demolition activities commence.</p> <p>HM-2: Prior to demolition and any renovation activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that a lead-based paint survey has been conducted at all existing buildings located on the Project Site. If lead-based paint is found, the Applicant shall follow all Occupational Safety and Health Administration (OSHA) procedural requirements and regulations for its proper removal and disposal before general demolition activities commence.</p> <p>HM-3: Prior to disposal, all fluorescent light fixtures within the existing buildings shall be inspected for polychlorinated biphenyl (PCB) content labels throughout demolition of the Project Site.</p> <p>HM-4: Pole-mounted transformers, light ballasts, or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal. All equipment found to contain PCBs must be</p>	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		<p>removed and disposed in accordance with all applicable local, State and Federal regulations including but not limited to California Code of Regulations (CCR) Title 22, 40 Code of Federal Regulations (CFR) Part 261, and Environmental Protection Agency (EPA) 40 CFR. Utility Plans prepared as part of building permit review must include notes requiring inspection and plan for removal and disposal.</p> <p>HM-5: In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan consistent with federal and state remedial requirements, must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or designee, for approval as required before continued work in the area.</p>	

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Operations			
<p>The Project Site has historically been used for agricultural production. However, any new development occurring on any of these documented hazardous materials sites would have to be preceded by remediation and cleanup under the supervision of the State Department of Toxic Substances Control (DTSC) or other regulatory agency (as deemed appropriate) before construction activities could begin, if such actions have not already occurred. In addition, these listed areas are down gradient from the Project Site, so exposure to contaminants from migration through surface water or groundwater flow from the contaminated zones is not expected. Therefore, potential for contamination of the Project Site from off-site contamination sources is considered less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<p><i>Threshold: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</i></p>			
<p>The Project Site is not within 0.25 miles of an existing school. The Project may involve the use of hazardous materials on site typical of industrial-type uses. The storage and disposal of these hazardous materials on the Project Site would comply with City and Santa Paula Fire Department (SPFD) regulations and standards. Therefore, impacts would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			
<p>The Project Site contained two historical Aboveground Storage Tanks (ASTs) and one Underground Storage Tank (UST). These historical tanks have either been abandoned or removed from the Project Site as of 2005. Sources of contamination were identified within the areas of the ASTs and UST; however, these areas on the Project Site have been cleaned up and remediated and are not considered an environmental concern. Due to the regulatory status of hazardous materials incidents at the facility (e.g., closed case), the distance between the facility and the site, or the hydrogeologically cross-gradient location from the site, and given that site reconnaissance did not reveal the presence of hazardous chemicals, on-site impacts related to nearby hazardous materials sites are considered less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			
<p>The Specific Plan is not located within any of the three Safety Zones as established by the Ventura County Airport Land Use Commission (ALUC) within their Comprehensive Land Use Plan (CLUP). Therefore, the Specific Plan would not conflict with the requirements set forth in the Ventura County ALUC or the City's</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
General Plan. Impacts would be less than significant.			
Threshold: For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			
No portion of the Specific Plan is within a private airstrip other than the Santa Paula Airport. Implementation of the Project would result in less than significant impacts related to the exposure of employees or visitors to hazards from plane accidents due to the proximity of any private airstrips.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			
Construction activities of the Project may require the closure of vehicle travel lanes. The City's designated evacuation routes are along SR 126 and SR 150. While, SR 126 runs along the southern boundary of the Project Site, construction activities of the Project are not anticipated to interfere with access to the roadway or interfere with operation of the County's Hazard Mitigation Plan. Emergency access and potential traffic access impacts would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The Specific Plan area has the potential for employees to encounter human-made and natural hazards, which could cause undue hardship to employees. The working population within the Specific Plan would be made aware of such disaster plans through public education and outreach activities. In addition, the Project would comply with the SPFD’s recommended standards for emergency accessibility and circulation. Thus, the Project’s operational impacts on the implementation of the Ventura County Hazard Mitigation Plan would be considered less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than significant</p>
<p>Threshold: Increased fire hazard in areas with flammable brush?</p>			
<p>The Specific Plan is not located within a California Department of Forestry and Fire Protection (CAL FIRE) designated Local Responsibility Area (LRA) or State Responsibility Area (SRA). As the Project would not expose employees or visitors to any increased risks to fire hazards on the site, impacts are considered to be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Cumulative Impacts</p>			
<p>Although each related project has potentially unique hazardous materials considerations, it is anticipated that all hazardous materials delivered and hazardous waste removed from the Specific Plan area and each related project would be in accordance with Title 24 of the Code of Federal Regulations.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Development of any projects would be required to comply with existing applicable laws and regulations pertaining to hazardous wastes, and the risk with identified hazardous material sites would be eliminated or reduced. Businesses would also be required to prepare a Hazardous Materials Business Plan (HMBP) including an annual inventory of hazardous materials used on site and submit a business emergency plan to the City for an annual review.</p> <p>Development under the Specific Plan would comply with all applicable laws and regulations related to the transport, use, treatment, storage, and disposal of hazardous materials and fire prevention.</p>			
Hydrology and Water Quality			
Threshold: Violate any water quality standards or waste discharge requirements?			
<p>Pollutants such as soil, sediments, and other substances associated with construction activities (e.g. oil, gasoline, grease, and surface litter) could be present in stormwater runoff from the site. Through compliance with the State Water Resources Control Board (SWRCB) and United States Environmental Protection Agency (USEPA) permits and SWPPP requirements, potential impacts to water quality during Project construction would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>The development of the Project would increase the amount of impervious surfaces on the Project Site, which has the potential to increase runoff within the Project Site. The BMPs and the project design features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all existing applicable federal, state, and local water quality rules and regulations to effectively minimize the Project's impact on water quality. Accordingly, impacts would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<p><i>Threshold: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?</i></p>			
<p>The Project will not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, the Project would use less water than the existing agricultural operations, and the Specific Plan would incorporate design features such as bioswales, bioretention cells, infiltration trenches and permeable pavement to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge. Therefore, impacts would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Threshold: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</p>			
<p>The Project does not alter the course of a stream or river, however site-clearing and grading operations have the potential for discharging sediment downstream during storm events. The Project would be required to develop a site-specific SWPPP in accordance with the NPDES Program General permits authorized under the Clean Water Act for Construction Activities. Adherence to the SWPPP and implementation of standard BMPs during construction would reduce the potential for increased siltation, erosion, and hazardous material spills. Through compliance with the SWPPP and standard BMPs, potential erosion and siltation, potential impacts will be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>The operation of the Specific Plan will contain a number of features to reduce the amount of runoff that will occur within the Specific Plan area, and limit the amount and rate of surface water flow downstream of the Specific Plan. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, potential impacts are considered less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			
The Specific Plan would not substantially alter drainage patterns within the Project area, nor alter a stream or river. The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, impacts are considered less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			
The Project incorporates detention basins sized to treat 10 percent of the Q50 (50-year storm event) from the storm drain system consistent with the Ventura County Storm Water Urban Impact Mitigation Plan (SQUIMP) guidelines. The proposed detention basins would be incorporated into the underground storm drain system, preventing any sedimentation to occur. Consequently, impacts related to water quality would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Otherwise substantially degrade water quality?			
To reduce the discharge of expected pollutants during grading and other construction activities, such as sediment into receiving waters during construction, the Project Applicant will be required to prepare	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>a SWPPP consistent with the Ventura County NPDES permit and the Technical Guidance Manual for Storm Water Quality Control Measures to minimize or eliminate the discharge of pollutants into receiving waters. The design features would comply with all NPDES permit requirements and no significant impacts to water quality will result.</p>			
<p>Threshold: Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</p>			
<p>The Specific Plan would not introduce new housing into the area. Therefore, impacts to housing within a 100-year flood hazard area would be considered less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<p>Threshold: Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</p>			
<p>The new channel design would have the capacity to handle flows that overtop the bank on the east side and the water that ponds due to the undersized culvert at SR 126. The channel also has a debris catchment area at the railroad bridge with a second culvert under the railroad bridge to accommodate peak flows rerouted due to the debris. A geotextile would be used in the channel to stabilize the soil for high velocities. Accordingly, impacts would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<p>Threshold: Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</p>			
<p>The Specific Plan does not propose any residential land uses. Therefore, no new</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
residential uses would be located in the flooding hazard zone. As such, impacts would be less than significant.			
Threshold: Inundation by seiche, tsunami, or mudflow?			
The Project Site is approximately 12 miles inland from the Pacific Ocean and is approximately 230 to 350 feet above mean sea level (amsl). There are no lakes, ponds, or dams adjacent to the Project Site. Therefore, the risk that the Project Site would be inundated by a seiche is considered negligible, and impacts associated with tsunamis or seiches would be less than significant. The proposed parallel channel and debris basin are incorporated into plans to improving the Adams Barranca. In addition, no on-site stormwater would be directed to the Adams Barranca. Therefore, impacts associated with mudflows would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Cumulative Impacts			
The Project would not contribute to a cumulatively significant hydrology or water quality impact. First, the Project does not alter any streams or rivers. Second, each related project would be required to comply with NPDES requirements and local regulations designed to prevent polluted runoff from entering local storm drain systems and receiving water bodies during construction and after development, the cumulative impact to water quality would be less than significant. Implementation of	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>applicable City requirements, including the standards of the Ventura County SQUIMP, on all new development within the watershed would reduce cumulative impacts to area hydrology to a less than significant level. Additionally, the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume of the local groundwater table level.</p>			
Land Use			
<i>Threshold: Physically divide an established community?</i>			
<p>The Project would not physically divide the existing community of Santa Paula or any smaller enclaves outside the City limits. The Project would not create incompatible land use relationships between the Project Site and existing off-site uses, and as a result of would not disrupt, divide, or isolate existing neighborhoods or communities. Therefore, impacts related to dividing an established community would be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<i>Threshold: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?</i>			
<p>The Project would be consistent with the County of Ventura General Plan and Non-Coastal Zoning Ordinance, the Santa Paula General Plan and Santa Paula Municipal Code (SPMC), the 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and with</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Ventura Local Agency Formation Commission (LAFCo) policies. Therefore, the project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project and impacts would be less than significant.</p>			
<p>Threshold: Conflict with any applicable habitat conservation plan or natural community conservation plan?</p>			
<p>The Specific Plan includes a dedication of Open Space/Passive uses over 4.9 acres that includes the Adams Barranca and buffer areas on the western portion of the Project Site. This dedication would preserve the habitat and natural community as envisioned in the City’s Open Space and Conservation Element of the General Plan. Therefore, impacts related to habitats conservation or natural community conservation plans would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Cumulative Impacts</p>			
<p>No significant cumulative land use impacts from future development within the expansion areas would result as these areas will be developed in accordance with the City’s General Plan. Additionally, environmental review will also be required and will be conducted prior to the adoption of future Specific Plans.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Noise</p>			

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			
<p>Construction noise could exceed construction noise thresholds for the County with an increase of greater than 3 dB(A) at residences located within the agricultural operations to the west. There is a residence located near the northwest boundary of the Project Site within 75 feet that would be subject to construction noise in excess of 65 dB(A) for exterior areas. Therefore, construction noise impacts to residences to the west are considered potentially significant.</p>	Potentially Significant	<p>N-1: Stationary construction equipment, such as pumps, generators, or compressors, shall be placed as far from noise sensitive uses as feasible during all phases of project construction.</p> <p>N-2: All construction equipment shall be equipped with appropriate mufflers in good working condition.</p> <p>N-3: Before any site activity, the contractor shall be required to submit a material haul route plan to the City of Santa Paula and the County of Ventura for review and approval. The contractor shall ensure that the approved haul routes are used for all materials hauling, to minimize exposure of sensitive receivers to potential adverse noise levels from hauling operations.</p> <p>N-4: During all site preparation, grading and construction, the construction contractor shall locate all stockpiling and vehicle staging areas away from existing residences, to the extent feasible.</p>	Less than Significant
<p>An increase of 3 dB(A) or greater in traffic noise levels that occurs from Project-related activities would be considered significant if the resulting noise levels that occurs from Project-related activities would exceed the City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels. These roadway systems will not experience an increase in noise levels of 3 dB(A) or greater. In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road extension and would not cause an increase of 3 dB(A) or</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
greater due to Project-related activities. Therefore, the Santa Paula West Specific Plan Area would not result in significant noise impacts in the local and regional street system. Impacts along these roadway systems are considered less than significant.			
Predicted noise levels at 50 feet from the railway centerline to the southern boundary would be approximately 69.4 dB(A). Due to its proximity to the rail road track, uses allowed within the southern boundary of the Project Site are not sensitive to that estimate level.	Less than Significant	No mitigation necessary.	Less than Significant
Assuming noise levels at 69.4 dB(A) within 50 feet from the railway centerline, interior noise will be reduced to 44.4 dB(A), below the General Plan noise threshold of 45 dB(A), in compliance with City Building Code requirements. Therefore, potential interior noise within the proposed development would be considered less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			
The surrounding land uses within 25 feet of the Project Site include the scattered residential uses immediately to the west. The construction near this portion of this site may include some earthwork and grading activities. While offsite surrounding land uses may experience vibration events, these would be temporary and would not be frequent and impacts would be considered less than significant.	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Ground-borne vibration typically attenuates rapidly as a function of distance from the vibration source. Furthermore, the majority of the Project's operational-related vibration sources, such as mechanical and electrical equipment, would incorporate vibration attenuation mounts, as required by the particular equipment specifications. Therefore, operation of the Project Site would not increase the existing vibration levels at off-site surrounding uses; and as such, vibration impacts associated with operations would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Given vibration from the railroad track would not be constant and would be approximately 50 feet from the track, uses allowed within Santa Paula West Specific Plan Area would not be susceptible to these conditions. Therefore, impacts would be considered less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			
The noise that could be generated from within the Specific Plan area and mobile source noise impacts would not substantially increase the ambient noise conditions in the surrounding area. Any permanent increase in ambient noise levels is considered less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			
It takes a doubling of average daily trips on roadways to increase noise by 3 dB(A). The average daily trips associated with	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>construction activities would not result in a doubling of trip volume along study-area roadways. Noise-level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and nearby roadways that are within the area (unincorporated County of Ventura) would be less than 3 dB(A), and potential impacts will be less than significant.</p>			
<p>Threshold: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?</p>			
<p>Threshold: For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?</p>			
<p>There are no commercial aircraft in operation at the airport. The general aircraft travel pattern is south of the City, with a required approach and departure altitude of 1,500 feet. Noise levels for the Airport, where most of the flight activities occur, are below 60 dB(A). Thus, people residing, attending school, or working within the future land uses of the Specific Plan area would not be exposed to excessive noise due to the aircraft travel pattern. Therefore, implementation of the Specific Plan would result in less than significant impacts related to noise generated by the Santa Paula Airport.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Cumulative Impacts</p>			
<p>All the stationary sources would be required to provide shielding or other noise-abatement measures so as not to cause a substantial increase in ambient noise levels. Moreover, due to distance, it is unlikely that</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
noise from multiple cumulative projects would interact to create a significant combined noise impact. As such, it is not anticipated that a significant cumulative increase in permanent ambient noise levels would occur and, therefore, the impact would be less than significant.			
Public Services			
<i>Threshold: Result in substantial adverse impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:</i>			
<i>Fire Protection and Emergency Medical Services</i>			
<p>The Specific Plan will result in an increase in the need for services from existing Santa Paula Fire Department facilities, equipment, and staff personnel. No new facilities would be required to serve the Project Site as a result of the implementation of the Specific Plan. As such, mitigation is not required.</p> <p>The SPFD will review all future building plans and require adequate fire-flow pressure and flow rates through automatic fire sprinkler systems, fire hydrants, and other design features where appropriate (as required by appropriate federal, state, and local fire code and building code requirements. As such, potential impacts with regard to fire-flow requirements will be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<i>Police Services</i>			
Development of the Specific Plan would increase the demand for services and	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
resources provided by the Santa Paula Police Department. The Project would not require construction of new or expanded police protection facilities, project-related police protection impacts would be less than significant.			
Public Schools			
No new residential zoning or new residential development is proposed; the Project would not generate new housing with residents who would have a need for public school facilities. Therefore, the Project would not significantly impact the local school districts.	Less than Significant	No mitigation necessary.	Less than Significant
Parks and Recreation Facilities			
The Project does not include any new residential zoning or any new residential development projects, it would not result in an increase in the residential population that could visit the City's parks and recreation facilities. Project impacts would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Other Public Services			
Annexation of the Project area would shift all local government services to the City of Santa Paula. There would be increased demand for a variety of City resources, especially during the development planning, permitting, and inspection phases, and much less so thereafter. All services can be provided from the City's existing administrative facilities. No new governmental facilities would need to be constructed to administer governmental	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
services for the Project area, there would be no environmental impacts related to public facilities construction projects.			
Cumulative Impacts			
The City has regulations and ordinances in place to address impacts on public services (e.g., police, fire), including the provision and acquisition of new facilities and equipment. All planned development would be reviewed by the respective agencies and corresponding mitigation design features and payment of existing fees would be required prior to building permit issuance. Therefore, cumulative impacts associated with public services would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Transportation and Traffic			
Threshold: Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			
Existing with Project with Beckwith Road			
If Beckwith Road is extended south to Faulkner Road, 10 th Street and Harvard Boulevard intersection is forecast to operate at LOS D during the AM peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Significant	10th Street & Harvard Boulevard (Intersection 1). No feasible mitigation measures are available. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as physically feasible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these improvements were not considered to be a feasible mitigation measure.	
If Beckwith Road is extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is forecast to operate at LOS D during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	<p>TRA-1 Peck Road & Harvard Boulevard/Telegraph Road/Main Street (Intersection 8).This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane.</p> <p>Since this is a cumulative impact, the Project applicant shall be responsible for their fair share contribution for this mitigation improvement.</p>	Less than Significant
If Beckwith Road is extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way is expected to operate at LOS E during the PM peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by	Potentially Significant	<p>TRA-2 Peck Road & SR 126 EB On/Off Ramps/Acacia Way (Intersection 10). This intersection could be mitigated to LOS C or better by installing a traffic signal. A peak-hour signal-warrant analysis is provided in Appendix D of the Traffic Impact Analysis and indicates that the installation of a traffic</p>	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>		<p>signal would be warranted under existing plus project conditions during the PM peak hour.</p> <p>Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.</p>	
<p>If Beckwith Road is extended south to Faulkner Road, Beckwith Road and Telegraph Road is expected to operate at LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>TRA-3 Beckwith Road & Telegraph Road (Intersection 12). This intersection could be mitigated to LOS C or better by installing a traffic signal and reconfiguring the westbound approach. A peak-hour signal-warrant analysis is provided in Appendix E and indicates that the installation of a traffic signal would be warranted under existing plus project conditions. The westbound approach can be restriped to provide one right-turn lane, one through lane, and one left-turn lane (a reconfiguration of the existing two-way left-turn lane). With the development of the Santa Paula West Business Park, Beckwith Road will be widened to full City standards, which provide for a 64-foot roadway within an 84-foot right-of-way. With the additional roadway width, the northbound approach could be widened from its current single-lane configuration to provide one left-turn lane and one shared through/right-turn lane. With this configuration as mitigation, the intersection would operate at LOS C or better under existing plus project conditions.</p> <p>Since the impacts at this intersection are project-related impacts (rather than cumulative impacts to which the project would contribute), the Project applicant shall be responsible for providing 100 percent of these mitigation improvements.</p>	<p>Less than Significant</p>
<p>Existing with Project without Beckwith Road</p>			
<p>If Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-1.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Boulevard/Telegraph Road/Main Street would operate at LOS D during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>			
<p>If Beckwith Road is not extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps/Acacia Way would operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	Potentially Significant	Implementation of mitigation measure TRA-2 .	Less than Significant
<p>If Beckwith Road is not extended south to Faulkner Road, Beckwith Road and Telegraph Road would operate at LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	Potentially Significant	Implementation of mitigation measure TRA-3 .	Less than Significant
Other Impacts with Project			
<p>The freeway segments currently operate at LOS C or better in both directions. Based on the significance threshold for the Los Angeles County CMP, the Project will not operate at</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
LOS F after the addition of project traffic and the Project does not cause a net increase in traffic demand of 2 percent of capacity or more. Therefore, the Project would result in less than significant impacts to freeway and multilane segments.			
Threshold: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?			
An analysis was completed to comply with the monitoring requirements found in the Ventura County Transportation Commission's (VCTC) 2009 Ventura County Congestion Management Program (VCCMP). The analysis indicated that these facilities would operate at LOS C or better during both peak hours under the Existing plus Project scenario and cumulative base plus project conditions in the year 2031. Therefore, impacts to the VCCMP would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?			
The nearest airport is the Santa Paula Airport, located to the southeast of the Project Site. The Project Site is not located within any of the various safety zones established by the CLUP, nor is it within the Safety Zone, which includes the Inner Safety Zone (ISZ), the Outer Safety Zone (OSZ), and the Traffic Pattern Zone (TPZ), as provided in the City's General Plan Safety Element. Therefore, the	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Project would result in a less than significant impact to air traffic patterns or safety risks.			
Threshold: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			
The internal circulation network would be constructed in compliance with the Santa Paula Municipal Code and would not contain dangerous design features (e.g., sharp curves, dangerous intersections) and would be designed to accommodate traffic of the Project, including any delivery trucks related other commercial vehicles related to the uses allowed under the Specific Plan. Implementation of the Project would result in less than significant impacts related to roadway design features and incompatible uses.	Less than Significant	No mitigation necessary.	Less than Significant
Threshold: Result in inadequate emergency access?			
No changes are proposed that would impact emergency access. In addition, as required by the City's Fire Code all individual building permit applications will include a review by the SPFD to ensure adequate setbacks between structures are maintained and that all sides of a building can be accessed by emergency personnel and emergency equipment. Impacts with regard to emergency accessibility would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Threshold: Conflict with adopted policies, plan, or program regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			
The City's General Plan includes goals to ensure that City residents have alternative transportation opportunities, such as public transit, bikeways, and pedestrian routes. Therefore, impacts to public transit, bicycle, or pedestrian facilities would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
Cumulative Impacts			
Cumulative Base Conditions			
Under future conditions without the Project, 10th Street and Harvard Boulevard is expected to operate at LOS E during the AM Peak hour and LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.	Significant	10th Street & Harvard Boulevard (Intersection 1). No feasible mitigation measures are available. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a physically feasible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these improvements were not considered to be a feasible mitigation measure.	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Under future conditions without the Project, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is expected to operate at LOS E during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Significant</p>	<p>Implementation of mitigation measure TRA-1.</p> <p>This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.</p>	<p>Significant and Unavoidable</p>
<p>Under future conditions without the Project, Peck Road and SR 126 eastbound (EB) On/Off Ramps/ Acacia Way is expected to operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions with or without the Project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than Significant</p>
<p>Under future conditions without the Project, Faulkner Road and SR 126 westbound (WB) On/Off Ramps is expected to operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic</p>	<p>Potentially Significant</p>	<p>TRA-4 Faulkner Road & SR-126 Westbound On/Off Ramps (Intersection 11). This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach. The westbound approach can be restriped to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
generated from future conditions with or without the Project would cause or contribute to significant traffic impacts at this intersection.		lanes, this improvement would require coordination with and approval by Caltrans. Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.	
Cumulative with Project with Beckwith Road			
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Significant	10th Street & Harvard Boulevard (Intersection 1). No feasible mitigation measures are available. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a physically feasible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these improvements were not considered to be a feasible mitigation measure.	Significant and Unavoidable
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS F during the AM Peak	Significant	Implementation of mitigation measure TRA-1.	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>		<p>This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.</p>	
<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and SR 126 EB On/Off Ramps/Acacia Way would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than Significant</p>
<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Faulkner Road and SR 126 WB On/Off Ramps would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-4.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
cause or contribute to significant traffic impacts at this intersection.			
Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Beckwith Road & Telegraph Road would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	Implementation of mitigation measure TRA-3 .	Less than Significant
Cumulative with Project without Beckwith Road			
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Significant	10th Street & Harvard Boulevard (Intersection 1). No feasible mitigation measures are available. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes,	Significant and Unavoidable

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
		these improvements were not considered to be a feasible mitigation measure.	
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS F during the AM Peak hour and LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Significant	Implementation of mitigation measure TRA-1 . This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.	Significant and Unavoidable
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	Implementation of mitigation measure TRA-2 .	Less than Significant
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Faulkner Road and SR 126 Westbound On/Off Ramps would operate at LOS F during the AM Peak hour. The City of	Potentially Significant	Implementation of mitigation measure TRA-4 .	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.			
Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Beckwith Road and Telegraph Road would operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	Implementation of mitigation measure TRA-3 .	Less than Significant
Other Cumulative			
Of the 10 directional freeway segments selected for analysis, all are projected to operate at LOS E or better during both the AM and PM peak hours under cumulative base conditions. As defined in the VCCMP, the minimum desirable level of service on freeway segments is LOS E. Therefore, no freeway segments would be significantly impacted due to cumulative development.	Less than Significant	No mitigation necessary.	Less than Significant
Utilities			
Threshold: Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			
Development of the Project will result in the removal of the existing septic tanks that currently serve the site. Once developed and occupied, uses within the Specific Plan area	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>will generate wastewater that will be connected to the City’s sewer system and conveyed through a series of pipelines to the water recycling facility (WRF) for treatment. Effluent from the treatment plant must comply with the SPMC to meet the requirements of the Waste Discharge Requirements (WDR) permit issued to the City by the Los Angeles RWQCB.</p> <p>The treated effluent from the Project will not exceed applicable requirements, and the Project’s potential impacts related to wastewater treatment are less than significant.</p>			
<p>Threshold: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</p>			
<p>Water and recycled water pipeline construction impacts would be less than significant because they would be required to comply with the City’s noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation. In addition, no new or increased severity of impacts would occur as a result of the Project.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>The new WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2.0 mgd, so there is unused capacity at the facility to accept the</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>incremental addition of 0.026 mgd that is anticipated from occupancy of the Specific Plan area. Therefore, the Project would have less than significant impacts to wastewater treatment capacity within the City.</p>			
<p>Threshold: Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?</p>			
<p>As concluded in the Sanitary Sewer Technical Report, the Project Site sewer system will be in accordance with the City of Santa Paula design guidelines. The Santa Paula West sewer system is in agreement with the design flows anticipated within the City's Wastewater Master Plan for this development. Also, the main backbone, will have additional capacity before reaching 50% pipe utilization of 253 gpm (0.564 cfs) for future connections and therefore there would be no impacts.</p>	Less than Significant	No mitigation necessary.	Less than Significant
<p>Threshold: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</p>			
<p>The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. The detention basins will significantly reduce</p>	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>peak runoffs downstream by storing the peak event flows and lagging their release after the storm peak. The Project's proposed design features and drainage plan would not result in an increase in stormwater runoff from the site or exceed stormwater drainage requirements established by the ACOE, Ventura County Waterworks District (VCWWD), or City. Impacts would be less than significant.</p>			
<p>Threshold: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?</p>			
<p>Water demand from the Project represents 0.81 percent of City's total projected urban water demand in 2017, and decreasing to 0.65 percent in 2037.</p> <p>The 2010 Urban Water Management Plan (UWMP) Update projects total water demands for the Santa Paula Business Park through 2035 and demonstrates that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands. Therefore, there would be no impacts to available water supplies and no new or expanded entitlements are needed.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Threshold: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? Threshold: Comply with federal, state, and local statutes and regulations related to solid waste?</p>			
<p>As provided by the SPMC, Section 50.140, Construction and Demolition Diversion, demolition and construction must divert 50</p>	<p>Potentially Significant</p>	<p>SW-1 Before issuance of a demolition permit or construction permit, the applicant must implement waste reduction and recycling programs to divert construction solid</p>	<p>Less than Significant</p>

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>percent of waste tonnage from landfills. Separate calculations and reports are required for the demolition and construction portion of projects involving both activities. Impacts related to construction solid waste generation are considered potentially significant.</p>		<p>waste from the area landfill. A construction recycling plan must be submitted and approved by the Director of Public Works. A final report as to the amount recycled must be provided to the Director of Public Works at the completion of construction activities documenting the waste reduction efforts conducted, including a listing of solid waste diversion amounts, and the amount of waste sent to landfills. The report must also document how the construction contractor complied with applicable state and local statutes and regulations to reduce and recycle solid waste generated during construction.</p>	
<p>The proposed Project would account for less than 1 percent of the Toland Road Landfill permitted daily capacity. Additionally, the Project would account for less than 1 percent of the maximum permitted daily capacity for Chiquita Canyon Sanitary Landfill and Simi Valley Landfill & Recycling Center. However, the Chiquita Canyon Sanitary Landfill is only permitted through 2019. While there would be a substantial increase in generated solid waste on the Project Site, adequate landfill capacity appears to be available within the City and nearby landfills. Solid waste generated during construction and operation of the Project would be required to comply with all federal, state, and local statutes and regulations to reduce and recycle solid waste. Therefore, impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
Cumulative Impacts			
Wastewater	Less than Significant	No mitigation necessary.	Less than Significant

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>Completion of proposed Project improvements would convey most of the wastewater flow to the point of connection (POC) along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project's contribution to cumulative wastewater system and treatment impacts would be less than significant.</p> <p><u>Water</u></p> <p>The Specific Plan's demand for water use would meet the projected development demands within the City. Additionally, the Project would use less water than the existing agricultural operations. Therefore, the cumulative increase in water demand of related projects and build-out of the City pursuant to the General Plan is considered less than significant.</p> <p><u>Solid Waste</u></p> <p>The City would utilize the Toland Road Landfill until the landfill reaches capacity. At the time Toland Road Landfill closes, the City would utilize the capacity of the five remaining landfills previously used for solid waste disposal. The combined remaining capacity of the five landfills is estimated to last for 95 years, or an average of 19 years.</p>			

Project Impacts	Impact without Mitigation	Mitigation Measures	Impact with Mitigation
<p>As such, cumulative impacts would be less than significant because the six landfills discussed above have sufficient capacity for decades to service the development of the Specific Plan and other development requiring solid waste disposal.</p>			

2.4 SUMMARY OF ALTERNATIVES

The Draft EIR considered a range of alternatives to the Project in accordance with CEQA Guidelines Section 15126.6, which requires that an EIR describe and evaluate a range of reasonable alternatives to a project to promote informed decision making.

The alternatives to the Project evaluated in the Draft EIR include the following:

Alternative 1: No Project Alternative—No Development

Alternative 2: 25 Percent Reduction Alternative

Alternative 3: 50 Percent Reduction Alternative

A brief description of each of these alternatives is provided below, along with a summary of the evaluation of each.

According to the CEQA Guidelines, the discussion of alternatives should focus on alternatives to a project or its location that can feasibly avoid or substantially lessen the significant effects of the proposed project. Section 4.0: Environmental Impact Analysis, of the Draft EIR concludes that Project implementation would result in significant and unavoidable environmental impacts. These include construction and operation impacts to aesthetics; impacts to agricultural resources; construction impacts to air quality; and Project and cumulative impacts to transportation and traffic. In response to these impacts, the City of Santa Paula identified and considered several alternatives to the proposed Project to determine if the alternatives could avoid or substantially lessen these significant impacts.

Alternative 1: No Project Alternative—No Development

The No Project Alternative—No Development is required to be evaluated by Section 15126(2)(4) of the CEQA Guidelines. As required by the CEQA Guidelines, the analysis must examine impacts that might occur if the site were left in its present condition, as well as what may reasonably be expected to occur in the foreseeable future if the Project were not approved based on current plans and consistent with available infrastructure and community services. Under the No Project Alternative—No Development, the Project Site would not be developed with additional uses and would remain in its current state, as agricultural fields.

Alternative 2: 25 Percent Reduction Alternative

This alternative assumes that there would be a 25 percent reduction in the 53.81 acres that make up the proposed Project. This assumes that 75 percent, or approximately 40.36 acres, of the Project would be built within the Specific Plan area; and 25 percent, or approximately 13.45 acres, would remain under the

jurisdiction of the County of Ventura, with land use subject to the County's General Plan and zoning and agricultural operations continuing.

The 25 Percent Reduction Alternative would reduce impacts to agricultural resources, air quality, greenhouse gas, transportation and traffic, wastewater, solid waste, and stormwater when compared to the proposed Project. However, significant and unavoidable impacts would not be avoided or substantially lessened. Land use impacts would be greater because this alternative would be potentially inconsistent with the goals and objectives of the General Plan Land Use Element, specifically, objective 5(f), "Sufficient land should be provided for all uses, including parks, low-density residential, industrial and neighborhood commercial, to accommodate projected population growth to the year 2020."

Alternative 3: 50 Percent Reduction Alternative

Alternative 3 assumes that there would be a 50 percent reduction in the 53.81 acres that make up the proposed Project. This assumes that 50 percent, or approximately 26.90 acres, of the Project would be built with the Specific Plan area; and 50 percent, or approximately 26.90 acres, would remain under the jurisdiction of the County of Ventura, with land use subject to the County's General Plan and zoning, and agricultural operations continuing.

The 50 Percent Reduction Alternative would result in reduced impacts to aesthetics, agricultural resources, air quality, biological resources, greenhouse gases, noise, transportation and traffic, wastewater, solid waste, and stormwater when compared to the proposed Project, and would avoid the significant and unavoidable traffic impact of the proposed Project at one intersection. Land use impacts would be greater because this alternative would be potentially inconsistent with the goals and objectives of the General Plan Land Use Element, specifically, objective 5(f), "Sufficient land should be provided for all uses, including parks, low-density residential, industrial and neighborhood commercial, to accommodate projected population growth to the year 2020."

Environmentally Superior Alternative

The CEQA Guidelines require that an environmentally superior alternative be identified among the selected alternatives.¹ If the No Project Alternative is determined to be the environmentally superior alternative, an environmentally superior alternative must also be identified among the remaining alternatives.

Alternative 1, the No Project Alternative, would have the fewest impacts and would not result in any significant impacts; making it the environmentally superior alternative. However, the No Project

1 California Code of Regulations, tit. 14, sec. 15126.6(e)(2).

Alternative would not meet the objectives of the proposed Project. As noted above, if the No Project Alternative is determined to be environmentally superior, the CEQA Guidelines require that an environmentally superior alternative must also be identified among the remaining alternatives.

The environmentally superior alternative among the remaining alternatives would be Alternative 3, the 50 Percent Reduction Alternative. This alternative would avoid the significant and unavoidable traffic impacts identified at one intersection.

However, this alternative would not eliminate the significant and unavoidable impacts for aesthetics, agricultural resources, and air quality during construction; would not be consistent with applicable land use policies; and would not achieve the basic objectives of the Project as defined by the City of Santa Paula. Additionally, water usage would be greater by approximately 120.6 acre-feet per year (afy) when compared to the build-out of the proposed Project, because of the higher water use for the existing agriculture uses.

3.0 RESPONSES TO COMMENTS

This section provides written responses to all comments received on the Draft Environmental Impact Report (“Draft EIR”) during its public review period from November 4 through December 19, 2016. Some comments were received after the comment period closed. CEQA does not require Lead Agencies to respond to these comments; however, these are included with responses in this section. Comments were received in the form of letters and emails.

The City received 15 written comment letters and emails from state agencies, local agencies, private organizations, and the public, two of which were duplicate letters, making a total of 13 letters. A list of all letters and emails is provided in **Table 3.0-1: Comment Letters**.

Each comment within each comment letter or email has been numbered. Each response is also numbered to correspond to the relevant individual comment. The original letters and emails are provided after the complete set of responses.

**Table 3.0-1
Comment Letters**

Letter No.	Agency/Entity/Individual	Name of Commenter	Date of Comment
State Agencies			
1	Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	Scott Morgan (Director)	December 20, 2016
2	California Department of Fish and Wildlife	Betty Courtney, Environmental Program Manager I	December 16, 2016
3	Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	Scott Morgan (Director)	December 23, 2016
4	Department of Transportation	Dianna Watson, IGR/CEQA Branch Chief	December 20, 2016
Local Agencies			
5	County of Ventura Resource Management Agency	Tricia Maier, Manager	December 15, 2016
6	Ventura County Watershed Protection District	E. Zia Hosseinipour, Manager, Advanced Planning Section	December 6, 2016
7	County of Ventura Resource Management Agency	Whitney Wilkinson	December 15, 2016
8	Ventura County Air Pollution Control District	Alicia Stratton	December 6, 2016
9	Ventura Local Agency Formation Commission	Ventura Local Agency Formation Commission	N/A
10	Ventura Local Agency Formation Commission	Andrea Ozdy, Analyst	January 3, 2017
Other Organizations and Individuals			
11	Golden State Environmental Justice Alliance	Joe Bourgeois, Chairman of the Board	December 18, 2016
12	N/A	Joe Bourgeois	January 3, 2017
13	Julie Tumamait-Stenslie	Julie Tumamait-Stenslie	December 13, 2016

**RESPONSE TO COMMENTS RECEIVED ON THE DRAFT
ENVIRONMENTAL IMPACT REPORT**

State Agencies



EDMUND G. BROWN, JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE of PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

December 20, 2016

CITY OF SANTA PAULA

DEC 27 2016

RECEIVED

Janna Minsk
City of Santa Paula
970 Ventura St
Santa Paula, CA 93060

Subject: Santa Paula West Business Park Specific Plan
SC#:# 2014081104

Dear Janna Minsk:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on December 19, 2016, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

1-1

Document Details Report
State Clearinghouse Data Base

SCH# 2014081104
Project Title Santa Paula West Business Park Specific Plan
Lead Agency Santa Paula, City of

Type EIR Draft EIR
Description The specific plan would guide future land use development on approximately 53.81 acres of the city's 125-acre West Area 2 designation. West Area 2 was included as an expansion area in the city's general plan, which was approved by the city of Santa Paula in 1998. This designation allows for a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The land uses envisioned within the specific plan would be a mix of low-intensity industrial (such as light manufacturing or research and development), professional offices, and supporting commercial businesses. These uses are allowed in the commercial/light industrial and light industrial zones.

Lead Agency Contact

Name Janna Minsk
Agency City of Santa Paula
Phone (805) 933-4214
email
Address 970 Ventura St
City Santa Paula **State** CA **Zip** 93060
Fax

Project Location

County Ventura
City Santa Paula
Region
Lat / Long
Cross Streets Telegraph Road
Parcel No.
Township

Range	Section	Base
-------	---------	------

Proximity to:

Highways SR 126
Airports Santa Paula
Railways VCTC
Waterways Santa Clara River
Schools
Land Use Use of site includes ag. GP: Mixed use commercial/light industrial

Project Issues Landuse; Traffic/Circulation; Air Quality; Noise; Biological Resources; Geologic/Seismic; Water Quality; Toxic/Hazardous; Aesthetic/Visual, Archaeologic-Historic; Public Services; Other Issues: Agricultural Land; Drainage/Absorption; Flood Plain/Flooding; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Vegetation; Water Supply; Growth Inducing; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; Department of Water Resources; Office of Emergency Services, California; Caltrans, Division of Aeronautics; California Highway Patrol, Caltrans, District 7; Regional Water Quality Control Board, Region 4; Native American Heritage Commission; Public Utilities Commission; Department of Housing and Community Development

Date Received 11/04/2016 **Start of Review** 11/04/2016 **End of Review** 12/19/2016

Letter No. 1

Scott Morgan, Director
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit
Letter dated December 20, 2016

Response 1-1:

This comment does not address the information or analysis in the Draft EIR. No further response is required.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director



December 16, 2016

Governor's Office of Planning & Research

DEC 16 2016

STATE CLEARINGHOUSE

Clear

12/19/16

Mr. Stratis Perros
Deputy Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061-0569
sperros@spcity.org

Subject: Comments on the Draft Environmental Impact Report for the Santa Paula West Business Park Specific Plan, Ventura County, SCH#2014081104

Dear Mr. Perros:

The California Department of Fish and Wildlife (CDFW) received a Draft Environmental Impact Report from the City of Santa Paula for the West Business Park Specific Plan Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW previously submitted comments in response to the Notice of Preparation on September 26, 2014 to the City of Santa Paula (City).

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802, Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed

2-1

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

Conserving California's Wildlife Since 1870

Mr. Stratis Perros
Deputy Planning Director
City of Santa Paula
December 16, 2016
Page 2 of 3

may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

2-1

PROJECT DESCRIPTION SUMMARY

The proposed Specific Plan contains a comprehensive set of plans, exhibits, regulations, conditions, and programs for orderly development of the Santa Paula West Business Park, which is designed to contain a combination of professional office, manufacturing, research and development, and limited commercial uses on approximately 54 acres located along the western edge of the City of Santa Paula. In addition to regulating land use, the Specific Plan addresses vehicular circulation, landscaping, pedestrian walkways, and infrastructure. The proposed Specific Plan area is bounded to the north by Telegraph Road, to the east by existing industrial and commercial development within the existing Santa Paula City limits, to the south by agriculture, and to the west by Adams Barranca. The Adams Barranca, located along the western boundary of the business park, would be zoned Open Space/Passive. The Specific Plan area also contains frontage along State Route 126 and Telegraph Road, and is bisected by the Ventura County Transportation Commission railroad right-of-way.

2-2

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

Biological Mitigation Measures: The DEIR provides thorough evaluation of potential biological impacts and has developed biological mitigation measures BR-1 through BR-10 to reduce potential impacts. The following comments are made to help further clarify and specify actions within the measures.

1. Biological mitigation measures BR-3 and BR-4 are thoroughly developed to reduce potential impacts to native nesting birds. However, least Bell's vireo and southwestern willow flycatcher, both State and federally-listed species have the potential to occur in suitable habitat in Adams Barranca. CDFW recommends a biological mitigation measure be developed that requires protocol level surveys for least Bell's vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax trailii extimus*) within the suitable habitat along the Adams Barranca.

Survey protocol for least Bell's vireo can be found at:

<https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/LBVireo.2001.protocol.pdf>.

Survey protocol for southwestern willow flycatcher can be found at:

<https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/SWWFlycatcher.2000.protocol.pdf>.

2-3

Mr. Stratis Perros
Deputy Planning Director
City of Santa Paula
December 16, 2016
Page 3 of 3

2. Biological mitigation measure BR-10 specifies CDFW streambed jurisdiction mitigation ratios and options. CDFW concurs with the DEIR that a Lake and Streambed Alteration Agreement (LSA) Notification should be submitted to CDFW for the project. However, although the options outlined in BR-10 look feasible, CDFW recommends mitigation ratios and options for impacts be negotiated during the LSA process after a CDFW Environmental Scientist has reviewed the Project on site.

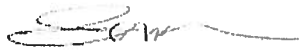
2-4

Minimum Setback Distance: The DEIR discusses the proposed Project along the open space zoning but does not clearly specify a recommended buffer area setback. CDFW submitted comments on the Notice of Preparation on September 26, 2014. As stated in the letter, CDFW concurs with the Open Space zoning and would like to again recommend a minimum setback of 100-150 feet between the edge of riparian habitat within the Adams Barranca and the Open Space adjacent to the barranca to facilitate stream habitat function and wildlife use.

2-5

Thank you again for the opportunity to comment on the referenced DEIR and for the City's thorough evaluation of potential biological impacts based on CDFW's NOP comment letter, and on other comment letters provided at the NOP stage. Questions regarding this letter and further coordination on these issues should be directed to Dan Blankenship, Senior Environmental Scientist (Specialist), at (661) 259-3750 or Daniel.Blankenship@wildlife.ca.gov.

Sincerely,



for
Betty J. Courtney
Environmental Program Manager I

ec: Christine Found-Jackson, CDFW, Westlake Village
Brock Warmuth, CDFW, Ventura
Scott Morgan (State Clearinghouse)

Letter No. 2

Betty J. Courtney, Environmental Program Manager I
California Department of Fish and Wildlife (CDFW)
Letter dated December 16, 2016

It should be noted that this letter was submitted directly to both the City and the State Clearinghouse. The letters are identical; to avoid confusion, only one copy of the letter has been included in this document.

Response 2-1:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 2-2:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 2-3:

In response to the potential for least Bell's vireo and southwest willow flycatcher to exist on or near the Project Site, a requirement to conduct protocol surveys for these species prior to construction has been added to mitigation measure **BR-3**. The Draft EIR has been revised accordingly and edits can be found in **Section 4: Revisions to the Draft EIR**.

Response 2-4:

The Project will comply with the requirements of CDFW and the Lake and Streambed Alteration (LSA) Program. Should the ratios and options identified in the EIR be revised as part of the process, they will be documented in the Streambed Alteration Agreement (SAA) that will result.

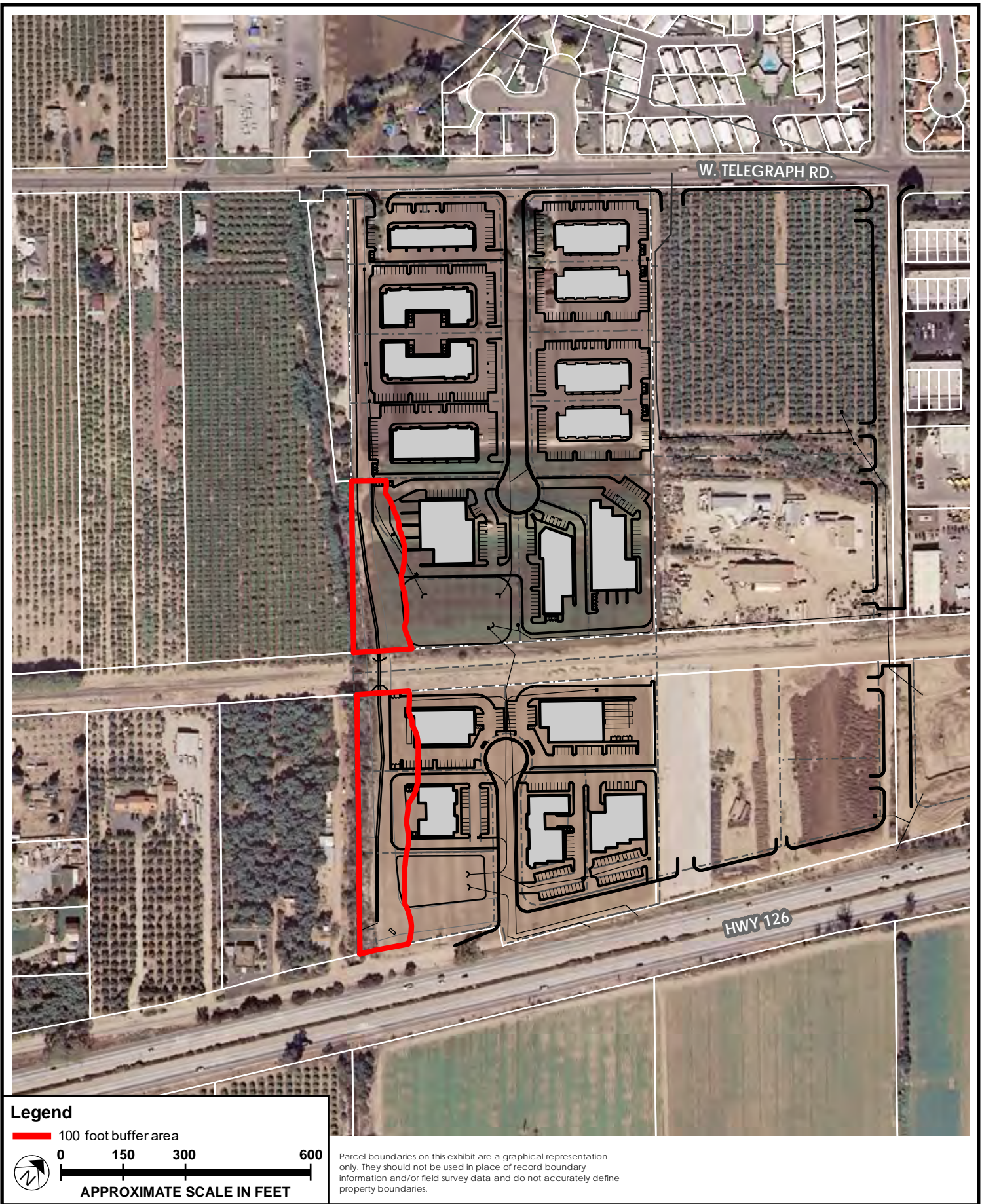
Response 2-5:

The proposed Specific Plan requires that all development be set back 100 feet from the upland edge of the riparian habitat in the Adams Barranca. As shown in **Figure 3.0-1: Proposed Riparian Habitat Buffer for Adams Barranca**, the buffer will be located along the southern portion of the Project Site and Assessor Parcel Numbers (APNs) 098-0-010-150 and 098-0-010-190. The buffer will not include the area adjacent to parcel APN 098-0-010-420 to the south because that parcel is developed and is located between the Project Site and the Adams Barranca.

The buffer area will be limited in use, and construction of the buildings outside the buffer and landscaping activities inside the buffer are required to be conducted to not degrade lakes, ponds, wetlands, or perennial watercourses in the Adams Barranca through filling, sedimentation, erosion, increased turbidity, or other contamination. Additionally, within the buffer area, permitted uses will include the following: passive recreation; educational uses; utility lines; pipelines; drainage and flood control of facilities; bridges and road approaches to bridges to cross a stream; and approved roads.

All permitted development in or adjacent to streams, wetlands, and other aquatic habitats must be designed and/or conditioned to prevent loss or disruption of the habitat, protect water quality, and maintain or enhance (when feasible) biological productivity. Design measures to be provided include but are not limited to:

- i. Flood control and other necessary instream work shall be implemented in a manner than minimizes disturbance of natural drainage courses and vegetation.
- ii. Drainage control methods shall be incorporated into projects in a manner that prevents erosion, sedimentation, and the discharge of harmful substances into aquatic habitats during and after construction.



SOURCE: Meridian Consultants - 2017

FIGURE 3.0-1



EDMUND G. BROWN JR.
GOVERNOR

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT



KEN ALEX
DIRECTOR

December 23, 2016

CITY OF SANTA PAULA

JAN 03 2017

RECEIVED

Janna Minsk
City of Santa Paula
970 Ventura St
Santa Paula, CA 93060

Subject: Santa Paula West Business Park Specific Plan
SCH#: 2014081104

Dear Janna Minsk:

The enclosed comment (s) on your Draft EIR was (were) received by the State Clearinghouse after the end of the state review period, which closed on December 19, 2016. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project.

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2014081104) when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures
cc: Resources Agency

3-1

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0615 FAX (916) 323-3018 www.opr.ca.gov

Letter No. 3

Scott Morgan, Director
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit
Letter dated December 23, 2016

Response 3-1:

A response to the Department of Transportation (DOT) comments is provided as part of the responses to Letter No. 4.

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF REGIONAL PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE: (213) 897-6536
FAX (213) 897-1337
www.dot.ca.gov

SCH 2014 08 1104



Serious drought.
Help save water!

December 20, 2016

Governor's Office of Planning & Research

DEC 23 2016

STATE CLEARINGHOUSE

Ms. Janna Minsk
City of Santa Paula
970 Ventura Street
Santa Paula, CA 93060

Cate
12/14/16 E

RE: Santa Paula West Business Park
Specific Plan
Vic. VN-126/ PM R9.72
GTS#07-VEN-2016-00019ME-DEIR

Dear Ms. Minsk:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced plan. The Specific Plan would guide future land use development on approximately 53.81 acres of the City's 125-acre West Area 2 designation. This designation allows for a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The Specific Plan also serves to facilitate development within the Project Site as a master-planned business park that includes a variety of light industrial and commercial uses.

The nearest State facility to the proposed project is State Route-126. As stated in the Draft Environmental Impact Report, the traffic analysis indicated that the proposed project would cause or contribute to significant traffic impacts at the following intersections. Included below are also proposed mitigations at each location:

- **Peck Road & SR 126 EB on/off ramps/Acacia Way-**
This intersection could be mitigated to LOS C or better by installing a traffic signal.
- **Faulkner Road & SR 126 Westbound on/off ramps-**
This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach. The westbound approach can be restriped to provide one share through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provided two lanes, this improvement would require coordination with and approval by Caltrans

4-1

4-2

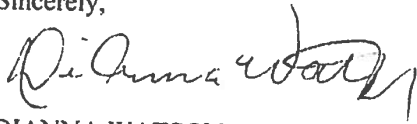
It is noted that because these are cumulative impacts, the Project applicant would only be responsible for their fair share contributions for these mitigation improvements. Caltrans is in agreement with the proposed mitigation and have no additional comments.

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Ms. Minsk
December 20, 2016
Page 2

In the spirit of mutual cooperation, Caltrans staff is available to work with your planners and traffic engineers for this project, if needed. If you have any questions regarding these comments, please contact project coordinator Ms. Miya Edmonson, at (213) 897-6536 and refer to GTS# VEN-2016-00019ME.

Sincerely,



DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

*"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"*

Letter No. 4

Dianna Watson, Branch Chief
California Department of Transportation (Caltrans)
Letter dated December 19, 2016

It should be noted that this letter was submitted directly to the City, as well as to the State Clearinghouse (see Letter No. 3). The letters are identical; to avoid confusion, only one copy of the letter has been included in this document.

Given the time since the original traffic study was conducted, the City of Santa Paula requested that a traffic baseline and growth forecast validation be conducted. This information is contained with **Appendix F: Baseline Traffic and Growth Validation** of this Final EIR. Based on this data and analysis, it was determined that the conclusions of the original traffic impact study remain valid and that no new significant impacts would occur that are not already identified in the original study.

Response 4-1:

The Draft EIR addresses mitigation for this intersection (Intersection 10) that is consistent with this recommendation, as shown in mitigation measure **TRA-2** in Section 4.13: Transportation and Traffic. As shown, this mitigation measure requires the installation of a traffic signal.

Response 4-2:

As shown in the Section 4.13: Transportation and Traffic of the Draft EIR, this mitigation measure requires the reconfiguration of the westbound approach by restriping to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two lanes, this improvement would require coordination with and approval by Caltrans.

Local Agencies

RESOURCE MANAGEMENT AGENCY

Planning Division

Kimberly L. Prillhart
Director

county of ventura

December 15, 2016

City of Santa Paula
Planning Department
Attn: Janna Minsk, Planning Director
970 Ventura Street
Santa Paula, CA 93060

Subject: Comments on the NOA/NOC for the Santa Paula West Business Park Specific
Plan DEIR

Dear Ms. Minsk:

Thank you for the opportunity to review and comment on the subject document. Attached are the comments that we have received resulting from intra-county review of the subject document. Additional comments may have been sent directly to you by other County agencies.

Your proposed responses to these comments should be sent directly to the commenter, with a copy to Clay Downing, Ventura County Planning Division, L#1740, 800 S. Victoria Avenue, Ventura, CA 93009.

If you have any questions regarding any of the comments, please contact the appropriate respondent. Overall questions may be directed to Clay Downing at (805) 650-4047.

Sincerely,



Tricia Maier, Manager
Planning Programs Section

Attachment(s)

County RMA Reference Number 14-019-1

5-1

800 South Victoria Avenue, L# 1740, Ventura, CA 93009 (805) 654-2481 Fax (805) 654-2509



Printed on Recycled Paper



Letter No. 5

Tricia Maier, Manager
County of Ventura Resource Management Agency
Planning Division
Memorandum dated December 15, 2016

Response 5-1:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

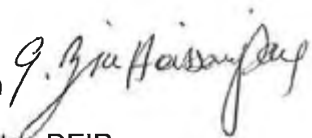


VENTURA COUNTY WATERSHED PROTECTION DISTRICT
WATERSHED PLANNING AND PERMITS DIVISION
800 South Victoria Avenue, Ventura, California 93009
Sergio Vargas, Deputy Director – (805) 650-4077

MEMORANDUM

DATE: December 6, 2016

TO: Janna Minsk, AICP, Planning Director
City of Santa Paula Planning Department
970 Ventura Street, Santa Paula, CA 93060
jminsk@spcity.org

FROM: E. Zia Hosseinipour, Manager, Advanced Planning Section 

SUBJECT: RMA14-019-1 Santa Paula West Business Park Specific Plan DEIR
City of Santa Paula
APNs: 098-0-010-150; -160; -180; -190; 098-0-020-040; 53.8 Acres
Adams Barranca, Santa Clara River Watershed, Zone 2
Watershed Protection District Project No. WC2016-0108

Pursuant to your request, this office has reviewed the Draft Environmental Impact Report for Santa Paula West Business Park Specific and offers the following comments.

PROJECT LOCATION:

The Project Site is a 53.81-acre area near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The Project Site is bound to the north by Telegraph Road, to the south by SR 126, to the east by existing industrial and commercial developments in the existing City limits, and to the west by the Adams Barranca and agricultural operations. The Project Site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way.

PROJECT DESCRIPTION:

The Santa Paula West Business Park Specific Plan encompasses approximately 58 acres of land in unincorporated Ventura County west of the City of Santa Paula. The proposed Specific Plan would permit the development of a variety of manufacturing, research and development, professional office, and limited commercial uses.

WATERSHED PROTECTION DISTRICT COMMENTS:

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Specific Plan Draft EIR
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A. General Comments

1. Adams Barranca is a District jurisdictional redline channel that borders the west side of the project site. At the project site, the barranca has a catch basin area of 5,580 acres (8.7 square miles) and a 100-year peak discharge of 6,880 cubic feet per second (cfs) according to the official Santa Clara River Feasibility Study HSPF hydrologic study report. The barranca is mostly a natural earthen channel with occasional farm berms. Based on the Preliminary Drainage Report prepared for this project, all road crossing structures have inadequate capacities to pass the 100-year discharge, with the double culvert under Highway 126 having a capacity of 2,200 cfs. In the existing conditions, stormwater may break out of the barranca at the upstream and downstream of Telegraph Road and flood the agricultural lands on both side of the barranca. Some of the break-out stormwater may flow through the project site and join Todd Lane Drain before joining the Santa Clara River. 6-1
2. This project proposes to fill the project site and raise the ground elevation up to 6 feet to bring the site out of the 100-year floodplain. Please analyze the regional hydrologic impacts of the project due to loss of the natural storage and blockage of the flow path to Todd Lane Drain. Please evaluate mitigation measures if the impacts are found to be significant. 6-2
3. The hydraulic analysis indicates that around 2,637 cfs stormwater would break out of the barranca upstream of the Telegraph Road, overtop the road and join the proposed parallel channel on the project site under post-development conditions. Please explain how the breakout water would be collected and directed to the excavated channel. 6-3
4. Initial investigation shows that stormwater may breakout further upstream (upstream of Santa Paula Street) during a 100-year storm event and potentially impact the project site. Please extend the hydraulic model further upstream to fully evaluate the onsite flood risks for both the existing and proposed conditions. 6-4
5. Due to the close proximity of the proposed parallel channel with the barranca, please analyze the stability of the east bank of the barranca under the proposed conditions. 6-5
6. Please discuss the sediment management strategy for the proposed project. 6-6

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7. The Draft EIR does not discuss the potential impacts to the project from the District debris basin located upstream of Foothill Road. This basin traps the medium to coarse sediment generated in the upper watershed by smaller storms, but has the potential to fill with sediment and/or floodwaters in larger storms. Any potential impacts to the project should be discussed in the Final EIR and addressed during the final design phase of the project.
8. The drainage report and plans to be provided during the final design phase of the project will be reviewed to confirm that they have achieved the level of mitigation presented in the Draft EIR and that they meet the design criteria of the Ventura County Watershed Protection District and the City of Santa Paula.

6-7

6-8

B. Detailed Comments

On Santa Paula West Business Park Specific Plan EIR Report

9. On page 2.0-27, "*Grading over the Project Site includes an estimated 80,000 cubic yards of cut and 179,000 cubic yards of fill, requiring the import of approximately 99 cubic yards of soil*". Please replace "99 cubic yards" with "99,000 cubic yards" for the statement to read correctly.
10. On page 2.0-27, "*One acre of land within the Specific Plan boundary has been set aside for detention basins totaling approximately 6 acre-feet of volume*". If the volume of cut is 80,000 cubic yards (50 acre-feet) and the detention basins volume is 6 acre-feet, please explain where the remaining 44 acre-feet of cut is coming from.
11. On page 2.0-27, "*The basin along Adams Barranca will include debris catchment facilities to reduce debris from storm flows that have caused problems at the railroad culvert and the Caltrans culvert in this channel*". Please determine debris yield of Adams Barranca at the project site, design and discuss debris catchment facilities, and develop an operation and maintenance plan for the facilities.
12. On page 2.0-27, "*These detention basins will serve dual roles of flood protection and water quality enhancement*". On page 4.9-19, "*The detention basins will be sized to treat 10 percent of the 50-year storm event from the storm drain, consistent with the Ventura County SQUIMP guidelines*". "*The Peak flows would*

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6-12

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not exceed existing conditions, so there would not be adverse effects downstream". In addition, these basins (or some of them) are designed to catch debris (see comment #9 above). Please analyze and explain how all these functions for the basins are achieved simultaneously.

6-12

13. On page 2.0-28, "*The new channel would join with the existing Adams Barranca at the railroad crossing and the SR 126 crossing*". The report indicates the split flows would not be able to re-join the barranca at the railroad crossing or at the SR 126 culvert under the existing conditions. No plans are included to show how the new channel would join the existing Adams Barranca at these locations. There is no impact analysis resulting from these modifications to the existing Adams Barranca. Please analyze and illustrate the proposed juncture with Adams Barranca.

6-13

On EIR Appendix 4.9: Adams Barranca Existing Condition Hydrology Study and Preliminary Hydrology Report for Santa Paula West Business Park

14. There are three sets of hydrology/drainage study reports included in this appendix: 1) Adams Barranca Existing Condition Hydrology Study, dated December 2011; 2) Santa Paula West Business Park Preliminary Drainage Report, dated February 2011; and 3) Santa Paula West Business Park Preliminary Drainage Report, dated November 2015. Some of the information contained in the previous reports is either obsolete or outdated. For example, the project boundary in the exhibit in Appendix A of the first report is obsolete, and the basin layouts on exhibits in the second report are outdated. To facilitate future reviews and for better documentation, please consolidate the analyses into one updated report. The District's review has been focused on the latest drainage report dated November 2015.

6-14

15. For regional hydrology, please use the Santa Clara River Feasibility Study HSPF results since it has been reviewed and approved by FEMA, USACE, and the District. This will facilitate future CLOMR/LOMR applications. It is acceptable to use the VCRAT program to evaluate onsite hydrology and project impacts. The VCRAT program incorporates more detailed subareas and routing reaches.

6-15

16. There is no discussion or explanation of how the proposed basins would function simultaneously as detention basins, water quality basins, and debris basins. There are no calculations to support the numbers in Table 2B – Santa Paula West Business Park Specific Plan Proposed Runoffs with Detention. Although

6-16

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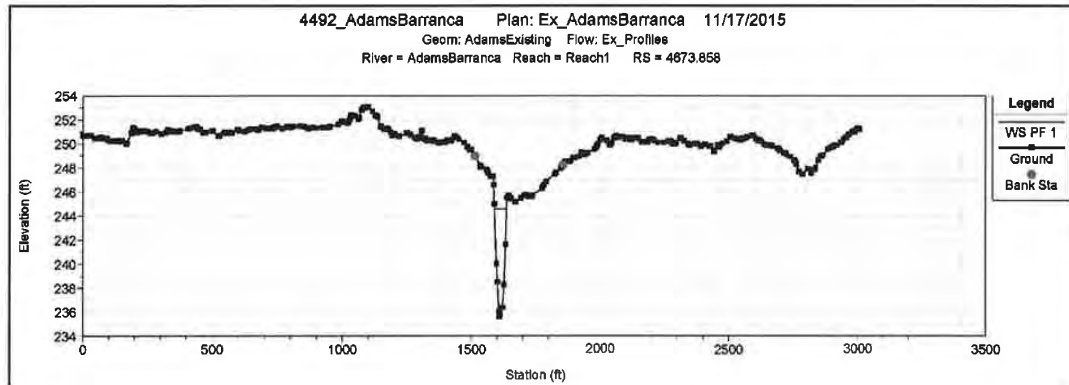
there are Pond Reports for detention basins in the second report, that report is outdated due to a change of basin layouts.

6-16

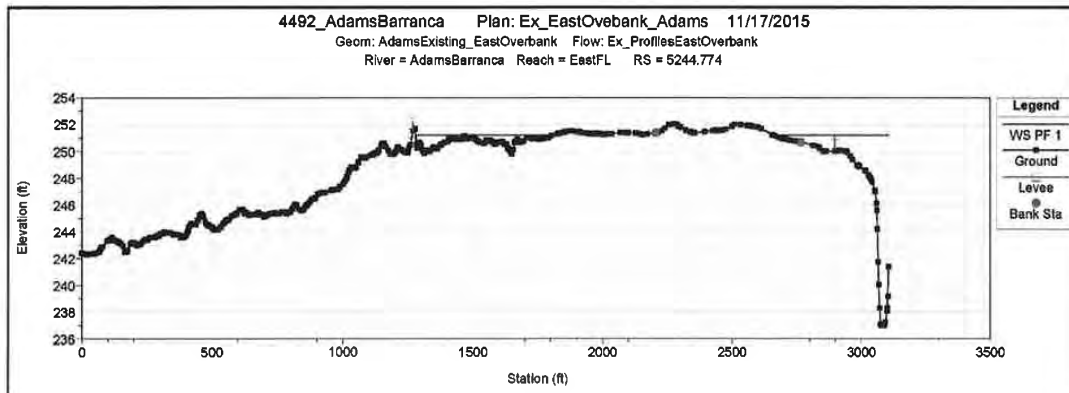
17. There appear to be critical errors in the existing conditions HEC-RAS model setup. One example is that the channel flow conveyance is utilized three times by the three different plans: the main channel plan - Ex_AdamsBarranca, the east overbank flow plan - Ex_EastOverbank_Adams, and the west overbank flow plan - Ex_WestOverbank_Adams (see figures below).

6-17

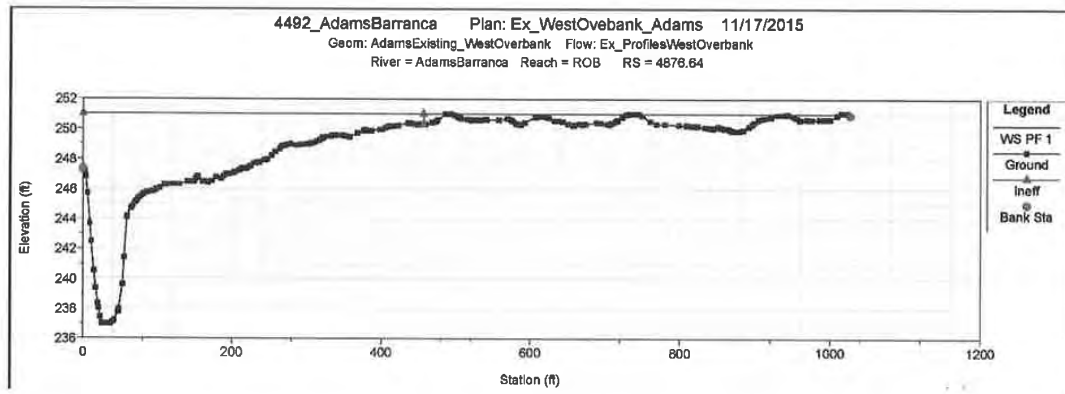
18. For the proposed condition HEC-RAS model, please show the complete proposed channel geometry (fill).



6-18



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6-18

Thank you for the opportunity to review the Draft EIR for this project.

END OF TEXT

Letter No. 6

E. Zia Hosseinipour, Manager
Ventura County Watershed Protection District
Advanced Planning Section
Letter dated December 6, 2016

Response 6-1:

At the Project Site, Adams Barranca has catch basins areas of 5,580 acres and a 100-year peak discharge of 6,880 cubic feet per second (cfs), according to the Santa Clara River Feasibility Study Hydrologic Simulation Program–FORTRAN (HSPF) hydrological study report. Based on the *Santa Paula West Business Park Preliminary Drainage Report*, the roads crossing the structures have inadequate capacities to pass the 100-year discharge with the double culvert under Highway 126, which has a capacity of 2,200 cfs. As noted in the existing conditions discussion (Section 4.9.1 of the Draft EIR), stormwater may break out of the barranca at the upstream and downstream Telegraph Road and flood agricultural fields on both sides of the barranca.

As noted in Table 4.9-3: Existing Condition Flow Summary, in Section 4.9: Hydrology and Water Quality, of the Draft EIR, a small portion of the Santa Paula West Business Park Project Site drains west into Adams Barranca, and Adams Creek runs along the western edge of the proposed Project area. Adams Barranca is a raised channel; on average, the top of the channel is 2 feet higher than the adjacent grade on the Project Site. This portion of the property is subject to flooding during a 100-year storm event from Adams Barranca.

The SR 126 westerly culverts (Area B) currently accepts the flow from approximately 27 acres. Overflow from pipe inlet blockage travels easterly to two other culverts under SR 126 or further east to the inlet at the end of Faulkner Road into a 72-inch reinforced concrete pipe (RCP) leading to the Todd Lane drain. The SR 126 easterly culverts (Areas C and D) currently accept flows from approximately 31 acres. Overflow from pipe inlet blockage travels easterly to the inlet at the end of Faulkner Road into a 72-inch RCP leading to the Todd Lane drain.

As shown in Figure 4.9-2: Current FEMA Flood Insurance Map, in the Draft EIR, the western portion of the site is designated as Flood Zone A, an inaccurate determination of current existing conditions, resulting from Adams Creek overtopping its banks during a 100-year storm event. This flooding is caused by lack of capacity within the channel, lack of capacity at the SR 126 undercrossing, and debris issues at the railroad bridge.

Flood control structures in the vicinity are undersized. The proposed Project provides flood protection for the Project Site and removes proposed development areas from the flood plain without causing adverse effects on existing structures or properties.

As part of the Project, flood control structures would be redesigned and constructed to address the deficiencies by identifying a conservative breakout condition and incorporating into the Project design a safe route for potential overflow around or through the Project Site. As shown in Figure 4.9-3: Conceptual Grading & Drainage Plan, in the Draft EIR, storm drain facilities would be sized to meet City of Santa Paula standards and would accommodate the increased runoff generated by the increase in impervious surfaces. The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions; thus, there would not be adverse effects downstream. Therefore, potential impacts are considered less than significant.

The Project will not increase the flood risk or contribute additional flows to the undersized facilities mentioned in the comment.

Response 6-2:

The proposed Project will replace or match existing storage such that the regional hydrological impacts of the loss of natural storage caused by fill placed on the Project Site would not affect other properties in the area beyond allowed limits. As proposed, the Project will not block the flow path to Todd Lane drain on the east edge of the site because flow areas to the drain would be replaced by new storm drain systems with normal design capacities and include overflow paths. The Project will accept and pass flows that might reach the upstream edge (breakout upstream) from Adams Barranca from existing conditions that affect the Project Site.

The Project will be designed to ensure that any fill within the existing flood is replaced with a comparable amount of storage for flood waters within the flood plain area remaining on the Project Site. The filling of the flood plain within the site will not, therefore, significantly affect off-site flood limits.

Response 6-3:

The development plan proposes an interceptor ditch along the south edge of Telegraph Road to collect water reaching the Project Site from any upstream breakout condition affecting this edge. Under current conditions, this potential overflow would occur as a wide surface flow that would crest over the centerline of Telegraph Road at the road's low points. As noted in the Draft EIR, the expected magnitude of flow

path of this water has been identified, and the ditch will collect the potential overflow water and divert it around edge of the Project Site.

Response 6-4:

The City disagrees that additional analysis is required. The flooding analysis for Adams Barranca extends for nearly 6,500 feet, 2,500 feet below the site extending to the Santa Clara River and 1,500 feet above the site. To establish these limits, the regional flow patterns were reviewed in relation to the proposed Project Site. The model provides a conservative assessment beginning with all potential flows in Adams Barranca. Predominant overland flow above Telegraph Road, as well as more pronounced flow above Santa Paula Street, is to the west toward Clow Road (Haines Barranca) or to the east and the existing City systems that drain to the Todd Lane drain.

Flow patterns above the area included in the model will be affected by Santa Paula Street, which is about 1,000 feet above the model limits and 2,500 feet above the Telegraph Road edge of the site. Santa Paula Street will likely direct any breakout that could affect the Project Site back to the Adams Barranca. Examination of the land above Santa Paula Street did not identify any indication of potential breakout and flow pattern that would change the model result to a more significant flood concern from the Adams Barranca watershed caused by the Project Site.

The model's conservative results used for the evaluation are likely the worst-case condition. The land above the area included in the model on the east side is higher than the west side; if water were to breakout to the west side of the Adams Barranca above Santa Paula Street, it would not return to Adams Barranca. Breakout to the east is unlikely because this side is higher. If this were to occur, it could potentially affect the Todd Lane drain. In considering these factors, the analysis boundary establishes a conservative model for the environmental review of the Project.

Response 6-5:

As proposed and described in the Draft EIR, the west side of the site at the flood protection edge (east edge of the Adams Barranca watershed) will safely convey the flow, considering velocity and scour potential. This edge protection may use rock, concrete, or other suitable material needed to meet flow velocity and scour potential. Final design of the improvement will be illustrated and presented to the City and, as necessary, to the Watershed Protection District, to show stable conditions prior to construction permitting.

Response 6-6:

Current sediment management for Adams Barranca will not be significantly affected by the Project. The Project will include on-site management of on-site sediment for both construction and permanent development through best management practices, vegetation, and low-impact development standards. The capacity of the bypass channel for Adams Barranca overflows will be designed to pass sediment flows and be maintained to remove sediment and debris that may be deposited.

Response 6-7:

The Adams Canyon debris basin is a publicly funded and maintained debris basin located approximately 6,500 feet upstream from the proposed Project and has a storage capacity of more than 84,000 cubic yards. The large ponding area and outlet structure control will provide storm flow attenuation during storm events; with proper maintenance, this basin will reduce the sediment that occurs in Adam Barranca. The debris basin will not affect the proposed Project, and no additional analysis is needed for this reason.

Response 6-8:

The comment is noted. Final design plans will be submitted to the District as requested.

Response 6-9:

The Final EIR has been revised to correct this typographic error, and the edit has been made to page 2.0-27.

Response 6-10:

Detention basin area (volume) and amount of Import are separate and unrelated quantities. Any earthen material required to raise grade above flood plain elevations, not available from on-site excavations, will be imported.

Response 6-11:

The capacity of the bypass channel for Adams Barranca overflows will be designed to pass sediment flows and be maintained to remove sediment and debris that may be deposited. The detailed design of this overflow path will address the debris expected to occur within this watershed. The required size of the facilities will be determined in the detailed final design.

Response 6-12:

On-site detention basins will be designed to mitigate on-site development impacts to the extent required by the MS-4 permit and as normal site development considerations. The detention basins will include storage to reduce post development flow to less than existing peak flows. The on-site basins will provide

infiltration volumes and/or on-site storage to capture the first flush per the MS-4 permit. Please see the *Santa Paula West Business Park Preliminary Drainage Report* (page 8), dated November 2015, for a complete description of the water treatment prior to discharge into the detention basins.

Response 6-13:

The onsite conveyance at the lower southwest corner of the site would combine with flow in Adams Barranca by removing and reconstructing much of the lower +/-250 feet of the east bank of the Barranca. This will allow the overflow to rejoin with the Adams Barranca flow as it reaches the existing SR 126 culvert. Additional ponding will be accommodated within the Project Site channel, and the lower corner of the site will be designed to replace flood plain storage from what currently exists. The storage on the Caltrans culvert is potentially undersized, so the comingled flows would be designed to pond to a depth equal to or near present condition before finding overland relief across the SR 126.

Response 6-14:

The applicable reports are the *Adams Barranca Existing Condition Hydrology Study* dated December 2011 and the *Santa Paula West Business Park Preliminary Drainage Report*. It appears the District has reviewed the appropriate reports.

Response 6-15:

The regional hydrology information from the reports identified in this comment was used in the hydrology study for the Project.

Response 6-16:

See **Response to Comment 6-12**.

The on-site stormwater quality and on-site basin final design will be reviewed by the City of Santa Paula.

Response 6-17:

The existing condition HEC-RAS model setup has a levee in place on the east overbank plan so that the flow conveyance of the channel is not included in the cross-sectional area for flow. The west overbank area has ineffective flow area where the main channel is located and, therefore, is not accounted for in the water surface elevations of the cross sections. The final Conditional Letter of Map Revision (CLOMR) application will show the existing and proposed conditions per Federal Emergency Management Agency (FEMA) requirements.

The model runs have been reviewed, and there are no errors.

Response 6-18:

The cross sections for the proposed condition in the HEC-RAS model shows the parallel channel and the proposed preliminary design. As the site moves forward in design, the HEC-RAS model will be updated accordingly and will meet the FEMA requirements for a CLOMR.



Memorandum

County of Ventura • Resource Management Agency • Planning Division
800 S. Victoria Avenue, Ventura, CA 93009-1740 • (805) 654-2478 • ventura.org/rma/planning

DATE: December 15, 2016

TO: Janna Minsk, AICP, Planning Director

FROM: Whitney Wilkinson, Ventura County Planning Division

SUBJECT: Notice of Availability of a Draft Environmental Impact Report for the Santa Paula West Business Park Specific Plan (RMA 14-019-1)

The Ventura County Planning Division has reviewed the Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan, and have the following comments that the City of Santa Paula should consider with regard to the analysis of impacts to biological resources.

1. Wetlands and Waters

The DEIR provides for an area adjacent to Adams Barranca to serve as passive open space. However, the DEIR does not provide the buffer distance of this passive open space between the Adams Barranca and the boundary of proposed disturbance and/or development.

Adams Barranca is a Ventura County Red Line Channel that flows into the Santa Clara River. According to the DEIR, it supports “a mixed southern willow riparian woodland vegetation community with trees and shrubs within the banks and along the channel within the ordinary high water mark.” In addition, it has the potential to support special status wildlife species. Biological Resource Policy 1.5.2-4 in the Ventura County General Plan Goals Policies is as follows:

Discretionary development shall be sited a minimum of 100 feet from significant wetland habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall

7-1

be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.

7-1

Based on the information in the DEIR, it would appear this drainage functions as a Significant Wetland Habitat. It is recommended the buffer distance between Adams Barranca and proposed development be at least 100 feet in order to establish consistency with this policy. In addition, clarification is needed as to what is proposed for this buffer area and what is meant by “passive open space”.

2. Federally Listed Species

The DEIR states that there is marginal habitat for southwestern willow flycatcher (*Empidonax trailii extimus*) (FE, SE) and least Bell’s vireo (*Vireo bellii pusillus*) (FE, SE). Disturbance to these nesting listed species could result in violation of the Migratory Bird Treaty Act, Department of Fish and Game Code, and Endangered Species Act. The pre-construction surveys for nesting birds described in Mitigation Measure BR-3 require weekly surveys, with the last survey conducted no more than 3 days prior to initiation of construction work. However, a survey immediately before land clearing and construction activity is recommended to mitigate any potentially significant impacts to least Bell’s vireo because this species tends to move around frequently during nesting and may be missed within a 3 day period. It is also recommended you contact the US Fish and Wildlife Service to determine how best to address these potential impacts in the Final EIR.

7-2

Thank you for the opportunity to comment on the DEIR. If you have questions regarding this submittal, please contact Whitney Wilkinson at 805-654-2462 or whitney.wilkinson@ventura.org.

Letter No. 7

Whitney Wilkinson
County of Ventura Resource Management Agency
Planning Division
Memorandum dated December 15, 2016

Response 7-1:

The proposed Specific Plan will require that all new development be set back 100 feet from the upland edge of the riparian habitat in the Adams Barranca. As shown in **Figure 3.0-1: Proposed Riparian Habitat Buffer for Adams Barranca**, the buffer will be located along the southern portion of the Project Site and APNs 098-0-010-150 and 098-0-010-190. The buffer will not include the area adjacent to parcel APN 098-0-010-420 to the south because that parcel is developed and is located between the Project Site and the Adams Barranca.

The buffer area will be limited in use, and construction of the buildings outside the buffer and landscaping activities inside the buffer shall be conducted to not degrade lakes, ponds, wetlands, or perennial watercourses in the Adams Barranca through filling, sedimentation, erosion, increased turbidity, or other contamination. Additionally, within the buffer area, permitted uses will include the following: passive recreation; educational uses; utility lines; pipelines; drainage and flood control facilities; bridges and road approaches to bridges to cross a stream; and approved roads.

All permitted development in or adjacent to streams, wetlands, and other aquatic habitats shall be designed and/or conditioned to prevent loss or disruption of the habitat, protect water quality, and maintain or enhance (when feasible) biological productivity. Design measures to be provided include but are not limited to:

- i. Flood control and other necessary instream work shall be implemented in a manner than minimizes disturbance of natural drainage courses and vegetation.
- ii. Drainage control methods shall be incorporated into projects in a manner that prevents erosion, sedimentation, and the discharge of harmful substances into aquatic habitats during and after construction.

Response 7-2:

Because of the potential for least Bell's vireo and southwestern willow flycatcher to occupy habitat along Adams Barranca, a requirement to conduct protocol surveys for these species prior to construction has been added to mitigation measure **BR-3**. The Final EIR (see page 4.4-44) has been revised accordingly.

Given that the protocol surveys for the southwest flycatcher require a certified biologist to make at least three visits during the third (or last) survey period (June 22 to July 17) because nesting southwestern willow flycatchers can be more difficult to detect once breeding efforts are well underway, and also given that the protocol surveys for least Bell's vireo will take place at least eight (8) times during the period from April 10 to July 31, there is no need for additional surveys within a 3-day period before the start of construction.¹

1 California Department of Fish and Wildlife, "Survey and Monitoring Protocols: Birds," accessed June 19, 2017, <https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281284-birds>.

VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT
Memorandum

TO: Janna Minsk, Planning Director, City of Santa Paula

DATE: December 6, 2016

FROM: Alicia Stratton

SUBJECT: Request for Review of Draft Environmental Impact Report for the Santa Paula West Business Park Specific Plan, City of Santa Paula (Reference No. 14-019-1)

Air Pollution Control District staff has reviewed the draft environmental impact report (DEIR), which is a proposal for a specific plan containing a comprehensive set of plans, exhibits, regulations, conditions and programs for orderly development of the Business Park. The Business Park would contain a combination of office, manufacturing, research and development, professional office, and limited commercial uses on approximately 54 acres of the City's 125-acre West Area 2 designation and would be developed over a ten-year period. The project location is unincorporated land west of the City of Santa Paula, south of Telegraph Road, and east of the Adams Barranca.

Section 4.3 of the DEIR addresses air quality issues. We concur with the findings of this discussion that significant operational, long-term and construction related, short-term air quality impacts would result from the project. Table 4.3-8, Page 4.3-21, *Operational Emissions*, indicates that 29.71 lbs/day reactive organic gases and 22.93 lbs/day oxides of nitrogen would be generated by the project. APCD has a 25 lbs/day threshold for reactive organic compounds and oxides of nitrogen as described in the Ventura County Air Quality Assessment Guidelines. Therefore reactive organic gases from the project would exceed the threshold and would need to be mitigated to a level less than significant. This is addressed below. Short-term, construction related emissions are presented in Table 4.3-6, *Construction Emissions* (Page 4.3-19) and in Table 3.4-7, Page 4.3-20, *Worst-Case Construction Emissions* (2020). These table indicates that for each year of construction APCD thresholds would be exceeded; however, the Ventura County Air Quality Assessment Guidelines do not count construction emissions toward thresholds of significance because they end when the project is constructed. These types of emissions must be mitigated to the greatest amount feasible.

8-1

Toxic air emissions are discussed on Page 4.3-23. This discussion indicates that diesel particulate carcinogenic risks from the project would be 0.87 cancers/million; the APCD

8-2

threshold for significance is 10/million. Therefore, impacts are less than significant because carcinogenic risks do not exceed the threshold.

8-2

Air impact mitigation is addressed in Section 4.3.6, Mitigation Measures (Page 4.3-28). This section presents mitigation of air impacts during grading, excavation and construction as well as mitigation of area source emissions and mobile source emissions during long-term operation of the project. Mitigation Measures AQ-1, AQ-2, AQ-3 and AQ-5, AQ-6, AQ-9, AQ-10 and AQ-11 will address short-term impacts from the activities; AQ-4 cites development of a Fugitive Dust Control Plan to be approved by APCD. We look forward to reviewing the Plan when it is developed.

8-3

Mitigation of operational emissions is presented in Measures AQ-12, AQ-13, and AQ-14. Measure AQ-13 refers to a Transportation Demand Management plan for approval by the City and APCD. The sixth element of this measure (Page 4.3-31) includes traffic light synchronization on streets impacted by project development. We recommend that the contributions are not to be used for traffic engineering projects, including signal synchronization, intersection improvements, and channelization, as the benefits from these projects are primarily traffic-related and not air quality-related.

8-4

Please note also that in the Existing Local Air Quality discussion (Page 4.3-7) the discussion on monitoring stations in Ventura County references a monitoring station on Anacapa Island. This station is no longer in use and the discussion should be revised to reflect this.

8-5

If you have any questions, please call me at (805) 645-1426.

Letter No. 8

Alicia Stratton
Ventura County Air Pollution Control District
Memorandum dated December 6, 2016

Response 8-1:

The comment is noted. The EIR provides mitigation measures in Section 4.3.6: Mitigation Measures, that address Construction Emissions (mitigation measures **AQ-1** through **AQ-4**), Building Construction (mitigation measures **AQ-5**), and Operational Emissions (mitigation measures **AQ-6** through **AQ-14**). The EIR notes that even after the implementation of mitigation measures, emissions of ROG and NO_x for both construction and operation would still exceed the regional construction emissions thresholds and impacts at both the Project level and cumulative level will remain significant and unavoidable after mitigation.

Response 8-2:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 8-3:

The comment is noted. As indicated in mitigation measure **AQ-4**, a Fugitive Dust Control Plan will be submitted to the Ventura County Air Pollution Control District (VCAPCD) for review and approval prior to the start of grading and excavation operations.

Response 8-4:

Areas of vehicle congestion have the potential to create carbon monoxide (CO) hotspots. While the mitigation is not directed at air quality improvements, signal synchronization helps coordinate traffic lights along major arterials and is used as a strategy to reduce vehicle congestion, thus indirectly potentially reducing air emissions. While this mitigation was included in the Draft EIR, no additional benefit was taken for any decrease in emissions resulting from the synchronization.

Response 8-5:

The discussion in the Draft EIR Section 4.3.1: Existing Conditions, (page 4.3-7), has been revised and includes the six monitoring stations throughout the County of Ventura: (1) El Rio; (2) Ojai; (3) Piru; (4) Simi Valley; (5) Simi Valley–Upper Air; and (6) Thousand Oaks.



VENTURA LOCAL AGENCY FORMATION COMMISSION

COUNTY GOVERNMENT CENTER • HALL OF ADMINISTRATION

800 S. VICTORIA AVENUE • VENTURA, CA 93009-1850

TEL (805) 654-2576 • FAX (805) 477-7101

WWW.VENTURA.LAFCO.CA.GOV

Dear Prospective LAFCo Applicant:

Local Agency Formation Commissions (LAFCos) are independent governmental agencies responsible for promoting orderly development through the logical formation and determination of local agency boundaries. LAFCos implement the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.), which grants them broad authority to review, consider, modify, condition, and approve or disapprove requests for changes of organization, including annexations.

In reviewing any request for a change of organization, LAFCos must consider numerous factors such as, but not limited to, land use; the need for organized community services; the effect on the cost and adequacy of services in the area and adjacent areas; the ability of the city or district to provide services; the availability of water supplies; consistency with regional transportation plans and city/county general and specific plans; and the effects on agricultural lands. In addition, LAFCos must comply with laws pertaining to environmental protection, land conservation, public records, open meetings and taxation. The Ventura LAFCo has also adopted local policies which must be given great weight as part of its consideration of proposals. These policies, along with LAFCo's operational rules and regulations, are set forth in the *Commissioner's Handbook*, which is available on the LAFCo website: www.ventura.lafco.ca.gov.

9-1

Regardless of your agency's level of familiarity or experience with the LAFCo application process, we strongly encourage all prospective applicants to consult with Ventura LAFCo staff prior to submitting an application. Although the LAFCo application requirements are generally the same for each boundary change proposal, there may be exceptions depending on the complexity, scope, and location. During the pre-application consultation, a detailed explanation of the application requirements and all information necessary to process the request will be provided. Meeting all of the requirements in the initial application submittal is the best way to minimize processing time and costs. Generally speaking, it takes between three and four months from the time an application is submitted to the time it can be recorded (for proposals that are approved). However, it can take significantly longer if the application does not include all of the required information.

Pre-application consultations are available free of charge in most cases unless multiple meetings are required. Optimally, the consultation process should occur before your agency initiates the environmental review process and well before a resolution to initiate a change of organization is adopted. Please take advantage of the LAFCo staff to help make your LAFCo experience as efficient and cost effective as possible.

Sincerely,
Ventura Local Agency Formation Commission

Letter No. 9

Ventura Local Agency Formation Commission (LAFCo)
Undated letter

Response 9-1:

Comment noted. The City will consult and coordinate with Ventura LAFCo staff on the annexation application for the site.



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January 3, 2017

Ms. Janna Minsk, Planning Director
City of Santa Paula
P.O. Box 569
Santa Paula, CA 94061-0569

SENT VIA E-MAIL

Subject: Notice of Availability of a Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan Project (SPWBPSP)

Dear Ms. Minsk:

Thank you for providing the Ventura Local Agency Formation Commission (LAFCo) with the opportunity to review the subject DEIR, and for providing us with additional time to review the document as a result of our office being short-staffed. As a responsible agency under the California Environmental Quality Act (CEQA), LAFCo is charged with ensuring that environmental documents prepared by lead agencies address the issues that relate to LAFCo's scope of authority. Please note that the Commission has not reviewed the DEIR, and these comments are solely those of the LAFCo staff.

Project Description

The City of Santa Paula is the lead agency for the project involving a specific plan that would allow for development of a business park (i.e., a combination of office, manufacturing, research and development, and other commercial uses) on an approximately 54-acre area located west of and contiguous to the City of Santa Paula. The territory is located within the "West Area 2" area planned for City expansion pursuant to the City's General Plan. The development within the proposed SPWBPSP area would receive City services, which requires that the territory be annexed to the City of Santa Paula. The majority of the project area is currently being used for agriculture, and the entire site has a County General Plan designation of Agricultural - Urban Reserve. The City's General Plan designates the project area as Mixed Use Commercial/Light Industrial.

10-1

LAFCo Law and Ventura LAFCo Policies

LAFCo's purposes are to (1) discourage urban sprawl, (2) preserve open space and prime agricultural land, (3) ensure efficient provision of government services, and (4) encourage the orderly formation and development of local agencies, such as cities (Government Code § 56301). The Ventura LAFCo has adopted local policies that it must consider when making

10-2

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January 3, 2017
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decisions on reorganization proposals. Specifically, the policies found in Division 3 of the Ventura LAFCo Commissioner’s Handbook (Handbook) apply to the proposed project. The Handbook is available on the Ventura LAFCo website at www.ventura.lafco.ca.gov, and can be found under the “Policies” tab. To adequately address the subjects that are within LAFCo’s scope of authority (pursuant to Government Code § 56668), the project description and analysis in the EIR should include the following:

10-2

Request to LAFCo

Annexation of the proposal area to the City requires LAFCo approval of several changes of organization, collectively referred to as a reorganization. Therefore, the EIR should identify LAFCo as a responsible agency whose approval is required in conjunction with the development of the proposed project. The project description should include the following necessary components of the reorganization:

10-3

- Annexation to the City of Santa Paula
- Detachment from the Ventura County Resource Conservation District
- Detachment from County Service Area Nos. 32 and 33
- Detachment from the Ventura County Fire Protection District
- Detachment from the Gold Coast Transit District

Based on the project description and map exhibits included in the DEIR, the railroad (which bisects the project area) is not proposed as part of the SPWBSP or for annexation to the City. As mentioned in the comments provided by LAFCo staff to City staff on September 30, 2014, regarding the Notice of Preparation of the DEIR, exclusion of the railroad right-of-way from the proposed reorganization may be inconsistent with the Handbook policies regarding the proposed City boundary configuration [Handbook Sections 3.3.1.2(a) and 3.3.2.2(c)]. Furthermore, the contiguous segment of the railroad right-of-way should be included in the reorganization request because: (1) it appears that the project would involve realignment and/or modifications to a railroad crossing, (2) utility and drainage systems serving the project would intersect the railroad, and (3) other portions of the railroad right-of-way that are flanked on both the north and south sides by the City are located within the City’s boundaries.

10-4

The map exhibits contained in the DEIR suggest that the unincorporated portion of Telegraph Road that is contiguous to the project site and within the City’s sphere of influence is not proposed for annexation to the City. Pursuant to Handbook Section 3.2.1, roadway sections adjacent to territory proposed to be annexed shall be included in City annexation requests. Therefore, the reorganization request should include annexation of an approximately 200-foot long segment of Telegraph Road at the western edge of the project area.

10-5

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Agricultural Resources [Government Code § 56668(e)]

The DEIR's discussion of impacts to agricultural land is based on the State's Important Farmlands Inventory (IFI), and identifies 49.08 acres of farmland that would be converted to non-agricultural uses as a result of the proposed development. However, in making determinations regarding reorganization proposals, LAFCo is required to apply the definition of prime agricultural land found in Government Code § 56064, which differs from the IFI. Based on a preliminary review of the project area, it appears that the entire proposal area (i.e., approximately 54 acres) consists of prime agricultural land that would be converted to non-agricultural uses in order to accommodate the proposed development. Handbook Section 3.3.5 includes policies that apply to proposals involving the conversion of agricultural land to other uses. As the project site is located on land qualifying as prime agricultural land, in order for LAFCo to approve the reorganization, LAFCo must determine (among other things) that "insufficient non-prime agricultural or vacant land exists" within the City [Handbook Section 3.3.5.1(c)] and make findings pursuant to Section 3.3.5.2. The DEIR provides a discussion of the project pursuant to Section 3.3.5.1, but does not include an analysis of the project pursuant to Section 3.3.5.2 (Findings that Insufficient Non-Prime Agricultural or Vacant Land Exists). Although not necessarily a CEQA matter, if the EIR does not include this evaluation, LAFCo will require that it be submitted in order for the Commission to consider the reorganization request.

10-6

10-7

Despite the conclusion that impacts to agricultural land will be significant and unavoidable, the DEIR states that no mitigation measures are proposed because: (1) the City has designated the land for non-agricultural uses, (2) conservation easements do not mitigate the loss of agricultural land, (3) the City does not have a program for collection and use of agricultural mitigation fees, and (4) agricultural mitigation is not economically feasible.

10-8

CEQA does not require that feasible mitigation measures result in a less than significant impact, but instead that they "avoid, minimize, rectify, reduce or eliminate, or compensate" for the impact (CEQA Guidelines § 15370). Therefore, in order for the EIR to be in compliance with CEQA, LAFCo staff encourages City staff to incorporate into the project description and evaluate in the document mitigation measures that would reduce the potential impacts to agricultural resources. If after such evaluation no agricultural mitigation measures are proposed because they are not feasible, the analysis should provide information to support this conclusion.

In addition, LAFCo staff noted that Table ES-2 includes Mitigation Measure A-1, which requires that the conversion of prime farmland be partially mitigated through the recordation of a conservation covenant on other prime farmland, with the amount of farmland to be protected determined by the monetary value of the crops grown, not the acreage of the farmland. This mitigation measure does not appear to be discussed in the body of the DEIR and conflicts with the Agricultural Resources section of the DEIR that states no agricultural mitigation measures are proposed.

10-9

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Drainage and Flooding [Government Code §§ 56668(j)]

As discussed in the December 6, 2016, comments submitted to the City by the Ventura County Watershed Protection District (WPD), the DEIR has not adequately evaluated flooding impacts related to the development, with respect to both flooding of the project site and the drainage impacts of the development on surrounding land, uses, and drainage facilities. Handbook Section 3.3.1.2(h) discourages approval of a proposal that would accommodate new development within a hazardous area, unless the hazard can be adequately mitigated. Therefore, the EIR should include a more robust evaluation of flooding and drainage hazards as itemized in the WPD's comments.

10-10

Water Supply and Demand [Government Code §§ 56668(b), (k), and (l)]

Pursuant to the Urban Water Management Planning Act, urban purveyors with 3,000 or more connections are required to prepare (and update in years ending in 5 and 0) an Urban Water Management Plan (UWMP) in order to ensure that adequate water supplies are available to meet existing and future water demands (Water Code §§ 10617 and 10621). The analysis regarding water supply and demand contained in the DEIR comes from the City's 2010 UWMP, which is outdated. The Draft Santa Paula West Water Supply Assessment (WSA) (November 2016) states that the 5-year update for 2015 is anticipated in early 2017. According to the Water Code, 2015 UWMPs were to be updated and submitted to the Department of Water Resources by July 1, 2016. Thus, it appears that the City is not in compliance with the State Water Code. The discussion of water should be updated based on the contents of the updated UWMP.

10-11

The DEIR specifies that the project demand within the SPWBPSP will be 39.8 afy (the UWMP allocation for the entire West Area 2 Planning Area is 88.8 afy). LAFCo staff identified four instances where the estimated water demand differs from the 39.8 afy estimated elsewhere in the DEIR: (1) 39.4 afy on page 2.0-2 of the WSA, (2) 40.6 afy on page 3.0-24 of the WSA, (3) 108 afy in Figure 4 of the Domestic Water Technical Report (November 2015), and (4) 107.6 afy on page 31 of the SPWBPSP. The EIR should reconcile this data, and any erroneous information contained within the EIR and/or supporting studies should be corrected.

10-12

The WSA states that the SPWBPSP would cover approximately 43% of the 125-acre West Area 2 area. This equates to a nearly proportional amount of the water allocation for West Area 2 based on land area [approximately 45% (39.8 afy/88.8 afy)]. The EIR should clarify whether the remaining approximately 71 acres of West Area 2 is planned for development intensity similar to or less than that of the SPWBPSP such that the remaining water allotment will be sufficient for build-out of West Area 2.

10-13

The DEIR states that maximum development under the SPWBPSP at build-out would be approximately 1,264,982.4 square feet of commercial/light industrial uses and approximately 562,795.2 square feet of light industrial uses (totaling 1,827,777.6 square feet). The WSA,

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which relies on the 2010 UWMP, estimates 1,906,000 square feet of development on the entire 125-acre territory comprising West Area 2, which leaves only approximately 78,222.4 square feet of development potential on the remaining 71 acres of West Area 2. As the development appears to be greatly weighted toward the SPWBSP portion of West Area 2, the EIR should provide additional discussion regarding anticipated build-out of West Area 2.

10-13

The WSA also states that according to the City's Potable Water System Master Plan, the City plans to develop a recycled water system conveyance plan that will include a line in Telegraph Road, and that recycled water will be used within the SPWBSP project area for irrigation purposes. The City has not yet developed a recycled water master plan, recycled water infrastructure is not yet available, and the City will gradually develop a recycled water system. The project site is expected to have a recycled water demand of 17.9 afy. The EIR should include an evaluation of impacts related to the demand of 17.9 afy of potable water if recycled water does not become available for the project before development occurs.

10-14

The WSA states that long-term, gradual declines in water levels have been observed in many parts of the Santa Paula Groundwater Basin, which is the City's sole source of water supply. While the declines have been relatively minor, "they are indicative of changing hydrologic conditions in the basin that warrant further monitoring, and if the trend persists, the development of alternative basin management strategies." Further, the WSA discusses the City's proposed water demand reduction program for worst-case planning purposes related to water supply. The program includes an up to 50% decrease in water allocation based on a yearly average for metered services, with penalties charged to noncompliant users. As the SPWBSP will incorporate water conservation features and measures, the EIR should discuss whether a 50% reduction in water use will be possible for development within the SPWBSP if water supply conditions warrant such a reduction.

10-15

Affected Public Agencies [Government Code § 56668(j)]

It appears that Beckwith Road is proposed to be improved and extended across the railroad right-of-way that bisects the Specific Plan, in which case the California Public Utilities Commission (CPUC), which has the exclusive authority to approve and determine the design of new railroad crossings (Public Utilities Code § 1201), would be a responsible agency under CEQA. The CPUC generally discourages new at-grade crossings. The EIR should include an evaluation of the feasibility of any proposed railroad crossing and extension of utility systems within the railroad right-of-way.

10-16

Additional Comments

Section 6.5.1 of the draft SPWBSP states that the Planning Director would have the authority to approve certain modifications to the SPWBSP, such as "Minor expansions or reductions (10%) of the geographic area." Please note that expansion of the SPWBSP area beyond that

10-17

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provided in the currently proposed SPWBSP would likely require approval by LAFCo to amend the City's sphere of influence and annex the additional territory to the City.

The Ventura LAFCo encourages prospective applicants to meet with LAFCo staff early in the planning process (see the attached letter from the Commission). Such consultation and ongoing communication is helpful to clarify the nuances of LAFCo requirements and to avoid delays later in the process.

10-17

Again, thank you for the opportunity to review the DEIR. Please feel free to contact me if you have any questions.

Sincerely,



Andrea Ozdy
Analyst

Attachment

- c: Glenn Shephard, Ventura County Watershed Protection District
- Mauricio Guardado, Jr., United Water Conservation District
- Kim Prillhart, Ventura County Planning Division
- Darren Kettle, Ventura County Transportation Commission
- Yen Chiang, California Public Utilities Commission

Letter No. 10

Andrea Ozdy, Analyst
Ventura Local Agency Formation Commission (LAFCo)
Email dated January 3, 2017

Response 10-1:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 10-2:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 10-3:

The City recognizes these requirements and will submit an application with LAFCo requesting approval of these actions. Please note that as of July 8, 2018, the City of Santa Paula annexed into the Ventura County Fire Protection District and action item ‘Detachment from the Ventura County Fire Protection District’ is a no longer needed action item.

Response 10-4:

As shown in **Figure 3.0-2: Annexation Boundary**, the railroad right-of-way will be included as part of the proposed annexation. However, the California Public Utilities Commission (CPUC) has jurisdiction over some portions of the railway, and the application process will incorporate the CPUC accordingly.

Response 10-5:

As shown in **Figure 3.0-2**, the southern portion of Telegraph Road through the Project Site will be included as part of the proposed annexation. Additionally, all of Faulkner Road through the Project Site will be included as part of the annexation application.

Response 10-6:

The Project Site, excluding the railroad, is approximately 54 acres. As noted in the Section 4.2: Agricultural Resources, of the Draft EIR, the Farmland Mapping & Monitoring Program (FMMP) Important Farmland Map for Ventura County identifies a total of 44.22 acres of prime farmland and 4.88 acres of farmland of statewide importance on the site (total of 49.1 acres).

Government Code Section 56064 defines “Prime Agricultural Land” as “an area of land, whether a single parcel or contiguous parcels, that has **not been developed for a use other than an agricultural use** (emphasis added) and that meets any of the following qualifications:

- (a) Land that qualifies, if irrigated, for rating as class I or class II in the US Department of Agriculture (USDA) Natural Resources Conservation Service land use capability classification, whether or not land is irrigated, provided that irrigation is feasible.
- (b) Land that qualifies for rating 80 through 100 Storie Index Rating.
- (c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the USDA in the National Range and Pasture Handbook, Revision 1, December 2003.
- (d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars (\$400) per acre.
- (e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars (\$400) per acre for three of the previous five calendar years.”

Approximately 4.71 acres of land located near Beckwith Road contains a farmworker housing unit and, therefore, has been developed for uses other than agriculture. Further, this area of land does not meet any of the criteria identified in the Government Code Section 56064. Therefore, 49.1 acres (53.81 acres – 4.71 acres) of the Project Site would be considered Prime Agricultural Land under Government Code Section 56064.

Response 10-7:

The Ventura LAFCo Commissioner’s Handbook includes a number of policies that apply to reorganizations. The consistency of the Project with several of these policies was assessed in Section 4.10, Land Use, of the Draft EIR. The analysis of policies as presented in the Draft EIR is expanded below.

SECTION 3.3.1 GENERAL STANDARDS FOR ANNEXATION TO CITIES AND DISTRICTS

3.3.1.1 Factors Favorable to Approval:

- a. *The proposal would eliminate islands, corridors, or other distortion of existing boundaries.*

The proposed Project would extend the existing City boundary and would not create any islands of unincorporated territory or distort the existing boundary of the City.

- b. *The affected territory is urban in character or urban development is imminent, requiring municipal or urban-type services.*

The Project Site is located within the City's Sphere of Influence (SOI) and has been identified as an expansion area within the City's General Plan since 1998 to meet the need for additional light industrial and business park land in the City. Because the area is currently undeveloped, future development would require the extension of urban services.

- c. *The affected territory can be provided all urban services by the city or district as shown by the city's or district's service plans and the proposal would enhance the efficient provision of urban services.*

Extensions of municipal services are needed to support the range and intensities of land uses envisioned for this area by the City's General Plan, and the City of Santa Paula will provide services.

The Santa Paula Water Master Plan plans for the expansion of West Area 2, stating:

The water demands of West Area 2 are not expected to be significant, and are not expected to affect the overall infrastructure requirements for the system. However, fire flow needs could be substantial, depending on the size and types of building that may be proposed for this commercial area. To supply the required fire flows, a pipeline that crosses the freeway will likely be needed of significant size (12 or 16-inch). When the plans for the development are available, and water and firefighting needs are better defined, a detailed water system analysis is recommended.²

The Santa Paula Wastewater Master Plan also provides for wastewater service for West Area 2 to meet a projected wastewater average dry weather flow of 0.1088 million gallons per day (mgd).³

- d. *The proposal is consistent with state law, adopted spheres of influence, applicable general and specific plans, and these policies.*

The Project Site is located within the City's SOI and is identified as an expansion area the City's General Plan. The proposed Project would be consistent with the City of Santa Paula General Plan and Municipal Code.

2 Boyle Engineering Corporation, *City of Santa Paula Potable Water System Master Plan* (Final; October 2005), 127–128, <http://www.ci.santa-paula.ca.us/PubWorks/PotableWaterMasterPlanOct2005.pdf>.

3 Boyle Engineering Corporation, *City of Santa Paula Wastewater System Master Plan* (September 2005), Table 3-2, <http://ci.santa-paula.ca.us/PubWorks/WASTEWATERMASTERPLANSEPTEMBER2005.pdf>.

- e. *The proposal is for the annexation of city or district owned property, used or to be used for public purposes.*

The Project does not include City- or district-owned property.

As shown, the proposed Project is consistent with factors (a) through (d), and factor (e) does not apply to the proposed Project.

3.3.1.2 Factors Unfavorable to Approval:

- a. *The proposal would create or result in corridors, peninsulas, or flags of city or district area or would otherwise cause or further the distortion of existing boundaries.*

The proposed Project would extend existing City boundaries and would not create islands of unincorporated territory.

- b. *The proposal would result in a premature intrusion of urbanization into a predominantly agricultural or rural area.*

The Project Site is located within the City's SOI and has been identified as an expansion area in the City's General Plan since 1998 to meet the need for light industrial and business park land in the City and, for this reason, annexation of the Project Site at this time would not result in the premature urbanization of a predominantly agricultural or rural area.

- c. *The proposal is inconsistent with state law, adopted spheres of influence, adopted general or specific plans, adopted habitat conservation and/or restoration plans, other applicable plans adopted by any governmental agency, or these policies.*

The Project Site is located within the City's SOI and is identified as an expansion area the City's General Plan. The proposed Project would be consistent with the City of Santa Paula General Plan and Municipal Code. There are no habitat conservation plans or other applicable plans adopted by other governmental agencies the Project is inconsistent with.

- d. *For reasons of topography, distance, natural boundaries, or like considerations, the extension of services would be financially infeasible, or another means of supplying services by acceptable alternatives is preferable.*

The proposed Project is adjacent to existing uses within the City that currently utilize services. Services can be extended cost effectively to the proposed Project Site from adjacent developed areas in the City of Santa Paula in accordance with the City's utility master plans in

- e. *Annexation would encourage a type of development in an area that due to terrain, isolation, or other economic or social reason, is not in the public interest.*

The Project Site is relatively flat and borders developed portions of the City of Santa Paula to the east. The Project Site is located within the City's SOI and has been identified as an expansion area in the City's General Plan since 1998. Annexation of the site would be in the public interest.

- f. *The proposal appears to be motivated by inter-agency rivalry or other motives not in the public interest.*

The Project would be consistent with the Guidelines for Orderly Development that provide for development to occur within the cities and not within the unincorporated County. The Project proposes to annex land that has been identified within the City's General Plan and SOI and is proposed for expansion within the General Plan.

- g. *The proposed boundaries do not include logical service areas or are otherwise improperly drawn.*

The proposed Project would not create distorted boundaries and would extend existing boundaries as provided for in the SOI. Infrastructure improvements and extension of public services would be extended in an efficient manner.

- h. *The proposal area would accommodate new development and includes a tsunami inundation zone, wildfire hazard zone, FEMA designated floodway or floodplain, or other hazardous area designated by federal, state or local public agencies, unless the Commission determines that the hazard or hazards can be adequately mitigated.*

The proposed Project would not be located in a tsunami inundation zone, wildfire hazard zone, or other hazardous area designated by federal, state or local public agencies. As indicated in the Draft EIR, the western portion of the Specific Plan site located adjacent to Adams Creek is currently located within a FEMA-designated 100-year floodplain area. However, based on a review of historic flooding, existing contours, and site features, the site is not subject to flooding, and a CLOMR will be processed.

- i. *The proposal will result in an unacceptable significant adverse impact(s) to the environment as determined by the Commission.*

Mitigation is identified in the Final EIR for all significant impacts identified for the Project including Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, Transportation and Traffic, and Utilities.

As shown, the proposed Project would not result in any conditions that would be unfavorable as outlined in the factors (a) through (i).

SECTION 3.3.2 GENERAL BOUNDARY CRITERIA

3.3.2.1 LAFCo Favors Applications with Boundaries that do the Following:

- a. *Create logical boundaries that coincide with existing and planned service areas and, where possible, eliminate previously existing islands.*

The proposed Project would create logical municipal service boundaries within the City's established SOI. The Project Site is within an area where the City has planned for the provision of urban services.

- b. *Follow natural and man-made features, such as ridge lines drainage areas, watercourses, and edges of right-of-way, provided they coincide with lines of assessment or ownership, or are described by metes and bounds legal descriptions which can easily be used for mapping lines of assessment or ownership.*

The Project extends to a natural boundary on the west, the Adams Barranca, and coincides with existing rights-of-way and parcel boundaries.

- c. *Include adjacent urbanized areas which are receiving or which may require urban services such as public water and/or sewer services.*

The Project Site is currently undeveloped land within the City's SOI and is not adjacent to any existing unincorporated areas receiving or requiring urban services.

As shown, the proposed Project is consistent with factors (a) and (b), and factor (c) does not apply.

3.3.2.2 LAFCo Discourages Applications with Boundaries that:

- a. *Split neighborhoods or divide an existing identifiable community, commercial district, or other area having a social and economic identity.*

The proposed Project would not split or divide any existing communities, commercial districts, or other areas having a social and economic identity.

- b. *Create areas where it is difficult to provide services.*

The proposed Project would create logical municipal service boundaries within the City's established SOI.

- c. *Create boundaries which result in islands, peninsulas, flags, "pinpoint contiguity," "cherry stems," or cause, or further, the distortion of existing boundaries.*

The proposed Project would extend existing City boundaries and would not create boundaries which result in islands, peninsulas, flags, "pinpoint contiguity," "cherry stems," or cause, or further, the distortion of existing boundaries.

- d. *Are drawn for the primary purpose of encompassing revenue-producing territories.*

The Project would be consistent with the City's existing General Plan that identifies this area for urban expansion to accommodate City growth through 2020. The General Plan identifies this area for industrial and research and development uses.

As shown, the proposed Project would not result in any conditions that would be discouraged by LAFCo as outlined in factors (a) through (d).

SECTION 3.3.5 AGRICULTURE AND OPEN SPACE PRESERVATION

3.3.5.1 Findings and Criteria for Prime Agricultural and Existing Open Space Land Conversion

LAFCo will approve a proposal for a change of organization or reorganization which is likely to result in the conversion of prime agricultural or existing open space land use to other uses only if the Commission finds that the proposal will lead to planned, orderly, and efficient development. For the purposes of this policy, a proposal for a change of organization or reorganization leads to planned, orderly, and efficient development only if all of the following criteria are met:

- a. The territory involved is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.*

The Project Site is adjacent to urbanized land within the City of Santa Paula to the east. Additionally, to the north of the Project Site, beyond Telegraph Road, are additional areas containing urban uses.

- b. The territory is likely to be developed within 5 years and has been pre-zoned for nonagricultural or open space use. In the case of very large developments, annexation should be phased wherever possible.*

The Project Site has been designated in the City's General Plan as an expansion area since 1998. With approval of the proposed Project, the site will be pre-zoned for nonagricultural use.

- c. Insufficient non-prime agricultural or vacant land exists within the existing boundaries of the agency that is planned and developable for the same general type of use.*

The City completed an inventory of vacant land within the City limits for the City's 2013-2021 Housing Element Update. This inventory identified approximately 60 acres of vacant, residentially zoned land, including several small vacant commercial properties, within the current city limits. Those vacant sites are not contiguous and are dispersed throughout the City.

In addition to these 60 acres of vacant land, the City has adopted Specific Plans for the East Area 1 and East Gateway Specific Plan Areas on the eastern edge of the City. Each of these Specific Plans designates small areas for business park uses. The East Gateway Specific Plan area is, however, primarily planned for development with community level retail commercial uses.

The small amount of vacant land available inside the City limits and available for development with light industrial and business park uses is not sufficient to meet the objectives in the City's General Plan. The West Area Expansion Area is the primary area for additional light industrial uses identified in the City's General Plan. There is insufficient non-prime agricultural or vacant land within the City's existing boundaries that is planned and developable for the same

general type of use. As the parcel of vacant land are dispersed and not contiguous, they do not provide sufficient site area to enable orderly, efficient and planned development of the commercial and light industrial uses envisioned for the Project area in the Santa Paula General Plan.

Other undeveloped land is available within the City's Sphere of Influence, which includes other expansion areas identified in the Santa Paula General Plan. They include Adams and Fagan Canyons located well north of SR 126 and have limited access. Because of the existing characteristics of these expansion areas, the Santa Paula General Plan limits development in Adams Canyon to single-family homes, a destination resort hotel, and a golf course, along with public facilities. Development permitted in Fagan Canyon by the General Plan includes single-family residences with supporting public facilities and a limited amount of neighborhood commercial uses. As such, these areas do not have the locational characteristics required for light industrial uses, or are not large enough to accommodate these uses.

- d. The territory involved is not subject to voter approval for the extension of services or for changing general plan land use designations. Where such voter approval is required by local ordinance, such voter approval must be obtained prior to LAFCo action on any proposal unless exceptional circumstances are shown to exist.*

The affected territory is not subject to voter approval for the extension of services or for the proposed minor changes in existing City General Plan land use designations. The proposed Specific Plan would include the annexation of land located within the City Urban Restriction Boundary (CURB). Measure L6 is not triggered by the proposed Project.

- e. The proposal will have no significant adverse effects on the physical and economic integrity of other prime agricultural or existing open space lands.*

The Project will be adjacent to other existing agricultural or open space lands for which the Project has been designed to address compatibility, including a buffer along the Adams Barranca to the west, and does not include uses such as residential, schools, and other sensitive receptors immediately adjacent to agricultural operations.

As shown, the proposed Project is consistent with factors (a) through (e).

3.3.5.2 Findings that Insufficient Non-Prime Agricultural or Vacant Land Exists

The Commission will not make affirmative findings that insufficient non-prime agricultural or vacant land exists within the boundaries of the agency unless the applicable jurisdiction has prepared a detailed alternative site analysis which at a minimum includes:

- a. An evaluation of all vacant, non-prime agricultural lands within the boundaries of the jurisdiction that could be developed for the same or similar uses.*

The proposed Project would develop approximately 54 acres of agricultural land. As discussed in Section 4.10: Land Use, of the Draft EIR, there is insufficient non-prime agricultural or vacant land within the City's existing boundaries that is planned and developable for the same general type of use.

The City conducted an inventory of vacant land conducted for the City's 2013–2021 Housing Element Update identified approximately 60 acres of vacant, properties within the current City limits, not including land in the City's East Area 1 and East Gateway Specific Plan areas. Those vacant sites are dispersed throughout the City, include sites zoned for residential uses, and do not provide sufficient contiguous land to allow for the orderly, efficient, and planned development of the commercial and light industrial uses envisioned for the Project area in the Santa Paula General Plan.

- b. An evaluation of the re-use and redevelopment potential of developed areas within the boundaries of the jurisdiction for the same or similar uses.*

The City completed an inventory of vacant land within the City limits for the City's 2013-2021 Housing Element Update. This inventory identified approximately 60 acres of vacant, residentially zoned land, including several small vacant commercial properties, within the current city limits. Those vacant sites are not contiguous, are dispersed throughout the City, and are not suitable for development with the type of light industrial and business park uses that would be accommodated by this proposed Project.

- c. Determinations as to why vacant, non-prime agricultural lands and potential re-use and redevelopment sites are unavailable or undesirable for the same or similar uses, and why conversion of prime agricultural or existing open space lands are necessary for the planned, orderly, and efficient development of the jurisdiction.*

As discussed above, the City does not have sufficient land available within its current City limits to accommodate the light industrial uses this Project would allow. Four expansion areas, Adams Canyon, Fagan Canyon, West Area 2, and one planning area, East Area 2, are identified in the City's General Plan to accommodate needed growth. This proposed Project is located in the West Area 2 Expansion Area, which is the primary area planned to meet the City's need for additional light industrial land.

As shown, the proposed Project is consistent with factors (a) through (c).

3.3.5.3 Impacts on Adjoining Prime Agricultural or Existing Open Space Lands

In making the determination whether conversion will adversely impact adjoining prime agricultural or existing open space lands, the Commission will consider the following factors:

- a. The prime agricultural and open space significance of the territory and adjacent areas relative to other agricultural and existing open space lands in the region.*

Approximately 49 acres of the 54-acre Project Site are currently under agricultural cultivation

The Project Site includes 49.1 acres of land meeting the definition of prime agricultural land in Government Code Section 56064.

The Project Site contains approximately 44.20 acres of prime farmland, 4.88 acres of farmland of Statewide importance, and 4.48 acres of urban and built-up land as designated on the current State Important Farmland Map.

As of 2016, Ventura County had approximately 118,508 acres of important farmland, which included 40,976 acres of prime farmland and 32,992 acres of farmland of Statewide importance.⁴ The 44.20 acres of prime farmland and 4.88 acres of farmland of Statewide importance currently under agricultural cultivation within the Project Site account for 0.1 percent of the total prime farmland in Ventura County and 0.01 percent of the total of farmland of Statewide importance within the County.

Additionally, the land directly west of the Project Site is part of the Ventura-Santa Paula Greenbelt and will not be annexed or developed. Annexation and development of the Project Site in accordance with the proposed Specific Plan, which includes a buffer to ensure compatibility with agricultural land around the site, will not affect the large amount of remaining high quality agricultural land in the County.

b. The economic viability of the prime agricultural lands to be converted.

The Project Site is currently farmed by two organizations: Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. The proposed Project contains 44 acres of prime agricultural land that would be converted. The County of Ventura has determined that prime agricultural lands in the County are highly productive and are capable of supporting commercially viable agricultural operations on parcels as small as 9 acres.⁵ At 44 acres, continued agricultural operations are economically viable.

c. The health and well-being of any urban residents adjacent to the prime agricultural lands to be converted.

The health and well-being of urban residents adjacent to the proposal area are unlikely to be impacted as a result of the conversion of the agricultural land within the proposed SOI amendment. The existing residential development to the north is separated by Telegraph Road, which has a width of approximately 50 feet, from the Project Site. The proposed light industrial and business park uses would be developed in accordance with the development and design standards in the proposed Specific Plan, will be compatible with the nearest residential uses, and will not affect the health or well-being of the residents of this neighborhood

4 California Department of Conservation, "Farmland Mapping and Monitoring Program, Ventura County, Land Use Conversion Table," available at <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx>.

5 Ventura County Board of Supervisors, *Ventura County Land Conservation Act Guidelines*, (adopted November 22, 2011; December 8, 2015, ed.), <https://docs.vcrma.org/images/pdf/planning/programs/lca/LCA-Guidelines.pdf>.

d. The use of the territory and the adjacent areas.

Residential and agricultural uses surround the Project Site. To the north of the Project Site and Telegraph Road are primarily single-family residences accessed from Country View Court, as well as a mobile home park accessed from Valencia Way. The southern portion of the Project Site is bound by SR 126; just beyond the freeway exist agricultural uses that grow various row crops, avocados, and citrus, and contain a limited number of single-family residential units within some of the properties. To the east of the Project Site, along Beckwith Road, are light industrial uses to the east, including offices, warehouse buildings, construction equipment storage, and maintenance facilities. The Adams Barranca is located adjacent to the western boundary of the Project Site; agricultural uses and limited single-family residences, consisting of orchards and a limited number of livestock, are located immediately west of the Adams Barranca.

Similar industrial uses currently exist to the east of the Project boundary. Additionally, man-made or natural boundaries would separate uses from the north, south, and west portions of the Project Site. The proposed light industrial and business park uses would be developed in accordance with the development and design standards in the proposed Specific Plan, will be compatible with the surrounding uses.

e. Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of prime agricultural or existing open space land outside of the agency's sphere of influence, or will be extended through prime agricultural or existing open space lands outside the agency's sphere of influence.

The City has sewer and water master plans designed to serve uses allowed by the City's General Plan, including the uses in the West Area 2 Expansion Area, which includes the Project Site. Sewer and water facilities would be provided to serve the site consistent with these master plans and would not be sized to accommodate additional growth. The Project would also not involve any road improvements that could induce growth of adjacent agricultural or open space land.

f. Whether natural or man-made barriers serve to buffer prime agricultural or existing open space lands outside of the agency's sphere of influence from the effects of the proposal.

The west portion of the Project Site will have a buffer between the Adams Barranca and the proposed Project, which will create a buffer between the existing prime agriculture to the west and the proposed Project Site. Additionally, Faulkner Road, and the 126 Freeway, places a buffer between the proposed Project and the agricultural land to the south of the Project Site.

g. Applicable provisions of local general plans, applicable ordinances that require voter approval prior to the extension of urban services or changes to general plan designations, Greenbelt Agreements, applicable growth-management policies, and statutory provisions designed to protect agriculture or existing open space.

The affected territory is not subject to voter approval for the extension of services or for the proposed minor changes in existing City General Plan land use designations. The proposed

Specific Plan would include the annexation of land located within the City's voter approved CURB. Measure L6 is not triggered by the proposed Project.

h. Comments and recommendations by the Ventura County Agricultural Commissioner.

No comments or recommendations directly involving the Project were received from the Agricultural Commissioner. In addition, the Project is consistent with the Agricultural Policy Advisory Committee's Agricultural/Urban Buffer Policy, which requires new dwellings, nonagricultural work sites, and ongoing outdoor public activities that may potentially conflict with agricultural operations to include a buffer/setback and fencing. The proposed Project will provide a buffer zone adjacent to the Adams Barranca to the west and is separated from adjacent lands by existing roadways (Faulkner Road to the south, Beckwith Road to the east, and Telegraph Road to the north).

As shown, the proposed Project does not conflict with factors (a) thru (h).

3.3.5.4 Territory Subject to a Land Conservation Act (Williamson Act) Contract

LAFCo will not approve a proposal which includes the annexation of territory subject to an active Land Conservation Act contract to a city or special district that provides or would provide facilities and/or services other than those that support the land uses that are allowed under the contract. For purposes of this section, an active Land Conservation Act contract includes a contract for which a notice of non-renewal has been filed.

The proposed Project is consistent with Policy 3.3.5.4. The proposed Project does not contain any parcels subject to a Williamson Act contract.

Response 10-8:

Under Government Code Section 56064, 49.1 acres of the Project Site would be considered Prime Agricultural Land. As discussed above, implementation of the proposed Project would convert 44.20 acres of Prime Farmland and 4.88 acres of Farmland of Statewide Importance to urbanized land uses.

Mitigation considered by the City to mitigate the impact of the Project on agricultural land is discussed below

Various measures have been developed by the California Department of Conservation (DOC),⁶ as well as by other federal and State entities nationwide, to protect farmland and support the economic viability of agriculture. These measures were considered by the City. The DOC encourages agricultural districts, conservation easements, differential assessment, purchase of agricultural conservation easements (PACE), right-to-farm laws, use of the Land Evaluation and Site Assessment (LESA) model, transfer of development rights (TDR), and the Farmland Protection Policy Act (FPPA). Additionally, to combat the

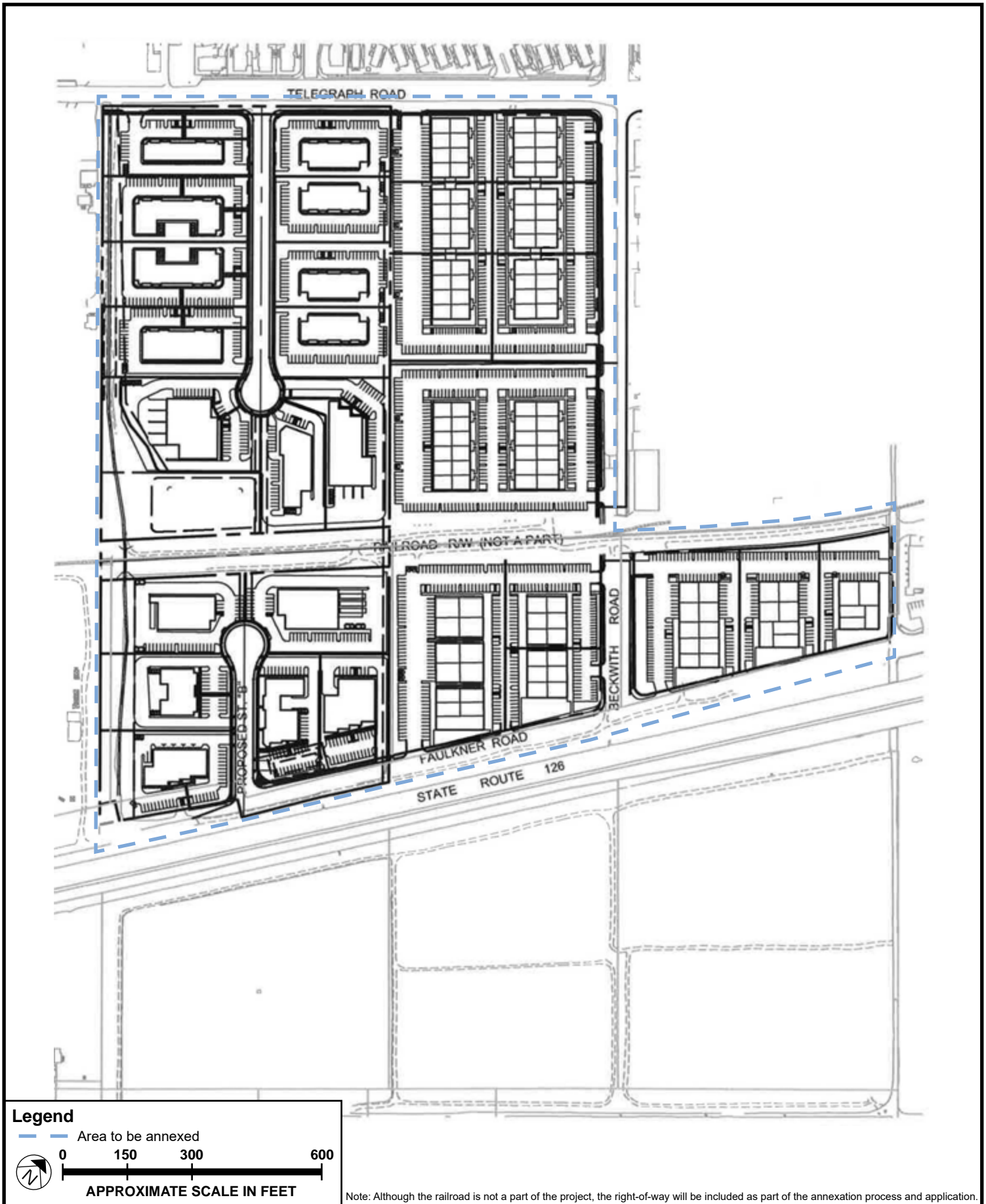
6 California Department of Conservation, "Welcome to the Division of Land Resource Protection," <http://www.conservation.ca.gov/dlrp/>.

development of residential and commercial uses adjacent to existing agricultural land, the DOC suggests that measures such as setbacks, berms, greenbelts, and open space areas, be developed between urbanized uses and existing agricultural land.

Some of the techniques developed have resulted in programs that are enacted and administered at the State level, while other are used primarily by local governments. These measures are described in **Table 3.0-2: Farmland Protection Tool Box**, and are taken from the Farmland Information Center (FIC),⁷ a clearinghouse for information about farmland protection and stewardship.

As shown in **Table 3.0-2**, the City has considered and evaluated the feasibility of a variety of farmland protection measures to mitigate the impacts of the Project on agricultural land.

7 The Farmland Information Center is a public/private partnership between the US Department of Agriculture's Natural Resources Conservation Service and the American Farmland Trust.



SOURCE: Jensen Design and Survey – May 2014

FIGURE 3.0-2

Annexation Boundary

**Table 3.0-2
Farmland Protection Tool Box**

Tool or Technique	Description	Applicability
Agricultural District Programs	Allows farmers to form special areas where commercial agriculture is encouraged and protected. Programs are authorized by state legislatures and implemented at the local level. Enrollment in agricultural districts is voluntary. In exchange for enrollment, farmers receive a package of benefits, which varies from state to state. Agricultural district programs help create a more secure climate for agriculture by preventing local governments from passing laws that restrict farm practices and by enhancing protection from private nuisance lawsuits. California enacted the California Land Conservation Act (also known as the Williamson Act) in 1965. It allows landowners within locally designated “agricultural preserves” to sign renewable 10-year contracts with local governments. Landowners agree to restrict use of property within preserves to agriculture or open space for the term of the contract. In return, the land is assessed at its agricultural use value, providing participants with significant property tax relief.	The Williamson Act is available in the State. The Project does not involve the development of any land subject to the Williamson Act; therefore, that this tool is not applicable.
Agricultural Protection Zoning (APZ)	Refers to county and municipal zoning ordinances that support and protect farming by stabilizing the agricultural land base. APZ designates areas where farming is the primary land use and discourages other land uses in those areas. APZ limits the activities permitted in agricultural zones. The most restrictive regulations prohibit any uses that might be incompatible with commercial farming.	Available in the County of Ventura through the Greenbelt Program, which (1) protects open space and agricultural lands; and (2) reassures property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses. There are greenbelts either side of Santa Paula: The Santa Paula–Fillmore Greenbelt located east of Santa Paula and the Ventura–Santa Paula Greenbelt, which is located directly west of the proposed Project Site. The Project Site is outside these greenbelts and in an expansion area as defined in the City’s General Plan. This tool is not applicable.
Conservation Easements	Deed restrictions that landowners voluntarily place on their land to protect important resources. Conservation easements are used by landowners to authorize a qualified conservation organization or public agency to monitor and enforce the restrictions set forth in the agreement. These easements are designed to keep land available for agriculture. Grantors retain the right to use their land for farming, ranching, and other purposes that do not interfere with or reduce agricultural viability; hold title to their properties; and may restrict public access, sell, give, or transfer their property as they	Potentially applicable tool.

Tool or Technique	Description	Applicability
	desire. Producers also remain eligible for any state or federal farm program for which they are qualified before entering into the conservation agreement.	
Cluster Zoning	A form of zoning that allows or requires houses to be grouped together at densities that exceed the usual requirements. By clustering houses on a small portion of a larger parcel, cluster zoning can be used to protect open space. This technique is also called cluster or conservation development. In the context of farmland protection, cluster zoning can allow or require new houses to be sited in wooded areas or on less-productive soils while keeping more-productive land available for agriculture. However, some question the effectiveness of cluster zoning as a farmland protection tool because the use of remaining open space may be limited. Rather than relying on cluster zoning to keep land available for agriculture, some communities use this form of zoning between urban and rural areas.	Not offered in the County of Ventura and not applicable because this tool addresses housing and the proposed Project is industrial.
Growth Management Laws	Designed to control timing and phasing of urban growth and to determine the types of land use that would be permitted at the local and regional levels. Growth management laws take a comprehensive approach to regulating the pattern and rate of development, and set policies to ensure that most new construction is concentrated within designated urban growth areas or boundaries (UGBs). These laws direct local governments to identify lands with high natural resource, economic, and environmental value, and protect them from development. Some growth management laws require that public services—such as water and sewer lines, roads, and schools—be in place before new development is approved. Others direct local governments to make decisions in accordance with comprehensive plans that are consistent with plans for adjoining areas.	The County of Ventura and the City of Santa Paula implement urban growth boundaries via voter-approved urban growth boundaries, including the Save Open Space and Agricultural Resources (SOAR) program. Additionally, agricultural boundaries are protected via the Greenbelt Program as discussed above under Agricultural Protection Zoning. The Project is consistent with these programs because the Project Site is inside the City’s voter approved CURB. This tool is applicable.
Right-to-Farm Regulations	State right-to-farm regulations are intended to protect farmers and ranchers from nuisance lawsuits. Some statutes protect farms and ranches from lawsuits filed by neighbors who moved in after the agricultural operation was established. Others protect farmers who use generally accepted agricultural and management practices and comply with federal and state laws. Many right-to-farm laws also prohibit local governments from enacting ordinances that would impose unreasonable restrictions on agriculture. A growing number of counties and municipalities are passing their own right-to-farm legislation to supplement the protection provided by state law.	The County of Ventura has implemented various Right-to-Farm regulations to help ensure farming can continue even with urban neighbors. This tool is applicable.
Transfer of Development Rights (TDR)	Enable the transfer of development potential from one parcel of land to another. TDR programs are typically established by local zoning ordinances. In the context of farmland protection, TDR is often used to shift development from agricultural land to designated growth zones located closer to municipal services. TDR is also known as transfer of development credits and transferrable development units.	Not applicable because a TDR program is not available in the City of Santa Paula.

Tool or Technique	Description	Applicability
Farmland Protection Policy Act (FPPA)	Congress enacted the FPPA as a subtitle to the 1981 Farm Bill. The FPPA is intended to minimize the extent to which federal activities contribute to the unnecessary and irreversible conversion of agricultural land to nonagricultural uses. It also seeks to ensure that federal policies are administered in a manner that would be compatible with state, local, and private policies that protect farmland. Some benefits of the FPPA include (a) an increase in national awareness about farmland protection; and (b) the ability of a federal agency to withhold financial assistance from private parties and state and local governments undertaking projects that would convert farmland.	Does not apply to the proposed Project as the Project does not involve any federal activities. This tool is not applicable.
Farm and Ranch Lands Protection Program (FRPP)	A voluntary federal conservation program that provides matching funds to eligible entities to buy permanent conservation easements on farm and ranch land. The US Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) manages the program.	This particular federal program is not available in the County of Ventura. However, a similar conservation easement tool is available. Mitigation measure AG-1 offers two options for the Applicant, one of which includes securing a conservation easement in perpetuity on land designated as Prime Farmland or Important Farmland within the State of California. The other option would allow the Applicant to contribute funds to a local, regional, or Statewide organization whose purpose is to acquire agricultural conservation easements for Prime Farmland and Important Farmland and has demonstrated a successful track record in doing so, over at least 5 years.
Subdivision Ordinances	Subdivision ordinances govern the division of larger parcels of land and give local officials the authority to review and make decisions about proposed subdivisions. In the context of farmland protection, subdivision ordinances can require review of potential impacts on agricultural resources; establish design standards, including setbacks and buffers and clustering of new houses; and authorize local officials to suggest alternatives or mitigation measures or to deny projects based on the impact to agriculture.	Implemented by the Lead Agency and part of the environmental review process. The City's General Plan requires preparation of Specific Plans for expansion areas to ensure comprehensive planning to make certain that land use is compatible. This is done concurrently with review of the proposed subdivision. This tool is applicable.
Land Evaluation and Site Assessment (LESA)	LESA is a numeric rating system created by the USDA NRCS to evaluate a parcel's relative agricultural importance. It is usually based on land capability classes, Important Farmland classes, soil productivity ratings, and/or soil potential ratings. The California Department of Conservation has employed the LESA model as a tool to determine impacts associated with converting agricultural land to urbanized land.	Available and allowed by CEQA as an alternative method for analyzing agriculture. The City utilizes LESA to determine the relative agricultural importance of agricultural land when appropriate. Given that the Project Site is identified as State Important Farmland and meets the Prime Agricultural Land Definition in the Government Code, the City determined that

Tool or Technique	Description	Applicability
		preparation of LESA analysis was not warranted. This tool is not applicable to the Project.
<p>The California Land Conservation Act of 1965 (Williamson Act)</p>	<p>The California Land Conservation Act of 1965—commonly referred to as the Williamson Act—enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.</p> <p>State funding was provided in 1971 by the Open Space Subvention Act, which created a formula for allocating annual payments to local governments based on acreage enrolled in the Williamson Act Program. Subvention payments were made through FY 2009 but have been suspended in more recent years due to revenue shortfalls.</p>	<p>Available in the County of Ventura. The Project Site does not include any land subject to an active Williamson Act contract. Therefore, this tool is not applicable.</p>

Source: Farmland Information Center, a partnership between the USDA NRCS and American Farmland Trust, <http://www.farmlandinfo.org>. Accessed June 2017.

Several of the farmland protection tools identified in **Table 3.0-2**—including agricultural district programs, agricultural protection zoning (APZ), cluster zoning, transfer development rights, and implementation of the FPPA and the Farm and Ranch Lands Protection Program—were not analyzed for the reasons listed above. In summary, the majority of these tools are not available or applicable in the County of Ventura or the City of Santa Paula, and many of tools do not apply to the proposed Project.

Therefore, the following farmland protection and preservation measures were considered by the City of Santa Paula and reviewed to determine their feasibility in reducing impacts due to the loss of Important Farmland on the Project Site:

Conservation easements;

Growth management laws;

Right-to-Farm laws;

Subdivision ordinances;

Land evaluation and site assessment; and

The California Land Conservation Act of 1965 (Williamson Act).

Conservation Easements

Conservation easements can protect agricultural land and mitigate impacts to agricultural land. Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements, or the donation of mitigation fees to a local, regional, or Statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements.

In June 2017, local farmers near the Project Site were sent survey letters, as shown in **Appendix B: Agricultural Survey Letter**, to evaluate the feasibility of obtaining agricultural conservation easements. The survey was sent to local landowners regarding the landowners' possible interest in entering into agricultural conservation easements. The five (5) landowners, representing approximately 310 acres of agricultural land, who returned the survey responded that they would not be interested in providing agricultural conservation easements.

This survey indicates that agricultural landowners are reluctant to place their agricultural land into conservation easements due to (1) the ever-changing economic conditions in the agricultural business, and (2) the limitations on the parcel of land's only being permitted to one type of business (agricultural business) for perpetuity. The placement of a permanent development restriction on agricultural land could cause a future burden to the landowner because continued agricultural production is dependent on

economic and social factors that play a role in where and how long the landowner continues to stay in business. Typically, when agricultural business is not profitable, the landowner ceases agricultural production, and either sells the parcel or uses it for a more viable economic use.

Mitigation measure **AG-1** has been included in the Final EIR to reduce or minimize impacts to farmland. This mitigation measure includes two options for the Applicant, one of which includes securing a conservation easement in perpetuity on land designated as Prime Farmland or Important Farmland within the State of California. The other option in mitigation measure **AG-1** would allow the Applicant to contribute funds to a local, regional or Statewide organization, the purpose of which is to acquire agricultural conservation easements for Prime Farmland and Important Farmland, and that has demonstrated a successful track record in doing so for at least 5 years. While impacts to regional farmland would still be considered significant and unavoidable, a conservation easement would mitigate this impact to the extent feasible, consistent with CEQA.

Growth Management Laws

The City of Santa Paula has a voter-approved urban-growth boundary to manage growth. In addition, the City has participated in establishing agricultural greenbelts on both the east and west sides of the City to further limit growth.

The proposed Specific Plan would include the annexation of land located within the City Urban Restriction Boundaries (CURB), which was voted on in November 2016 and continues through December 31, 2050.⁸ The Project Site is not subject to voter approval for the extension of services or for the proposed minor changes in the existing City General Plan land use designations. Measure L6 is not triggered by the proposed Project.

Right-to-Farm Ordinances

As noted, agricultural uses exist on the west and south sides of the property. To the west side of the property, between the Project Site and the agricultural uses, is the Adams Barranca, which acts as a vegetative screen between the properties.

Within the County of Ventura, agricultural uses are protected from future development that may occur adjacent to them. The Ventura County Board of Supervisors adopted a "Right to Farm Ordinance"⁹

8 Save Open Space and Agricultural Resources, "An Initiative Ordinance Amending Existing Limitations on Urban Development and Extending Those Limitations Until December 31, 2050," <http://www.soarvc.org/wp-content/uploads/2014/09/Santa-Paula-Initiatives.pdf>.

9 Ventura County Board of Supervisors, Ordinance 4151, Protect Commercial Agriculture from Nuisance Claims, to Require Notification of such Protection, and to Provide for Mediation of Disputes (adopted October 7, 1997), http://vcportal.ventura.org/AgComm/docs/Right_to_Farm_Ordinance.pdf.

intended to protect the farming community from developments that would inhibit its ability to continue agricultural production. Such things as agricultural wind machines, odors, dust, and noise are often the subject of nuisance complaints by adjoining property owners.

These laws do not particularly seek to save agricultural lands; however, the laws' intent is to provide a cohesive existence between agricultural operations and urban development. The Right to Farm Ordinance protects agricultural operations by limiting the circumstances under which a properly conducted agricultural operation may be considered a nuisance.

The proposed Project would not develop residential uses; therefore, the Right to Farm Ordinance would not apply. The Agricultural Policy Advisory Committee (APAC) Ag/Urban Buffer Policy states that where applicable, urban developments or nonagricultural uses shall be conditioned to provide and maintain a 300-foot setback and chain-link fence on the nonagricultural property between the urban use and the agriculture, or a 150-foot buffer/setback if a vegetative screen is used.

The proposed Project would incorporate an additional 100-foot buffer from the Adams Barranca, creating, at minimum, a 150-foot buffer between the agricultural uses and the proposed Project. To the south of the Project Site, between the agricultural uses, is Faulkner Road, followed by SR 126, which helps to create an approximately 200-foot buffer between the two uses.

Subdivision Ordinances

In the context of farmland protection, subdivision ordinances can require review of potential impacts on agricultural resources; establish design standards, including setbacks and buffers and clustering of new houses; and authorize local officials to suggest alternatives or mitigation measures, or to deny projects based on the impact to agriculture. The Project does not include residential units; therefore, clustering houses would not apply.

The review of potential impacts on agricultural resources and the establishment of design standards, including setbacks and buffers, was completed through the environmental review process the City conducted for this proposed Project and incorporated into the proposed Specific Plan.

Land Evaluation and Site Assessment

California's LESA model evaluates agricultural characteristics of specific sites, as indicated in the CEQA Guidelines. Impacts on agricultural resources may be both quantified and qualified by the use of established thresholds of significance. The LESA model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment caused by

agricultural land conversions are quantitatively and consistently considered in the environmental review process.¹⁰

The LESA model is specifically used for evaluating farmland designations. The farmland designations on the Project Site are not under question or consideration for reclassification; therefore, the LESA model was not used by the City to determine the relative value of the agricultural value of the Project Site.

The California Land Conservation Act of 1965 (Williamson Act)

The California Land Conservation Act of 1965—commonly referred to as the Williamson Act—enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based on farming and open space uses, as opposed to full market value.

Although less restrictive than an easement, a Williamson Act contract would result in similar issues with respect to compatibility and mandating a particular business, whether profitable or not. A Williamson Act contract would establish a commitment to retain farmland for agricultural use. The length of time that this land would remain in agricultural use would be dependent on the terms of the conservation easement or Williamson Act contract, as well as on the economic feasibility of continued agricultural operations. However, a Williamson Act contract would only reduce the potential that the land would be converted to nonagricultural use. The individual and cumulative loss of agricultural land caused by the proposed Project would still occur, however, resulting in a net loss of Important Farmland that could not be recovered.

No properties within the Project Site are subject to active Williamson Act contracts.

Summary

As discussed above, a number of mitigation measures (or farmland protection tools) were considered by the City to determine if any could feasibly reduce impacts associated with the conversion of the agricultural land. While a variety of mitigation measures have been identified by the DOC and other parties, the majority are not applicable or available within the City of Santa Paula.

Conservation easements and payments to organizations that acquire agricultural easements were considered by the City to mitigate the impact of converting agricultural land to nonagricultural use and determined to be a potentially feasible mitigation measure. Mitigation measure **AG-1** defines options for obtaining conservation easements to offset the loss of agricultural land that would occur as a result of the

10 California Department of Conservation, “Land Evaluation & Site Assessment Model (LESA),” accessed July 2015, http://www.conservation.ca.gov/dlrp/Pages/qh_lesa.aspx.

Project. While impacts to agricultural resources would still be considered significant and unavoidable, a conservation easement would reduce this impact.

General Plan Objectives, Goals and Policies Regarding Agricultural Land

In addition to farmland protection tools, the City’s General Plan includes a Conservation and Open Space Element that contains objectives, goals, and policies regarding the protection of agricultural land. These address the conversion of farmland. The proposed Project would comply with the applicable General Plan policies.

The Conservation and Open Space Element¹¹ notes that agriculture has historically been important to the economy of Santa Paula, and this importance continues today. As the area urbanizes, commercial agriculture is very slowly being replaced by other land uses. The presence of prime agricultural soils in the planning area is a natural resource that must be conserved to provide opportunities for ongoing and expanded agricultural operations.

The following goals, objectives, and policies are applicable to agricultural lands within the City and may be applicable to the Project as noted.

Agriculture and Soils

Goals

Goal 3.1 Preserve and protect viable agricultural lands and operations within the City and the expansion areas.

Analysis: The Specific Plan is located within the City of Santa Paula’s SOI and is proposed for expansion with the General Plan, for industrial land uses. Approval and implementation of the Specific Plan would implement the General Plan. Man-made and natural buffers and setbacks would be incorporated between the agricultural uses to the west and south of the Project Site to further protect surround agricultural lands.

The Land Use Element designates the areas west of Peck Road and north of Telegraph Road, and north of South Mountain Road (Lemon Road) within the South Mountain Planning Area for agricultural use. These lands are intended for crops, limited livestock production, limited agriculture, incidental and supportive agricultural uses, structures, and storage on parcels of no less than 20 acres in size.

11 City of Santa Paula, *General Plan*, “Conservation and Open Space Element,” p. CO-45.

Goal 3.2 Development should be compatible with and have minimal adverse impacts upon agriculture and natural resources and should not be wasteful of scarce land.

Analysis: The Specific Plan development would not allow any uses that would be incompatible with adjacent uses. Additionally, man-made and natural buffers and setbacks would be incorporated between the agricultural uses to the west and south of the Project Site to have minimal impacts on existing agriculture and natural resources. This buffer area would also help to preserve the existing Adams Barranca.

Goal 3.3 Urban expansion should be directed away from the most productive agricultural areas.

Analysis: The Specific Plan is within the City of Santa Paula's West Area 2 expansion area. Buffers and setbacks would be established so that urban sprawl into the agricultural lands to the west would be less likely to occur.

Objectives

Objective 3(a) Encourage low-intensity land uses and/or barriers near agricultural lands.

Analysis: Agricultural land exists to the west and south of the Project Site. To the west side of the property, between the Project Site and the agricultural uses, is the Adams Barranca, which acts as a vegetative screen between the properties.

The proposed Project would incorporate an additional 100-foot buffer from the Adams Barranca, thus creating, at minimum, a 150-foot buffer between the agricultural uses and the proposed Project. To the south of the Project Site, between the agricultural uses, is Faulkner Road, followed by SR 126, which helps create an approximately 200-foot buffer between the two uses.

Objective 3(b) Encourage the use of land for agricultural operations.

Objective 3(c) Include areas for agriculture in the City's land use plan.

Analysis: The City of Santa Paula's General Plan Land Use map designates land for agricultural use in the City's Planning Area. Additionally, the City has created large agricultural Greenbelts west and east of the City which protect open space and agricultural lands and reassures property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses. Also, the City has established City Urban Restriction Boundary (CURB) areas that require a vote from Save Open Space and Agricultural Resources (SOAR) before allowing urban development beyond the restriction areas.

Policies

Policy 3.a.a Preserve viable agriculture and prime agricultural lands as a greenbelt and buffer around the City.

Analysis: Greenbelts are voluntary agreements between the Ventura County Board of Supervisors and one or more City Councils regarding development of agricultural and/or open space areas beyond city limits. Greenbelts protect open space and agricultural lands and serve to reassure property owners located within these areas that lands will not be prematurely converted to agriculturally incompatible uses.

Cities commit to not annex any property within a greenbelt, while the Board agrees to restrict development to uses consistent with existing zoning. City- and Ventura County–elected officials were pioneers in designing and adopting greenbelts. The first greenbelt, between the cities of Ventura and Santa Paula, was adopted by the County in 1967. A total of seven greenbelts now exist in the County. These are:¹²

- Ventura–Santa Paula Greenbelt
Approximately 27,884 acres of unincorporated County territory between the cities of Ventura and Santa Paula.
- Santa Paula–Fillmore Greenbelt
Approximately 32,000 acres of unincorporated County territory between the cities of Fillmore and Santa Paula

Other Greenbelts:

- Camarillo-Oxnard Greenbelt
- Santa Rosa Valley Greenbelt
- Tierra Rejada Greenbelt
- Ventura-Oxnard Greenbelt
- Fillmore-Piru Greenbelt

The Ventura–Santa Paula Greenbelt is the nearest greenbelt to the southern portion of the City. The proposed Project is not located within any established greenbelt.

Policy 3.b.b Erosion of soils should be controlled and prevented during agricultural use, during storms and especially during the construction phase of new development.

Analysis: As stated in Section 4.6: Geology and Soils of the Draft EIR (see page 4.6-25), construction activities for the proposed Project would comply

12 County of Ventura, Resource Management Agency, “Greenbelt Program,” accessed September 25, 2018, <https://vcrma.org/greenbelt-program>.

with erosion control requirements, including grading and dust control measures, imposed by the City pursuant to grading permit regulations. Each construction project permitted under the Specific Plan would be required to obtain and comply with the City's necessary permits, plans, plan checks, and inspections to reduce the effects of sedimentation and erosion.

Additionally, the Project would be required to have a Storm Water Pollution Prevention Plan (SWPPP) pursuant to the National Pollutant Discharge Elimination System (NPDES) permit requirements. As part of the SWPPP, best management practices (BMPs) would be implemented during construction to reduce soil erosion and pollutant levels to the maximum extent possible.

After construction, the Project may result in a limited degree of soil erosion affects from vegetated areas. However, in accordance with NPDES requirements, the Project would be required to have a Standard Urban Stormwater Mitigation Plan—which would include BMPs that would reduce on-site erosion from vegetated areas and basins on the Project Site—in place during the operational life of each development within the Specific Plan.

Policy 3.c.c

Develop a transfer of development rights program that provides for easements for the preservation of agricultural land areas within the City's Area of Interest.

Analysis:

As discussed above, **MM AG-1** includes two options for the Applicant, one of which includes securing a conservation easement in perpetuity on land designated as Prime Farmland or Important Farmland within the State of California. The other option in **MM AG-1** would allow the Applicant to contribute funds to a local, regional or statewide organization whose purpose is to acquire agricultural conservation easements for Prime Farmland and Important Farmland and has demonstrated a successful track record in doing so, over at least 5 years.

Response 10-9:

The Draft EIR Agricultural Resources section has been updated to include mitigation measure **AG-1**, which was also updated in the Executive Summary.

Response 10-10:

Responses have been provided to the Ventura County Watershed Protection District. Potential flooding impacts have been adequately assessed, and the Project has been designed in a manner that will avoid flooding impacts on and off the site. See responses to comments for Letter No. 6.

Response 10-11:

The City of Santa Paula released its 2016 Draft Urban Wastewater Management Plan (UWMP) for public review on June 30, 2017 and adopted the Final 2016 UWMP on September 5, 2017. As shown in **Appendix D: Final Water Supply Assessment**, the Final EIR and Water Supply Assessment (WSA) have been revised to reflect information from the Final 2016 UWMP.

The Water Supply Reliability section of the Final 2016 UWMP was calculated by the City, and the water supply for a normal year, single dry year, and multiple dry years is shown in **Table 3.0-3: Projected Supply and Demand Comparison for Normal Water Year for 2020–2040**.

Table 3.0-3
Projected Supply and Demand Comparison for Normal Water Year for 2020–2040

Supply vs Demand	2020	2025	2030	2035	2040
Supply Totals	6,908	7,755	8,603	9,450	10,295
Demand Totals	4,608	5,311	6,012	6,714	7,416
Difference	2,300	2,444	2,591	2,736	2,879

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017).

Note: afy = acre-feet per year.

It should be noted that due to conservation efforts, the water supply estimates in the 2016 UWMP are expected to yield more water or other uses than the previous estimates. Additionally, unlike for the 2010 UWMP, the Water Supply Reliability section of the 2016 UWMP indicates that the Santa Paula Water Basin will remain a consistent source of water supply for the City of Santa Paula; therefore, the 2016 UWMP did not adjust supply or demand from an average year to dry years.

Table 3.0-4: Project Supply and Demand Comparison—Average Year (afy), based on the 2016 UWMP, shows the proposed Project water demand as a percent of total supply throughout various milestones in the build-out schedule. By 2027 (build-out), the Project is estimated to demand 39.7 afy of water. Water demand from the Project represents 0.61 percent of the City's total projected urban water demand in 2017, decreasing to 0.41 percent in 2037.

The Water Supply Reliability section of the 2016 UWMP projects total water demands for the Santa Paula Business Park through 2040 and demonstrates that supplies are sufficient to meet demands.

Table 3.0-4
Project Supply and Demand Comparison—Average Year (afy)

	2015	2017	2020	2025	2027	2030	2035	2037	2040
Total City supply ^a	6,637 ^b	6,462 ^c	6,908	7,755	8,094	8,603	9,450	9,788 ^d	10,295
West Area 2 allocation ^e	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
Existing agricultural use ^f	281.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Project demand ^g	0	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
Percent of City's total supply	0%	0.61%	0.57%	0.51%	0.49%	0.46%	0.42%	0.41%	0.39%
Net change from agricultural use	0	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)
Available recycled water	0	0	400	800	960	1,200	1,600	1,760	2,000
Project demand for recycled water (Part of Total Project Demand)	0	0	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Percent of available recycled water	0.00%	0.00%	4.45%	2.23%	1.85%	1.48%	1.11%	1.10%	0.89%

Note: afy = acre-feet per year.

^a City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 4-4, p. 69.

^b 2015 Data taken from Final 2010 UWMP (June 2011).

^c Value extrapolated from 2015 and 2020 data.

^d Value extrapolated from 2035 and 2040 data.

^e City of Santa Paula, Final 2016 UWMP Update (August 2017), 46, Table 3-2 (1,905,750 square feet of development at 15 gal/sq. ft./year is 87.7 afy).

^f See Table 3 in **Appendix D**.

^g See Table 2 in **Appendix D**.

Response 10-12:

The updated project demand is 39.7 afy based on the 2016 UWMP demand factors. The WSA and the Final EIR have been updated to reflect this amount.

Please note that the Domestic Water Technical Report was written for engineering and design purposes—specifically, to determine the size of potable water lines needed to serve the Project and not to provide an estimate of the water that will be used by the proposed uses. The Specific Plan incorporated the water demand estimate from the Domestic Water Technical Report. The engineering factors used to size the water delivery system are different than the water use factors in the City’s UWMP. This is the reason for the difference in the water demand and water use estimates the Draft EIR, Domestic Water Technical Report, and Specific Plan.

Response 10-13:

The proposed Project would cover approximately 43 percent of the 125-acre West Area 2 area (53.81 acres for the proposed Project divided by the 125 total acres for West Area 2).

Fair share for water usage is calculated by calculating the Project’s percent of total area versus the Project’s percent of total water usage. The estimated water demand for the Project were recalculated based on the 2016 UWMP demand factors. The Draft EIR and WSA were updated to reflect these changes. Water usage is estimated at approximately 45 percent because the total water demand estimated for West Area 2 in the City’s 2016 UWMP projected for West Area 2 was 87.7 afy,¹³ and the proposed Project would use 39.7 afy. As noted in the General Plan Land Use Element, a variety of uses are anticipated in West Area 2, including light industrial and research & development uses. Table LU-5, Land Uses and Build-Out for the Expansion and Planning Area, in the Land Use Element (page LU-25) estimates development of approximately 1,905,750 square feet for West Area 2. As proposed, the proposed Project would build out approximately 1,827,777 square feet on 53.81 acres and would occupy approximately 43 percent of the total 125 acres of West Area 2.

Given that the Project area would account for 43 percent of the total area included in West Area 2 area and water usage would account for 45 percent of the total amount of water use projected for West Area 2, the projected water use for the Project is proportional.

The total 87.7 afy allocation for West Area 2 is based on assumptions per the General Plan (see Table LU-5 in the Land Use Element). As applications and subsequent specific plans are developed for the remainder

13 City of Santa Paula, *Final Urban Water Management Plan 2016 Update [Final 2016 UWMP Update]* (August 2017), prepared by Milner-Villa Consulting, 46, Table 3-2 (1,905,750 square feet of development at 15 gal/sq. ft./year is 87.7 afy), <http://www.ci.santa-paula.ca.us/PubWorks/FinalUrbanWaterMgmtPlan.pdf>.

of West Area 2, environmental review may be required at that time. If the future specific plan(s) meet the criteria for a WSA as stipulated under Senate Bill 610, a WSA will need to be prepared. Future project(s) will need to demonstrate that an adequate water supply is available to meet demands at the time any future applications are submitted. Additionally, the City is required to update the UWMP every 5 years and will update the projections for water use in West Area 2 as needed.

Response 10-14:

Please note that the demand for recycled water usage is 17.8 afy. Construction of the new Santa Paula Water Recycling Facility (WRF) was completed in 2010. The City purchased the facility on May 1, 2015. The WRF has a permitted dry-weather capacity of 4.2 mgd and permitted wet-weather (also maximum) capacity of 8.0 mgd. The City WRF produces water that meets California Title 22 regulations for recycled water. At this time, there is no infrastructure built to deliver recycled water within the City.

The 2016 UWMP¹⁴ estimated recycled water urban demand within the City (and adjacent areas) and showed that the recycled water demand could be fully met with recycled water from the new WRF.

The WSA prepared for the Specific Plan determined that the total Project water demand was 39.7 afy. As shown in **Response to Comment 10-11, Table 3.0-4**, the 39.7 afy incorporates the recycled water demand of 17.8 afy if it were to be available as a conservative estimate to prove water demand could continue to be met if recycled water does not become available prior to estimated build-out date. The Project demand and recycled water demand numbers were used to estimate Project supply and demand using the 2016 UWMP data and demonstrate that supplies are sufficient to meet demands. As shown, the projected demand for the Project will account for only 0.49 percent of the total available supply of the supply indicated in the data from the 2016 UWMP at build-out. The City would, therefore, have sufficient water available to meet the needs of the Project if development should occur before recycled water is available at the Project Site.

Response 10-15:

The 50 percent reduction in water use as discussed in the UWMP specifically applies to existing uses within the City that may or may not have water meters installed or do not utilize water-efficient plumbing. All new development will be metered and will incorporate current water conservation features. Therefore, the 50 percent reduction is accounted for with the proposed Project demand estimates.

¹⁴ City of Santa Paula, *Final UWMP 2016 Update*.

The basin is monitored by the United Water Conservation District (UWCD), which has noted the historical fluctuations in the basin. However, based on the fact that primary recharge of the basin results from precipitation both locally and upstream, it is likely that the basin will recover from a gradual decline.

The Santa Paula Basin is an adjudicated basin, and the City has a right to 5,560 afy of water per the adjudication.¹⁵ Any change in allocation within the adjudication amounts would require approval through the court. As an adjudicated basin, the Santa Paula Basin is not subject to the Sustainable Groundwater Management Act (SGMA), which would require the groundwater basin to be managed on a local level by a groundwater sustainability agency. As previously noted, the proposed Project has an estimated water demand of 39.7 afy, of which 17.8 afy could be provided by recycled water when it becomes available. At this point in time, the proposed Project would utilize 39.7 afy of potable water, which would decrease to 22 afy of potable water when recycled water becomes available.

Response 10-16:

As noted in the Project description, as part of the permitting process, a formal application will be submitted to the CPUC for an at-grade crossing of the Ventura County Transportation Commission (VCTC) railroad. Authority to modify an existing public rail crossing is typically granted through the General Order 88-B (GO 88-B), Modification of an Existing Rail Crossing, authorization process, which results in an authorization letter from the Rail Crossings and Engineering Branch supervisor under authority delegated from the VCTC, if General Order 88-B is applicable.

An application will be submitted to CPUC staff in the Rail Crossings and Engineering Branch to request authority to alter a crossing, pursuant to GO 88-B. Such alterations may include roadway widening within the existing right-of-way; approach-grade changes; track-elevation changes; roadway realignment within the existing or contiguous right-of-way; change in the type or addition of an automatic signaling device; the addition of one track within the existing railroad right-of-way; alteration or reconstruction of a grade-separated crossing; or construction of a grade separation that eliminates an existing at-grade crossing.

Response 10-17:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

15 City of Santa Paula, *Final UWMP 2016 Update*, Appendix D, Table 6-9: Retail: Water Supplies—Projected.

Other Organizations and Individuals



December 18, 2016

VIA EMAIL

City Planning Commission & City Council
City of Santa Paula
200 S. Tenth Street
Santa Paula, CA 93060

Janna Minsk, AICP, Planning Director
P.O. Box 569
Santa Paula, CA 93061
jminsk@spcity.org

**SUBJECT: COMMENTS ON SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN
EIR**

To whom it may concern:

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed Santa Paula West Business Park Specific Plan. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance.

2.0 - Project Description

As we understand it, the proposed Santa Paula West Business Park Specific Plan is composed of 53.81 acres ("Project Site") within the City of Santa Paula's 125-acre West Area 2 designation. The Specific Plan would guide future land use development on approximately 53.81 acres of the City's 125-acre West Area 2 designation. The land use and zoning designations will allow for the

11-1

development of a mixture of light manufacturing, research and development, professional offices, and supporting commercial uses, consistent with the C/LI and LI zones of the City of Santa Paula's Zoning Ordinance.

11-1

3.0 - Related Projects

Table 3.0-1 Related Projects indicates that there are 36 related projects. However, figure 3.0-1 Map of Related Projects does not provide a map of all 36 projects. Specifically, projects number 28, 31, 32, and 33 are not provided on the map. This does not comply with CEQA's requirements for meaningful disclosure.

11-2

4.1 - Aesthetics

Threshold: Substantially degrade the existing visual character or quality of the site and its surroundings?

The EIR concludes that the existing visual character of the site will be significantly and unavoidably impacted. However, there are no suggested mitigation measures for this impact. Possible mitigation measures not addressed include: reducing the massing of the building through a maximum 50% lot coverage instead of 80% lot coverage; reducing the allowable building heights from 35 feet and 45 feet to 25 feet and 35 feet, respectively. The EIR should address these possible mitigation measures regarding SPWBP development standards that could potentially reduce the significant and unavoidable impact to the visual character or quality of life at the site and its surroundings.

11-3

4.2 - Agriculture

Threshold: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Threshold: Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The EIR indicates that the project site is comprised of prime farmland and farmland of statewide importance. The project site has a current designation of "A-E Urban Reserve for land currently in agricultural use" under the current Ventura County General Plan. The proposed project would convert the entire site to non-agriculture use. The EIR presents this conflict but focuses heavily on the consistency of the project with the Santa Paula General Plan, which changes the designation to commercial/light industrial. The EIR also states that Santa Paula is not requiring mitigation measures for the loss of prime farmland/farmland of statewide importance. However, the EIR does not provide a reason for this or a CEQA exemption for which mitigation is not required. The EIR should evaluate the possibility of agriculture conservation easements as

11-4

potential mitigation (*Masonite Corp. v. County of Mendocino*, 218 Cal. App. 4th 230 - Cal: Court of Appeal, 1st Appellate Dist., 3rd Div. 2013).

11-4

4.3 - Air Quality

Threshold: Conflict with or obstruct implementation of the applicable air quality plan?

The EIR states, "According to the VCAPCD Guidelines, to be consistent with the AQMP, a project must conform to the local general plan and must not result in or contribute to an exceedance of the City's projected population growth forecast. The proposed Project does not include any new residential uses and would not result in the direct growth of population within the Santa Paula Growth Area." The EIR does not address conformance with the local general plan. The proposed project is not in conformance with the Ventura County General Plan and thus in conflict with the AQMP. Not addressing this aspect of the consistency requirements is not in keeping with CEQA's requirements for meaningful disclosure.

11-5

Threshold: Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Emissions

The EIR provides information regarding construction including it was modeled for a 10 year time period with overlapping construction phases. The EIR then states that, "In reality, this would not occur, as most equipment operates only a fraction of each workday and many of the activities would not overlap on a daily basis". This statement is misleading and makes the EIR less useful as an informational document. It is possible for construction phases to overlap at some point throughout the 10 year construction period, which may last even longer due to market conditions according to the project description.

11-6

The EIR indicates that construction emissions were modeled for a 10 year duration while the project description indicates that construction may take longer due to market conditions. The EIR should provide additional extended analysis for 12, 15, 17, and 20 year construction year periods in order to fully analyze and disclose the potential air quality impacts. Also, there is no requirement that the project be completed over a certain number of days given. Construction may occur faster as well, which would result in significantly greater daily impacts.

Further, section 93.23(A) of the Santa Paula Municipal Code indicates the legal hours of construction are 8:00 AM - 6:00 PM Monday - Friday. The Air Quality Analysis does not present the "worst-case scenario" of construction equipment emitting pollutants for the legal 10 hours per day. The Air Quality modeling must be revised to account for these legally possible longer construction days.

Threshold: Expose sensitive receptors to substantial pollutant concentrations?

11-7

The EIR states that sensitive receptors were placed “uniformly along the fence line” but does not state which sensitive receptors were analyzed. Was it the residential to the north? Was it the properties nearest the project site or was it a property on the other side of the mobile home park?

11-7

4.3.7 - Residual Impacts after Mitigation

The EIR indicates that air quality impacts related to the project will be significant and unavoidable after mitigation. However, it does not provide any of the mitigated emissions rates in this section. The EIR must provide the mitigated emissions figures in order to fully comply with CEQA’s requirements for meaningful disclosure.

11-8

4.11 - Noise

Threshold: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

The EIR states that “Santa Paula Municipal Code (SPMC) Chapter 93 sets noise standards for the City. SPMC Section 93.21 establishes the acceptable *exterior* noise standard for residential uses of 65 dB(A) from 7:00 AM through 10:00 PM, and of 60 dB(A) from 10:00 PM through 7:00 AM. *The SPMC does not set acceptable interior noise level standards*”. This is not an accurate statement. The SPMC does not specify if the noise standards provided are for interior or exterior measurement. However, the SPMC does provide a definition for noise level measurement in which a noise meter “microphone must be a minimum of 3-1/2 feet from any wall, floor or other large sound reflecting surface”. This definition indicates that noise level measurement can be taken from the interior of a property. The EIR should reflect this accurate information.

11-9

The EIR also states that “construction is temporary” even though the proposed construction timeline is 10 years, and possibly longer. This statement should be removed.

11-10

Noise at Surrounding Noise Sensitive Uses

The EIR states that “Although the City considers construction noise temporary and intermittent, future development within the Project Site would be required to comply with SPMC section 93.21, which generally requires construction noise to be restricted to the hours of 8:00 A.M. to 6:00 P.M. Monday through Friday (though a temporary noise permit can be obtained pursuant to SPMC section 93.06). This will reduce noise impacts for both surrounding uses”. The EIR does not provide a definition of construction noise which the City defines construction noise as temporary and intermittent. This is not representative of the proposed project as the construction timeline is a minimum of 10 years. Further, this statement says that “generally” construction noise is limited to 8:00 AM - 6:00 PM Monday through Friday. The term “generally” should be

11-11

deleted as it is misleading - the SPMC explicitly requires these hours to be the legal hours of construction. Finally, the EIR concludes by stating that "This will reduce noise impacts for both surrounding uses" but does not provide any evidence of this. How will limiting construction noise to 10 hours per day reduce noise impacts for both surrounding uses?

11-11

Further, the EIR is inadequate as an informational document in that it does not disclose where the sensitive receptors were placed for analysis. Where, exactly, were they placed? Were the residents on the north boundary of the project site placed the same way as the receptors on the west boundary? Conservative modeling should have assessed what might have happened to the receptors given their exposure at their property lines.

5.0 - Alternatives

The EIR identifies the project objectives in a manner that makes the construction of the project a foregone conclusion. Objectives such as "permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula; Provide for light industrial and commercial uses that complement existing uses adjacent to the Project area" mean that this Project will be implemented as a certainty.

CEQA requires analysis of a "reasonable range" of alternatives. Here, since the No Project Alternative is required, the EIR analyzes only two. This does not comply with a reasonable range of alternatives. The alternative site selection was rejected because "there are no suitable sites available that could accommodate a large industrial/retail commercial center *of the type that would permitted under the Specific Plan*". Again, this indicates that construction of the project is a foregone conclusion.

11-12

The EIR goes on to discuss other expansion areas in the Santa Paula General Plan (Fagan Canyon and Adams Canyon) but states they they "are not suitable in terms of location and other site characteristics, to accommodate a large light industrial/commercial center". The EIR does not provide any detail regarding the "location and other site characteristics" and why they do not make a suitable alternative site. Further, this statement communicates that there are alternate sites available. This is not in keeping with CEQA Guidelines section 15126.6(f)(1), which allows consideration of whether the applicant "can reasonably acquire, control or otherwise have access to the alternative site," among other considerations.

Conclusion

For the foregoing reasons, GSEJA believes the EIR is flawed and an amended EIR must be prepared for the proposed project and recirculated for public review. Golden State Environmental Justice Alliance requests to be notified via email at goldenstateeja@gmail.com regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project.

11-13

Sincerely,

A handwritten signature in black ink, appearing to read 'Joe Bourgeois', with a long, sweeping horizontal stroke extending to the right.

Joe Bourgeois
Chairman of the Board
Golden State Environmental Justice Alliance

Letter No. 11

Joe Bourgeois, Chairman of the Board
Golden State Environmental Justice Alliance
Letter dated December 18, 2016

Response 11-1:

This comment does not address the information or analysis in the Draft EIR. No further response is required.

Response 11-2:

Project numbers 28, 31, 32, and 33 do not have specific addresses, as shown in Table 3.0-1: Related Projects, of the Draft EIR. However, approximate locations were added to the related projects map for related project numbers 28, 31, and 32, as shown in **Figure 3.0-3: Related Projects**. Related project number 33 is a Citywide crosstown pipeline and does not have an exact location. It should be noted that while none of these four related projects is near the Project Site, these projects were considered in the cumulative analysis in the Draft EIR.

Additionally, two projects, 37 and 38, were added to the related projects list and map to reflect the newest projects within the City. The cumulative analysis was updated for each issue area based on the addition of these two projects.

Response 11-3:

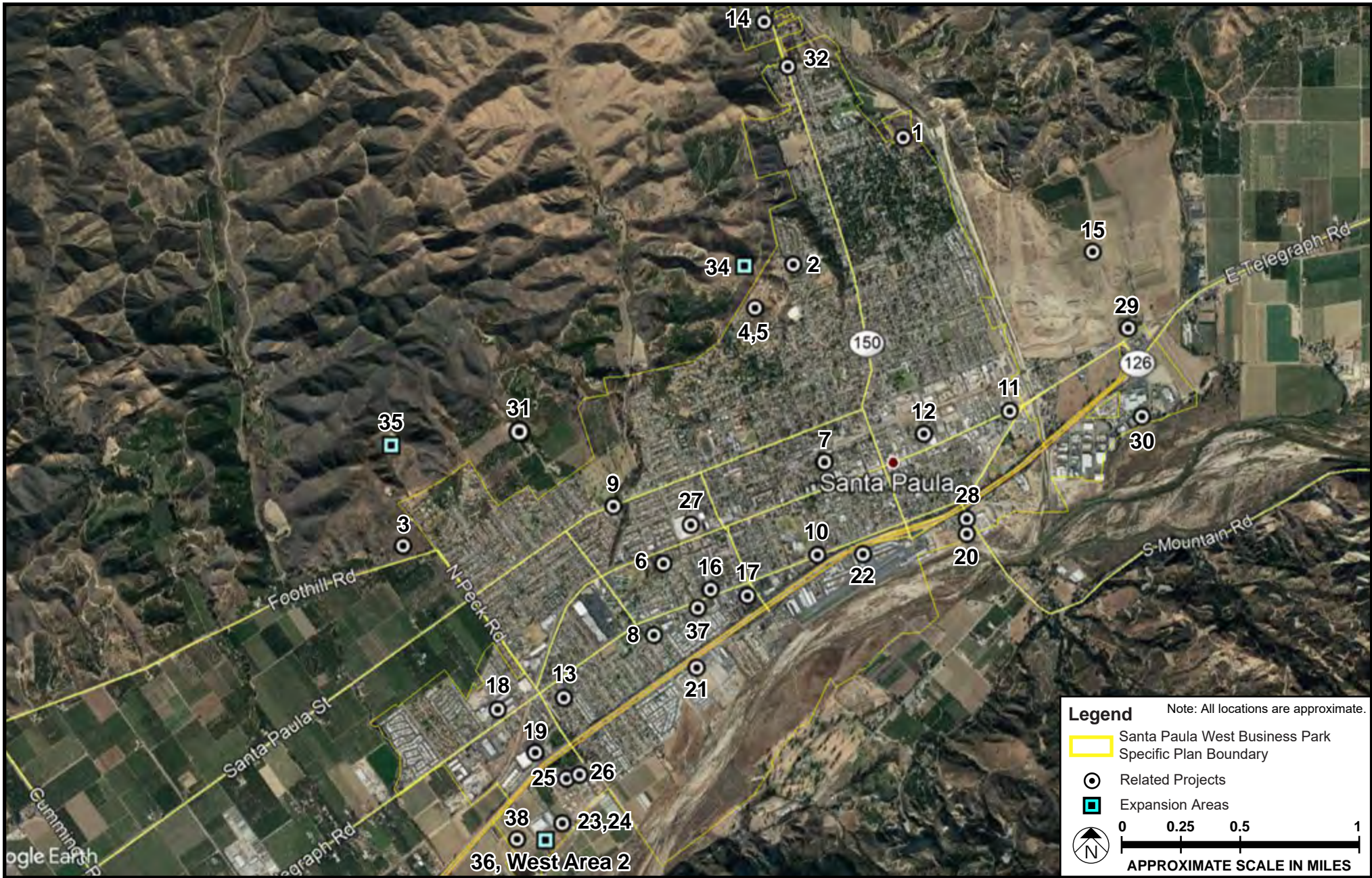
The proposed Project would alter the existing visual character from agricultural to urban uses, and this change has been identified as a significant and unavoidable impact. Reducing the density of the Project would not avoid or substantially reduce this impact, which results from the conversion of the site from agricultural use.

However, the Draft EIR, as part of the discussion on alternatives (see Section 5.0), does consider and evaluate less-intensive development alternatives. While the alternatives do not specifically address building and lot coverage, they do address both a 25 percent and 50 percent reduction in land development area. Indirectly, these reductions would result in less lot coverage. Conversely, they could result in the same density. The EIR determined that both alternatives would likely result in the same impacts as would the proposed Project. Impacts would be significant and unavoidable.

With regard to other alternatives involving less density, as mentioned in the letter in **Appendix C: Letter Correspondence with Doug Shaw**, Mr. Shaw, who is First Vice President of Commercial Real Estate Services, notes that tenants in the market look for square footage that can range from 10,000 to up to

200,000 square feet—even larger in some cases.¹⁶ Limiting the maximum size of any individual building to 30,000 square feet would drastically limit the ability to lease or sell the properties because the Project would not be able to market to large numbers of potential tenants seeking larger spaces. In addition, limiting the clear height would detract from and limit the market for potential tenants. In today’s market, low clear height buildings do not lease as quickly. For most tenants, such a factor would immediately remove that property from consideration. The current market reflects the “ecommerce era,” with most companies needing a minimum 24-foot height clearance under the beam at the lowest point of the warehouse, with up to 30 feet and even 32 feet clear required to accommodate stacking storage.

16 Letter correspondence with Doug H. Shaw, First Vice President, CBRE, Advisory & Transaction Services, Industrial Properties, dated March 28, 2017.



SOURCE: Google Earth - 2018; Meridian Consultants, LLC - 2018

FIGURE 3.0-3

Location of Related Projects

For example, one of the oldest major businesses in Santa Paula is Calavo, an avocado processing and marketing company. A similar company in the area is Mission Produce in Oxnard, which recently completed construction of a 200,000-square-foot cooler building with an interior clear height of 30 feet. If Calavo or a similar agricultural processing company were interested in building a facility in the Project, and the building height were reduced as suggested, this type of tenant could not be accommodated in the Project.

Economically, it would take significantly longer to locate potential buyers and tenants, putting the proposed Project at a disadvantage versus competing properties in neighboring cities. Given that time is the downfall of many real estate projects, limiting the size of buildings in the Santa Paula West Project could cause the Project severe economic damage. As such, the consideration of lower building heights was eliminated from consideration, to err on the side of a successful project.

Response 11-4:

Annexation of the Project Site to the City of Santa Paula would be subject to approval from LAFCo, which requires consistency with State laws, as well as with relevant LAFCo policies and procedures. Given that the Project Site is currently located within the City's LAFCo approved SOI, implementation of the Project would not conflict with State law or LAFCo's annexation policies and procedures. Government Code 56668, contains factors that LAFCo is required to consider in its decision to approve a boundary reorganization request.

The Project proposes the construction of urbanized uses within an expansion area that is currently within the CURB. Therefore, no voter approval is required to amend the CURB. Because the proposed project will be annexed into the City of Santa Paula, withdrawal from the County General Plan does not need to be addressed. With respect to the Project's consistency with LAFCo policy (see **Response to Comment 10-7**), the applicable LAFCo policies have been addressed.

Additionally, mitigation measure **AG-1** was incorporated into the Draft EIR, which will require the Applicant to provide mitigation to the extent feasible utilizing conservation easements and/or payments to an organization which acquires agricultural conservation easements, to minimize or reduce the level of impacts to farmland.

Response 11-5:

As discussed in Section 4.10: Land Use of the EIR, the Specific Plan area would be annexed into the City of Santa Paula and removed from the County of Ventura Agricultural and Urban Reserve designations. With LAFCo's approval of the reorganization, the Project Site would no longer be subject to the County of

Ventura’s land use and zoning controls. Therefore, if approved by LAFCo and upon annexation, the Project would not conflict with the County of Ventura General Plan and Non-Coastal Zoning Ordinance.

The Specific Plan is proposed for adoption as an amendment to the City of Santa Paula’s General Plan. Upon adoption by the City, the Project would retain City General Plan Land Use Element designations and City zone district classifications to the affected properties, replacing the existing County of Ventura land use and zoning designations. The proposed City land use designations and zone district classifications match the designations for the Project Site, as shown on the City’s General Plan Land Use Map. Therefore, the Specific Plan would be consistent with the City’s General Plan and would not result in any conflicts.

The 2007 Air Quality Management Plan (AQMP), as discussed in Section 4.3: Air Quality, of the Draft EIR, was prepared to accommodate growth, reduce the high levels of pollutants within the County of Ventura, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because they were included in the projections utilized in the formulation of the AQMP. Therefore, the Project uses and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP.

The City has a population of 30,654 as of January 1, 2017, based on the California Department of Finance estimate.¹⁷ The General Plan projects a population of approximately 37,920 (see Table 2-7 of the Land Use Element) for the City. The Ventura County Air Pollution Control District (VCAPCD) AQMP is based on regional population forecasts developed by the Southern California Association of Governments (SCAG). SCAG’s most recent population forecast was adopted in 2016 as part of the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. The 2016 SCAG growth forecast for Santa Paula projects a population increase from 29,800 in 2012 to 38,800 by year 2040, and an employment increase from 7,800 jobs in 2012 to 11,700 jobs by the year 2040.¹⁸ The proposed Project would not increase the amount of housing within the Specific Plan area because no residences would be built.

As of 2012, the City of Santa Paula’s employment number was 8,247.¹⁹ The Project would result in employment of approximately 1,510 employees,²⁰ or approximately 12.9 percent of SCAG’s projected employment growth by the year 2040 of 11,700 employees for the City of Santa Paula. For analysis

17 California Department of Finance, “Table E-1, Population Estimates for Cities, Counties, and the State—January 1, 2016 and 2017,” <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>, accessed June 19, 2017.

18 Southern California Association of Governments, *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (April 2016), <http://scagrtpsc.net/Documents/2016/final/f2016RTPSCS.pdf>.

19 City of Santa Paula, Santa Paula Demographics and Statistics, “Profile of the City of Santa Paula: 2012 Statistical Summary,” <http://www.ci.santa-paula.ca.us/DemoStat.htm>

20 US Green Building Council, “Building Area Per Employee by Business Type” (May 13, 2008), accessed August 24, 2016, <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>.

purposes, this growth in employment would only increase population in Santa Paula if all 1,510 employees relocated to the City of Santa Paula; these future employees would account for 17 percent of the projected growth in population for the City. This is considered a conservative estimate because employees may already live in the City or may reside in other nearby cities. Given that employment opportunities within the City are estimated to steadily increase through the years from the current estimated population of 30,654 to SCAG's estimate of 38,800 by 2040, the Project's addition of 1,510 employees would be consistent with the SCAG's projections.

The planned uses would also be consistent with the City's land use and zoning designation for the Project Site. The Project would accommodate a mix of commercial and light industrial uses within walking distance, which would reduce the need for residents within the City to travel long distances to other commercial and entertainment centers. As such, the Project would not conflict with the 2016 AQMP and, as such, would not jeopardize attainment of State and national ambient air quality standards in the County of Ventura.

Further, the City's General Plan Conservation Element includes Policy 4.b.b., which states: "Review individual development projects to ensure that air quality control measures are incorporated to the greatest extent possible." The Conservation Element also provides Implementation Measure 21b, which states:

Encourage the implementation of programs and strategies which reduce air emissions. For example, emission reduction measures may include:

- *Provision of on-site employee services and preferential parking for carpools*
- *Parking lot design to reduce vehicle cueing*
- *Provision of transit services and pedestrian/bicycle access*
- *Transportation Demand Measures (TDM)*
- *Energy efficient building materials and lighting*
- *Ozone precursor control measures*
- *Dust control measures*

Implementation of mitigation measures in the EIR are consistent with the City's policies. Specifically, mitigation measures **AQ-1** through **AQ-5**, would reduce construction emissions and would be consistent with VCAPCD Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 74.2 (Architectural Coating). In addition, mitigation measures **AQ-6** through **AQ-8**, **AQ-12**, and **AQ-13** would reduce operational emissions to the greatest extent feasible.

Response 11-6:

Initial land development including, site clearing, grading, roadway construction, and improvements of the Project Site which constitute by far the greatest amount of construction related emissions, are anticipated to occur over approximately a 4-month period starting in sometime in 2019. For purposes of the analysis within this EIR, construction of individual buildings is assumed to occur over approximately 10 years in response to market conditions.

According to the Ventura County Air Quality Assessment Guidelines, construction-related emissions of ROG and NOx are not counted toward two significance thresholds because these emissions are temporary. However, construction-related emissions should be mitigated if estimates exceed the 25-pound-per-day threshold. As shown in Tables 4.3-6, Construction Emissions, Table 4.3-7, Worst-Case Construction Emissions (2020), and Table 4.3-8, Operational Emissions, in the Draft EIR, emissions would exceed the thresholds for ROG and NOx. Implementation of mitigation measures **AQ-1** through **AQ-5** would reduce construction emissions and would be consistent with VCAPCD Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 74.2 (Architectural Coating).

Furthermore, implementation of mitigation measures **AQ-6** through **AQ-13** would reduce operational emissions, including emissions from area and mobile sources. It was concluded that with implementation of mitigation measures, impacts from emissions of ROG and NOx for both construction and operation would still exceed the regional emission thresholds. Impacts would remain significant and unavoidable.

Response 11-7:

As stated on page 4.3-23 of the Draft EIR, off-site receptors were uniformly placed along the fence line and at 10- and 50-meter buffers to provide a comprehensive evaluation of the fate and transport of dust and particulate matter toward sensitive receptor locations. As such, fence-line (Project boundary) emissions or sensitive receptors are the points of maximum impact, which is in accordance of the Office of Environmental Health Hazard Assessment guidelines. As shown in Tables 4.3-10, Diesel Particulate Carcinogenic Risk, and 4.3-11, Diesel Particulate Noncarcinogenic Risk, in the Draft EIR, carcinogenic and noncarcinogenic risks at the fence line would not generate any significant air quality impacts with regard to temporary exposure to emissions of toxic air contaminants that would occur during construction.

Response 11-8:

As shown in Table 4.3-6 of the Draft EIR, construction unmitigated and mitigated emissions are presented. Furthermore, Table 4.3-8 presents the maximum mitigated operational emissions. Based on the data provided, it was concluded that air quality impacts during construction and operation would be significant and unavoidable even with mitigation.

Response 11-9:

The Santa Paula Municipal Code (SPMC) sets forth the maximum exterior noise levels for specific land uses that cannot be exceeded at receiving land uses unless specially exempted by the SPMC or permitted by the City. For industrial zones, the exterior noise level standard is 75 dB(A). For commercial and office uses, the exterior noise standard is 70 dB(A). The municipal code does not define interior noise standards for industrial buildings, nor should any be implied as suggest by the comment.

Commercial, industrial, and warehousing land uses such as the proposed Project and adjacent industrial uses need only conform to applicable State and federal workplace safety standards for interior noise levels, as stated in Cal/OSHA Title 8 regulations.

Response 11-10:

Construction equipment operates at its noisiest levels for certain percentages of time during operation. Equipment such as excavators, graders, and loaders would operate at different percentages over the course of an hour. As such, noise level increases would be temporary and intermittent, and would predominately occur during the initial site preparation phase sometime in 2019.

Response 11-11:

Construction equipment operates at its noisiest levels for certain percentages of time during operation. Equipment such as excavators, graders, and loaders would operate at different percentages over the course of an hour. As stated in page 4.11-28 of the Draft EIR, sensitive land uses surrounding the Project Site, such as the residential units to the north, may experience construction noise in excess of 3 dB(A) over existing ambient noise conditions. However, construction activities on Monday through Friday between 8:00 AM and 6:00 PM are not subject to the noise level standards established by the City's Noise Ordinance (SPMC Section 93.23), although a temporary noise permit can be obtained for construction activities outside of these time periods (SPMC section 93.06). The City's Noise Element requires that construction activities employ feasible and practical techniques to minimize the noise impacts on adjacent uses. Implementation of mitigation measure **N-2** would require construction equipment to be equipped with appropriate mufflers in good working condition. Standard exhaust mufflers for all equipment and the break in line of sight to a sensitive use would reduce construction noise levels by approximately 7 dB(A). Further, as previously mentioned, initial land development including, site clearing, grading, roadway construction, and improvements of the Project Site are anticipated to occur over an approximately 4-month period starting sometime in . For purposes of the analysis within this EIR, construction of individual buildings is assumed to occur over approximately 10 years in response to market conditions. As such, construction noise impacts would occur on a temporary basis and be less than significant.

Response 11-12:

The State CEQA Guidelines Section 15126.6(a) state that:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

A suitable site for this proposed Project would need to be approximately 54 acres in size, zoned for industrial or commercial uses, and preferably not abut residential uses. The City completed an inventory of vacant land within the City limits for the City's 2013-2021 Housing Element Update. This inventory identified approximately 60 acres of vacant, residentially zoned land, including several small vacant commercial properties, within the current City limits. Those vacant sites are not contiguous, are dispersed throughout the City, and are not suitable for development with the type of light industrial and business park uses that would be accommodated by this proposed Project, nor are they located at the western gateway to the City, nearest the City of Ventura and its high population, and the coast, which are all important to the City and the Project's attraction to buyers and/or renters.

The Draft EIR considers three alternatives: the No Project Alternative and two alternatives with less development (25 percent and 50 percent). As noted in Section 15126.6(a) above, an EIR does not need to include every conceivable alternative, only a reasonable range. The State CEQA Guidelines further state that "[t]here is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason."

The purpose of the alternatives as stated in the CEQA Guidelines Section 15126.6(b) is to

identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

Because the Draft EIR has identified multiple alternatives, it complies with the CEQA Guidelines. Further, the comment does not suggest any other alternatives for consideration other than to state the EIR "concludes that development is a foregone conclusion."

The City of Santa Paula, as discussed in the General Plan Land Use Element, identified several expansion areas within the City's SOI to accommodate growth and considered three land use scenarios. A preferred growth scenario was selected by the City Council that scenario forms the basis of the General Plan. That scenario has been modified as a result of a citizens' initiative known as the Save Open-Space and Agricultural Resources (SOAR) Santa Paula City Urban Restriction Boundary Initiative, as subsequently amended by the voters. The Land Use Element of the General Plan carries out the preferred scenario by calling for expansion outside the existing City limits and recommending several land use and policy changes for land within the City limits.

Four expansion areas and one planning area are identified in the General Plan. The expansion areas are Adams Canyon, Fagan Canyon, East Area 2, and West Area 2; and the planning area is South Mountain. The Land Use Element of the General Plan (see page LU-21) notes that Specific Plans are required for all expansion areas within the city.

Table LU-5 in the General Plan illustrates the land uses types, amounts, and build-out planned for the expansion scenario. As noted therein, the General Plan consider both Adams Canyon and Fagan Canyon for primarily residential development with little or no industrial area (Adams Canyon, 495 units; and Fagan Canyon, 450 units), which relate to several factors including their mountain topography, relatively more remote location, and distance from utility infrastructure. As such, the City, not the EIR, has identified the areas for development; the alternatives presented in the EIR are consistent with the General Plan.

Response 11-13:

As demonstrated by the responses to the comments in the Final EIR, the Draft EIR contains factual, objective, and accurate information regarding potential on- and off-site environmental impacts; identifies regulatory requirements and feasible mitigation measures; and provides analysis of alternatives that supports the conclusions presented on the significance of the impacts of the Project, consistent with the requirement of CEQA. Revisions to the Draft EIR as necessary have been made and are listed in **Section 4.0, Revisions to the Draft EIR**, of this Final EIR.

From: jbourg2271@aol.com [mailto:jbourg2271@aol.com]
Sent: Saturday, December 31, 2016 7:20 PM
To: Janna Minsk
Subject: Santa Paula West Business Park

Ms. Minsk,

Please advise on when this project is scheduled to go before the City Planning Commission.

Also, please add my email address to this projects notification list.

Thank You,

Joe Bourgeois

12-1

Letter No. 12

Joe Bourgeois

Email dated December 31, 2016

Response 12-1:

All persons requesting notification will be notified of any future public hearings on the certification of the EIR and the consideration of the Project by the Planning Commission and the City Council. This comment is noted.

From: Julie Tumamait-Stenslie [<mailto:jtumamait@hotmail.com>]
Sent: Tuesday, December 13, 2016 5:24 PM
To: Nelson, Trayci <tnelson@mbakerintl.com>
Subject: Re: Cultural Resources section of DEIR

hello, the sensitivity map should not be for public viewing. I don't know if you are only showing me. If not please remove it from public view. People use things like this to dig up artifacts to sell. I had personal conversation with a County planning staff person and She said the Sensitivity map is out dated. Many of the older buildings are often built on raised foundations, which means that there was little ground disturbance. If there are Cultural Resources underneath those buildings, there can be intact sites. Monitoring should occur when building are demolished. Disking actually doesn't do a lot of soil disturbance, there can be CR material or even Burials subsurface. Our cemetarys are not always a lot of people, it can only be one, sometimes fragments. I would like to see a full Phase 1 survey done with trenching to locate the sensitive areas. I find the idea of having "a contractor must cease work" ineffective, they are not a qualified Archaeologist. The Archaeologist should be one who has worked and is familiar with California (Ventura Co. area) Native Culture and traditions. There should also be a qualified Native (Chumash) Monitor present. This individual should be able to demonstrate their lineage and be a member of a State recognized Tribe as on the NAHC SB-18 and AB-52 list These two professionals should continue to monitor throughout all earth disturbing activities as well as landscaping projects that are going to be in undisturbed soil. There will no need to watch recompacted soils that had been previously monitored. Any Human Remains that are unearthed , I would like to see an attempt to leave them in place . If this is unavoidable then reburial in an area on property. Although this is only my personal view. The MLD will make a recommendation. Thank-you for your call today. If there is a chance to see the property(site visit)that would be helpful. I may have more, can't anymore. Thank-you, Julie

13-1

13-2

13-3

Letter No. 13

Julie Tumamait-Stenslie

Email dated December 13, 2016

California Senate Bill (SB) 18²¹ requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions in order to protect Traditional Tribal Cultural Places.²² Cities and counties must obtain a list of the California Native American tribes from the Native American Heritage Commission (NAHC), whose traditional lands within the agency's jurisdiction may be affected by a proposed adoption or amendment of a general plan or specific plan. Before the adoption or any amendment of a general or specific plan, a local government must notify the appropriate tribes of the opportunity to conduct consultations on the proposed project. Before the adoption or substantial amendment of the general plan or specific plan, a local government must refer the proposed project to those tribes on the Native American contact list that have traditional lands within the agency's jurisdiction.

As part of the process of identifying Native American cultural resources within or near the project area and to meet the requirement of Senate Bill 18, the City prepared and mailed letters to a contact list of four (4) Native American individuals, provided by the NAHC, that may have knowledge of cultural resources in or near the project area. The list of Native American individuals and letter sent out are contained with **Appendix E** of this Final EIR. The City requested information regarding any Native American cultural resources within or immediately adjacent to the project area. The only Native American group that contacted the City was via email was the Barebarena/Ventureno Band of Mission Indians. The email comments provide by Barebarena/Ventureno Band of Mission Indians are contained with the Final EIR and responded to below.

Response 13-1:

The Archaeological Sensitivity Map, Ventura County (South Half) (Figure 3.5-1 in the Draft EIR) is public information. The map is from the Ventura County General Plan, Resources Appendix, Figure 1.8-1, and is available to the public online at <http://vcrma.org/pdf/plans/General-Plan-Resources-Appendix-6-28-11.pdf>. As shown in the Draft EIR, the figure does not show locations beyond what is currently available via the County to the public.

21 California Government Code, sec. 65040.2, 65092, 65351, 65352, and 65560; California Civil Code, sec. 815.3.

22 California Senate Bill 18, ch. 905, Statutes of 2004.

Response 13-2:

As noted in the Draft EIR, Section 4.5, Cultural Resources, a Phase I archaeological survey was completed by ASM Affiliates and is documented in the report *Phase I Archaeological Survey of the Santa Paula West Specific Plan Area, Santa Paula, Ventura County, California*, dated June 2, 2015. The report is included in Appendix 4.5 of the Draft EIR.

Response 13-3:

The Draft EIR includes mitigation measure **CUL-2**, which addresses human remains that may be discovered during grading and excavation activities. Mitigation measure **CUL-2** provides procedures and protocols to be followed in the event of such a discovery, which are consistent with best practices in the sensitive treatment of any such remains.

4.0 REVISIONS TO THE DRAFT EIR

In accordance with State CEQA Guidelines Section 15132, this section presents the changes that were made to the Draft EIR to clarify or amplify the text in response to comments. Such changes are insignificant as the term is used in State CEQA Guidelines Section 15088.5(b).

Changes to the Draft EIR use ~~strike-out~~ for text that is removed from the Draft EIR and double underline for text that is added to the Draft EIR. Each change is preceded by a brief explanation of the reason for the change.

Section ES, Executive Summary

Page

Revision:

ES-1

Project Location

The 53.81-acre Project Site is ~~area~~ near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The Project Site is bound to the north by Telegraph Road; to the south by SR 126; to the east by existing industrial and commercial development in the current City limits; and to the west by the Adams Barranca and agricultural operations. The Project Site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way. Local access is provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

ES-6-7

Table ES-2, Summary of Project Impacts, Aesthetics

<p>Construction activities within the Project Site and off-site improvements, such as along Beckwith Road and Faulkner Road, could potentially be visible from SR 126 and Telegraph Road and other vantage points that currently have views of these areas. Additionally, <u>initial land development including, site clearing, grading, roadway construction, and improvements of the Project Site are anticipated to occur over approximately a 4-month period starting in sometime in 2019. For purposes of the analysis within this EIR, construction of individual buildings is assumed to occur over approximately 10 years in response to market conditions</u> the construction timeframe would occur over approximately 10 years and would alter the existing open space character of the Project Site from immediate surroundings.</p>	Potentially Significant	The impact is on a temporary basis and there are no mitigation measures.	Potentially Significant and Unavoidable (on a temporary basis)
<p>The Project would provide for the development of commercial and light industrial uses, along with roadways and open space across the 53.81-acre Project Site. Building heights would be consistent with the 1- to 2-story buildings having similar uses to the east of the Project Site, with a maximum building height of 35 feet and 45 feet for commercial/light industrial and industrial uses, respectively. Views of the agricultural fields from the SR 126 would be replaced with views of commercial and industrial uses related to the Project. Scenic aspects of the Project Site of the Project Site also include the agricultural lands and Adams Barranca west of the Site. While implementation of the Project</p>	Less than Significant	No mitigation measures required.	Less than Significant

<p>would result in the loss of views of the existing agricultural lands in the immediate foreground with the addition of structures, circulation system, and supporting infrastructure, the urbanized appearance is similar to the adjacent uses, and in More distant scenic vistas views of the Santa Clara River Valley would not be significantly altered upon the development of structures on the Project Site. Therefore, the Project would result in less than significant adverse impacts to scenic vistas.</p>			
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ES-7 Table ES-2, Summary of Project Impacts, Aesthetics

<p>The Project would incorporate various open space/passive uses into the Project design to preserve the visual quality of Adams Barranca, would not remove visually important trees or geologic features, and since the segment of SR 126 that is adjacent to the Project Site is not eligible for designation <u>as a scenic highway</u>, implementation of the Project would not damage scenic resources within a designated state scenic highway.</p>	<p>Less than Significant</p>	<p>No mitigation measures required.</p>	<p>Less than Significant</p>
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ES-8 Table ES-2, Summary of Project Impacts, Aesthetics

<p>The existing visual character and quality of the Project Site is predominantly agricultural in nature, with ancillary agricultural facilities, row crops, and orchards. Due to the Project Site's relatively low and flat elevations, many off-site vantage points of the Project Site are obstructed by existing structures and buildings. However, development within the</p>	<p>Potentially Significant</p>	<p>No mitigation measures.</p>	<p>Significant and Unavoidable</p>
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<p>Project Site can be seen from vantage points that are located immediately adjacent to the Project Site, such as those along SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road. Furthermore, while elevations of the Project Site would remain relatively flat and at low elevations, and although the Specific Plan development standards will be required to ensure a consistent and compatible aesthetic character with the developments to the east, the existing open space and agricultural character of the Project Site would substantially change. The altered views from the public viewpoints that immediately surround the Project Site are considered significant and unavoidable.</p>			
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ES-8 Table ES-2, Summary of Project Impacts, Aesthetics

<p><u>The Project’s development standards establish the types of materials that can be used for various types of structures on the Project Site; reflective, glare-producing materials are prohibited. Daytime sources of glare would include the sun reflecting off glass windows of structures and vehicles. Glare produced from these sources would be brief and intermittent. Therefore, impacts related to glare would be less than significant.</u></p> <p><u>The Project’s nighttime sources of light would include outdoor lights, such as mounted lights and lighted signs on the buildings, parking lot lighting, interior building lights, and headlights of vehicles.</u></p>	<p>Potentially Significant</p>	<p>AES-1: Before the City issues grading permits, the applicant must prepare and submit a Lighting Plan to the City of Santa Paula Planning Director for approval that identifies the types of shielding that will be used for outside lighting <u>and must comply with all applicable dark sky ordinances/regulations.</u></p> <p>All exterior night lighting installed on the Project Site shall be of low-intensity, low-glare design, and hooded to direct light directly downward onto the area being lighted to prevent spillover onto adjacent parcels. Shielding must be included to eliminate uplighting. Exterior lighting fixtures must be kept to the minimum number and intensity needed to ensure public safety. These lights shall be dimmed after 10:00 PM to the maximum extent practical without compromising safety. Upward directed exterior lighting is prohibited.</p>	<p>Less than Significant</p>
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<p><u>Given that minimal outdoor lighting is currently emitted from the Project Site, these impacts related to the additional nighttime light and glare from the Project are considered to be potentially significant.</u></p> <p>The Project would result in a potential for increases glare from within the Project Site during the day from reflective surfaces, and an increase in artificial light during the night. Given that minimal outdoor lighting is currently emitted from the Project Site, these impacts related to the additional nighttime light and glare from the Project are considered to be potentially significant.</p>			
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ES-9-10 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Aesthetics

<p><u>In combination with the Project, all of the proposed expansion areas would change the visual character of the area over time from a more rural setting to one with more urbanized development, especially along the main travel corridors, such as SR 126. The cumulative development would transform the visual character of the City by reducing the amount of open space within the City limits and expanding the urban visual character. However, implementation of the Project and related projects would be consistent with the City's General Plan. While the Santa Paula West Business Park Specific Plan would include various open space and would not affect the Adams Barranca, the development would contribute (albeit to a lesser degree) to the cumulative changes in visual character of the City in combination</u></p>	<p><u>Potentially Significant</u></p>	<p><u>No mitigation measures.</u></p>	<p><u>Significant and Unavoidable</u></p>
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<p><u>with the other relatively large scale related projects. Therefore, as with the Project, impacts related to the views and visual character of the City as a result of the Specific Plan amendment, are considered cumulatively considerable, and significant and unavoidable.</u></p>			
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ES-10-11 Table ES-2, Summary of Project Impacts, Agricultural Resources

<p>According to the FMMP Important Farmland Map for Ventura County, there are approximately 44.220 acres of prime farmland and 4.88 acres of farmland of statewide importance on the site (total of 49.081 acres). Implementation of the Specific Plan would result in the conversion of the 49.081 acres of both prime farmland and important farmland to urbanized uses. <u>Per Government Code Section 56064, the same amount of approximately 49.1 acres of Prime Agricultural Land would be developed.</u></p>	<p>Potentially Significant</p>	<p>AG-1: <u>To reduce or minimize impacts to Prime Farmland, and Important Farmland, and to Prime Farmland as defined in Section 56064 of the Government Code, the Applicant shall provide mitigation through one, or some combination of, the following mitigation measures, prior to the issuance of a grading permit by the City:</u></p> <ol style="list-style-type: none"> 1. <u>The Applicant shall secure a conservation easement in perpetuity, on land officially designated by the State of California as Prime Farmland and Important Farmland. The mitigation ratio shall be 1:1 for each class of designated farmland, resulting in a conservation easement being placed on a total of 44.20 acres of Prime Farmland and 4.88 acres of Important Farmland within the State of California. The applicant may satisfy the Important Farmland mitigation requirement by conserving Prime Farmland; or</u> 2. <u>The Applicant shall make payments to a local, regional, or statewide organization whose purpose is to acquire agricultural conservation easements for Prime Farmland and Important Farmland, and has demonstrated a successful track record in doing so, over at least 5 years. If the applicant elects to pursue this option alone, or in combination with option 1, the Applicant shall demonstrate to the City Planning Director that it has paid funds sufficient to</u> 	<p>Significant and Unavoidable</p>
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		<p><u>allow the state, regional, or local conservation organization to acquire conservation easements in perpetuity over Prime Farmland and important Farmland resulting in a mitigation conservation ratio or 1:1 for each class of Farmland.</u></p> <p><u>If, prior to the issuance of a grading permit, the Applicant contends that satisfying mitigation options 1 and/or 2 is not financially feasible, the Applicant shall provide “substantial evidence” to the City Planning Director, as that term is defined in the CEQA Guidelines, including but not limited to expert opinion evidence supported by facts, to support its contention that such mitigation is not financially feasible. The Applicant’s substantial evidence shall be independently reviewed by the City’s financial experts or outside consultant, the cost of which shall be paid by the Applicant. If the City concurs with the Applicant’s conclusion that mitigation options 1 and/or 2 are not financially feasible, the Applicant shall provide mitigation at less than a 1:1 ratio, to the extent feasible, to minimize or reduce the level of impacts to Prime Farmlands and important Farmland.</u></p> <p>A-1: Before approval of a grading permits that will convert prime farmland as designated on the Department of Conservation’s most recent State Important Farmland Map, the applicant must record an agricultural conservation covenant, in a form approved by the City of Santa Paula, on other prime farmland currently under agricultural production within the City of Santa Paula’s Area of Interest.</p> <p>The area of the conservation covenant shall be based on the production value of the prime farmland being taken out of production. The production value shall be determined as the annual average of the total crop value for the four year period prior to the issuance of a grading permit. The conservation covenant shall provide for an equivalent amount of acreage to provide for the same</p>	
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		production value on the prime farmland being lost (e.g., if one acre of prime farmland being converted produces \$500,000 of crops per year, then an agricultural covenant shall be placed on one-half [½] acre of land producing \$1,000,000 per year.	
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ES-13-14 Table ES-2, Summary of Project Impacts, Agricultural Resources

<p><u>On-Site Agriculture</u> As stated previously, approximately 49 acres of the 53.81-acre Project Site are under agricultural cultivation and would be taken out of production as a result of implementation of the Specific Plan.</p> <p><u>Adjacent Agriculture</u> Existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of State Route (SR) 126, and near the western boundary of the Specific Plan area, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126. The Specific Plan would not readily accommodate outdoor recreational activities for the general public or provide residential habitation components. As such, residential and general public exposure to dust, noise, and odors associated with nearby farming activities is considered less than significant. Therefore, based on the nature of the Project and design features to reduce any conflicts with adjacent agricultural land, potential impacts related to the conversion of off-site farmland to</p>	<p><u>Potentially Significant for On-Site Agriculture</u></p> <p>Less than Significant for <u>Adjacent Agriculture</u></p>	<p><u>Implementation of Mitigation Measure AG-1.</u></p>	<p><u>Significant and Unavoidable for On-Site Agriculture</u></p> <p>Less than Significant for <u>Adjacent Agriculture</u></p>
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nonagricultural uses would be less than significant.			
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ES-14 Table ES-2, Summary of Project Impacts, Cumulative Impacts Agricultural Resources

Implementation of the General Plan would result in a long-term commitment to nonagricultural uses in areas that currently support prime and important Farmland soils, particularly within the West Area 2 and East Area 2 Expansion Areas. Since both of these expansion areas include statewide important farmland, development of these areas in accordance with the General Plan will result in cumulative impacts to agricultural resources within the City’s Planning Area. While development of these areas would be consistent with local planning policies, the cumulative impact on agricultural resources would be a significant and unavoidable impact.	<u>Significant</u>	<u>Implementation of Mitigation Measure AG-1.</u>	<u>Significant and Unavoidable</u>
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ES-14-15 Table ES-2, Summary of Project Impacts, Air Quality

<u>According to the VCAPCD Guidelines, to be consistent with the AQMP, a project must conform to the local general plan and must not result in, or contribute to, an exceedance of the County’s projected population growth forecast.</u> <u>The Project’s addition of 1,510 employees would be consistent with the projections per SCAG. The planned uses would also be consistent with the City’s land use and zoning designation of the Project Site. As such, the</u>	Less than Significant	No mitigation measures necessary.	Less than Significant
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<p><u>Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County.</u></p> <p>The proposed Project will not increase the amount of housing within the Specific Plan area, as no residences are planned to be built. The project employment increase would be approximately 1,510 employees and would not result in SCAG projections being exceeded. Therefore, as growth under the Specific Plan is not expected, the Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County. Therefore, impacts regarding consistency with applicable air quality are considered less than significant.</p>			
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ES-15-16 Table ES-2, Summary of Project Impacts, Air Quality

<p><u>The VCAPCD's 25 lb/day threshold for ROG and NOx does not apply to construction emissions because such emissions are temporary. Emissions of TACs are localized, not regional, in nature; impacts related to construction activities would be limited to the area immediately surrounding the construction site within the Project area, and the VCAPCD does not recommend any thresholds of significance for their associated emissions. Instead, the VCAPCD bases the determination of significance on a consideration of the control measures to be implemented. If all appropriate emissions</u></p>	<p>Potentially Significant</p>	<p>AQ-1: During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD (including without limitation, to VCAPCD Rule 50 (Opacity) and Rule 51 (Nuisance):</p> <ul style="list-style-type: none"> • On-site vehicle speed shall not to exceed 15 miles per hour (the Project Site will contain posted signs with the speed limit). • All on-site construction roads with vehicle traffic shall be watered <u>as necessary to prevent excessive dust periodically;</u> 	<p><u>Less than Significant</u></p>
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<p><u>control measures recommended by the VCAPCD Guidelines are implemented for a project, then construction emissions are not considered significant. All construction activities would adhere to the VCAPCD Rule 50 for Opacity, Rule 51 for Nuisance, and Rule 55 for Fugitive Dust.</u></p> <p>Construction activities associated with the construction of uses allowed with the Specific Plan would exceed VCAPCD threshold for ROG and NOx throughout the entire construction period and would be considered potentially significant.</p> <p>The construction emissions analysis was conducted for Year 2020, which was identified as the worst case year due to the overlapping construction activities of paving and architectural coating. ROG emissions from architectural coating exceeded the significance threshold.</p>		<ul style="list-style-type: none"> • Streets adjacent to the Project reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust. • All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust (contact the VCAPCD meteorologist for current information about average wind speeds). • All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust. • The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust. <p>These control techniques shall be indicated on Project grading plans. The Applicant and/or its contractor shall be responsible for implementing these measures and compliance with this measure will be subject to periodic site inspections by the City.</p> <p>AQ-2: Project grading plans shall show that for the duration of construction, ozone precursor emissions from construction equipment vehicles must be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer’s specifications, to the satisfaction of the City Engineer. Compliance with this measure will be subject to periodic inspections of construction equipment vehicles by the Public Works Department.</p>	
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		<p>AQ-3: All trucks that will haul excavated or graded material on site shall comply with California Vehicle Code Section 23114 with special attention to subsections 2311(b)(F), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.</p> <p>AQ-4: A comprehensive Fugitive Dust Control Plan shall be developed by the Applicant and approved by the VCAPCD before the applicant commences grading and excavation operations. The Plan shall include all feasible, but environmentally safe, dust control methods. If a particular dust control method is determined or believed not to be feasible, or if it would conflict with other regulations, justification for not including the subject method shall be provided at the time the Fugitive Dust Control Plan is submitted to the VCAPCD. The Plan shall identify all fugitive dust sources, the means by which fugitive dust from each identified source will be minimized, and the schedule of frequency that each dust control method will be applied for each identified source.</p> <p>AQ-5: The construction contractor shall adhere to VCAPCD Rule 74.2 (Architectural Coatings) for limiting volatile organic compounds from architectural coatings. This rule specifies architectural coatings storage, clean up, and labeling requirements.</p>	
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ES-17-18 Table ES-2, Summary of Project Impacts, Air Quality

<p>The Project would generate average daily operational emissions that exceed the thresholds of significance recommended by the VCAPCD for ROG. Many of the measures that the VCAPCD recommends to reduce the significant operational impacts are features of the Project. The off-site transportation demand management (TDM) fund is a</p>	<p>Potentially Significant</p>	<p>AQ-6: Use low emission water heaters for residential, retail, and commercial water heating (Emissions reduction of 11 percent for ROG and 9.5 percent for NOx).</p> <p>AQ-7: Construct pedestrian and transit friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, and bikeways and or lanes <u>and bike racks</u>.</p>	<p>Significant and Unavoidable</p>
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<p>mitigation measure that can be used by project proponents for projects and program that exceed the ROG and NOx significance thresholds. The City of Santa Paula utilizes this program to mitigate the significant air quality impacts of projects with its jurisdiction. While impacts will be reduced with mitigation, they will remain significant and unavoidable.</p>		<p>Sidewalks and bikeways should be landscaped with trees (an approximately 4 percent emissions reduction).</p> <p>AQ-8: Provide shuttle/minibus service between the Project commercial and industrial land uses and the Project retail land uses and the Santa Paula downtown area during the lunchtime period (11:00 AM to 2:00 PM).</p>	
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ES-18-19 Table ES-2, Summary of Project Impacts, Air Quality

<p>According to the VCAPCD, if an individual project results in air emissions of criteria pollutants that exceed VCAPCD's recommended daily thresholds for project-specific impacts, then the project would also result in a cumulatively considerable net increase of these criteria pollutants. By applying VCAPCD's cumulative air quality impact methodology, implementation of the Project would result in an increase of ROG, an ozone precursor, and NOx, such that significant cumulative impacts would occur. Accordingly, cumulative impacts would be potentially significant.</p>	<p>Potentially Significant</p>	<p>AQ-12: The Applicant and/or its contractor must plant and maintain shade trees to reduce heat build-up on structures.</p> <p>AQ-13: The Applicant and/or its contractor shall prepare a TDM for review and approval by the City and VCAPCD, before the City issues building permits. The plan shall incorporate reasonable and feasible measures to reduce Project-related traffic and vehicle miles traveled. At minimum, the TDM Program shall include the following measures:</p> <ul style="list-style-type: none"> • Provision of connections to identified adjacent City or regional trails. • Provision of adequate way-finding features to direct pedestrians and bicyclists to nearby Project and City destinations, such as school, retail, and civic facilities. • Provision of homeowner information packets prior to close of escrow, identifying local and regional nonvehicular transportation options, and providing homeowners with basic information regarding telecommuting options. • Provision of adequate setbacks and design features such that the proposed future enhancement of 	<p><u>Significant and Unavoidable</u></p>
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		<p>commuter rail opportunities is not hindered by Project design.</p> <ul style="list-style-type: none"> • Construction of pedestrian- and transit-friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, bikeways, or lanes. Sidewalks and bikeways should be landscaped with trees. • Perform a traffic light synchronization study on streets impacted by Project development to reduce vehicle queuing time. <p>The Project shall offset the increase in daily emission over the 25 pounds of reactive organic compounds and nitrogen oxides per day either through the purchase of emission offsets or through the in-lieu fees shall be paid to fund off-site TDM facilities or services, if such a program has been established at that time. These fees can reduce emissions from non-Project-generated motor vehicle trips by funding programs to promote ridesharing, public transit, and bicycling. The amount of this financial contribution should be calculated on a pro-rate basis as determined to be equitable by the VCAPCD, and in accordance with the VCAPCD Guidelines. These fees should be paid prior to the issuance of building permits by the County. The applicant shall demonstrate the availability of the offsets or contribution to fund off-site TDM services to the VCAPCD through a contract or other agreement with the offset source(s), which binds the reduction to the Project.</p> <p>AQ 14: The Applicant and/or its contractor shall install EPA-certified wood burning stoves or fireplace inserts. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor must be utilized or the use of natural gas fireplaces may be used as a feasible alternative.</p>	
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ES-20 Table ES-2, Summary of Project Impacts, Air Quality

<p>An HRA was prepared to determine whether diesel particulate emissions from construction under <u>within</u> the Santa Paula West Specific Plan will cause significant impacts to nearby sensitive receptors. In comparison to the <u>applicable</u> 10 in 1 million threshold level, carcinogenic risks do not exceed the level posing no significant risk. Therefore, impacts are less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than Significant</p>
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ES-21 Table ES-2, Summary of Project Impacts, Air Quality

<p>The uses allowed by the Santa Paula West Business Park Specific Plan do not include any operations that require large amounts of hazardous materials <u>that could pose a significant health risk</u>. Accordingly, the Project will not result in a significant impact with respect to use of hazardous materials during long-term operations.</p>	<p>Less than Significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than Significant</p>
<p>The types of industrial activities that would occur with the Project are not known at this time, but would be evaluated at the time that permits to construct and operate are applied for from the APCD. Therefore, the potential impacts associated with objectionable odors will be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than Significant</p>

ES-21-22 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Air Quality

<p>The Project would not have a cumulatively considerable contribution to this impact with respect to conflicting with or obstructing the implementation of the applicable air quality plan.</p>	<p>Less than Significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than Significant</p>
<p>Cumulative development activity within the City of Santa Paula would continue to implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the city is not expected to cause a significant impact associated with construction activities.</p>	<p>Less than Significant</p>	<p>No mitigation measures necessary.</p>	<p>Less than Significant</p>
<p><u>The Project would not have a cumulatively considerable contribution to this impact with respect to conflicting with or obstructing the implementation of the applicable air quality plan.</u></p> <p><u>Cumulative development activity within the City of Santa Paula would continue to implement dust control and equipment emissions mitigation measures during construction in accordance with City practices. Consequently, cumulative development within the city is not expected to cause a significant impact associated with construction activities.</u></p> <p><u>However, because</u> Ventura County is currently in nonattainment for ozone, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Therefore,</p>	<p><u>Significant</u></p>	<p>Implementation of mitigation measures AQ-6 through AQ-8 and AQ-12 through AQ-134.</p>	<p>Significant and Unavoidable</p>

the emissions generated by the Project would be cumulatively considerable and are a significant and unavoidable impact.			
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ES-23 Table ES-2, Summary of Project Impacts, Biological Resources

<u>The Project includes the dedication of Open Space for the areas identified as Mixed Willow Riparian, and no development would occur within the Mixed Willow Riparian habitat area, potential impacts to vegetation communities are considered less than significant.</u>	<u>Less than Significant</u>	<u>No mitigation measures necessary.</u>	<u>Less than Significant</u>
Southern California black walnut (<i>Juglans californica</i>) is the only special-status plant species that was documented or determined to have a high likelihood of occurring within the Project Site. A total of 19 individual trees are located along the perimeter of the Project Site, mainly along the southwest boundary within the riparian habitat of the Adams Barranca and along the SR 126 right-of-way along the southeast boundary of the Project Site, <u>however, the Project does not currently propose to remove any of the 19 Southern California black walnut trees.</u> Therefore, i mpacts to special-status plant species (e.g. black walnut) are considered potentially significant.	Potentially Significant	BR-1 Before issuance of a grading permit, the Applicant must identify on grading plans, the locations of any protected trees (such as the Southern California black walnut, <i>Juglans californica</i>) and must include a report pertaining to preserving the tree(s) that could be affected by the grading activity. The report shall be prepared by a tree expert and shall evaluate the subdivider's <u>Applicant's</u> proposals for protected tree preservation, including avoiding grading, land movement, or other activity within the drip line of any protected tree. Prior to grading, the drip line must be fenced to prevent earthmoving equipment from inadvertently entering the drip line. In the event protected tree cannot be avoided, then the Applicant must provide a tree report in accordance with the City's Tree Protection Ordinance and must provide for the replacement or relocation of any protected trees that are to be removed, or would be subject to landmoving or grading within its drip line.	Less than Significant
The Southwestern willow flycatcher breeds in dense riparian habits along rivers and streams, and almost all southwestern flycatchers breeding habitat is within close	Potentially Significant	BR-3 <u>To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be approved by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to</u>	Less than Significant

<p>proximity of water or saturated soils. The Project includes construction activity that could result in a temporary impact to the species if members are foraging or in the unlikely event they nest near the Project Site at the time of construction. Therefore, impacts are considered potentially significant.</p> <p>The Project is consistent with the recovery plan for this species because if southwestern willow flycatchers are located on site, they would not be permanently impacted. Although, the Project would result in potentially significant impacts to the southwestern willow flycatcher, mitigation measures are included within this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed.</p>		<p><u>construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special-status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove. In addition, due to the potential for least Bell's vireo and southwest willow flycatcher to exist, protocol surveys should be completed prior to the start of construction.</u></p> <p>BR-4 <u>If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the qualified biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel</u></p>	
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		<p><u>shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.</u></p> <p>Implementation of mitigation measure BR-2 would ensure that impacts to Southwestern willow flycatcher habitat, Adams Barranca, would remain less than significant.</p>	
<p>The least Bell's vireo was not observed during the Project surveys; however, Adams Barranca provides potential habitat for the species. Impacts are considered potentially significant in the unlikely event this species nests on site or in the immediate vicinity and is subject to disturbance from construction activity.</p> <p>The Project is consistent with the recovery plan for this species because the least Bell's vireo habitat present on the site would not be impacted. The Project would result in potentially significant impacts to the least Bell's vireo. However, mitigation measures are included within this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts to habitat for least Bell's vireo individuals in the Santa Clara River Watershed.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure BR-3 and BR-42.</p>	<p>Less than Significant</p>

<p>Although, \mp the Pallid bat was not observed during the Project surveys, Adams Barranca provides foraging and roosting habitat for the species. Construction under the Specific Plan could result in potentially significant impacts to pallid bats.</p> <p>The Hoary Bat was not observed during the Project Surveys, however, Adams Barranca provides foraging and roosting habitat for the species. This species is not expected to breed in Adams Barranca but may use the habitat for roosting, and the agricultural areas of Project Area for foraging.</p>	<p>Potentially Significant</p>	<p>BR-6 To avoid <u>potential</u> impacts to the Pallid bat (<i>Antrozous pallidus</i>) and the Hoary Bat (<i>Lasiurus cinereus</i>), the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities. Thirty days before ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys in accordance with standard protocols to determine if roosting western red bats are present in the construction zone or within 300 feet of the construction zone. Roosting bat surveys shall be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees and large shrubs in which this species is known to roost. Any bats found outside of the breeding season (May through August) shall be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 300 feet of the roost, shall be postponed or halted until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site shall be established in the field with flagging, fencing, or other appropriate barriers. Construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no</p>	<p>Less than Significant</p>
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		<p>inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of these bat species.</p>	
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ES-27-32 Table ES-2, Summary of Project Impacts, Biological Resources

<p>No active bird nests were observed at the time of survey; however, suitable nesting habitat is present within the avocado orchard, ornamental trees within the Project area, and adjacent trees to the Project Site and within Adams Barranca. However, impacts to nesting birds may be potentially significant.</p>	<p>Potentially Significant</p>	<p><u>Implementation of mitigation measure BR-3 and BR-4.</u> BR-3 To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance</p>	<p>Less than Significant</p>
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		<p>activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove.</p> <p>BR-4 If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged, as determined by the qualified biologist, and there is no evidence of a second attempt at nesting. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers, and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts to these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.</p>	
<p>Development under the Specific Plan would require the removal of the agricultural drainage ditch that bisects the Project Site and is considered State Waters pursuant to the Fish and Game Code and the Clean Water Act. Other state and federal jurisdictional waters (i.e., those within Adams Barranca) would be preserved through an Open Space dedication and prevention of construction activities within the Barranca. <u>All Project impacts to ACOE and CDFW jurisdictional areas are considered potentially significant, and would be mitigated to a less than</u></p>	<p>Potentially Significant</p>	<p>BR-7 Before the issuance of a grading permit for areas that require state permits, the applicant shall coordinate with the CDFW to verify the impact to state-protected waters and associated vegetation on the Project Site. A Streambed Alteration Agreement (SAA) must be obtained, and mitigation measures recommended by the CDFW as part of the SAA shall be implemented. The SAA shall be provided to the City prior to issuance of a grading permit.</p> <p>The Applicant must mitigate for impacts to jurisdictional waters as administered by the CDFW jurisdiction by restoring habitats within those jurisdictions acceptable</p>	<p>Less than Significant</p>

<p><u>significant level through the conditions imposed pursuant to the Project's 404, 401, and 1602 permits/agreement as well as by mitigation measures identified in this EIR.</u></p>		<p>to the resource agency. Habitat must be mitigated onsite or within the same watershed, if feasible.</p> <ul style="list-style-type: none"> • The mitigation site(s) shall have been evaluated and selected on the basis of their suitability for use as riparian mitigation areas. • The mitigation area shall provide procedures to prepare soils in the mitigation area, provide detailed seeding/planting mixtures, provide seeding/planting methods, and other procedures that will be used for successful re-vegetation. • Impacts to jurisdictional waters shall be avoided to the extent feasible in the design phase of the Project. • Maintenance and monitoring requirements shall be established, including quarterly and annual monitoring reports to CDFW. <p>BR-8 Prior to the issuance of a grading permit for areas that require state or federal permits, the applicant and/or its contractor shall coordinate with the Army Corps of Engineers (ACOE) to verify the impact to federally regulated waters on the Project Site. A Nationwide Permit (NWP) shall be obtained and mitigation measures recommended by the ACOE and National Marine Fisheries, as part of the NWP shall be implemented. The NWP shall be provided to the City prior to initiating construction of the bridge crossing Santa Paula Creek.</p> <p>Areas determined to be federally regulated by the ACOE shall also fall under the jurisdiction of the Regional Water Quality Control Board (RWQCB), and a Clean Water Act Section 401 Water Quality Certification (401 Certification) will be required from the RWQCB for impacts to those areas.</p> <p>BR-9 For impacts to Regional Board jurisdiction, the Applicant shall:</p>	
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		<ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio) on site; or • Provide a one-time in-lieu fee to a Regional Board–approved mitigation bank and/or in-lieu fee program within the Santa Clara River Watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1.27 acres of Regional Board jurisdiction; or • A combination of on-site and/or off-site compensatory mitigation options, as described above. <p>BR-10 As mitigation impacts to CDFW jurisdiction, the Applicant shall:</p> <ul style="list-style-type: none"> • Establish, reestablish, rehabilitate, and/or enhance a minimum of 1:1 mitigation-to-impact ratio acres of CDFW jurisdiction for loss of State Waters; or • Provide a one-time in-lieu fee to a CDFW-approved mitigation bank and/or in-lieu fee program within the Santa Clara River watershed (at a minimum 1:1 mitigation-to-impact ratio) to establish, re-establish, rehabilitate, and/or enhance a minimum of 1:1 CDFW jurisdiction area; or <p>A combination of on-site and/or off-site compensatory mitigation options, as described above.</p>	
<p>The development of the Project Site would increase the number of nighttime light and glare sources on the site. Light and glare can “spill over” into adjacent open space areas, increasing the level of light currently experienced there. Nighttime light can disturb breeding and foraging behavior and can potentially alter foraging and breeding behavior of nocturnal birds, mammals, and</p>	<p><u>Less than Significant</u> Potentially Significant</p>	<p>Implementation of mitigation measure BR-2. <u>No mitigation necessary.</u> <u>Implementation of mitigation AES-1 which includes the installation of low intensity, low-glare design, and hooded to direct light downward preventing spillover into adjacent areas would further reduce impact.</u></p>	<p>Less than Significant</p>

<p>invertebrates, which is considered a potentially significant impact. <u>Section 4.6 of the Specific Plan for the proposed Project addresses lighting guidelines for the Project Site, including but not limited to, height of lighting, requirements for screened lighting, and submittal of a lighting plan to the police Chief or designee for approval prior to issuance of a building permit. Impacts from lighting and glare would be considered less than significant.</u></p>			
<p>Development under the Project can be expected to increase human activity near Adams Barranca, which could result in an increase in the frequency of human encroachment into the Barranca when compared to existing conditions. The Open Space <u>area</u> designations of the Specific Plan, upland buffers from the riparian area and development under the Project, and the Project characteristics that would provide predominantly indoor daytime work areas would minimize any potential for increase human disturbance to the Adams Barranca. Therefore, indirect impacts from human encroachment would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>Invasive exotic species introduced as landscaping could be dispersed by stormwater, wind, or wildlife, or by various other means to natural habitats in the area, including Adams Barranca and other downstream water bodies, such as the Santa Clara River. Impacts from the introduction of invasive exotic landscape plants could be potentially significant.</p>	<p>Potentially Significant</p>	<p>BR-2 Before issuance of a grading permit for development within the Specific Plan area, a landscaping and irrigation plan must be prepared and must incorporate the planting of native vegetation and use of water conserving irrigation. The landscaping and irrigation plan must be prepared by a licensed landscape architect, and use native plant and tree species. The landscape and irrigation plan must be submitted to the City of Santa Paula Planning Department for review and approval.</p>	<p>Less than Significant</p>

		<p>Nonnative plants or vegetation must be avoided in future development areas. The landscaping plans within common areas of development areas must include appropriate provisions to prevent other invasive plant species from colonizing remaining natural areas. These provisions must include the following: (a) review and screening of proposed plant palette and planting plans to identify and avoid the use of invasive species; (b) weed removal during the initial planting of landscaped areas; and (c) the monitoring for and removal of weeds and other invasive plant species as part of ongoing landscape maintenance activities. The frequency and method of monitoring for invasive species must be determined by a qualified botanist.</p> <p>For areas adjacent to Adams Barranca riparian corridors, the plan must provide for adequate landscaping to reduce indirect impacts including attenuation of noise and reduction of nighttime lighting and glare.</p>	
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ES-34 Table ES-2, Summary of Project Impacts, Biological Resources

<p>Adams Barranca, located along the western border of the Project Site could provide a wildlife movement corridor with linkage between the foothills of the mountains north of the City and the Santa Clara River, <u>however, the Project does not propose to obstruct or develop in the Barranca. The Project would not result in potentially significant impacts to the movement of resident or migratory fish or terrestrial wildlife species.</u> No historical or active raptor nests or communal roosts exist at the Project Site or within 100 feet of any area that is or will be subject to development within the Project Site. Raptors are mobile species with</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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<p>generally large home ranges, they are capable of compensating for the loss of small acreages of foraging habitat in a local area by moving to other suitable foraging habitats. Therefore, development of the Project would not eliminate significant raptor foraging areas or limit raptors' access to food resources, making potential impacts to raptors due to the development of the Project less than significant.</p>			
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ES-35 Table ES-2, Summary of Project Impacts, Biological Resources

<p><u>The Project is consistent with the recovery plan for this the least Bell's vireo because the least Bell's vireo habitat present on the site would not be impacted. All potential impacts to the least Bell's vireo during construction would be mitigated by measures are included in this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts to habitat for least Bell's vireo individuals in the Santa Clara River Watershed.</u></p>	<p><u>Potentially Significant</u></p>	<p><u>Implementation of mitigation measure BR-2.</u></p>	<p><u>Less than Significant</u></p>
<p><u>All potential impacts to the southwestern willow flycatcher during construction would be mitigated by measures included in this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed. The southwestern willow flycatchers would not be permanently impacted, and therefore the Project is consistent with the recovery plan.</u></p>	<p><u>Potentially Significant</u></p>	<p><u>Implementation of mitigation measure BR-2.</u></p>	<p><u>Less than Significant</u></p>

ES-35-36 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Biological Resources

<p><u>Most wildlife species that could be expected to use the Project Site are species that are adapted to the disturbance that is caused by human-induced activities. Because of the present condition of the Project Site and the surrounding lands, it is unlikely that development of the site would contribute significantly to cumulative adverse impacts to regional flora and fauna. However, the loss of habitat associated with development of the Project area would contribute to the overall cumulative loss of biological resources in the Santa Paula region. Given that the impacted habitat within the Project area consists primarily of agricultural and urban developed land, and the impacted waters are small (less than 1 acre), the incremental contribution of the Project to this habitat loss is not cumulatively considerable.</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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ES-38 Table ES-2, Summary of Project Impacts, Cultural Resources

<p>A majority of the Project Site has been extensively farmed with various row crops and orchards, which has continually disturbed the surface of the soils. While the Project Site does not contain any known sensitive archaeological resources within the disturbance area, the general Santa Clara River Valley is considered sensitive, and there is potential for unknown resources to be uncovered by activities, such as grading, that disturb the ground surface.</p>	<p>Potentially Significant</p>	<p>CUL-3: In the event that previously unidentified archaeological resources are discovered during building construction, the contractor must cease work in the immediate area and the City Planning Director shall be contacted. An independent qualified archaeologist, retained by the City at the expense of the applicant, must assess the significance of the find and make mitigation recommendations, <u>which shall be implemented to the extent feasible.</u></p>	<p>Less than Significant</p>
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ES-39 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Cultural Resources

<p><u>Potential impacts to cultural resources within the Project Site would be mitigated to less than significant with implementation of mitigation measures. Other Specific Plan projects that would likely have similar potentially significant impacts to paleontological, archaeological, and historic resources include the remainder of West Area 2, Adams Canyon, Fagan Canyon, and East Area 1 Specific Plan and East Area 2 Projects. The Project, in combination with other currently planned projects, may result in the potential for a cumulatively significant contribution to significant cumulative impacts. However, mitigation measures would reduce the potentially significant cumulative contribution to paleontological, archaeological, and historical resources.</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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ES-40 Table ES-2, Summary of Project Impacts, Geology and Soils

<p>The Specific Plan area could be subject to strong ground shaking in the event of an earthquake originating along one of the <u>nearby faults listed in Table 4.6-1</u> (or another active or potentially active in the Southern California area, such as the San Andrea Fault). Construction allowed by the Specific Plan will be required to comply with the version of the CBC in effect at the time individual building permits are obtained. The Project will not expose residents to unknown safety issues associated with seismicity (including ground</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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shaking), and potential impacts are less than significant.			
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ES-41 Table ES-2, Summary of Project Impacts, Geology and Soils

<p>Most of the Project Site lies within a liquefaction hazard zone, an area where the historic occurrence of liquefaction or groundwater conditions indicate a potential for ground displacements as a result of liquefaction, as designated by the State of California and the City of Santa Paula. Settlement caused by ground shaking is often not uniformly distributed, which can result in differential settlement. If settlement occurs, it could result in damage to improvements. Seismic settlement could occur on the site and is thus considered a potentially significant impact.</p>	Potentially Significant	<p>G-1: Additional explorations must be performed at the tentative tract map and grading plan review stages of the development planning. The purpose of the explorations would be to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement. <u>The Project shall comply with all CBC/UBC requirements for seismic safety.</u></p>	Less than Significant
<p>The native topsoil and alluvial soils in the annexation area may be moderately susceptible to erosion. Construction activities would comply with erosion control requirements, including <u>existing</u> grading and dust control measures, imposed by the City pursuant to grading permit regulations. After construction, the project may result in a limited degree of soil erosion effects from vegetated areas. However, in accordance with NPDES requirements, the project would be required to have a Standard Urban Stormwater Mitigation Plan (SUSMP) in place during the operational life of each development within the Specific Plan. While BMP design features would be developed with more refined engineering for each</p>	Potentially Significant	<p>G-2: Detailed, design-level geotechnical investigation reports for all future subdivision and other discretionary development approvals must be submitted to the Public Works Director, or designee, for approval. In addition, grading plans and geotechnical reports prepared by a licensed Engineering Geologist (approved by the Public Works Director) must be provided to the Public Works Director, or designee, before the City issues grading building permits for individual development projects within the Project Site. Requirements for the geotechnical reports and compliance are described below.</p> <ul style="list-style-type: none"> The Engineering Geologist must make recommendations to address any seismically induced settlement within portions of the Project Site. In particular, seismically induced settlement 	Less than Significant

<p>development prior to implementation of the above requirements, impacts associated with erosion and sedimentation are considered potentially significant.</p>		<p>must be addressed in the western parts of the Project Site, where preliminary geotechnical investigations determined that the area may experience up to several inches of seismically induced settlement in the event of strong ground motion.</p> <ul style="list-style-type: none"> • The Engineering Geologist must inspect and certify that any expansive soils underlying individual building pads and all roadway subgrades have been either removed or amended in accordance with construction specifications, and make site-specific recommendations for grading, drainage installation, and foundation design, as appropriate. • The Public Works Director, or designee, must ensure that all soils and engineering report recommendations are incorporated into the project engineering and construction plans, including soils tests to ensure that it meets the soil classifications assumed in the soils reports, and that soils meet the CBC requirements. • All Project plans as determined necessary by the Public Works Director, or designee, including Grading and Construction Plans, must be reviewed and stamped by a Project soils engineer and submitted to the Public Works Director, or designee, for review and verification that all requirements are incorporated before the City issues grading or construction permits. • The Applicant and/or contractor must retain a licensed soils engineer acceptable to the Public Works Director, or designee, to review all construction plans for consistency with the soils reports and to monitor on-site grading and construction to ensure the conditions at the Project Site do not substantially change the requirements of report recommendations for design-level geotechnical investigations. The project soils 	
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		<p>engineer must monitor grading and construction activity and report observations to the Public Works Director, or designee. The Public Works Director, or designee, will conduct field inspections as needed.</p>	
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ES-44-45 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Geology and Soils

<p><u>At a minimum, all development occurring within the City of Santa Paula would be subject to CBC and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Also, individual project geotechnical investigation reports, required prior to permit approval, would provide recommendations to account for site-specific design requirements to avoid subjecting on- and off-site properties to geologic hazards, in accordance with the CBC. With regard to erosion and sedimentation, development under the Santa Paula West Specific Plan and related projects are required to implement a SWPPP during construction, as required by the NPDES permit, to minimize impacts to off-site properties from the effects of erosion. The Project will meet the applicable standards and will sufficiently reduce its incremental cumulative geology and soil impacts to a less than significant cumulative impact.</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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ES-45 Table ES-2, Summary of Project Impacts, Greenhouse Gasses

<p><u>GHG emissions reductions would be achieved through energy-efficient lighting and building design; installation of low-flow appliances; and water conservation. The methods used to establish this relative reduction are consistent with the approach used in the CARB’s Scoping Plan for the implementation of AB 32 through 2020. The Project’s features and GHG reduction measures make the Project consistent with the goals of AB 32. Therefore, the Project will result in a less than significant contribution to cumulatively significant GHG emissions.</u></p> <p>Given the Specific Plan’s consistency with state and county GHG emission reduction goals and objectives, the Specific Plan’s contribution to the cumulative impact of greenhouse gas emissions would not be cumulatively considerable and would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs (i.e., the 2014 Updated Scoping Plan). Similarly, related projects would also be anticipated to comply with these same emissions reduction goals and objectives. Therefore, cumulative impacts with respect to greenhouse gas emissions would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-46-47 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

<p><u>Construction of the Project would involve deliveries and disposal of hazardous materials such as fuels, oils, solvents, and other equipment maintenance and building materials.</u> Spills or leakages encountered during construction and hauling would be temporary and would be required to be remediated in accordance with the State and local regulations for hazardous waste cleanup. As such, impacts from the use and handling of hazardous materials would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-47-48 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

<p>If the railroad is commissioned for service within the future, any transport of hazardous materials would comply with US Department of Transportation (USDOT) Federal Railroad Administration (FRA) safety regulations. Therefore, the probability of an accident involving the transport of hazardous materials within proximity to the Project Site is considered to be <u>very low unlikely</u>. Impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p>During construction of the Project, delivered materials to the site could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. The event of a spill or release related to these hazardous materials could cause a short-term threat of exposure to nearby schools and residential areas along SR 126 and W. Telegraph Road. Therefore, the Project would</p>	<p>Potentially Significant</p>	<p>HM-1: Prior to demolition and construction activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that an asbestos survey has been conducted on any buildings and irrigation pipelines that are to be demolished or removed from the Project Site. If asbestos is found, the Applicant shall follow all procedural requirements and regulations of the VCAPCD Rule</p>	<p>Less than Significant</p>

<p>have potentially significant impacts related to the transport of hazardous materials during construction activities.</p> <p><u>The Project Site has been historically used for agricultural uses for more than 75 years, it is possible that residual pesticides may be exposed during grading and excavation activities. The limited Phase II ESA conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate of every condition within the Project, and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on site. Therefore, potential impacts related to the presence of hazardous substances would be potentially significant.</u></p>		<p>62.7 to properly dispose of all on-site ACM's before general demolition activities commence.</p> <p>HM-2: Prior to demolition and any renovation activities on the Project Site, the Applicant shall submit verification to the City of Santa Paula Building and Safety Department that a lead-based paint survey has been conducted at all existing buildings located on the Project Site. If lead-based paint is found, the Applicant shall follow all OSHA procedural requirements and regulations for its proper removal and disposal before general demolition activities commence.</p> <p>HM-3: Prior to disposal, all fluorescent light fixtures within the existing buildings shall be inspected for PCB content labels throughout demolition of the Project Site.</p> <p>HM-4: Pole-mounted transformers, light ballasts, or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal. All equipment found to contain PCBs must be removed and disposed in accordance with all applicable local, State and Federal regulations including but not limited to California Code of Regulations Title 22, 40 CFR Part 261, and EPA 40 CFR. Utility Plans prepared as part of building permit review must include notes requiring inspection and plan for removal and disposal.</p> <p><u>HM-5: In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan consistent with federal and state remedial requirements, must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or</u></p>	
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		<u>designee, for approval as required before continued work in the area.</u>	
The Project Site has been historically used for agricultural uses for more than 75 years, it is possible that residual pesticides may be exposed during grading and excavation activities. The limited Phase II ESA conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate of every condition within the Project, and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on site. Therefore, potential impacts related to the presence of hazardous substances would be potentially significant.	Potentially Significant	HM-5: In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or designee, for approval as required before continued work in the area.	Less than Significant

ES-49 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

The Project Site is not within 0.25 miles of an existing school. The Project would <u>may</u> involve the use of hazardous materials on site typical of industrial-type uses. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards. Therefore, impacts would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
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ES-51 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

The Specific Plan area has the potential for residents and employees to encounter human-made and natural hazards, which could cause undue hardship to residents and employees.	Less than Significant	No mitigation necessary.	Less than Significant
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<p>The working population within the Specific Plan would be made aware of such disaster plans through public education and outreach activities. In addition, the Project would comply with the SPFD’s recommended standards for emergency accessibility and circulation. Thus, the Project’s operational impacts on the implementation of the Ventura County Hazard Mitigation Plan would be considered less than significant.</p>			
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ES-52 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

<p>Construction activities of the Project may require the closure of vehicle travel lanes. The City’s designated evacuation routes are along SR 126 and SR 150. While, SR 126 runs along the southern boundary of the Project Site, construction activities of the Project are not anticipated to interfere with access to the roadway or interfere with operation of the County’s Hazard Mitigation Plan. Emergency access and potential traffic access impacts would <u>be</u> less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-53 Table ES-2, Summary of Project Impacts, Hazards and Hazardous Materials

<p>The Specific Plan is <u>not</u> located not within a CAL FIRE designated LRA or SRA. As the Project would not expose employees or visitors to any increased risks to fire hazards on the site, impacts are considered to be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-53 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Hazards and Hazardous Materials

<p><u>Although each related project has potentially unique hazardous materials considerations, it is anticipated that all hazardous materials delivered and hazardous waste removed from the Specific Plan area and each related project would be in accordance with Title 24 of the Code of Federal Regulations. Development of any projects would be required to comply with existing applicable laws and regulations pertaining to hazardous wastes, and the risk with identified hazardous material sites would be eliminated or reduced. Businesses would also be required to prepare a HMBP including an annual inventory of hazardous materials used on site and submit a business emergency plan to the City for an annual review.</u></p> <p><u>Development under the Specific Plan would comply with all applicable laws and regulations related to the transport, use, treatment, storage, and disposal of hazardous materials and fire prevention.</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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ES-54-55 Table ES-2, Summary of Project Impacts, Hydrology and Water Quality

<p>The development of the Project would increase the amount of impervious surfaces on the Project Site, which has the potential to increase runoff within the Project Site. The BMPs and the project design features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all <u>existing</u> applicable federal, state, and</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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<p>local water quality rules and regulations to effectively minimize the Project’s impact on water quality. Accordingly, impacts would be less than significant.</p>			
<p>The Project will not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, <u>the Project would use less water than the existing agricultural operations, and</u> the Specific Plan would incorporate design features such as bioswales, bioretention cells, infiltration trenches and permeable pavement to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge. Therefore, impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
<p><u>The Project does not alter the course of a stream or river, however</u> Site-clearing and grading operations have the potential for discharging sediment downstream during storm events. The Project would be required to develop a site-specific SWPPP in accordance with the NPDES Program General permits authorized under the Clean Water Act for Construction Activities. Adherence to the SWPPP and implementation of standard BMPs during construction would reduce the potential for increased siltation, erosion, and hazardous material spills. Through compliance with the SWPPP and standard BMPs, potential erosion and siltation, potential impacts will be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>

ES-56 Table ES-2, Summary of Project Impacts, Hydrology and Water Quality

<p>The Specific Plan would not substantially alter drainage patterns within the Project area, <u>nor alter a stream or river</u>. The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream. Therefore, impacts are considered less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-58-59 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Hydrology and Water Quality

<p><u>The Project would not contribute to a cumulatively significant hydrology or water quality impact. First, the Project does not alter any streams or rivers. Second, each related project would be required to comply with NPDES requirements and local regulations designed to prevent polluted runoff from entering local storm drain systems and receiving water bodies during construction and after development, the cumulative impact to water quality would be less than significant. Implementation of applicable City requirements, including the standards of the Ventura County SQUIMP, on all new development within the watershed would reduce cumulative impacts to area hydrology to a less than significant level. Additionally, the Project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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<u>would be a net deficit in aquifer volume of the local groundwater table level.</u>			
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ES-60 Table ES-2, Summary of Project Impacts, Land Use

The Project would be consistent with the County of Ventura General Plan and Non-Coastal Zoning Ordinance, the Santa Paula General Plan and SPMC, the 2016 SCAG RTP/SCS, and with Ventura LAFCo <u>policies</u> . Therefore, the project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project and impacts would be less than significant.	Less than Significant	No mitigation necessary.	Less than Significant
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ES-60 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Land Use

<u>No significant cumulative land use impacts from future development within the expansion areas would result as these areas will be developed in accordance with the City's General Plan. Additionally, environmental review will also be required and will be conducted prior to the adoption of future Specific Plans.</u>	<u>Less than Significant</u>	<u>No mitigation necessary.</u>	<u>Less than Significant</u>
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ES-61 Table ES-2, Summary of Project Impacts, Noise

An increase of 3 dB(A) or greater in traffic noise levels that occurs from Project-related activities would be considered significant if the resulting noise levels that occurs from Project-related activities would exceed the City Noise	Less than Significant	No mitigation necessary.	Less than Significant
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<p>Compatibility Matrix for “acceptable” exterior or interior noise levels. These roadway systems <u>will</u> do not experience an increase in noise levels of 3 dB(A) or greater. In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road extension and would not cause an increase of 3 dB(A) or greater due to Project-related activities. Therefore, the Santa Paula West Specific Plan Area would not result in <u>significant</u> noise impacts in the local and regional street system. Impacts along these roadway systems are considered less than significant.</p>			
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ES-62 Table ES-2, Summary of Project Impacts, Noise

<p>Assuming noise levels at 69.4 dB(A) within 50 feet from the railway centerline, interior noise <u>will</u> could be reduced to 44.4 dB(A), below the General Plan noise threshold of 45 dB(A), <u>in compliance with City Building Code requirements</u>. Therefore, potential interior noise within the proposed development would be considered less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-62 Table ES-2, Summary of Project Impacts, Noise

<p>The surrounding land uses within 25 feet of the Project Site include the scattered residential uses immediately to the west. The construction near this portion of this site may include some earthwork and grading activities. While offsite surrounding land uses may experience vibration events, these would <u>be temporary and would</u> not be frequent and</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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impacts would be considered less than significant.			
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ES-63 Table ES-2, Summary of Project Impacts, Noise

<p>Average daily trips associated with construction activities would not result in a doubling of trip volume along study area roadways. Given that it takes a doubling of average daily trips on roadways to increase noise by 3 dB(A), <u>The average daily trips associated with construction activities would not result in a doubling of trip volume along study area roadways.</u> Noise-level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and nearby roadways that are within the area (unincorporated County of Ventura) would be less than 3 dB(A), and potential impacts will be less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
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ES-65 Table ES-2, Summary of Project Impacts, Public Services

<p>The Specific Plan will result in an increase in the need for services from existing Santa Paula Fire Department facilities, equipment, and staff personnel. Under the terms of the Development Agreement, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection facilities and personnel costs. No new facilities would be required to serve the Project Site as a result</p>	Less than Significant	No mitigation necessary.	Less than Significant
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<p>of the implementation of the Specific Plan. As such, mitigation is not required.</p> <p>¶The SPFD will review all future building plans and require adequate fire-flow pressure and flow rates through automatic fire sprinkler systems, fire hydrants, and other design features where appropriate (as required by appropriate federal, state, and local fire code and building code requirements. As such, potential impacts with regard to fire-flow requirements will be less than significant.</p>			
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ES-67 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Public Services

<p><u>The City has regulations and ordinances in place to address impacts on public services (e.g., police, fire), including the provision and acquisition of new facilities and equipment. All planned development would be reviewed by the respective agencies and corresponding mitigation design features and payment of existing fees would be required prior to building permit issuance. Therefore, cumulative impacts associated with public services would be less than significant.</u></p>	<p><u>Less than Significant</u></p>	<p><u>No mitigation necessary.</u></p>	<p><u>Less than Significant</u></p>
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ES-68 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>If Beckwith Road is extended south to Faulkner Road, 10th Street and Harvard Boulevard intersection is forecast to operate at LOS D during the AM peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would</p>	<p><u>Potentially Significant</u></p>	<p>10th Street & Harvard Boulevard (Intersection 1) <u>No feasible</u> m<u>Mitigation measures are available from prior major projects in Santa Paula were investigated along the Ojai Road corridor.</u> A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible <u>physically feasible</u> mitigation. Given the constraints of the intersection and the</p>	<p>Significant and Unavoidable</p>
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<p>cause or contribute to significant traffic impacts at this intersection.</p>		<p>proposed bicycle lanes, <u>cumulative impacts to</u> this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these <u>improvements</u> mitigations were not considered <u>to be</u> as a feasible mitigation <u>measure</u>.</p>	
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ES-68 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>If Beckwith Road is extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is forecast to operate at LOS D during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>TRA-1 Peck Road & Harvard Boulevard/Telegraph Road/Main Street (Intersection 8).This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane.</p> <p>Since this is a cumulative impact, the Project applicant would <u>shall</u> be responsible for their fair share contribution for this mitigation improvement.</p>	<p>Less than Significant</p>
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ES-69 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>If Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS <u>D</u> during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C, traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-1.</p>	<p>Less than Significant</p>
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ES-70 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>The freeway segments currently operate at LOS C or better in both directions. Based on the significance threshold for the Los Angeles County CMP, the Project will <u>does</u> not operate at LOS F after the addition of project traffic and the Project does not cause a net increase in traffic demand of 2 percent of capacity or more. Therefore, the Project would result in less than significant impacts to freeway and multilane segments.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-72 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions without the Project, 10th Street and Harvard Boulevard is expected to operate at LOS E during the AM Peak hour and LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would</p>	<p>Potentially Significant</p>	<p>10th Street & Harvard Boulevard (Intersection 1) <u>No feasible</u> mMitigation measures <u>are available from prior major projects in Santa Paula were investigated along the Ojai Road corridor.</u> A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible <u>physically feasible</u> mitigation. Given the constraints of the intersection and the proposed bicycle lanes, <u>cumulative impacts to this intersection</u></p>	<p>Significant and Unavoidable</p>
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<p>cause or contribute to significant traffic impacts at this intersection.</p>		<p>cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these <u>improvements mitigations</u> were not considered <u>to be</u> as a feasible mitigation <u>measure</u>.</p>	
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ES-73 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions without the Project, Peck Road and Harvard Boulevard/Telegraph Road/Main Street is expected to operate at LOS E during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions without the Project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-1. This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.</p>	<p>Significant and Unavoidable</p>
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ES-74 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions without the Project, Peck Road and SR 126 EB On/Off Ramps/ Acacia Way is expected to operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions <u>with or</u> without the Project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than Significant</p>
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ES-74 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions without the Project, Faulkner Road and SR 126 WB On/Off Ramps is expected to operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated from future conditions <u>with or</u> without the Project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>TRA-4 Faulkner Road & SR-126 Westbound On/Off Ramps (Intersection 11). This intersection could be mitigated to LOS C or better by reconfiguring the westbound approach. The westbound approach can be restriped to provide one shared through/right-turn lane and two left-turn lanes. While the freeway on-ramp at this location currently provides two lanes, this improvement would require coordination with and approval by Caltrans.</p> <p>Since this is a cumulative impact, the Project applicant would be responsible for their fair share contribution for this mitigation improvement.</p>	<p>Less than Significant</p>
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ES-74 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic</p>	<p>Potentially Significant</p>	<p>10th Street & Harvard Boulevard (Intersection 1) <u>No feasible</u> Mitigation measures are available from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible <u>physically feasible</u> mitigation. Given the constraints of the intersection and the</p>	<p>Significant and Unavoidable</p>
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<p>generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>		<p>proposed bicycle lanes, <u>cumulative impacts to</u> this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these <u>improvements mitigations</u> were not considered <u>to be as</u> a feasible mitigation <u>measure</u>.</p>	
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ES-75 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C_T. <u>T</u>raffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially <u>S</u>ignificant</p>	<p>Implementation of mitigation measure TRA-1. This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario. Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.</p>	<p>Significant and Unavoidable</p>
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ES-75 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Peck Road and SR 126 EB On/Off Ramps/Acacia Way would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C₂. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than Significant</p>
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ES-76 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Faulkner Road and SR 126 WB On/Off Ramps would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C₂. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-4.</p>	<p>Less than Significant</p>
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ES-76 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and with Beckwith Road extended south to Faulkner Road, Beckwith Road & Telegraph Road would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C₂. Traffic generated by the</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-3.</p>	<p>Less than Significant</p>
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proposed project would cause or contribute to significant traffic impacts at this intersection.			
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ES-76 Table ES-2, Summary of Project Impacts, Transportation and Traffic

Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, 10th Street and Harvard Boulevard would operate at LOS F during the AM and PM Peak hours. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	10th Street & Harvard Boulevard (Intersection 1) No feasible Mitigation measures are available from prior major projects in Santa Paula were investigated along the Ojai Road corridor. A beautification project, including bicycle lanes, is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a possible <u>physically feasible</u> mitigation. Given the constraints of the intersection and the proposed bicycle lanes, <u>cumulative impacts</u> to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these improvements mitigations were not considered <u>to be</u> as a feasible mitigation <u>measure</u> .	Significant and Unavoidable
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ES-77 Table ES-2, Summary of Project Impacts, Transportation and Traffic

Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and Harvard Boulevard/Telegraph Road/Main Street would	Significant	Implementation of mitigation measure TRA-1 . This intersection could be mitigated to LOS D with the same mitigation measure suggested for the Existing plus Project scenario.	Significant and Unavoidable
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<p>operate at LOS F during the AM Peak hour and LOS D during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>		<p>Full mitigation of this intersection under Cumulative plus Project conditions requires the addition of a second left-turn lane to the westbound approach on Main Street. The westbound approach on Main Street would have to be reconfigured to include one right-turn lane and dual left-turn lanes and maintain the exclusive or protected signal phasing for this turning movement. However, the implementation of dual left-turns at this location would require the acquisition of right-of-way on Main Street and relocation of existing grade crossing gates to accommodate the proposed intersection configuration, and so was not considered as a feasible mitigation.</p>	
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ES-77 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Peck Road and SR 126 Eastbound On/Off Ramps would operate at LOS F during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-2.</p>	<p>Less than Significant</p>
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ES-78 Table ES-2, Summary of Project Impacts, Transportation and Traffic

<p>Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Faulkner Road and SR 126 Westbound On/Off Ramps would operate at LOS F during the AM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C. Traffic generated by the proposed project</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure TRA-4.</p>	<p>Less than Significant</p>
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would cause or contribute to significant traffic impacts at this intersection.			
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ES-78 Table ES-2, Summary of Project Impacts, Transportation and Traffic

Under future conditions with the Project, and if Beckwith Road is not extended south to Faulkner Road, Beckwith Road and Telegraph Road would operate at LOS E during the PM Peak hour. The City of Santa Paula has defined the minimum desirable intersection level of service as LOS C ₂ . Traffic generated by the proposed project would cause or contribute to significant traffic impacts at this intersection.	Potentially Significant	Implementation of mitigation measure TRA-3 .	Less than Significant
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ES-79 Table ES-2, Summary of Project Impacts, Utilities - Wastewater

<p><u>Development of the Project will result in the removal of the existing septic tanks that currently serve the site. Once developed and occupied, uses within the Specific Plan area will generate wastewater that will be connected to the City's sewer system and conveyed through a series of pipelines to the WRF for treatment. Effluent from the treatment plant must comply with the SPMC to meet the requirements of the WDR permit issued to the City by the Los Angeles RWQCB.</u></p> <p>The treated effluent from the Project will not exceed applicable requirements, and the Project's potential impacts related to wastewater treatment are less than significant.</p>	Less than Significant	No mitigation necessary.	Less than Significant
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ES-79-80 **Table ES-2, Summary of Project Impacts, Utilities - Wastewater**

<p>The proposed Project would comply with AB 939 and AB-231 and the City's Construction and Demolition Diversion section of the Municipal Code, which states that demolition, construction, and remodeling shall divert 50 percent of waste tonnage from landfills. However, given that future landfill capacity may not be ensured through the life of the development of the Specific Plan, for many years after occupancy, impacts to solid waste would be potentially significant.</p>	<p>Potentially Significant</p>	<p>Implementation of mitigation measure SW-1.</p>	<p>Less than Significant</p>
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ES-80-81 **Table ES-2, Summary of Project Impacts, Utilities - Wastewater**

<p>Completion of proposed Project improvements would convey most of the wastewater flow to the POC along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project's contribution to cumulative wastewater system and treatment impacts would be less than significant.</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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ES-84 **Table ES-2, Summary of Project Impacts, Utilities - Water**

<p>The Specific Plan's demand for water use would meet be consistent with the projected development demands within the City. Therefore, the cumulative increase in water demand of related projects and build-out of</p>	<p>Less than Significant</p>	<p>No mitigation necessary.</p>	<p>Less than Significant</p>
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the City pursuant to the General Plan is considered less than significant.			
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ES-85 Table ES-2, Summary of Project Impacts, Utilities – Solid Waste

The proposed Project would comply with AB 939 and AB 231 and the City’s Construction and Demolition Diversion section of the Municipal Code, which states that demolition, construction, and remodeling shall divert 50 percent of waste tonnage <u>from landfills</u> . However, given that future landfill capacity may not be ensured through the life of the development of the Specific Plan, for many years after occupancy, impacts to solid waste would be potentially significant.	Potentially Significant	Implementation of mitigation measure SW-1 .	Less than Significant
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ES-86 Table ES-2, Summary of Project Impacts, Cumulative Impacts, Utilities

<p><u>Wastewater</u> <u>Completion of proposed Project improvements would convey most of the wastewater flow to the POC along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project’s contribution to cumulative wastewater system and treatment impacts would be less than significant.</u></p> <p><u>Water</u> <u>The Specific Plan’s demand for water use would meet the projected development demands within the City. Additionally, the</u></p>	Less than Significant	No mitigation necessary.	Less than Significant
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<p><u>Project would use less water than the existing agricultural operations. Therefore, the cumulative increase in water demand of related projects and build-out of the City pursuant to the General Plan is considered less than significant.</u></p> <p><u>Solid Waste</u></p> <p>The City would utilize the Toland Road Sanitary Landfill until the landfill reaches capacity. At the time Toland Road Sanitary Landfill closes, the City would utilize the capacity of the five remaining landfills previously used for solid waste disposal. The combined remaining capacity of the five landfills is estimated to last for 95 years, or an average of 19 years.</p> <p>As such, cumulative impacts would be less than significant because the six landfills discussed above have sufficient capacity for decades to service the development of the Specific Plan and other development requiring solid waste disposal.</p>			
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Section 2.0, Project Description

Page

Revision:

2.0-1

Project Objectives

1. Help revitalize the existing built environment and economic climate of the City by permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula, as envisioned in the City's General Plan;

2.0-27

Conceptual Grading Master Plan

The Specific Plan includes a Grading Master Plan for the earthwork needed to support development of the Project. The Grading Master Plan is shown in **Figure 2.0-14, Grading and Drainage Master Plan**. The Grading Master Plan provides for the cut and fill grading of the Project Site into a roughly 2 percent land gradient overall, which would maintain the existing gradient from north to south. Cut and fill grading will be conducted using on-site soils with an overexcavation and recompaction depth of approximately 6 feet. Grading will also raise portions of the Project Site above the flood hazard elevation, with up to 6 feet of fill to be placed along the western boundary near Adams Barranca. Grading over the Project Site includes an estimated 80,000 cubic yards of cut and 179,000 cubic yards of fill, requiring the import of approximately 99,000 cubic yards of soil. The finished grade of the Project Site will maintain the existing 2 percent maximum gradient, and yield roadways and blocks in the lower areas generally within the 0.5 percent to 2 percent gradient range.

2.0-28

General Plan Amendment, Rezone, and Annexation

The Project would implement the City's plans for a portion of the West Area 2 Planning Area as defined in the Santa Paula General Plan. The Project includes a series of related actions including ~~jurisdictional reorganization (annexation)~~, a General Plan Amendment (to the Land Use Element), ~~and the adoption of a Specific Plan and rezoning for the Project area,~~ approval of a Master Vesting Tentative Map, jurisdictional reorganization (annexation to the City of Santa Paula), encroachment permit by the California Department of Transportation for the construction of roadway and utility improvements in the State right-of-way

and California Public Utilities Commission approval for an at-grade crossing of the Ventura County Transportation Commission (VCTC) railroad.

2.0-31

Development Timeframe

Initial land development including, site clearing, grading, roadway construction, and improvements of the Project Site are anticipated to occur over an approximately 4-month period starting sometime in 2019. For purposes of the analysis within this Environmental Impact Report (EIR), construction of individual buildings is assumed to occur over approximately 10 years in response to market conditions. ~~Development of the Project is anticipated to occur over approximately 10 years or as market conditions allow. For purposes of the analysis within this Environmental Impact Report (EIR), development is expected to begin in 2017 and be completed by 2027. Construction would occur continuously during this 10-year period but would generally occur based on market and economic conditions to provide for orderly development.~~

2.0-31

City of Santa Paula

The City of Santa Paula, as Lead Agency, will require the following approvals, permits, and actions to implement the proposed ~~East Gateway Project~~ Santa Paula West Specific Plan Project:

General Plan Amendment for the West Area 2 Expansion Area;

Specific Plan Approval and rezoning;

~~Development Agreement~~

Approval of the Master Vesting Tentative Map;

Annexation to the City of Santa Paula;

Encroachment permit by the California Department of Transportation for the construction of roadway and utility improvements in the State right-of-way; and

California Public Utilities Commission approval for an at-grade crossing of the Ventura County Transportation Commission (VCTC) railroad.

Section 3.0, Related Projects

3.0-1 Related Projects

An estimated total of 1,770~~81~~ residential units and 1,077,021 ~~1,022,772~~ square feet of commercial and industrial facilities and 16 motel units (not including this Project) is pending, approved, under construction, or built. In addition, a total of 7,657 acres of expansion area is proposed for annexation into the City's boundaries.

3.0-2-3.0-4 Related Projects Table

3	NW corner of Foothill and Peck Road	Single-family units	<u>6379</u> du	Proposed <u>Conceptual</u>
6	220 W Main Street	Assisted-living apartment units	20 du	Completed <u>Occupied</u>
7	812/820 E Santa Barbara Street	Assisted-living apartment units	6 du	Completed <u>Occupied</u>
9	Cemetery and Santa Paula Street	Single-family units	8 du	Under Construction <u>Occupied</u>
30	250 S Hallock Drive	Mixed-use warehouse (w/dwelling unit)	7,800 sq. ft. + 1 du	Under Construction <u>Occupied</u>
Total residential units			1,770<u>86</u> du	
<u>37</u>	<u>132 W. Harvard</u>	<u>Fast Food Eatery</u>	<u>2,249 sq. ft.</u>	<u>Approved</u>
Total commercial			217,298 <u>219,547</u> sq. ft.	
29	18201 E Telegraph Road	Private self-storage facility	80,755 sq. ft.	Proposed <u>Plan Check</u>
30	250 S Hallock Drive	Mixed-use warehouse (w/dwelling unit)	7,800 sq. ft. + 1 du	Under Construction <u>Occupied</u>
15	East Area 1a	Light industrial	25,000 sq. ft. square feet	Approved
<u>38</u>	<u>630 Todd Lane</u>	<u>General industrial (O’Kote Pipe Factory)</u>	<u>52,000 sq. ft.</u>	<u>Approved</u>
Total industrial			805,474 <u>857,474</u> sq. ft.	

Source: City of Santa Paula Planning Department (20168); City of Santa Paula General Plan, “Land Use Element” (2013); and Fehr & Peers, East Area 1 Traffic Study (May 2014).
Abbreviations: du = dwelling units; sq. ft. = square feet

Section 4.1, Aesthetics

Page

Revision:

4.1-12

Scenic Highways

The County of Ventura General Plan identifies SR 126 as an eligible county scenic highway.¹ The City of Santa Paula's General Plan Conservation and Open Space Element identifies SR 126 and SR 150 as man-made scenic resources.² SR 126 offers sweeping 360-degree views of the higher elevations of the surrounding mountains from throughout the travel corridor. Views include portions of the Topatopa Mountains and Santa Paula Peak to the north, and the South Mountain to the south. Where openings in landscaping or structural development along the right-of-way occur, wide-ranging views of agricultural lands are also available along the corridor, predominantly occurring outside the City's limits. As described previously, parts of the Project Site are blocked by existing vegetation; however, gaps in the vegetation allow the Project Site to enter public view along SR 126. a majority of the Project Site is visible from SR 126. This is due to the minimal landscaping, vegetation, and power lines that would obstruct views when seen from a moving vehicle.

4.1-16–4.1-17

Project Impacts

4.1.4 PROJECT IMPACTS

Threshold: Have a substantial adverse effect on a scenic vista?

Temporary Construction Impacts

Construction activities within the Project Site and off-site improvements, such as along Beckwith Road and Faulkner Road, could potentially be visible from SR 126 and Telegraph Road and other vantage points that currently have views of these areas. Additionally, there would be off-site improvements along SR 126 for the connection of Beckwith Road to the extended Faulkner Road. Initial land development, including site clearing, grading, roadway construction, and improvements of the Project Site are anticipated to occur over an approximately 4-month period starting in sometime in 2019. For purposes of the analysis within this EIR, construction of individual buildings is assumed to occur over

1 County of Ventura, *General Plan*, "Resources Appendix," (2011).

2 City of Santa Paula, *General Plan*, "Conservation and Open Space Element," (1998).

~~approximately 10 years in response to market conditions. Development of the Specific Plan would occur over a 10-year period or as market conditions allow. Construction activities would include various site preparation, vegetation removal, and grading activities.~~ As the Project Site is relatively flat and is at relatively low elevation, grading activities would include the import of approximately 99,000 cubic yards of soil to raise portions of the western areas above flood elevations from Adams Barranca flows. Finished grades not substantially also the existing be contours and would result in slightly reduced differences in elevations over the Project Site. The infrastructure improvements, such as water and sewer pipelines, and roadways would be constructed to meet the needs of the development as it progresses over time.

~~**Threshold: Have a substantial adverse effect on a scenic vista?**~~

Operational Impacts

4.1-17-4.1-18

Project Impacts

Development in accordance with the Specific Plan would result in an expanded urban fringe on the westerly limits. The Project would provide for the development of commercial and light industrial uses, along with roadways and open space across the 53.8-acre Project Site. Building heights would be consistent with the 1- to 2-story buildings having similar uses to the east of the Project Site, with a maximum building height of 35 feet and 45 feet for commercial/light industrial and industrial uses, respectively.

The more panoramic vistas that take in a sweeping breadth of the mountains and foothills forming the river valley and vistas overlooking the lower man-made and natural horizon features of the area would not be blocked through development under the Specific Plan. Rather, more immediate foreground and middle-distant open views across the Project Site would be replaced with structures. Landscaping within the Project Site could channel some views from the immediate surroundings. However, as previously stated, this development would not add an anomalous element to the viewshed because it would occur on the urban fringe of the City near existing light industrial and residential areas.

While implementation of the Project would result in the loss of views of the existing agricultural lands in the immediate foreground with the addition of

structures, circulation system, and supporting infrastructure, the urbanized appearance is similar to the adjacent uses, and in More distant scenic vistas views of the Santa Clara River Valley would not be significantly altered upon the development of structures on the Project Site. Therefore, the Project would result in less than significant adverse impacts to scenic vistas.

4.1-22 Mitigation Measures

The following mitigation measure would reduce the Project’s potentially significant impacts related to nighttime lighting to less than significant:

AES-1: Before the City issues grading permits, the applicant must prepare and submit a Lighting Plan to the City of Santa Paula Planning Director for approval that identifies the types of shielding that will be used for outside lighting and must comply with all applicable dark sky ordinances/regulations.

Section 4.2, Agricultural Resources

Page Revision:

4.2-17-18 Project Impacts

The City of Santa Paula follows the CDC’s FMMP in identifying the conversion of state-defined prime soils and soils of statewide importance as an impact to agricultural resources. The FMMP Important Farmland Map for Ventura County identifies a total of 44.229 acres of prime farmland and 4.88 acres of farmland of statewide importance on the site (total of 49.108 acres). The Project Site is currently farmed by two organizations, Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land, and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. Other areas contain the agricultural ancillary uses, such as packing facilities and equipment storage and maintenance yards, and are designated as developed.

Approximately 4.71 acres of land located within the current agricultural operation near Beckwith Road contains a farmworker housing unit and has thus been developed for uses other than agricultural. Further, this area of land does not meet any of the criteria identified in Government Code Section 56064. Therefore,

49.1 acres (53.81 acres–49.1 acres) of the Project Site would be considered Prime Agricultural Land under Government Code Section 56064.

Implementation of the Specific Plan would result in the conversion of the 49.1~~08~~ acres of both prime farmland and important farmland to urbanized uses and the conversion of 49.1 acres of Prime Agricultural Land, as defined in Government Code Section 56064.

With implementation of **Mitigation Measure AG-1**, the Applicant shall provide mitigation to the extent feasible, to minimize or reduce the level of impacts to farmland. However, ~~T~~the loss of 49.1~~08~~ acres of farmlands is considered a significant and unavoidable impact.

4.2-19

Project Impacts

As stated previously, approximately 49 acres of the 54-acre Project Site are under agricultural cultivation and would be taken out of production as a result of implementation of the Specific Plan. This includes approximately 9.2 acres of avocados, 12.3 acres of herbs, and 27.5 acres of other miscellaneous row crops. These areas would be developed with an office/industrial/business park that includes a variety of manufacturing, research and development, professional office, and limited commercial uses. Development under the Specific Plan would result in the loss of 49 acres of land currently under agricultural cultivation, of which 44 acres consists of prime farmland, and approximately 5 acres consists of farmland of statewide importance. **Mitigation Measure AG-1** would be implemented; however, ~~T~~this farmland conversion is considered a significant and unavoidable impact.

4.2-20

Adjacent Agriculture

As stated previously, existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of State Route (SR) 126, and near the western boundary of the Specific Plan area, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126. SR 126 includes a transportation corridor that is approximately 160 feet wide and is raised above the existing grades of the Project Site and agricultural land to the south. There is no land use connectivity between the Project Site and these agricultural lands. Furthermore, portions of the

agricultural lands south of SR 126 are also within the City's CURB and the West Area 2 Expansion area, which would allow for future planning for similar light industrial uses as would occur under the Santa Paula West Specific Plan.

4.2-21–4.2-23

Cumulative Impacts

Implementation of the Project would reduce avocado, herb, and row crop production locally and within the County. The loss of approximately 49.108 acres would represent a fraction of a percent of the 93,376 acres of agricultural land harvested in the County in 2014. Of the 23,012 acres of avocado and cilantro harvested in the County in 2014, the Project would represent approximately 0.210 percent. However, the Project would contribute to the conversion of agricultural lands in the County to nonagricultural uses.

Implementation of the General Plan would result in a long-term commitment to nonagricultural uses in areas that currently support prime and important Farmland, particularly within the West Area 2 and East Area 2 Expansion Areas. Since both of these expansion areas include statewide important farmland, development of these areas in accordance with the General Plan will result in cumulative impacts to agricultural resources within the City's Planning Area. While development of these areas would be consistent with local planning policies, the cumulative impact on agricultural resources would be a significant and unavoidable impact.

~~Implementation of the General Plan would result in a long-term commitment to nonagricultural uses in areas that currently support prime soils, particularly within the flatland expansion areas (West Area 2 and East Area 2). Since development of proposed land uses within the expansion areas would occur over most prime and statewide important farmland, it is assumed that all prime soils within these areas could be impacted or rendered infeasible for further agricultural production. Implementation of **Mitigation Measure AG-1** would help to minimize impacts to farmland, however, the loss of high-quality agricultural soils, while only a small percentage of the total prime and statewide importance agricultural land in Ventura County, is considered both individually and cumulatively significant.~~

4.2-21

Mitigation Measures

AG-1: To reduce or minimize impacts to Prime Farmland, and Important Farmland, the Applicant shall provide mitigation through one, or some combination of, the following mitigation measures, prior to the issuance of a grading permit by the City:

1. The Applicant shall secure a conservation easement in perpetuity, on land officially designated by the State of California as Prime Farmland and Important Farmland. The mitigation ratio shall be 1:1 for each class of designated farmland, resulting in a conservation easement being placed on a total of 44.20 acres of Prime Farmland, and 4.88 acres of Important Farmland, within the State of California. The applicant may satisfy the Important Farmland mitigation requirement by conserving Prime Farmland; or
2. The Applicant shall make payments to a local, regional, or statewide organization whose purpose is to acquire agricultural conservation easements for Prime Farmland and Important Farmland, and has demonstrated a successful track record in doing so, over at least 5 years. If the applicant elects to pursue this option alone, or in combination with option 1, the Applicant shall demonstrate to the City Planning Director that it has paid funds sufficient to allow the state, regional, or local conservation organization to acquire conservation easements in perpetuity over Prime Farmland and important Farmland resulting in a mitigation conservation ratio or 1:1 for each class of Farmland.

If, prior to the issuance of a grading permit, the Applicant contends that satisfying mitigation options 1 and/or 2 is not financially feasible, the Applicant shall provide “substantial evidence” to the City Planning Director, as that term is defined in the CEQA Guidelines, including but not limited to expert opinion evidence supported by facts, to support its contention that such mitigation is not financially feasible. The Applicant’s substantial evidence shall be independently reviewed by the City’s financial experts or outside consultant, the

cost of which shall be paid by the Applicant. If the City concurs with the Applicant's conclusion that mitigation options 1 and/or 2 are not financially feasible, the Applicant shall provide mitigation at less than a 1:1 ratio, to the extent feasible, to minimize or reduce the level of impacts to Prime Farmlands and important Farmlands.

~~The City of Santa Paula does not propose to require implementation of agricultural mitigation for projects within the Santa Paula West Business Park Area. This determination is made based on the following reasons:~~

~~1. The City of Santa Paula recognized the loss of this agricultural land with the designation of the site for development in the General Plan. The Project Site is identified in the General Plan as a part of the West Area 2 Expansion Area. The City's General Plan Land Use Element currently designates the Project Site for Mixed-Use Commercial/Light Industrial uses.~~

~~The preservation of other existing agricultural land through purchase of conservation easements does not mitigate the loss of the land in question. The only way to mitigate the loss would be to preserve the land in question by preventing development.~~

~~The City has neither an established program under which agricultural mitigation fees could be collected and dispersed nor any policy to require such a program.~~

~~The cost of such agricultural mitigation is not considered economically feasible. This impact has been found to be significant and unavoidable, and a statement of overriding considerations will be adopted for approval of the Project.~~

Section 4.3, Air Quality

Page

Revision:

4.3-5

Existing Conditions, Air Pollutants, Table 4.3-2

Source: USEPA, "Region 9: Air Programs, Air Quality Maps," (December 2015), <https://www.arb.ca.gov/desig/adm/adm.htm>~~https://www3.epa.gov/region9/air/maps/~~.

Existing Conditions, Air Pollutants, Table 4.3-3

Source: California Air Resources Board, "Area Designations Maps/State and National" (December 2015),

<https://www.arb.ca.gov/desig/adm/adm.htm><https://www3.epa.gov/region9/air/maps/>

4.3-6

Air Pollutants

Ambient air quality is determined by the type and amount of pollutants emitted into the atmosphere, as well as the size, topography, and meteorological conditions of a geographic area. The South Central Coast Air Basin (“Basin”) has low mixing heights and light winds, which help to accumulate air pollutants. The average daily emissions inventory for the entire Basin and the Ventura County portion of the Basin is summarized in **Table 4.3-4, Regional Average Emissions in 2012-2015**. As shown, exhaust emissions from mobile sources generate the majority of ROG, oxides and nitrogen (NOx), and CO in Ventura County. Area-wide sources generate the most airborne particulates (i.e., PM10 and PM2.5).

Air Pollutants, Table 4.3-4

**Table 4.3-4
Regional Average Emissions in 2012-2015**

Emissions Source	Emissions in Tons per Day					
	ROG	CO	NOx	SOx	PM10	PM2.5
Ventura County						
Stationary Sources	<u>6.8</u> <u>11.9</u>	<u>3.4</u> <u>9.6</u>	<u>2.1</u> <u>4.7</u>	<u>0.2</u> <u>6</u>	<u>0.6</u> <u>1.3</u>	<u>0.4</u> <u>1.0</u>
Area-wide Sources	<u>10.9</u> <u>13.4</u>	<u>14.4</u> <u>23.1</u>	<u>1.4</u> <u>7</u>	<u>0.1</u>	<u>13.4</u> <u>23.3</u>	<u>3.8</u> <u>5.6</u>
Mobile Sources	<u>15.4</u> <u>19.7</u>	<u>124.0</u> <u>136.8</u>	<u>26.3</u> <u>33.6</u>	<u>0.3</u> <u>16.1</u>	<u>2.2</u> <u>4.5</u>	<u>1.5</u> <u>3.9</u>
Natural Sources	<u>40.4</u>	<u>150.6</u>	<u>2.3</u>	<u>1.2</u>	<u>15.2</u>	<u>12.9</u>
Total Emissions	<u>73.5</u><u>45.0</u>	<u>292.4</u><u>169.5</u>	<u>32.2</u><u>60.0</u>	<u>1.8</u><u>16.7</u>	<u>31.3</u><u>29.1</u>	<u>18.5</u><u>10.5</u>
South Central Coast Air Basin						
Stationary Sources	<u>19.2</u> <u>11.7</u>	<u>12.0</u> <u>8.7</u>	<u>8.4</u> <u>3.7</u>	<u>1.5</u> <u>0.5</u>	<u>2.0</u> <u>1.3</u>	<u>1.1</u> <u>0.9</u>
Area-wide Sources	<u>26.9</u> <u>13.4</u>	<u>31.8</u> <u>23.1</u>	<u>3.1</u> <u>1.7</u>	<u>0.1</u>	<u>36.9</u> <u>23.3</u>	<u>9.0</u> <u>5.6</u>
Mobile Sources	<u>31.1</u> <u>18.5</u>	<u>285.0</u> <u>133.9</u>	<u>59.1</u> <u>26.6</u>	<u>0.5</u> <u>7</u>	<u>4.4</u> <u>2.1</u>	<u>2.9</u> <u>1.7</u>
Total Emissions	<u>77.1</u><u>43.6</u>	<u>328.8</u><u>165.8</u>	<u>70.6</u><u>32.0</u>	<u>2.2</u><u>1.3</u>	<u>43.3</u><u>26.7</u>	<u>13.0</u><u>8.2</u>

Source: California Air Resources Board, Published 2013, www.arb.ca.gov/app/emsinv/emseic1_query.php.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOX = sulfur oxide.

4.3-7 Existing Local Air Quality

The Ventura County Air Pollution Control District (VCAPCD) monitors ambient air pollutant concentrations through a series of monitoring stations located throughout the County. These stations are located in Thousand Oaks, El Rio, ~~San Buenaventura (two stations)~~, Piru, Ojai, Simi Valley (two stations), and ~~on Anacapa Island-Thousand Oaks~~. In addition, the CARB operated a monitoring station in western Ventura County. The City of Santa Paula is located between El Rio and Piru monitoring stations. The El Rio station measures ambient concentrations of O3, PM10, PM2.5, and NO2. Ambient concentrations of ozone and PM2.5 are measured at the Piru station.

Table 4.3-5, Local Ambient Air Quality—El Rio and Piru Monitoring Stations, identifies the national and state ambient air quality standards for relevant air pollutants along with the ambient pollutant concentrations that have been measured at the El Rio and Piru monitoring stations during the period ~~2012-2014~~ through 2014-2016, which the most recent data available from CARB.

4.3-8 Existing Local Air Quality, Table 4.3-5

**Table 4.3-5
Local Ambient Air Quality—El Rio and Piru Monitoring Stations**

Pollutant	Standards	Year		
		2014 2	2015 3	2016 4
<i>El Rio-Rio Mesa School #2 Monitoring Station</i>				
Ozone (O3)				
Maximum 1-hour concentration monitored (ppm)		0.1120 82	0.0700 67	0.0841 12
Maximum 8-hour concentration monitored (ppm)		0.077 65	0.066 3	0.071 7
Number of days exceeding state 1-hour standard	0.09 ppm	0	0	1
Number of days exceeding state 8-hour standard	0.070 ppm	<u>2</u> 0	0	<u>1</u> 2
Number of days exceeding federal 8-hour standard	0.070 5 ppm	<u>2</u> 0	0	1
Nitrogen Dioxide (NO2)				
Maximum 1-hour concentration monitored (ppb)		<u>39</u> 57.0	<u>36</u> 40.0	<u>33</u> 39.0
Annual average concentration monitored (ppb)		<u>6</u> 7	<u>6</u> 7	<u>5</u> 6
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0
Respirable Particulate Matter (PM10)				
Maximum 24-hour concentration monitored (µg/m³)		<u>115.3</u> 56.9	<u>92.0</u> 46.7	<u>101.6</u> 51.3
Annual average concentration monitored (µg/m³)		<u>27.4</u> 21.0	<u>25.6</u> 24.3	*
Number of samples exceeding state standard	50 µg/m³	<u>0</u> 7	<u>0</u> 6	<u>1</u> 4
Number of samples exceeding federal standard	150 µg/m³	0	0	0
Fine Particulate Matter (PM2.5)				

Pollutant	Standards	Year		
		2014 2	2015 3	2016 4
Maximum 24-hour concentration monitored ($\mu\text{g}/\text{m}^3$)		30.8 <u>22.2</u>	22.2 <u>25.5</u>	22.2 <u>22.7</u>
Annual average concentration monitored ($\mu\text{g}/\text{m}^3$)		8.7 <u>9.3</u>	9.6 <u>9.6</u>	9.3 <u>8.1</u>
Number of samples exceeding federal standard	35 $\mu\text{g}/\text{m}^3$	0	0	0
Number of samples exceeding state standard	12 $\mu\text{g}/\text{m}^3$	0	0	0
Piru Monitoring Station				
Ozone (O3)				
Maximum 1-hour concentration monitored (ppm)		0.082 <u>0.097</u>	0.067 <u>0.085</u>	0.112 <u>0.107</u>
Maximum 8-hour concentration monitored (ppm)		0.082	0.074	0.085
Number of days exceeding state 1-hour standard	0.09 ppm	1 <u>0</u>	0	1
Number of days exceeding state 8-hour standard	0.070 ppm	9 <u>14</u>	4 <u>3</u>	5 <u>9</u>
Number of days exceeding federal 8-hour standard	0.075 ppm	9 <u>1</u>	4 <u>2</u>	4 <u>5</u>
Fine Particulate Matter (PM2.5)				
Maximum 24-hour concentration monitored ($\mu\text{g}/\text{m}^3$)		23.8	24.7 <u>23.6</u>	26.7 <u>23.8</u>
Annual average concentration monitored ($\mu\text{g}/\text{m}^3$)		9.5 <u>9.5</u>	7.7 <u>7.5</u>	8.3 <u>9.6</u>
Number of samples exceeding federal standard	35 $\mu\text{g}/\text{m}^3$	0	0	0
Number of samples exceeding state standard	12 $\mu\text{g}/\text{m}^3$	0 <u>0</u>	0 <u>0</u>	0 <u>0</u>

Source: California Air Resources Board, Air Quality & Emissions, <http://www.arb.ca.gov/adam/topfour/topfour1.php>

Notes: $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air; ppm = parts per million by volume of air.

El Rio station measures ambient concentrations of O3, PM10, PM2.5, and NOx. Piru station measures ambient concentrations of O3 and PM2.5.

*Insufficient data available to determine the value.

4.3-12-13

Air Quality Management Plan

The VCAPCD is the agency principally responsible for comprehensive air pollution control in the Basin. As a regional agency, the VCAPCD works directly with SCAG, County transportation commissions, and local governments and cooperates actively with all federal and State government agencies. The VCAPCD develops rules and regulations to reduce emissions, protect public health and agriculture, and achieve and maintain State and federal air quality standards. In addition, the VCAPCD establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines when necessary.

The VCAPCD is directly responsible for reducing emissions from stationary, area, and mobile sources. It has responded to this requirement by preparing a sequence of AQMPs. The most recent of these was the 2016 Ventura County Air Quality Management Plan ("2016 AQMP") adopted by the Governing Board of

the VCAPCD in February 2017.³ The 2016 AQMP is based on growth projections for Ventura County and subareas within the County that have been agreed to by both the County and the SCAG. As such, the 2016 AQMP presents Ventura County's (1) strategy to attain the 2008 federal 8-hour ozone standard; (2) attainment demonstration for the federal 8-hour ozone standard; and (3) reasonable further progress demonstration for the federal 8-hour ozone standard.

~~The VCAPCD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a series of AQMPs. The most recent of these was adopted by the Governing Board of the VCAPCD in 2008. This AQMP, referred to as the 2007 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high pollutant levels of pollutants in the Basin, to meet federal and state air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. It identifies the control measures that will be implemented to reduce major sources of pollutants. These planning efforts have substantially decreased the population's exposure to unhealthy levels of pollutants, even while substantial population growth has occurred within the County.~~

~~The future air quality levels projected in the 2007 AQMP are based on several assumptions. For example, the VCAPCD assumes that general new development within the County will occur in accordance with population growth and transportation projections identified by County staff.~~

4.3-19

Project Impacts

According to the VCAPCD Guidelines, to be consistent with the AQMP, a project must conform to the local general plan and must no result in or contribute to an exceedance of the County's projected population growth forecast.

~~The 2007 AQMP, discussed previously, was prepared to reduce the high levels of pollutants within Ventura County, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP~~

3 Ventura County Air Pollution Control District, *Final 2016 Ventura County Air Quality Management Plan* (adopted February 14, 2017), <http://www.vcapcd.org/pubs/Planning/AQMP/2016/Final/Final-2016-Ventura-County-AQMP.pdf>.

would not interfere with attainment because there were included in the projections utilized in the formulation of the AQMP.

~~According to the VCAPCD Guidelines, to be consistent with the AQMP, a project must conform to the local general plan and must not result in or contribute to an exceedance of the City's projected population growth forecast. The proposed Project does not include any new residential uses and would not result in the direct growth of population within the Santa Paula Growth Area.~~

The VCAPCD's AQMP considers regional population forecasts developed by the Southern California Association of Governments (SCAG). SCAG's most recent population forecast was adopted in 2016 as part of the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. The 2016 SCAG growth forecast projects a SCAG's population projection increase from 29,800 in 2012 to 38,800 by year 2040, and employment increase 7,800 jobs in 2012 to 11,700 jobs by the year 2040.⁴ The proposed Project will not increase the amount of housing within the Specific Plan area because no residences are planned to be built. The project employment increase would be approximately 1,510 employees⁵ or approximately 12.9 percent of SCAG's projected employment growth by the year 2040 of 11,700 employees. For analysis purposes, the Project would indirectly increase the local population if all 1,510 employees relocated to the City of Santa Paula; however, they would account for 17 percent of the projected growth in population. This is a conservative estimate as employees may already live in the area, or may reside in other cities. Given that employment opportunities within the City are supposed to steadily increase through the year 2040, the Project's addition of 1,510 employees would be consistent with the projections per SCAG.

The planned uses would also be consistent with the City's land use and zoning designation of the Project site. The Project would accommodate a mix of commercial and light industrial uses within walking distance which would reduce the need for residents within the City to travel long distances to other commercial and entertainment centers. As such, the Project would not conflict with the 2016 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County. Therefore, impacts regarding consistency with applicable air quality are considered less than significant.

4 Southern California Association of Governments, *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy*, April 2016.

5 US Green Building Council, *Building Area Per Employee by Business Type*, May 13, 2008, <http://www.usgbc.org/Docs/Archive/General/Docs4111.pdf>, accessed August 24, 2016.

nd would not result in SCAG projections being exceeded. Therefore, as growth under the Specific Plan is not expected, the Project would not conflict with the 2007 AQMP and, as such, would not jeopardize attainment of state and national ambient air quality standards in Ventura County. Therefore, impacts regarding consistency with applicable air quality are considered less than significant.

4.3-21 Project Impacts, Table 4.3-6, Construction Emissions

Year 2020						
Unmitigated Maximum	235.18	17.01	18.61	0.64	1.55	1.04
VCAPCD threshold	25	25	—	—	—	—
Threshold Exceeded?	Yes	No	—	—	—	—
Mitigated Maximum	234.09	12.66	21.16	0.03	1.31	0.86
Threshold Exceeded?	Yes	No	—	—	—	—

Source: Refer to Air Quality and Greenhouse Gas Modeling data sheets in **Appendix 4.3**.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOX = sulfur oxide.

As shown in **Table 4.3-6**, construction activities associated with the construction of uses allowed with the Specific Plan would exceed VCAPCD threshold for ROG and NOx throughout the entire construction period. Emissions of ROG are a precursor for the formation of O3. The primary source of ROG emissions is off-gas emissions associated with architectural coating operations. The primary source of NOx, CO, and SOx emissions is from construction equipment exhaust and on-road haul truck trips while the majority of particulate matter emissions would occur as a result of fugitive dust emissions generated during grading and excavation activities. Primary sources of PM10 and PM2.5 emissions would be clearing activities, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth surfaces.

Since construction of the Project will exceed the thresholds for ROG and NOx, these impacts are considered potentially significant.

Worst Case Construction Emission

The construction emissions analysis was conducted for Year 2020, which was identified as the worst-case year due to the overlapping construction activities of paving and architectural coating. Results of the construction emissions modeling analysis are presented in **Table 4.3-7, Worst-Case Construction Emissions (2020)**. ROG emissions from architectural coating exceeded the significance threshold.

4.3-22 Project Impacts, Worst Case Scenario

As discussed above, the VCAPCD's 25 lb/day threshold for ROG and NOx does not apply to construction emissions because such emissions are temporary. Emissions of TACs are localized, not regional, in nature; impacts related to construction activities would be limited to the area immediately surrounding the construction site within the Project area, and the VCAPCD does not recommend any thresholds of significance for their associated emissions. Instead, the VCAPCD bases the determination of significance on a consideration of the control measures to be implemented. If all appropriate emissions control measures recommended by the VCAPCD Guidelines are implemented for a project, then construction emissions are not considered significant. Implementation of mitigation measure AQ-1 through AQ-5 include dust control measures, such as watering graded areas, covering trucks hauling excavated soil, soil stabilization methods, and street sweeping; and construction equipment controls such as minimizing idle time, maintaining equipment engines, using alternatively fueled equipment, and minimizing the number of pieces of equipment operated simultaneously. All construction activities would adhere to the VCAPCD Rule 50 for Opacity, Rule 51 for Nuisance, and Rule 55 for Fugitive Dust. As such, construction related impacts would not be considered significant.

4.3-23 Project Impacts, Table 4.3-8, Operational Emissions

**Table 4.3-8
Operational Emissions**

Source	Pollutant (pounds/day)					
	ROG	NOx	CO	SOx	PM10	PM2.5
Maximum <u>mitigated</u>	29.71	22.93	103.64	0.41	29.44	8.33
VCAPCD threshold	25	25	—	—	—	—
Threshold exceeded?	Yes	No	—	—	—	—

Source: Refer to Air Quality and Greenhouse Gas Modeling data sheets in **Appendix 4.3**.

Notes: CO = carbon monoxide; NOx = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SOx = sulfur oxide.

4.3-25 Project Impacts

An HRA was prepared to determine whether diesel particulate emissions from construction ~~under~~ within the Santa Paula West Specific Plan will cause significant impacts to nearby sensitive receptors. PM10 exhaust serves as a surrogate for diesel particulate emissions from off-road construction equipment. Emission estimates and associated construction year were generated from the CalEEMod output data files (provided in **Appendix 4.3**) for the mitigated exhaust PM10 pollutant category. **Table 4.3-9, PM10 Exhaust Emissions by Calendar Year**, lists the maximum daily PM10 exhaust emissions for each calendar year of construction.

4.3-26 Project Impacts

The carcinogenic risk estimate was predicted to be 8.7×10^{-7} (0.86 in 1 million) at the MEIR location. In comparison to the applicable 10 in 1 million threshold level referenced above, carcinogenic risks do not exceed the level posing no significant risk. Therefore, impacts are less than significant.

4.3-28 Project Impacts

The uses allowed within Specific Plan area are not anticipated to use hazardous or acutely hazardous materials in appreciable quantities. Any quantifiable stationary source health risks will generally occur within facility boundaries. TACs typically exist at industrial operations or commercial facilities, such as gasoline stations or dry cleaners. However, the airborne release of such TAC emissions from such facilities would be sufficiently small enough. Hazardous substances are regulated under the California Accidental Release Prevention (CalARP) Program. The CalARP Program satisfies the requirements of the Federal Risk Management Plan Program, and contains additional state requirements. The CalARP Program applies to regulated substances in excess of specific quantity thresholds. The majority of the substances have thresholds in the range of 100 to 10,000 pounds. Moreover, significant amounts of hazardous substances will typically be expected at industrial, manufacturing, and complex water or wastewater treatment plant land uses. The uses allowed by the Santa Paula West Business Park Specific Plan do not include any operations that require ~~large~~ that could pose a significant health risk amounts of hazardous materials. Accordingly, the Project will not result in

a significant impact with respect to use of hazardous materials during long-term operations.

4.3-28

Project Impacts

Odors are typically associated with industrial projects involving the use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes, as well as sewage treatment facilities and landfills. ~~Commercial and light industrial uses are not typically associated with objectionable odor complaints.~~ Some restaurants may generate odors that nearby residents consider objectionable, but this is largely dependent upon the cooking products that are used, the design of the restaurant ventilation and filtration system, and the sensitivity of the nearby residents. The restaurant kitchen design characteristics are evaluated at the time that the operator of the restaurant is requesting approval of permits from the VCAPCD. The types of industrial activities that would occur with the Project are not known at this time, but would be evaluated at the time that permits to construct and operate are applied for from the APCD. Therefore, the potential impacts associated with objectionable odors will be less than significant.

4.3-30

Mitigation Measures, Construction Emissions

AQ-1: During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD (including without limitation, to VCAPCD Rule 50 (Opacity) and Rule 51 (Nuisance):

On-site vehicle speed shall not to exceed 15 miles per hour (the Project Site will contain posted signs with the speed limit).

All on-site construction roads with vehicle traffic shall be watered as necessary to prevent excessive dust;

Streets adjacent to the Project reach shall be swept as needed to remove silt that may have accumulated from construction activities so as to prevent excessive amounts of dust.

All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust. Watering shall occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day.

All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 25 miles per hour averaged over one hour) so as to prevent excessive amounts of dust (contact the VCAPCD meteorologist for current information about average wind speeds).

All material transported off site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust.

These control techniques shall be indicated on Project grading plans. The Applicant and/or its contractor shall be responsible for implementing these measures and compliance with this measure will be subject to periodic site inspections by the City.

4.3-31

Mitigation Measures, Operational Emissions

~~The Specific Plan would result in significant and unavoidable impacts with regard to ROG. VCAPCD recommends that feasible area source mitigation measures be included in all projects that have been determined to have a significant air quality impact. Consequently, the following measures shall be incorporated or imposed upon the Project.~~

AQ-6: Use low emission water heaters for ~~residential, retail, and~~ commercial water heating (Emissions reduction of 11 percent for ROG and 9.5 percent for NOx).

AQ-7: Construct pedestrian and transit friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, and bikeways and/or lanes and bike racks. Sidewalks and bikeways should be landscaped with trees (an approximately 4 percent emissions reduction).

4.3-32 Mobile Source Emissions

AQ-8: Provide shuttle/minibus service between the Project commercial and industrial land uses ~~and the Project retail land uses~~ and the Santa Paula downtown area during the lunchtime period (11:00 AM to 2:00 PM).

4.3-33 Long-Term Operations

AQ-13: The Applicant and/or its contractor shall prepare a TDM for review and approval by the City and VCAPCD, before the City issues building permits. The plan shall incorporate reasonable and feasible measures to reduce Project-related traffic and vehicle miles traveled. At minimum, the TDM Program shall include the following measures:

Provision of connections to identified adjacent City or regional trails.

Provision of adequate way-finding features to direct pedestrians and bicyclists to nearby Project and City destinations, such as school, retail, and civic facilities.

~~Provision of homeowner information packets prior to close of escrow, identifying local and regional nonvehicular transportation options, and providing homeowners with basic information regarding telecommuting options.~~

Provision of adequate setbacks and design features such that the proposed future enhancement of commuter rail opportunities is not hindered by Project design.

Construction of pedestrian- and transit-friendly facilities such as wider sidewalks, bus stops with passenger benches and shelters, bikeways, or lanes. Sidewalks and bikeways should be landscaped with trees.

Perform a traffic light synchronization study on streets impacted by Project development to reduce vehicle queuing time.

The Project shall offset the increase in daily emission over the 25 pounds of reactive organic compounds and nitrogen oxides per day either through the purchase of emission offsets or through the in-lieu fees shall be paid to fund off-site TDM facilities or services, if such a program has been established at that time. These fees can reduce emissions from non-Project-generated motor vehicle trips by funding programs to promote ridesharing, public transit, and bicycling. The amount of this financial contribution should be calculated on a pro-rate basis as determined to be equitable by the VCAPCD, and in accordance with the VCAPCD Guidelines. These fees should be paid prior to the issuance of building permits by the County. The applicant shall demonstrate the availability of the offsets or contribution to fund off-site TDM services to the VCAPCD through a contract or other agreement with the offset source(s), which binds the reduction to the Project.

~~AQ 14: The Applicant and/or its contractor shall install EPA certified wood-burning stoves or fireplace inserts. If this is not feasible, then the installation of a ceramic coating on the honeycomb inside a catalytic combustor must be utilized or the use of natural gas fireplaces may be used as a feasible alternative.~~

Section 4.4, Biological Resources

Page

Revision:

4.4-4

Field Surveys

On May 20, 2015, BRC conducted a reconnaissance-level survey of the Project Site and surroundings. The area was methodically surveyed to document the existing conditions, wildlife and plant species present, and plant communities. It is not usually not possible to schedule all needed field surveys during the optimum survey period for all the special-status plant and wildlife species known to occur in the region. Therefore, the objective of the field survey was to determine the likelihood of occurrence of any special-status plant or wildlife species based on the presence/absence of suitable habitat and other natural history elements that might predict their occurrence.

4.4-22 American Badger (*Taxidea taxus*)—Listing: CA Species of Special Concern

This species was not observed during the Project surveys; however, the avocado orchard and the ecotone between the agricultural fields and Adams Barranca provides forging habitat for this species.

4.4-35 Project Impacts

As discussed previously in Existing Conditions, Southern California black walnut (*Juglans californica*) is the only special-status plant species that was documented or determined to have a high likelihood of occurring within the Project Site. A total of 19 individual trees are located along the perimeter of the Project Site, mainly along the southwest boundary within the riparian habitat of the Adams Barranca and along the SR 126 right-of-way along the southeast boundary of the Project Site, however, the Project does not currently propose to remove any of the 19 Southern California black walnut trees.

4.4-37 Project Impacts

Development under the Specific Plan would include removal of existing vegetation within the Project Site; grading to reach finished grades to support structures; installation of storm drains to carry surface runoff; and construction of buildings, driveways, and parking lots. This would require the removal of the agricultural drainage ditch that bisects the Project Site and is considered State Waters pursuant to the Fish and Game Code and the Clean Water Act. Other state and federal jurisdictional waters (i.e., those within Adams Barranca) would be preserved through an Open Space dedication and ~~prevention~~ the prohibition of construction activities within the Barranca. **Table 4.4-8, Impacts to Jurisdictional Waters**, provides a breakdown of the acres and linear feet of impacts of the Project.

While all Project impacts to ACOE and CDFW jurisdictional areas are considered potentially significant, and they would be mitigated to a less than significant level through the conditions ~~identified~~ imposed pursuant to the Project's 404, 401, and 1602 permits/agreement as well as by mitigation measures identified by this EIR.

4.4-38 Project Impacts, Increases in Light and Glare

The development of the Project Site would increase the number of nighttime light and glare sources on the site. Light and glare can “spill over” into adjacent open space areas, increasing the level of light currently experienced there. Nighttime illumination is known to adversely affect some species of animals in natural areas. Nighttime light can disturb breeding and foraging behavior and can potentially alter foraging and breeding behavior of nocturnal birds, mammals, and invertebrates, which is considered a potentially significant impact. However, Section 4.6 of the Specific Plan for the proposed Project addresses lighting guidelines for the Project Site, including but not limited to, height of lighting, requirements for screened lighting, and submittal of a lighting plan to the police Chief or designee for approval prior to issuance of a building permit. Impacts from lighting and glare would be considered less than significant.

4.4-38 Project Impacts, Increase in Human Presence

The Open Space area designations of the Specific Plan, upland buffers from the riparian area and development under the Project, and the Project characteristics that would provide predominantly indoor daytime work areas would minimize any potential for increase human disturbance to the Adams Barranca. Therefore, indirect impacts from human encroachment would be less than significant.

4.4-42 Project Impacts, Final Recovery Plan for the Least Bell’s Vireo

The Project is consistent with the recovery plan for this species because the least Bell’s vireo habitat present on the site would not be impacted. ~~The Project would result in~~ All potentially significant impacts to the least Bell’s vireo would be mitigated by ~~However, mitigation~~ measures are included within this EIR, and the Project would include an Open Space dedication along the western boundary to avoid impacts to habitat for least Bell’s vireo individuals in the Santa Clara River Watershed.

4.4-42 Project Impacts, Final Recovery Plan for the Southwestern Willow Flycatcher

~~The Project is consistent with the recovery plan for this species because if southwestern willow flycatchers are located on site, they would not be permanently impacted. All~~ Although, the Project would result in potentially

~~significant~~ impacts to the southwestern willow flycatcher during construction would be mitigated by, mitigation measures are included with in this EIR, and the Project includes an Open Space dedication along the western boundary to avoid impacts to habitat for southwestern willow flycatcher individuals in the Santa Clara River Watershed. The southwestern willow flycatchers would not be permanently impacted, and therefore the Project is consistent with the recovery plan for.

4.4-43

Cumulative Impacts

The development of approximately 49 acres of already disturbed agricultural lands and 4.48 acres of urban developed land on the Project Site would have limited adverse effects on the diversity and abundance of native flora and fauna either locally or in the region. Natural habitat areas containing suitable habitat for special-status animal and plant species is proposed to be preserved. The impacted area of the Project Site supports only marginally suitable habitat for a few special-status animals, and has no potential to support a high diversity of native plants. Most wildlife species that could be expected to use the Project Site are species that are adapted to the disturbance that is caused by human-induced activities. Because of the present condition of the Project Site and the surrounding lands, it is unlikely that development of the site would contribute significantly to cumulative adverse impacts to regional flora and fauna. However, ~~the~~ the loss of habitat associated with development of the Project area would contribute to the overall cumulative loss of biological resources in the Santa Paula region. ~~However,~~ Given that the impacted habitat within the Project area consists primarily of agricultural and urban developed land, and the impacted waters are small (less than 1 acre), the incremental contribution of the Project to this habitat loss is not cumulatively considerable and, therefore, not significant.

4.4-43

Mitigation Measures, BR-1

Before issuance of a grading permit, the Applicant must identify on grading plans, the locations of any protected trees (such as the Southern California black walnut, *Juglans californica*) and must include a report pertaining to preserving the tree(s) that could be affected by the grading activity. The report shall be prepared by a tree expert and shall evaluate the ~~subdivider's~~ Applicant's proposals for protected tree preservation, including avoiding grading, land movement, or other

activity within the drip line of any protected tree. Prior to grading, the drip line must be fenced to prevent earthmoving equipment from inadvertently entering the drip line. In the event protected tree cannot be avoided, then the Applicant must provide a tree report in accordance with the City's Tree Protection Ordinance and must provide for the replacement or relocation of any protected trees that are to be removed, or would be subject to landmoving or grading within its drip line.

4.4-44

Mitigation Measures, BR-3

To avoid impacts to native nesting birds, the Applicant must retain a qualified biologist (with selection to be ~~reviewed~~ approved by the City) to conduct nest surveys in potential nesting habitat within the Project Site prior to construction or site preparation activities. Specifically, within 30 days of ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act (MBTA) or the California Fish and Wildlife Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Surveys for special-status bird species can be conducted concurrently with general nesting bird surveys. Because birds known to use the Project area nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding season (mid-March through September) and in January and February. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than 3 days shall have elapsed between the last survey and the commencement of ground disturbance activities.

Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to occur in the area and are shrub or ground nesters, including burrowing owl, California horned lark, and mourning dove. In addition, due to the potential for least Bell's vireo and southwest willow flycatcher to exist, protocol surveys should be completed prior to the start of construction.

4.4-45

Mitigation Measures, BR-6

To avoid potential impacts to the Pallid bat (*Antrozous pallidus*) and the Hoary Bat (*Lasiurus cinereus*), the Applicant must retain a qualified biologist (with selection to be reviewed by the City) to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities. Thirty days before ground disturbance activities associated with construction or grading, a qualified biologist shall conduct weekly surveys in accordance with standard protocols to determine if roosting western red bats are present in the construction zone or within 300 feet of the construction zone. Roosting bat surveys shall be carried out from March through September. Surveys for special-status bat species may be conducted concurrently with nesting bird surveys. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance or construction work. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than three days shall have elapsed between the last survey and the commencement of ground disturbance activities. Surveys shall include examination of trees and large shrubs in which this species is known to roost. Any bats found outside of the breeding season (May through August) shall be relocated by having a qualified biologist remove the bat from the roost. If roosting female bats are found with young during the breeding season (May through August) clearing and construction activities within 300 feet of the roost, shall be postponed or halted until the roost is vacated and juveniles have been weaned, as determined by the biologist. Limits of construction to avoid an active roost site shall be established in the field with flagging, fencing, or other appropriate barriers. Construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active roost areas to ensure that no inadvertent impacts on these roosts will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the City of Santa Paula within 30 days of completion of the pre-construction surveys and construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of these bat species.**4.4-46**

Mitigation Measures, BR-7

Before issuance of a grading permit for areas that require state permits, the applicant shall coordinate with the CDFW to verify the impact to state-protected waters and associated vegetation on the Project Site. A Streambed Alteration Agreement (SAA) must be obtained, and ~~mitigation measures~~ conditions of approval, including but not limited to buffer zones, recommended by the CDFW as part of the SAA shall be implemented. The SAA shall be provided to the City prior to issuance of a grading permit.

Section 4.5, Cultural Resources**4.5-21-22****Cumulative Impacts**

Potential impacts to cultural resources within the Project Site would be mitigated to less than significant with implementation of mitigation measures. Additionally, ~~P~~previous development within Ventura County has resulted in the loss of much of the evidence of the prehistoric occupation and use of the area. As discussed in **Section 3.0, Related Projects**, current development projects within the City of Santa Paula include a number of projects ranging from relatively small residential developments to larger residential development, commercial and industrial developments, and mixed-use developments. Other Specific Plan projects that would likely have similar potentially significant impacts to paleontological, archaeological, and historic resources include the remainder of West Area 2, Adams Canyon, Fagan Canyon, and ~~the recently approved~~ East Area 1 Specific Plan and East Area 2 Projects. The ~~Specific Plan Project,~~ in combination with other currently planned projects, ~~would~~ may result in the potential for a cumulatively significant contribution to significant cumulative impacts. ~~However,~~ ~~M~~mitigation measures would reduce the potentially significant cumulative contribution to paleontological, archaeological, and historical resources. Therefore, impacts are not considered cumulatively considerable and potentially significant.

4.5-22**Mitigation Measures, CUL-3**

In the event that previously unidentified archaeological resources are discovered during building construction, the contractor must cease work in the immediate area and the City Planning Director shall be contacted. An independent qualified archaeologist, retained by the City at the expense of the applicant, must assess

the significance of the find and make mitigation recommendations, which shall be implemented to the extent feasible.

Section 4.6, Geology and Soils

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Revision:

4.6-25

Project Impacts

Construction activities would comply with erosion control requirements, including existing grading and dust control measures, imposed by the City pursuant to grading permit regulations. Specifically, each construction project permitted under the Specific Plan would be required to comply with City's necessary permits, plans, plan checks, and inspections to reduce the effects of sedimentation and erosion. In addition, as discussed in **Section 4.9, Hydrology and Water Quality**, the Project would be required to have a Storm Water Pollution Prevention Plan (SWPPP) pursuant to the National Pollutant Discharge Elimination System (NPDES) permit requirements. As part of the SWPPP, best management practices (BMPs) would be implemented during construction to reduce soil erosion and pollutant levels to the maximum extent possible.

4.6-26

Cumulative Impacts

Geologic impacts are typically confined to a project site or within a localized area and do not affect off-site areas associated with the related projects identified in **Section 3.0, Related Projects**, or other growth in the City. At a minimum, all development occurring within the City of Santa Paula would be subject to CBC and construction standards relative to seismic and other geologic conditions that are prevalent within the region. Also, individual project geotechnical investigation reports, required prior to permit approval, would provide recommendations to account for site-specific design requirements to avoid subjecting on- and off-site properties to geologic hazards, in accordance with the CBC. With regard to erosion and sedimentation, development under the Santa Paula West Specific Plan and related projects are required to implement a SWPPP during construction, as required by the NPDES permit, to minimize impacts to off-site properties from the effects of erosion. Therefore, based on the Santa Paula West Specific Plan design (including recommendations within the geotechnical reports), and compliance with applicable regulations and plan review, the Project

will meet the applicable standards and will sufficiently reduce its incremental cumulative geology and soil impacts to a less than significant cumulative impact.

4.6-27

Mitigation Measures, G-1

Additional explorations must be performed at the tentative tract map and grading plan review stages of the development planning. The purpose of the explorations would be to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement. The Project shall comply with all CBC/UBC requirements for seismic safety.

Section 4.7, Greenhouse Gases

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4.7-24

Cumulative Impacts

Climate change is a cumulative impact from various global sources of activities that incrementally contribute to global GHG concentrations. Individual projects provide a small addition to total concentrations but contribute cumulatively to a global phenomenon. The goal of AB 32 is to require GHG emission reductions from existing conditions. As a result, cumulative GHG and climate change impacts must be analyzed from the perspective of whether they would impede the state’s ability to meet its emission reduction goals.

To achieve Statewide goals, CARB is in the process of implementing regulations to reduce Statewide GHG emissions. However, currently, no applicable significance thresholds, specific reduction targets, and approved policies or guidance are in place to assist in determining significance at the project or cumulative level. Additionally, currently no generally accepted methodology exists to determine whether GHG emissions associated with a specific project represent new emissions or existing and/or displaced emissions.

GHG emissions reductions would be achieved through energy-efficient lighting and building design; installation of low-flow appliances; and water conservation. The methods used to establish this relative reduction are consistent with the approach used in the CARB’s Scoping Plan for the implementation of AB 32 through 2020. The Project’s features and GHG reduction measures make the

Project consistent with the goals of AB 32. Therefore, the Project will result in a less than significant contribution to cumulatively significant GHG emissions.

~~Although the Specific Plan is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. However, currently there are no significance thresholds, specific reduction targets, and no approved policy or guidance to assist in determining significance at the project or cumulative level. Additionally, there is currently no generally accepted methodology to determine whether GHG emissions associated with a specific project represent new emissions or existing, displaced emissions. Implementing the project design features and GHG-reducing measures would result in a net decrease in GHG emissions. The Project’s design features and GHG reduction measures make the Specific Plan consistent with the goals of AB 32.~~

Section 4.8, Hazards and Hazardous Materials

Page

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4.8-16

Project Impacts

The Project proposes the development of a business park that would include commercial and light industrial uses with some areas for passive open space. Operation of the Project ~~would~~ may involve the use, transport, production, handling, or storage of hazardous materials that have the potential to create a significant hazard to people on the Project Site. These materials may include the use of fuels, grease, solvents, paints, and pesticides and other various landscaping products. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards.

Furthermore, the Ventura County Transportation Commission (VCTC) owns the 100-foot-wide railroad corridor that bisects the Project. While the railroad has the capacity to serve as a corridor for the transport of hazardous materials, the railroad is currently out of service and would not pose any dangers to people on the Project Site related to the accidental release of hazardous materials, such as a fire, explosion, or chemical spill. However, if the railroad is commissioned for

service within the future, any transport of hazardous materials would comply with US Department of Transportation (USDOT) Federal Railroad Administration (FRA) safety regulations. Therefore, the probability of an accident involving the transport of hazardous materials within proximity to the Project Site is considered to be very low unlikely. Impacts would be less than significant.

4.8-18**Project Impacts**

As provided previously, the Project ~~would~~ may involve the use of hazardous materials onsite typical of industrial-type uses. The storage and disposal of these hazardous materials on the Project Site would comply with City and SPFD regulations and standards. Therefore, impacts would be less than significant.

4.8-21**Project Impacts**

The City requires preparation of a detailed Construction Traffic Management Plan, which would be submitted to the City for review and approvals consistent with the City's existing standards and emergency response plans. The plan would provide notification to the City of Santa Paula Police Department (SPPD), which oversees emergency operations within the City in cooperation with the Ventura County OES.⁶ The OES is coordinated through the Ventura County Sherriff's Department and is responsible for countywide disaster planning, mitigation, response, and recovery activities through the implementation of the Ventura County Hazard Mitigation Plan. The City's designated evacuation routes are along SR 126 and SR 150. While, SR 126 runs along the southern boundary of the Project Site, construction activities of the Project are not anticipated to interfere with access to the roadway or interfere with operation of the County's Hazard Mitigation Plan. Emergency access and potential traffic access impacts would be less than significant.

As with much of southern California, the Specific Plan area has the potential for ~~residents and~~ employees to encounter human-made and natural hazards, which could cause undue hardship to ~~residents and~~ employees. Human-made hazards include the potential release of hazardous materials; the potential for biological or chemical attacks from foreign and domestic terrorism; and the potential for

6 City of Santa Paula, *General Plan*, "Safety Element," (1998).

fires started by humans. Natural hazards include flooding, seismic activity, extreme weather conditions, and fires that are started naturally.

4.8-21

Project Impacts

The Specific Plan is not located ~~not~~ within a CAL FIRE designated LRA or SRA. The nearest FHZA within the SRA is located just south of the Specific Plan area. The foothills to the south of the Specific Plan area are designated Moderate Severity, while areas further up the South Mountains carry a Very High Severity classification. Based on the City of Santa Paula General Plan, the Project Site is located within an area with minimal fire hazard risk. As the Project involves the development of commercial and light industrial uses across the site's estimated 54 acres. Thus, there would be minimal vegetation that could pose a flammable hazard.

4.8-22

Cumulative Impacts

Related projects may be located on or near a site included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. Development of any of the related projects would be required to comply with existing applicable laws and regulations pertaining to hazardous wastes, and the risk with identified hazardous material sites would be eliminated or reduced through proper handling, disposal practice, and/or clean up procedures. Accordingly, cumulative impacts to the public or environment associated with development on or near listed contaminated sites would be less than significant.

4.8-23-4.8-24

Mitigation Measures, HM-5

In the unlikely event that hazardous materials are encountered during grading or excavation activities anywhere on the Project Site, earthwork must be temporarily suspended in order to coordinate investigation/remediation efforts with the oversight of the Santa Paula Fire Department. An environmental professional (e.g. a professional geologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan consistent with federal and state remedial requirements, must be developed by a professional geologist approved by the City and submitted to the City Planning Director, or designee, for approval as required before continued work in the area.

Section 4.9, Hydrology and Water Quality

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4.9-4

Watershed Description

As shown in **Table 4.9-3**, a small portion of the Santa Paula West Business Park existing property drains west into Adams Barranca. Adams Barranca is a raised channel; on average, the top of the channel is 2 feet higher than the adjacent grade on the property. This portion of the property is subject to flooding during a 100-year storm event from Adams Barranca.⁷ The SR 126 westerly culverts (Area B) ~~handle~~ currently accept the flow from approximately 27 acres. Overflow from pipe inlet blockage travels easterly to two other culverts under SR 126 or farther east to the inlet at the end of Faulkner Road into a 72-inch reinforced concrete pipe (RCP) leading to Todd Lane Drain. The SR 126 easterly culverts (Areas C and D) handle flows from approximately 31 acres. Overflow from pipe inlet blockage travels easterly to the inlet at the end of Faulkner Road into a 72-inch RCP leading to Todd Lane Drain.

4.9-16

Project Impacts

Development of the Specific Plan would involve construction activities over an estimated ~~2-5~~10-year period. Proposed grading and construction activities would involve earth movement and the use of heavy equipment. Peak stormwater runoff could result in short-term sheet erosion with areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential. Given the above, pollutants such as soil, sediments, and other substances associated with construction activities (e.g. oil, gasoline, grease, and surface litter) could be present in stormwater runoff from the site.

4.9-18

Project impacts

Overall, the BMPs and the project design features would address the anticipated and expected pollutants of concern from operation of the Project. Degradation of water quality from the Project would be managed in accordance with all

⁷ FEMA Flood Map Service Center (Map Numbers 0611C0778E and 0611C0779E), <https://msc.fema.gov/portal/search?AddressQuery=Faulkner%20Road%2C%20Santa%20Paula>.

existing applicable federal, state, and local water quality rules and regulations to effectively minimize the Project's impact on water quality. Accordingly, impacts would be less than significant.

4.9-18**Project Impacts**

Based on the above, the Project will not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, the Project would use less water than the existing agricultural operations, and the Specific Plan would incorporate design features such as bioswales, bioretention cells, infiltration trenches and permeable pavement to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge. Therefore, impacts would be less than significant.

4.9-19**Project Impacts**

The Project does not alter the course of a stream or river, however ~~S~~ site-clearing and grading operations have the ~~greatest~~ potential for discharging sediment downstream during storm events. As discussed above, construction and grading activities would involve earth movement and the use of heavy equipment. Peak stormwater runoff could result in short-term sheet erosion with areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential.

4.9-20**Project Impacts**

As mentioned previously, the Specific Plan would not substantially alter drainage patterns within the Project area. The Specific Plan would provide future development in accordance with proposed land use designations for the Specific Plan area, nor alter a stream or river. Given that the Specific Plan area consists of undeveloped agricultural land, development would result in an increase in the rate and amount of surface runoff generated by the Specific Plan Area.

4.9-20**Cumulative Impacts**

The cumulative impact analysis in this Section considers related development projects in the area. With regard to water quality, the related projects would be

required to comply with the NPDES General Construction Permit, including implementation of a site-specific SWPPP, to prevent polluted runoff from entering local stormwater drainage systems during construction activities. Additionally, each related project would be subject to NPDES requirements and applicable SPMC requirements. The Project would not contribute to a cumulatively significant hydrology or water quality impact. First, the Project does not alter any streams or rivers. Second, ~~Given that~~ each related project would be required to comply with NPDES requirements and local regulations designed to prevent polluted runoff from entering local storm drain systems and receiving water bodies during construction and after development, the cumulative impact to water quality would be less than significant. Furthermore, in compliance with NPDES, the cumulative impact related to erosion and siltation would also be less than significant.

Section 4.10, Land Use

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4.10-22-4.10-27

LAFCo Commissioners Handbook Standards

The Project is consistent with the Handbook policies that favor annexations to cities, as set forth in Section 3.3.1 General Standards for Annexation to Cities and Districts, ~~because it would:~~

~~Eliminate islands of unincorporated territory and fill in gaps within the City of Santa Paula's jurisdictional boundaries. While the VCTC railway that bisects the Project Site is not a part of the Project, the areas along the railroad right-of-way would be improved with landscaped screening to ensure compatibility with the Project. Additionally, an existing at-grade crossing will be realigned approximately 100 feet to the east to align with Beckwith Road. Implementation of the Project around the VCTC railway would not result in any conflicts with surrounding City uses.~~

~~Facilitate urbanized development in the western portion to the City of Santa Paula, consistent with the City's existing General Plan policies that envision this area for urban expansion to accommodate City growth through 2020. Buildout of the Specific Plan area is imminent, based upon future market and economic conditions, with concurrent infrastructure improvements and extension of public services to maintain desired levels of service.~~

Extensions of municipal services are needed to support the range and intensities of land uses envisioned for this area by the City's General Plan, and the City of Santa Paula has the resources to provide such services in an efficient manner. The Project Site is located within the City's SOI and is proposed for expansion within the General Plan. The Proposed Project would benefit the community as it would be used for public purposes.

3.3.1.1 Factors Favorable to Approval:

a. The proposal would eliminate islands, corridors, or other distortion of existing boundaries.

The proposed Project would extend the existing City boundary and would not create any islands of unincorporated territory or distort the existing boundary of the City.

b. The affected territory is urban in character or urban development is imminent, requiring municipal or urban-type services.

The Project Site is located within the City's Sphere of Influence (SOI) and has been identified as an expansion area within the City's General Plan since 1998 to meet the need for additional light industrial and business park land in the City. Because the area is currently undeveloped, future development would require the extension of urban services.

c. The affected territory can be provided all urban services by the city or district as shown by the city's or district's service plans and the proposal would enhance the efficient provision of urban services.

Extensions of municipal services are needed to support the range and intensities of land uses envisioned for this area by the City's General Plan, and the City of Santa Paula will provide services.

The Santa Paula Water Master Plan, plans for the expansion of West Area 2, stating "The water demands of West Area 2 are not expected to be significant, and are not expected to affect the overall infrastructure requirements for the system. However, fire flow needs could be substantial, depending on the size and types of building that may be proposed for this commercial area. To supply the required fire flows, a pipeline that crosses the freeway will likely be needed of significant size (12 or 16-inch). When the plans for the development are available, and water and firefighting needs are better defined, a detailed water system analysis is recommended."⁸

⁸ Boyle Engineering Corporation, City of Santa Paula Potable Water System Master Plan (Final; October 2005), 127-128, <http://www.ci.santa-paula.ca.us/PubWorks/PotableWaterMasterPlanOct2005.pdf>.

The Santa Paula Wastewater Master Plan, also provides for wastewater service for West Area 2 to meet a projected wastewater average dry weather flow of 0.1088 million gallons per day (mgd).⁹

d. The proposal is consistent with state law, adopted spheres of influence, applicable general and specific plans, and these policies.

The Project Site is located within the City's SOI and is identified as an expansion area the City's General Plan. The proposed Project would be consistent with the City of Santa Paula General Plan and Municipal Code.

e. The proposal is for the annexation of city or district owned property, used or to be used for public purposes.

The Project does not include City- or district-owned property.

As shown, the proposed Project is consistent with factors (a) through (d), and factor (e) does not apply to the proposed Project.

⁹ Boyle Engineering Corporation, City of Santa Paula Wastewater System Master Plan (September 2005), Table 3-2, <http://ci.santa-paula.ca.us/PubWorks/WASTEWATERMASTERPLANSEPTEMBER2005.pdf>

3.3.1.2 Factors Unfavorable to Approval:

a. The proposal would create or result in corridors, peninsulas, or flags of city or district area or would otherwise cause or further the distortion of existing boundaries.

The proposed Project would extend existing City boundaries and would not create islands of unincorporated territory.

b. The proposal would result in a premature intrusion of urbanization into a predominantly agricultural or rural area.

The Project Site is located within the City's SOI and has been identified as an expansion area in the City's General Plan since 1998 to meet the need for light industrial and business park land in the City and, for this reason, annexation of the Project Site at this time would not result in the premature urbanization of a predominantly agricultural or rural area.

c. The proposal is inconsistent with state law, adopted spheres of influence, adopted general or specific plans, adopted habitat conservation and/or restoration plans, other applicable plans adopted by any governmental agency, or these policies.

The Project Site is located within the City's SOI and is identified as an expansion area the City's General Plan. The proposed Project would be consistent with the City of Santa Paula General Plan and Municipal Code. There are no habitat conservation plans or other applicable plans adopted by other governmental agencies the Project is inconsistent with.

d. For reasons of topography, distance, natural boundaries, or like considerations, the extension of services would be financially infeasible, or another means of supplying services by acceptable alternatives is preferable.

The proposed Project is adjacent to existing uses within the City that currently utilize services. Services can be extended cost effectively to the proposed Project Site from adjacent developed areas in the City of Santa Paula in accordance with the City's utility master plans in

e. Annexation would encourage a type of development in an area that due to terrain, isolation, or other economic or social reason, is not in the public interest.

The Project Site is relatively flat and borders developed portions of the City of Santa Paula to the east. The Project Site is located within the City's SOI and has been identified as an expansion area in the City's General Plan since 1998. Annexation of the site would be in the public interest.

f. The proposal appears to be motivated by inter-agency rivalry or other motives not in the public interest.

The Project would be consistent with the Guidelines for Orderly Development that provide for development to occur within the cities and not within the unincorporated County. The Project proposes to annex land that has been identified within the City's General Plan and SOI and is proposed for expansion within the General Plan.

g. The proposed boundaries do not include logical service areas or are otherwise improperly drawn.

The proposed Project would not create distorted boundaries and would extend existing boundaries as provided for in the SOI. Infrastructure improvements and extension of public services would be extended in an efficient manner.

h. The proposal area would accommodate new development and includes a tsunami inundation zone, wildfire hazard zone, FEMA designated floodway or floodplain, or other hazardous area designated by federal, state or local public agencies, unless the Commission determines that the hazard or hazards can be adequately mitigated.

The proposed Project would not be located in a tsunami inundation zone, wildfire hazard zone, or other hazardous area designated by federal, state or local public agencies. As indicated in the Draft EIR, the western portion of the Specific Plan site located adjacent to Adams Creek is currently located within a FEMA-designated 100-year floodplain area. However, a review of historic flooding, existing contours, and site features concludes the Flood Zone limit shown on the FIRM maps is inaccurate.

i. The proposal will result in an unacceptable significant adverse impact(s) to the environment as determined by the Commission.

Mitigation is identified in the Final EIR for all significant impacts identified for the Project including Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Noise, Transportation and Traffic, and Utilities.

As shown, the proposed Project would not result in any conditions that would be unfavorable as outlined in the factors (a) through (i).

SECTION 3.3.2 GENERAL BOUNDARY CRITERIA

3.3.2.1 LAFCo Favors Applications with Boundaries that do the Following:

a. Create logical boundaries that coincide with existing and planned service areas and, where possible, eliminate previously existing islands.

The proposed Project would create logical municipal service boundaries within the City's established SOI. The Project Site is within an area where the City has planned for the provision of urban services.

b. Follow natural and man-made features, such as ridge lines drainage areas, watercourses, and edges of right-of-way, provided they coincide with lines of assessment or ownership, or are described by metes and bounds legal descriptions which can easily be used for mapping lines of assessment or ownership.

The Project extends to a natural boundary on the west, the Adams Barranca, and coincides with existing rights-of-way and parcel boundaries.

c. Include adjacent urbanized areas which are receiving or which may require urban services such as public water and/or sewer services.

The Project Site is currently undeveloped land within the City's SOI and is not adjacent to any existing unincorporated areas receiving or requiring urban services.

As shown, the proposed Project is consistent with factors (a) and (b), and factor (c) does not apply.

3.3.2.2 LAFCo Discourages Applications with Boundaries that:

a. Split neighborhoods or divide an existing identifiable community, commercial district, or other area having a social and economic identity.

The proposed Project would not split or divide any existing communities, commercial districts, or other areas having a social and economic identity.

b. Create areas where it is difficult to provide services.

The proposed Project would create logical municipal service boundaries within the City's established SOI.

c. Create boundaries which result in islands, peninsulas, flags, "pinpoint contiguity," "cherry stems," or cause, or further, the distortion of existing boundaries.

The proposed Project would extend existing City boundaries and would not create boundaries which result in islands, peninsulas, flags, "pinpoint contiguity," "cherry stems," or cause, or further, the distortion of existing boundaries.

d. Are drawn for the primary purpose of encompassing revenue-producing territories.

The Project would be consistent with the City's existing General Plan that identifies this area for urban expansion to accommodate City growth through 2020. The General Plan identifies this area for industrial and research and development uses.

As shown, the proposed Project would not result in any conditions that would be discouraged by LAFCo as outlined in factors (a) through (d).

SECTION 3.3.5 AGRICULTURE AND OPEN SPACE PRESERVATION

3.3.5.1 Findings and Criteria for Prime Agricultural and Existing Open Space Land Conversion

LAFCo will approve a proposal for a change of organization or reorganization which is likely to result in the conversion of prime agricultural or existing open space land use to other uses only if the Commission finds that the proposal will lead to planned, orderly, and efficient development. For the purposes of this policy, a proposal for a change of organization or reorganization leads to planned, orderly, and efficient development only if all of the following criteria are met:

a. The territory involved is contiguous to either lands developed with an urban use or lands which have received all discretionary approvals for urban development.

The Project Site is adjacent to urbanized land within the City of Santa Paula to the east. Additionally, to the north of the Project Site, beyond Telegraph Road, are additional areas containing urban uses.

b. The territory is likely to be developed within 5 years and has been pre-zoned for nonagricultural or open space use. In the case of very large developments, annexation should be phased wherever possible.

The Project Site has been designated in the City's General Plan as an expansion area since 1998. With approval of the proposed Project, the site will be pre-zoned for nonagricultural use.

c. Insufficient non-prime agricultural or vacant land exists within the existing boundaries of the agency that is planned and developable for the same general type of use.

The City completed an inventory of vacant land within the City limits for the City's 2013-2021 Housing Element Update. This inventory identified approximately 60 acres of vacant, residentially land, including several small vacant commercial properties, within the current city limits Those vacant sites are not contiguous and are dispersed throughout the City.

In addition to these 60 acres of vacant land, the City has adopted Specific Plans for the East Area 1 and East Gateway Specific Plan Areas on the eastern edge of the City. Each of these Specific Plans designates small areas for business park uses. The East Gateway Specific Plan area is, however, primarily planned for development with community level retail commercial uses.

The small amount of vacant land available inside the City limits and available for development with light industrial and business park uses is not sufficient to meet the objectives in the City's General Plan. The West Area Expansion Area is the primary area for additional light industrial uses identified in the City's General Plan. There is insufficient non-prime agricultural or vacant land within the City's existing boundaries that is planned and developable for the same general type of use. As the parcel of vacant land are dispersed and not contiguous, they do not provide sufficient site area to enable orderly, efficient and planned development of the commercial and light industrial uses envisioned for the Project area in the Santa Paula General Plan.

Other undeveloped land is available within the City's Sphere of Influence includes other expansion areas identified in the Santa Paula General Plan. They include Adams and Fagan Canyons located well north of SR 126 and have limited access. Because of the existing characteristics of these expansion areas, the Santa Paula General Plan limits development in Adams Canyon to single-family homes, a destination resort hotel, and a golf course, along with public facilities. Development permitted in Fagan Canyon by the General Plan includes single-family residences with supporting public facilities and a limited amount of neighborhood commercial uses. As such, these areas do not have the locational characteristics required for light industrial uses, or are not large enough to accommodate these uses.

d. The territory involved is not subject to voter approval for the extension of services or for changing general plan land use designations. Where such voter approval is required by local ordinance, such voter approval must be obtained prior to LAFCo action on any proposal unless exceptional circumstances are shown to exist.

The affected territory is not subject to voter approval for the extension of services or for the proposed minor changes in existing City General Plan land use designations. The proposed Specific Plan would include the annexation of land located within the City Urban Restriction Boundary (CURB). Measure L6 is not triggered by the proposed Project.

e. The proposal will have no significant adverse effects on the physical and economic integrity of other prime agricultural or existing open space lands.

The Project will be adjacent to other existing agricultural or open space lands for which the Project has been designed to address compatibility, including a buffer along the Adams Barranca to the west, and does not include uses such as residential, schools, and other sensitive receptors immediately adjacent to agricultural operations.

As shown, the proposed Project is consistent with factors (a) through (e).

3.3.5.2 Findings that Insufficient Non-Prime Agricultural or Vacant Land Exists

The Commission will not make affirmative findings that insufficient non-prime agricultural or vacant land exists within the boundaries of the agency unless the applicable jurisdiction has prepared a detailed alternative site analysis which at a minimum includes:

a. An evaluation of all vacant, non-prime agricultural lands within the boundaries of the jurisdiction that could be developed for the same or similar uses.

The proposed Project would develop approximately 54 acres of agricultural land. As discussed in **Section 4.10, Land Use**, of the Draft EIR, there is insufficient non-prime agricultural or vacant land within the City's existing boundaries that is planned and developable for the same general type of use.

The City conducted an inventory of vacant land conducted for the City's 2013–2021 Housing Element Update identified approximately 60 acres of vacant, properties within the current City limits, not including land in the City's East Area 1 and East Gateway Specific Plan areas. Those vacant sites are dispersed throughout the City, include sites zoned for residential uses, and do not provide sufficient contiguous land to allow for the orderly, efficient, and planned development of the commercial and light industrial uses envisioned for the Project area in the Santa Paula General Plan.

b. An evaluation of the re-use and redevelopment potential of developed areas within the boundaries of the jurisdiction for the same or similar uses.

The City completed an inventory of vacant land within the City limits for the City's 2013-2021 Housing Element Update. This inventory identified approximately 60 acres of vacant, residentially land, including several small vacant commercial properties, within the current city limits Those vacant sites are not contiguous, are dispersed throughout the City, and are not suitable for development with the type of light industrial and business park uses that would be accommodated by this proposed Project.

c. Determinations as to why vacant, non-prime agricultural lands and potential re-use and redevelopment sites are unavailable or undesirable for the same or similar uses, and why conversion of prime agricultural or existing open

space lands are necessary for the planned, orderly, and efficient development of the jurisdiction.

As discussed above, the City does not have sufficient land available within its current City limits to accommodate the light industrial uses this Project would allow. Four expansion areas, Adams Canyon, Fagan Canyon, West Area 2, and one planning area, East Area 2, are identified in the City's General Plan to accommodate needed growth. This proposed Project is located in the West Area 2 Expansion Area, which is the primary area planned to meet the City's need for additional light industrial land.

As shown, the proposed Project is consistent with factors (a) through (c).

3.3.5.3 Impacts on Adjoining Prime Agricultural or Existing Open Space Lands

In making the determination whether conversion will adversely impact adjoining prime agricultural or existing open space lands, the Commission will consider the following factors:

a. The prime agricultural and open space significance of the territory and adjacent areas relative to other agricultural and existing open space lands in the region.

Approximately 49 acres of the 54-acre Project Site are currently under agricultural cultivation

The Project Site includes 49.1 acres of land meeting the definition of prime agricultural land in Government Code Section 56064.

The Project Site contains approximately 44.20 acres of prime farmland, 4.88 acres of farmland of Statewide importance, and 4.48 acres of urban and built-up land as designated on the current State Important Farmland Map.

As of 2016, Ventura County had approximately 118,508 acres of important farmland, which included 40,976 acres of prime farmland and 32,992 acres of farmland of Statewide importance.¹⁰ The 44.20 acres of prime farmland and 4.88 acres of farmland of Statewide importance currently under agricultural cultivation within the Project Site account for 0.1 percent of the total prime farmland in Ventura County and 0.01 percent of the total of farmland of Statewide importance within the County.

Additionally, the land directly west of the Project Site is part of the Ventura-Santa Paula Greenbelt and will not annexed or developed. Annexation and development of the Project Site in accordance with the proposed Specific Plan, which includes a buffer to ensure compatibility with agricultural land

10 California Department of Conservation, Farmland Mapping and Monitoring Program, Ventura County, Land Use Conversion Table, <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Ventura.aspx>.

around the site will not affect the large amount of remaining high quality agricultural land in the County.

b. *The economic viability of the prime agricultural lands to be converted.*

The Project Site is currently farmed by two organizations: Bender Farms and McGrath Farms. Bender Farms grows avocados on approximately 9.2 acres of land and herbs on approximately 12.3 acres. McGrath Farms grows a variety of row crops on approximately 27.5 acres of land. The proposed Project contains 44 acres of prime agricultural land that would be converted. The County of Ventura has determined that prime agricultural lands in the County are highly productive and are capable of supporting commercially viable agricultural operations on parcels as small as 9 acres.¹¹ At 44 acres, continued agricultural operations are economically viable.

c. *The health and well-being of any urban residents adjacent to the prime agricultural lands to be converted.*

The health and well-being of urban residents adjacent to the proposal area are unlikely to be impacted as a result of the conversion of the agricultural land within the proposed SOI amendment. The existing residential development to the north is separated by Telegraph Road, which has a width of approximately 50 feet, from the Project Site. The proposed light industrial and business park uses would be developed in accordance with the development and design standards in the proposed Specific Plan, will be compatible with the nearest residential uses, and will not affect the health or well-being of the residents of this neighborhood

d. *The use of the territory and the adjacent areas.*

Residential and agricultural uses surround the Project Site. To the north of the Project Site and Telegraph Road are primarily single-family residences accessed from Country View Court, as well as a mobile home park accessed from Valencia Way. The southern portion of the Project Site is bound by SR 126; just beyond the freeway exist agricultural uses that grow various row crops, avocados, and citrus, and contain a limited number of single-family residential units within some of the properties. To the east of the Project Site, along Beckwith Road, are light industrial uses to the east, including offices, warehouse buildings, construction equipment storage, and maintenance facilities. The Adams Barranca is located adjacent to the western boundary of the Project Site; agricultural uses and limited single-family residences, consisting of orchards and a limited number of livestock, are located immediately west of the Adams Barranca.

Similar industrial uses currently exist to the east of the Project boundary. Additionally, man-made or natural boundaries would separate uses from the north, south, and west portions of the Project Site. The proposed light

11 Ventura County Land Conservation Act Guidelines. Adopted November 22, 2011; December 8, 2015, edition.

industrial and business park uses would be developed in accordance with the development and design standards in the proposed Specific Plan, will be compatible with the surrounding uses.

e. Whether public facilities related to the proposal would be sized or situated so as to facilitate the conversion of prime agricultural or existing open space land outside of the agency's sphere of influence, or will be extended through prime agricultural or existing open space lands outside the agency's sphere of influence.

The City has sewer and water master plans designed to serve uses allowed by the City's General Plan, including the uses in the West Area 2 Expansion Area, which includes the Project Site. Sewer and water facilities would be provided to serve the site consistent with these master plans and would not be sized to accommodate additional growth. The Project would also not involve any road improvements that could induce growth of adjacent agricultural or open space land.

f. Whether natural or man-made barriers serve to buffer prime agricultural or existing open space lands outside of the agency's sphere of influence from the effects of the proposal.

The west portion of the Project Site will have a buffer between the Adams Barranca and the proposed Project, which will create a buffer between the existing prime agriculture to the west and the proposed Project Site. Additionally, Faulkner Road, and the 126 Freeway, places a buffer between the proposed Project and the agricultural land to the south of the Project Site.

g. Applicable provisions of local general plans, applicable ordinances that require voter approval prior to the extension of urban services or changes to general plan designations, Greenbelt Agreements, applicable growth-management policies, and statutory provisions designed to protect agriculture or existing open space.

The affected territory is not subject to voter approval for the extension of services or for the proposed minor changes in existing City General Plan land use designations. The proposed Specific Plan would include the annexation of land located within the City's voter approved CURB. Measure L6 is not triggered by the proposed Project.

h. Comments and recommendations by the Ventura County Agricultural Commissioner.

No comments or recommendations directly involving the Project were received from the Agricultural Commissioner. In addition, the Project is consistent with the Agricultural Policy Advisory Committee's Agricultural/Urban Buffer Policy, which requires new dwellings, nonagricultural work sites, and ongoing outdoor public activities that may potentially conflict with agricultural operations to include a buffer/setback

and fencing. The proposed Project will provide a buffer zone adjacent to the Adams Barranca to the west and is separated from adjacent lands by existing roadways (Faulkner Road to the south, Beckwith Road to the east, and Telegraph Road to the north).

As shown, the proposed Project does not conflict with factors (a) thru (h).

3.3.5.4 Territory Subject to a Land Conservation Act (Williamson Act) Contract

LAFCo will not approve a proposal which includes the annexation of territory subject to an active Land Conservation Act contract to a city or special district that provides or would provide facilities and/or services other than those that support the land uses that are allowed under the contract. For purposes of this section, an active Land Conservation Act contract includes a contract for which a notice of non-renewal has been filed.

The proposed Project is consistent with Policy 3.3.5.4. The proposed Project does not contain any parcels subject to a Williamson Act contract.

Section 4.11, Noise

Page

Revision:

4.11-16-17

Santa Paula Municipal Code

Annexation of the Santa Paula West Business Park into the City of Santa Paula is planned to occur as part of the Specific Plan approval process. Santa Paula Municipal Code (SPMC) Chapter 93 sets noise standards for the City. SPMC Section 93.21 establishes the acceptable exterior noise standard for residential uses of 65 dB(A) from 7:00 AM through 10:00 PM, and of 60 dB(A) from 10:00 PM through 7:00 AM. The exterior noise standard for other noise-sensitive uses, including schools, libraries, hospitals, community care facilities, and assembly halls, is 65 dB(A) at all times. According to the SPMC, commercial and office uses cannot exceed an outdoor noise level of 70 dB(A), and neighborhood commercial uses cannot experience an external noise level of more than 65 dB(A). Industrial uses cannot to exceed an external noise level of more than 75 dB(A). The SPMC ~~does~~ has not yet set acceptable interior noise level standards.

4.11-24

Project Impacts

As previously discussed, an increase of 3 dB(A) or greater in traffic noise levels that occurs from Project-related activities would be considered significant if the resulting noise levels that occurs from Project-related activities would exceed the

City Noise Compatibility Matrix for “acceptable” exterior or interior noise levels. These roadway systems ~~will do~~ not experience an increase in noise levels of 3 dB(A) or greater. In addition, vehicle trips and traffic noise levels would remain the same with the proposed Beckwith Road extension and would not cause an increase of 3 dB(A) or greater due to Project-related activities. Therefore, the Santa Paula West Specific Plan Area would not result in significant noise impacts in the local and regional street system. Impacts along these roadway systems are considered less than significant.

4.11-25**Project Impacts**

As mentioned previously, exterior-to-interior reduction of noise is generally 25 dB(A) or more. Assuming noise levels at 69.4 dB(A) within 50 feet from the railway centerline, interior noise ~~could~~will be reduced to 44.4 dB(A), below the General Plan noise threshold of 45 dB(A), in compliance with the City’s Building Code. Therefore, potential interior noise within the proposed development would be considered less than significant.

4.11-26**Project Impacts**

Loaded trucks and large bulldozers are capable of producing approximately 86 and 87 VdB, respectively, at 25 feet. The surrounding land uses within 25 feet of the Project Site include the scattered residential uses immediately to the west. The construction near this portion of this site may include some earthwork and grading activities. While offsite surrounding land uses may experience vibration events, these would be temporary and would not be frequent and impacts would be considered less than significant.

4.11-29**Project Impacts**

~~Average daily trips associated with construction activities would not result in a doubling of trip volume along study-area roadways. Given that it takes a doubling of average daily trips on roadways to increase noise by 3 dB(A), the average daily trips associated with construction activities would not result in a doubling of trip volume along study-area roadways.~~ the n Noise-level increases associated with construction vehicle trips along major arterials in the City of Santa Paula and nearby roadways that are within the area (unincorporated County of

Ventura) would be less than 3 dB(A), and potential impacts will be less than significant.

Section 4.12, Public Services

4.12-16 Project Impacts

~~Furthermore, as part of the review of the Specific Plan, the City of Santa Paula and Project Applicant will enter into a Development Agreement with the property owner that addresses the funding of public services, including fire protection services. Under the terms of the Development Agreement, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection facilities and personnel costs. No new facilities would be required to serve the Project Site as a result of the implementation of the Specific Plan. As such, mitigation is not required.~~

4.12-18 Cumulative Impacts

The City has regulations and ordinances in place to address impacts on public services (e.g., police, fire), including the provision and acquisition of new facilities and equipment. All planned development would be reviewed by the respective agencies and corresponding mitigation design features and payment of existing fees would be required prior to building permit issuance. Therefore, cumulative impacts associated with public services would be less than significant.

Section 4.13, Transportation and Traffic

Page Revision:

4.13-26 Project Impacts

The summary of the freeway and multilane highway impacts analyses is provided in **Table 4.13-6, Existing plus Project Impacts—Freeway and Multilane Segments**. The five freeway segments currently operate at LOS C or better in both directions. Based on the significance threshold for the Los Angeles County CMP, the Project ~~does~~ will not operate at LOS F after the addition of project traffic and the Project does not cause a net increase in traffic demand of 2 percent of

capacity or more. Therefore, the Project would result in less than significant impacts to freeway and multilane segments.

4.13-27 **Project Impacts**

The City's General Plan includes goals to ensure that City residents have alternative transportation opportunities, such as public transit, bikeways, and pedestrian routes.

4.13-39 **Mitigation Measures, MM TRA-1**

Peck Road & Harvard Boulevard/Telegraph Road/Main Street (Intersection 8).

This intersection could be mitigated to LOS C or better with the addition of one travel lane to both the northbound and southbound approaches on Peck Road and the addition of a northbound right overlap phase. The northbound lane configuration would be one right-turn lane, two through lanes, and one left-turn lane. The northbound right-turn movement would also have an overlap signal head installed to accommodate the overlap phase. The southbound lane configuration would be one shared through/right-turn lane, one through lane, and one left-turn lane.

Since this is a cumulative impact, the Project applicant ~~would~~ shall be responsible for their fair share contribution for this mitigation improvement.

4.13-40 **Mitigation Measures**

10th Street & Harvard Boulevard (Intersection 1) – No feasible ~~MM~~ mitigation measures are ~~from prior major projects in Santa Paula were investigated along the Ojai Road corridor available~~. A beautification project including bicycle lanes is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a ~~possible~~ physically feasible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated. Alternatively, a peak-hour parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include on shared through/right turn lane, one through lane (during peak hours), and on left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would

result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B under the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these improvements mitigations were not considered as to be a feasible mitigation measure.

4.13-29

Mitigation Measures

10th Street & Harvard Boulevard (Intersection 1) – No feasible Mmitigation measures are ~~from prior major projects in Santa Paula were investigated along the Ojai Road corridor available.~~ A beautification project including bicycle lanes is planned along 10th Street at this location; therefore, widening of 10th Street to gain capacity was not considered as a ~~possible~~ physically feasible mitigation. Given the constraints of the intersection and the proposed bicycle lanes, cumulative impacts to this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable. Alternatively, a peak-hour parking restriction on the southbound approach would allow for the reconfiguration of the southbound approach to include one shared through/right-turn lane, one through lane (during peak hours), and one left-turn lane. The northbound approach could be restriped to provide one right-turn lane, one through lane, and one left-turn lane. In combination, these measures would result in an improvement from LOS C during the AM peak hour and LOS D during the PM peak hour to LOS A during the AM peak hour and LOS B during the PM peak hour, thus mitigating the increase in V/C ratio attributable to project traffic. However, due to the planned bicycle lanes, these mitigations were not considered as a feasible mitigation. The constraints of the intersection and the proposed bicycle lanes discussed under the Existing plus Project scenario would also apply to the Cumulative plus Project scenario. Therefore, this intersection cannot be fully mitigated, and the impact would remain significant and unavoidable.

Section 4.14, Utilities and Service Systems

Section 4.14, Utilities and Service Systems, of the Draft EIR was updated to reflect the Final Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project (Final WSA). The Final WSA was updated to reflect the Final 2016 Urban Water Management Plan (UWMP) released in August 2017. The 2016 UWMP had many updates but specially there were, updated generation rates, updated current and future supplies and demands through 2040, and updated water production, recycled water, groundwater allocations and transfers. Due to the updated UWMP, many changes were made to the

water portion of the Utilities and Service Systems. This section can be found with strike throughs for deletions and double underlines for insertions in **Appendix A**. The changes largely consist of changes to water supply and demand numbers; changes to **Tables 4.14-1** through **4.14-4**, **4.14-6**, and **4.14-10**; and updating references to the 2016 Final UWMP.

Section 5.0, Alternatives

Section 5.0, Alternatives, of the Draft EIR was updated to reflect grammar and minor technical errors. The following changes were made:

<u>Page</u>	<u>Revision:</u>
5.0-2	<p>Project Objectives</p> <p>1. Help revitalize the existing built environment and economic climate of the City by permitting new investment and development in West Area 2 that reflects and complements the existing pattern and scale of development in Santa Paula, <u>as envisioned in the City's General Plan</u>;</p>
5.0-9	<p>Conclusion and Relationship to Project Objectives</p> <p>Land use and water usage impacts for the proposed Project would be significantly fewer <u>less</u> than those under the No Project–No Development Alternative. While this alternative would not generate any impacts to water or land use, the impacts of this alternative could be considered greater than the proposed Project.</p>
5.0-9	<p>Alternative 2: 25 Percent Reduction, Description of Alternative</p> <p>This alternative assumes that there would be a 25 percent reduction in the 53.81 acres that makes up the proposed Project. This assumes that 75 percent, or approximately 40.36 acres of the Project would be built with the Specific Plan <u>area</u>, and 25 percent, or approximately 13.45 acres would remain under the jurisdiction of the County of Ventura with land use subject to the County's General Plan and zoning, and agricultural operations would still continue.</p>
5.0-13	<p>Cultural Resources</p> <p>This alternative would develop a smaller portion of the site with commercial and light industrial uses. This alternative would have a similar potential to uncover previously unknown archaeological resources and human remains. Compliance</p>

with the Mitigation Measures during the construction phase would ensure development would not result in significant impacts to potential cultural resources. Impacts would be similar to those of the proposed Project, and less than significant.

5.0-13-14

Greenhouse Gas

The proposed Project would generate a net increase of approximately 5,546 ADT while 4,160 ADT could be generated under Alternative 2. As with the proposed Project, GHG emissions would be generated by area, energy, and mobile sources, waste disposal, and water and wastewater treatment and conveyance, with mobile sources generating the majority of the overall GHG emissions. All industrial land use projects that exceed 10,000 MTCO₂e per year are considered potentially significant under the South Coast Air Quality Management District (SCAQMD) screening threshold, which is recognized by the VCAPCD. The estimated Project operational GHG emissions with project design features was estimated to be 6,674.83 MTCO₂e per year, which would not exceed the screening threshold. Given that Alternative 2 includes a 25 percent reduction in uses, this alternative would result 5,006 MTCO₂e per year, which would not exceed the screening threshold. In addition, as with the proposed Project, development under Alternative 2 is expected to be consistent with all feasible and applicable strategies and the recommended measures of ARB Scoping Plan to reduce greenhouse gas emissions in California. Neither this alternative nor the proposed Specific Plan would result in significant greenhouse gas impacts; however, impacts under this alternative would be slightly ~~fewer~~ less.

5.0-14

Hazards and Hazardous Materials

While this alternative would result in a density reduction to approximately 40 acres, development would still occur; and impacts similar to those of the proposed Project, but at a reduced intensity, would occur. Construction of the Project would still require materials that could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. that could spill or release. Additionally, agricultural land containing residual pesticides, would still be disturbed. Mitigation measures pertaining to these issues would still be implemented and impacts would be similar to that of the proposed Project, and less than significant.

5.0-15**Public Services**

Without annexing approximately 13 acres to the City of Santa Paula, the City's municipal services needs would slightly decrease. However, there would still be a demand for the City's police, fire, and other City resources. Because there is no residential development involved, public schools and parks would not be impacted under this alternative. Similar to the proposed Project, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection and police services. Impacts would be similar to those of the proposed Project, and less than significant. ~~There would be similar, less than significant impacts under Alternative 2 as the proposed Project.~~

5.0-17**Conclusion and Relationship to Project Objectives**

A summary comparison of impacts associated with the Project alternatives is provided in **Table 5.0-3** at the end of this section.

The 25 Percent Reduction Alternative would reduce impacts to agricultural resources, air quality, greenhouse gas, transportation and traffic, wastewater, solid waste, and stormwater when compared to the proposed Project. However, significant and unavoidable impacts would not be avoided or substantially lessened. Land use impacts would be greater because this alternative would be potentially inconsistent with the goals and objectives of the General Plan Land Use Element, specifically, objective 5(f), "Sufficient land should be provided for all uses, including parks, low-density residential, industrial and neighborhood commercial, to accommodate projected population growth to the year 2020."~~The 25 Percent Reduction Alternative would result in reduced impacts when compared to the proposed Project. Land use is considered to be greater as it would create an unincorporated island and the general plan would not be fully implemented.~~

This alternative would meet the basic objectives defined by the City of Santa Paula for the proposed Project, but to a lesser degree.

5.0-17-5.0-18**Alternative 3: 50 Percent Reduction, Description of Alternative**

Alternative 3 assumes that there would be a 50 percent reduction in the 53.81 acres that makes up the proposed Project. This assumes that 50 percent, or

approximately 26.90 acres of the Project would be built with the Specific Plan area, and 50 percent, or approximately 26.90 acres would remain under the jurisdiction of the County of Ventura with land use subject to the County's General Plan and zoning, and agricultural operations would still continue.

5.0-20 Cultural Resources

This alternative would develop a smaller portion of the site with commercial and light industrial uses. Alternative 3 would have a similar potential to uncover previously unknown archaeological resources and human remains. Compliance with the Mitigation Measures during the construction phase would ensure development would not result in significant impacts to potential cultural resources. Impacts would be similar to those of the proposed Project, and less than significant.

5.0-21 Hazards and Hazardous Materials

While this alternative would result in a density reduction to approximately 27 acres, development would still occur; and impacts similar to those of the proposed Project, but at a reduced intensity, would occur. Construction of the Project would still require materials that could contain hazardous materials, such as fuels, solvents, oils, coatings, etc. that could spill or release. Additionally, agricultural land containing residual pesticides, would still be disturbed. Mitigation measures pertaining to these issues would still be implemented and impacts would be similar to that of the proposed Project, and less than significant.

5.0-22 Public Services

Without annexing approximately 27 acres to the City of Santa Paula, the City's municipal services needs would slightly decrease. However, there would still be a demand for the City's police, fire, and other City resources. Because there is no residential development involved, public schools and parks would not be impacted under this alternative. Similar to the proposed Project, the Project Applicant and/or developer will be required to contribute funding through development impact fees to the City to contribute toward ongoing fire protection and police services. Impacts would be similar to those of the proposed Project, and less than significant. ~~There would be similar, less than significant impacts under Alternative 2 as the proposed Project.~~

5.0-24

Conclusion and Relationship to Project Objectives

A summary comparison of impacts associated with the Project alternatives is provided in **Table 5.0-3** at the end of this section.

The 50 Percent Reduction Alternative would result in reduced impacts to aesthetics, agricultural resources, air quality, biological resources, greenhouse gases, noise, transportation and traffic, wastewater, solid waste, and stormwater when compared to the proposed Project, and would avoid the significant and unavoidable traffic impact of the proposed Project at one intersection. Land use impacts would be greater because this alternative would be potentially inconsistent with the goals and objectives of the General Plan Land Use Element, specifically, objective 5(f), "Sufficient land should be provided for all uses, including parks, low-density residential, industrial and neighborhood commercial, to accommodate projected population growth to the year 2020."

~~The 50 Percent Reduction Alternative would result in reduced impacts when compared to the proposed Project, and avoid would avoid the significant and unavoidable impact of the proposed Project on transportation and traffic at one intersection. Land use impacts are considered to be greater because the general plan would not be fully implemented.~~

This alternative would meet the basic objectives defined by the City of Santa Paula for the proposed Project, but to a lesser degree.

5.0-25

Environmentally Superior Alternative

Alternative 1, the No Project Alternative, would have the fewest impacts and would not result in any significant impacts making it ~~and is~~ the environmentally superior alternative. However, the No Project Alternative would not meet the objectives of the proposed Project. As noted above, if the No Project Alternative is determined to be environmentally superior, the CEQA Guidelines require an environmentally superior alternative must also be identified among the remaining alternatives.

The environmentally superior alternative among the remaining alternatives would be ~~the~~ Alternative 3, the 50 Percent Reduction Alternative. This alternative would avoid the significant and unavoidable environmental impact identified at one intersection ~~under traffic for the proposed Project.~~

However, this alternative would not eliminate the significant and unavoidable impacts for aesthetics, agricultural resources, and air quality during construction; ~~and~~ would not be consistent with applicable land use policies; and would not achieve the basic objectives of the Project as defined by the City of Santa Paula. Additionally, water usage would be greater by approximately 120.6 afy when compared to the build-out of the proposed Project because of higher water use for existing agriculture.

5.0-25-26

Table 5.0-3 Comparison of Alternatives to the Proposed Project

	Proposed Project	Alternative 1	Alternative 2 No Project Existing Plans & Policies	Alternative 3 East Gateway Specific Plan & High Density Residential
Environmental Topic	Impacts with Mitigation	No Project Alternative	<u>25 Percent Reduction</u>	<u>50 Percent Reduction</u>

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APPENDIX A

Revisions to Draft EIR—Utilities

4.14 UTILITIES AND SERVICE SYSTEMS

This section describes the existing utilities and service systems located on and immediately surrounding the Santa Paula West Business Park Specific Plan (“Specific Plan”) area. The section addresses the potential impacts of the Project on water service, sewer service, and solid waste. Each subsection includes an introduction, followed by discussions of existing conditions, regulatory framework, methodology, potential environmental impacts, cumulative impacts, and recommended mitigation measures to help reduce or avoid identified impacts, and the level of significance of adverse impacts after mitigation.

Information presented in this section derives from the City of Santa Paula’s General Plan (1998), the City of Santa Paula’s ~~Draft-Final~~ *Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project* (“~~Draft-Final~~ WSA”; ~~November 2016~~), the Final 2016~~0~~ Urban Water Management Plan (UWMP) Update (~~June 2011~~ August 2017), the 2005 Potable Water System Master Plan Amendment (June 2012), the Wastewater System Master Plan (2012), the *Sanitary Sewer Technical Report* prepared by Jensen Design & Survey, Inc. (May 2015), CalRecycle, well-pumping data through year 2014, and the proposed Santa Paula West Business Park Specific Plan (October 2016). The ~~Draft-Final~~ WSA is included in **Appendix 4.14**.

4.14.1 EXISTING CONDITIONS

Water

On-Site Water Availability

The Project Site currently contains two small farmworker dwelling units that use potable water and approximately 49 acres under agricultural production that also use water for irrigation. The remainder of the Project Site consists of nonirrigated open space and improvements such as roads and equipment storage areas associated with farming operations.

Within the Santa Paula Groundwater Basin, water for the Project Site is currently provided by an on-site water well that supplies water for existing agricultural irrigation uses and for domestic consumption (residents). This existing water well also provides water for off-site users other than those on the Project Site. This existing well has been in service for a long period of time and, for the purposes of future conditions, has run its design life.

Water Demand

The City's water distribution system provides domestic water service to approximately ~~7,278~~ 400 end users/accounts.¹ As provided in **Table 4.14-1, 2015~~0~~ City Water Demand**, the total 2015~~0~~ water demand within the City was ~~4,416~~ 3,907 acre-feet (af).² The largest land use in the City for water demand is single-family residential, which accounted for approximately ~~54~~ 7 percent of the total 2010~~5~~ water demands. Multifamily residential accounts represented approximately ~~22~~ 0 percent of the 2015~~0~~ demands. Commercial/Institutional accounts represented approximately ~~13~~ 4 percent of the 2015~~0~~ demands. Industrial, landscape and agricultural-irrigation, sales to Middleroad Mutual Water Company, estimated losses/unmetered, and "other" accounts represented the balance of the demands.

Table 4.14-1
2015~~0~~ City Water Demand

Customer Classification	Demand (acre-feet)	Percent of Total Water Demand
Single-family residential	2,504 <u>106</u>	56.7 <u>54</u>
Multifamily residential	887 <u>868</u>	20.1 <u>22</u>
Commercial/Institutional	601 <u>493</u>	13.6 <u>13</u>
Industrial	4 <u>84</u>	1.2
Landscape irrigation	22 <u>49</u>	0.5 <u>1.2</u>
Other	4 <u>122</u>	0.6 <u>9</u>
Agricultural irrigation/Sales to Middleroad Mutual Water Company	4 <u>40</u>	1.1 <u>0</u>
Unmetered/Estimated Losses	317 <u>277</u>	7.2
Total	4,416 <u>3,907</u>	100.00

Source: City of Santa Paula, Final ~~2016~~ 2010 Urban Wastewater Management Plan (UWMP) Update, ~~June 2011~~ (August 2017), Table 3-1, ~~42~~.

The City does not generally provide wholesale water to any other agencies, nor does it purchase water from any wholesale agency. However, in 2010~~5~~, the City provided ~~44~~ 39 af to the Middleroad Mutual Water Company.³ The City does not use potable supplies for saline barriers, groundwater recharge, conjunctive use, raw water, or recycled water uses.

The 2016~~0~~ UWMP Update includes estimated future water demand based on the City's General Plan (see **Table 4.14-2, Estimated Future Potable Water Demand**).⁴ Future water requirements are estimated

- 1 City of Santa Paula, Final ~~2016~~ 2010 Urban Water Management Plan Update (UWMP), ~~(June 2011)~~ (August 2017), 3.
- 2 City of Santa Paula, Final 2016 UWMP Update (August 2017), 3. City of Santa Paula, Final 2010 UWMP Update (June 2011).
- 3 City of Santa Paula, Final 2016 UWMP Update (August 2017), 3. City of Santa Paula, Final 2010 UWMP Update (June 2011).
- 4 City of Santa Paula, Final 2016 UWMP Update (August 2017), Table ES-2, 4. City of Santa Paula, Final 2010 UWMP Update (June 2011).

through 2035 according to future land use, population projections, and water demand characteristics. Potable water demands for potential developments were estimated to be a net increase of 1,697 af.

**Table 4.14-2
Estimated Future Potable Water Demand**

Land Use	Potential Development ^{a,b,c,d}	Estimated Potable Water Demand (af) ^e
Existing Demand		4,416
Potential Future Demand		
Residential		
Adams Canyon	495 du	
East Area 1	1,500 du	
Fagan Canyon	450 du	
Other	200 703 du	
Subtotal	2,645 3,148 du	1,349 259
Commercial/Industrial/Institutional/Institutional^eMixed-Use^e		
Adams Canyon ^f	100,000 sq. ft.	
East Area 1 ^g	811,000 998,993 sq. ft.	
East Area 2	1,602,000 234,500 sq. ft.	
Fagan Canyon ^h	100,000 76,230 sq. ft.	
West Area 2	1,905,750 6,000 sq. ft.	
Other	1,200,000 115,050 sq. ft.	
Subtotal	5,706,300 3,664,293 sq. ft.	267 169
Industrial		
East Area 1	25,000 sq. ft.	
East Area 2	1,056,330 sq. ft.	
Other	128,000 sq. ft.	
Subtotal	1,209,330 sq. ft.	<u>9</u>
Parks and Recreation^e		
Adams Canyon ⁱ	200 460 acres	
East Area 1	89 225 acres	
Fagan Canyon	7 213 acres	
South Mountain	115 acres	
Other	0 acres	
Subtotal	411 1,013 acres ¹	0
Unaccounted Water ^h Landscape with Irrigation		81 901
Water Losses ^j		<u>117</u>
Subtotal Potential Future Demand		<u><u>1,696</u></u> 2,455

Land Use	Potential Development ^{a,b,c,d}	Estimated Potable Water Demand (afy) ^e
Total Future Potable Demands		6,112,362

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), ~~Final 2010 UWMP Update (June 2011)~~, Table 2-4ES-2 and Table 2-4, pp. 5 and 39.

Notes: afy = acre-feet per year; du = dwelling units; sq. ft. = square feet.

^a Source: City of Santa Paula General Plan, "Land Use Element" (2011).

^b Source: City of Santa Paula General Plan (1998).

^c East Area 1 Specific Plan (2007).

^d Source: personal communication (City, 2011b)

^e All new community landscape areas, including golf courses, will be irrigated with recycled water. However, this water demand will be approximately 900 afy.

^f Includes school and destination resort hotel.

^g Includes two schools, a community college, and an assisted living facility. It should be noted that the community college is not a part of the East Area 1 Specific Plan Amendment.

^h Includes school.

ⁱ Includes golf course (Adams Canyon).

^j Source: Assume 5 percent.

As shown in **Table 4.14-3, Potable Water Demands 2015–2040~~35~~**, the estimated total potable water demand (existing plus potential) is approximately 4,840,907 af in 2015 and will increase to approximately 6,116,416 af by 2035~~2040~~. Future water demand values represent the total potable water demand, including anticipated future development.

**Table 4.14-3
Potable Water Demands ~~2015–2035~~2020-2040 (afy)**

	2015	202015	20250	20252030	20350	204035
Total Demand	<u>3,907</u>	<u>4,840,907</u>	<u>5,265,311</u>	<u>5,689,012</u>	<u>6,116,714</u>	<u>6,116,416</u>

Source: City of Santa Paula, Final 2016~~2010~~ UWMP Update (August 2017), ~~June 2011~~ August 2017), Table 3-3, p. 482.

Note: afy = acre-feet per year.

Water Supply

The City of Santa Paula (City) Public Works, Water Division, supplies water to the City. The City of Santa Paula currently has secured water rights from two sources: groundwater allocation from the Santa Paula Basin, and surface water through an agreement with the Canyon Irrigation Company. Currently the Santa Paula Basin is the City’s sole source of water supply.⁵

The total amount of water produced by the City was 4,455,907 af in 2010~~05~~. In comparison, the City produced 5,046,047 af in 2005, ~~an amount that is 591 af more than was produced in 2010~~ which is 29

⁵ City of Santa Paula, Final 2016~~2010~~ UWMP Update (August 2017), ~~June 2011~~ August 2017), 55.

greater than production in 2015. The highest annual water demand for the period 2000 to ~~2010~~2015 was recorded in 2002, when 5,359 af was produced.⁶

The City's current groundwater supply includes production from five active wells. Domestic water is pumped from Wells 1-B, 11, 12, 13, and 14, which can produce up to 10.6 million gallons per day.⁷ **Table 4.14-4, City Groundwater Well Production**, summarizes the City's groundwater resources by well, including current status, well capacity, and 2010~~5~~ production. Wells 12 and 14 produced ~~81~~98 percent of the water for the City in ~~2010~~2015. The City no longer operates Wells 2, 8, and 9 because of a history of elevated nitrate levels in water extracted from these sources; these wells were sold to an agricultural enterprise.

6 City of Santa Paula, Final 2016 UWMP Update (August 2017), 63.

7 City of Santa Paula, Final 2016-2019 UWMP Update (June 2011-August 2017), 266.

**Table 4.14-4
City Groundwater Well Production**

Well No.	Status	Capacity (gpm)	2010 Production (acre-feet)
1-B	Active	<u>1,288,812</u>	<u>114.9104</u>
11	Active	<u>1,232,203</u>	<u>393.2392</u>
12	Active	<u>1,448,179</u>	<u>1,768.8527</u>
13	Active	<u>1,932,042</u>	<u>353.3378</u>
14	Active	<u>3,219,375</u>	<u>1,825.3507</u>
Total			<u>4,455.53,907</u>

Source: City of Santa Paula, Final 2016 ~~2010~~ UWMP Update (~~June 2011~~ August 2017), Table 4-32, p. 63.

The Project Site is located outside of the incorporated City boundary but is within West Area 2, which is a future expansion area under the City's General Plan, and is within the City's Sphere of Influence. The entire Project Site would be located within the City's service area after annexation of the site to the City.

Construction of the City's centralized water conditioning facility and the Well 14 pumping plant was completed in 2000. The centralized water conditioning facility was designed to remove manganese and iron from up to 10 million gallons of water per day from Wells 11, 13, and 14, and future Well 15. Well 14 is anticipated to contribute an added 4.5 million gallons of water per day to the system. This added production capacity will help the City's water system to meet peak water use demands in hot summer weather. Both facilities are housed in a new building located along Main Street. Well 1-B was recently rehabilitated. Annual production from existing and planned wells will be limited by the City's current groundwater allocation (5,412 acre-feet per year [afy]) in the Santa Paula Basin.

There are several options that the City may consider for meeting future water demands including: long-term transfer of water rights; short-term transfer of water rights; State Water Project (SWP) water; use of recycled water; and supporting water demand management programs.⁸ Implemented over time, these programs are expected to provide the City with sufficient supplies to meet future water demands.

Water Supply Assessment

A ~~Draft~~ Final WSA was prepared for the Specific Plan in accordance with the requirements of Section 10910 of the California Water Code (Senate Bills [SB] 610 and 221) to verify the sufficiency of the local

⁸ City of Santa Paula, Final 2016-2010 UWMP Update (~~June 2011~~ August 2017), 1.

water supply to meet the demand associated with the land uses allowed under the Specific Plan.⁹ The ~~Draft-Final~~ WSA, included in **Appendix 4.14**, considered water supplies for the entire 53.81-acre Specific Plan area and specifically for the areas of light industrial, commercial, and landscaped areas that would be allowed for development under the Specific Plan. The ~~Draft-Final~~ WSA also considered the Project water demand in light of the existing water demand for the agriculture and related uses currently on the Project Site.

The ~~Draft-Final~~ WSA reported the 20-year water supply and demand estimates from the City's 2016~~0~~ UWMP, prepared in 2011. ~~the final 2017 document was prepared in~~ accordance with California Water Code Sections 10610 and 10656. The ~~Draft-Final~~ WSA concluded that there would be no decrease in availability of groundwater supplies through the year 2037~~40~~. Furthermore, the ~~Draft-Final~~ WSA determined that the City of Santa Paula's projected water supply for 20 years is adequate to meet the demand for the Project, as well as existing and planned future uses in the City in normal, single dry, and multiple dry years.

Section 15155 (d) of the California Environmental Quality Act (CEQA) Guidelines states that when a WSA has been prepared for a project, no additional WSA is required if the water demands of the project have not substantially increased and there have been no changes in circumstances or conditions that would substantially affect the ability of City to supply the water needed for the project.

The Specific Plan ~~Draft-Final~~ WSA provided water demand estimates for the City of Santa Paula through 2037~~2040~~, which corresponded with the 20-year forecast required in a WSA if the Project were to be initiated in 2017. The 2016~~0~~ UWMP addresses new requirements developed by the State of California Department of Water Resources (DWR) as published in their *Guidebook to Assist Urban Water Suppliers to Prepare a 2016 Urban Water Management Plan* ~~2010 Urban Water Management Plan~~ (March 2011~~August 2017~~).

On January 17, 2014, the Governor of the State of California proclaimed a state of emergency due to current drought conditions and called on Californians to reduce their water usage by 20 percent. On March 1, 2014, the Governor signed into law emergency drought legislation that finds and declares that California is experiencing an unprecedented dry period and shortage of water for its citizens, local governments, agriculture, environment, and other uses.

⁹ City of Santa Paula, *Draft Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project* (November 2016).¹⁰ State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015). http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approve_d_regs2015.pdf.

Additionally, the Fox Canyon Groundwater Management Agency (GMA), the local agency responsible for groundwater management for aquifers on the Santa Paula Basin, adopted an emergency pumping ordinance (Emergency Ordinance E) on April 11, 2014, that implements a phased 20 percent reduction over 18 months, consistent with Governor Brown's January 2014 drought declaration, other agencies' efforts, and the GMA's need to achieve groundwater basin sustainability.

On December 22, 2014, Governor Brown issued Executive Order B-28-14, which extended the suspension of certain activities subject to the CEQA contained in the January 2014 and April 2014 proclamations, including the State Water Resources Control Board's (SWRCB's) adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers (i.e., those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 af of water annually, excluding wholesalers) to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed Executive Order B-29-15, directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage through February 2016, as compared to the amount used in 2013. The Governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the Governor's January 2014 proclamation, April 2014 proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the Governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015. The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers, each of which is assigned a conservation standard ranging between 4 and 36 percent.¹⁰

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB; from March to June 2016, the City achieved 24.2 percent water savings. The Governor issued a new Executive Order, as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions, and the City now has a zero percent conservation standard.¹¹

In September 2016, Governor Brown signed SB 1262 (Pavley). Details of this bill are discussed below under Regulatory Setting. It should be noted here, however, that SB 1262 is not effective until January 2017.

Project Site Water Supply and Demand

The existing land uses within the Specific Plan area includes approximately 54 acres of agricultural land, fallow agricultural land, and a small amount of industrial uses.

Water supply for irrigation on the Specific Plan area has been historically supplied from an on-site well that overlies the Santa Paula Basin. The existing well in the area (E11S) is owned and operated by McGaelic Group and Bender combined.

Approximately 49 acres of the Santa Paula West Specific Plan site is under cultivation for avocados, herbs, and a variety of row crops. Production records for the irrigation well for the period 2010 to 2014 are shown on **Table 4.14-5, Existing Well Pumping Records 2010–2014**. Water usage has been from one well but delivered to several parcels, including McGaelic West (McGrath owners), Bender Farms, and Jaime Santana; only the McGaelic West and Bender parcels are within the Project Site. As shown on Table 4.14-5, over the last five years (2010 to 2014), the total water used on site has averaged 281.1 afy.

**Table 4.14-5
Existing Well Pumping Records 2010–2014**

Year	McGaelic West (acre-feet)	Bender (acre-feet)	Total Usage (acre-feet)
2010	N/A	112.9	112.9
2011	122.9	89.4	212.3

10 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015).

http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approved_regs2015.pdf.

11 State Water Resources Control Board, Self-Certification Conservation Standards—“Stress-test” (by supplier), Pulled on October 18, 2016, http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf.

2012	176.5	162.9	339.4
2013	187.8	232.7	420.5
2014	120.8	199.6	320.4
Total	608.0	797.5	1,405.5
2010–2014 Average per Year	121.6	159.5	281.1

Source: Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015)

Groundwater Allocation Transfers from Developed Properties

In accordance with Santa Paula Municipal Code Section 52.021, landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. This regulation is intended to ensure that new urban land users provide sufficient water resources for their needs. If the associated water rights are not sufficient to serve the proposed development’s anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must either purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This regulation applies to developments inside and outside City limits that seek to receive potable water service from the City.

Purchased Groundwater Allocations

Water availability is complicated by the fact that the actual safe yield of the Santa Paula Groundwater Basin is unknown.¹² Disagreement over the issue between the UWCD and the water users, including the City and the City of San Buenaventura (Ventura), led to the adjudication of the Santa Paula Groundwater Basin. The Stipulated Judgment¹³ represents the beginning of a program of basin management, including the regulation of pumping, that is aimed at meeting the reasonable water supply needs of the parties, including protection for historic users, without harm to the Santa Paula Groundwater Basin.

The 2010~~6~~ UWMP recognizes that in 2005, it was determined that 497 afy of potentially available groundwater allocations held by others within the Santa Paula Basin boundary were not being utilized as shown in **Appendix 4.14**.¹⁴ The City has the option to independently pursue the acquisition of groundwater allocations at any time in the future.

12 City of Santa Paula, Final 2016~~2010~~ UWMP Update (June 2011~~August 2017~~), 32-60.

13 *United Water Conservation District v. City of San Buenaventura* (California, 1996; 2010).

14 ~~City of Santa Paula, Draft Water Supply Assessment for the Proposed Santa Paula West Business Park Specific Plan Project (November 2016-15~~ City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 6-9.

The available water resources and demand for water resources in the City is estimated in the ~~Draft~~ Final WSA. **Table 4.14-6, Existing and Projected City Water Resources and Demand**, provides a summary of existing and projected water demand through the year ~~2037~~ 2040.

Table 4.14-6
Existing and Projected City Water Resources and Demand (afy)

Percent	2015	*2017	2020	2025	*2027	2030	2035	*2037	2040
Existing SuppliesExisting Supplies									
City Wells ¹ City Wells	5,4835,483	5,5145,483	5,5605,483	5,5605,48	5,5605,483	5,5605,483	5,5605,483	5,5605,48	5,560
Santa Paula Creek ² Santa Paula Creek	500500	500500	500500	500500	500500	500500	500500	500500	500
SubtotalSubtotal	5,9835,983	6,0145,983	6,0605,983	6,0605,98	6,0605,983	6,0605,983	6,0605,983	6,0605,98	6,060
Projected SuppliesProjected Supplies									
Groundwater Allocation Transfers ³ Groundwater Allocation Transfers	454454	348**544.8	348908	6951,362	8341,816	1,0431,816	1,3901,816	1,5291,81	1,738
Purchased Groundwater Allocations ⁴ Purchased Groundwater Allocations	200200	100**225	100300	200400	240497	300497	400497	439497	497
SWP ⁵ SWP	00	00	00	00	00	00	00	00	0
Recycled Water ⁶ Recycled Water	0400	0480	400800	8001,200	9601,622	1,2001,622	1,6001,622	1,7601,62	2,000
SubtotalSubtotal	6541,054	4481,244.8	8482,008	1,6952,96	2,0343,935	2,5433,935	3,3903,935	3,7283,93	4,235
Total Projected SuppliesTotal Projected Supplies	6,6377,037	6,4627,228	6,9087,991	7,7558,94	8,0949,918	8,6039,918	9,4509,918	9,7889,9	10,295
Existing DemandsEstimated Demand									
Current Potable Demands ⁷ City of Santa Paula	3,6304,840	3,6304,925	3,6305,265	3,6305,68	3,6306,113	3,6306,113	3,6306,113	3,6306,11	3,630
Current Water LossesWest Area-2 Allocation	27788.8	27788.8	27788.8	27788.8	27788.8	27788.8	27788.8	27788.8	277
SubtotalProjected Santa Paula West Project Area	3,9070	3,90739.8	3,90739.8	3,90739.8	3,90739.8	3,90739.8	3,90739.8	3,90739.8	3,907

Potential Demands										
New Potable Demands ⁸	N/A	N/A	287	575	690	862	1,150	1,265	1,437	-
New Potable Water Losses ⁹	N/A	N/A	14	29	35	43	57	63	72	
New Recycled Demands ⁶	N/A	N/A	380	760	912	1,140	1,520	1,672	1,900	
New Recycled Water Losses ⁹	N/A	N/A	20	40	48	60	80	88	100	
Subtotal	N/A	N/A	701	1,404	1,685	2,105	2,807	3,088	3,509	
Total Estimated Demand	4,840,840.0	4,745,964.4	6,085,304.8	5,311,572	5,592,152	6,012,152	6,714,152.8	6,995,611	7,416	
(Potential + Existing Demand)Total	0	80	0	8.80	80	80	0	52.80		
Estimated Demand										
(Projected + City Demand)										
Project Demands as % of Total City Supply	0%0%	0.61%44.82%	0.57%44.82%	0.51%44.8%	0.49%44.82%	0.46%44.82%	0.42%44.82%	0.41%44.82%	0.39%	
Project Demand as % of West Area-2		%	%	2%	%	%		82%		
Difference (Supply less Demand)Project Demand as % of Total City Supply	1,7970%	1,7170.81%	2,3000.76%	2,4440.70%	2,5020.65%	2,5910.65%	2,7360.65%	2,7930.65%	2,8795%	
Total Estimated Demand	4,840,197	4,745,263	4,608,686	5,311,211	5,592,765	6,012,765	6,714,765	6,995,765	7,416	
(Potential + Existing Demand)Difference (Supply - Demand)				6				65		

Source: City of Santa Paula, Final 2016¹⁰ Urban Water Management Plan Update (June 2014-August 2017).

* Projected data.

** Data taken from 2020 data.

*** 2015 Data taken from Final 2016 UWMP (August 2017).

Notes:

All values rounded to the nearest 1 acre-foot (af).

Santa Paula West Area Business Park Specific Plan would start construction in 2017 and be completed by 2027. Conservatively assumed full build-out Project Demand numbers in 2017.

afy = acre-feet per year.

¹ The City's current allocation is 5,488 afy (California, 2011; Frank B. and Associates, 2016).

² The City currently wheels the 500 afy of surface water from Santa Paula Creek to Farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.

³ The City anticipates receiving 1,816 afy of groundwater allocation transfers via agricultural land development by 2040. For planning purposes, the 1,816 afy is distributed equally from 2020 to 2040. Note that the method for dividing up groundwater allocations through the years was done differently in the 2016 Draft UWMP than in the 2010 Final UWMP, where allocation transfers were achieved during four equal 5-year periods (approximately 454 afy per 5-year period).

⁴ The City anticipates purchasing 497 afy of additional groundwater allocations by 2040. For planning purposes, the 497 afy is distributed equally from 2020 to 2040.

⁵ For planning purposes, the City does not anticipate receiving SWP water during the period 2020-2040.

⁶ *The City anticipates initiating a recycled water program by 2020. Estimate includes new community landscaped areas with irrigation, a potential golf course, and potential agricultural irrigation. It is anticipated that approximately 2,000 afy could be developed by 2040. For planning purposes, the 2,000 afy is distributed equally from 2020 to 2040.*

⁷ *Existing demand is from 2015 data and is made up of 2,106 af from single-family residential, 868 af from multifamily residential, 493 af from commercial/institutional, 48 af from industrial, 49 af from landscape irrigation, 22 af from other, 44 af from sales to Middleroad Mutual Water Company, and 277 af from estimate losses.*

⁸ *City anticipates 2,808 afy of new potential residential, commercial institutional, industrial, and landscape development by 2040 for build-out of potential projects.*

⁹ *Estimated at 5 percent of total new demands. ~~Projected data~~*

Notes:

All values rounded to the nearest 1 AF.

Santa Paula West Area Business Park Specific Plan would start construction in 2017 and be completed by 2027. Conservatively assumed full build-out Project Demand numbers in 2017.

The City's current (2011) allocation is 5,483 AFY.

The City currently wheels the 500 AFY of surface water from Santa Paula Creek to farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 AFY groundwater pumping credits in the Santa Paula Basin.

Total of 1,815 AFY allocation transfers achieved over 4 equal 5-year periods (approximately 454 AFY per 5-year period).

The City anticipates purchasing groundwater allocations. It is anticipated that approximately 200 AFY could be developed by 2015, 300 AFY by 2020, 400 AFY by 2025, and 497 by 2030.

The City has rights to 2,198 AFY. However, actual delivery may be only 60 percent of water rights (DWR, 2010) in an average year, 7 percent in a single dry year, and 34 percent in multiple dry years. For the purposes of this UWMP, the City does not anticipate receiving SWP water in the near future.

The City purchased the WRF in 2015, however, currently there is no infrastructure to supply recycled water to the City. The 2010 UWMP anticipated that approximately 400 afy could be developed by 2015, 800 afy by 2020, 1,200 afy by 2025, and 1,622 afy by 2030.

The 2016 UWMP Update anticipates that the City will acquire through allocation transfers 448 afy by 2020, 895 afy by 2025, 1,343 afy by 2030, 1,790 by 2035, and 2,235 afy by 2040.¹⁵

The 2010 UWMP Update anticipates that the City will acquire through allocation transfers 454 AFY by 2015, 908 AFY by 2020, 1,362 AFY by 2025, and 1,815 AFY by 2030 and 2035 through allocation transfers within the Santa Paula Basin as provided for in the Judgment.

Implementation of these water supply programs is anticipated to provide the City with sufficient water supplies to meet future water demand. As shown in **Table 4.14-67, Existing and Potential City Water Resources and Demands**, the potential water supplies available to the City exceed the estimated water demand at City build-out conditions.

Table 4.14-7
Existing and Potential City Water Resources and Demands

Supplies	2010	2015	2020	2025	2030
City wells ^a	5,483	5,483	5,483	5,483	5,483
Santa Paula Creek ^b	500	500	500	500	500
<i>Subtotal</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>	<i>5,983</i>
Groundwater allocation transfers	0	454	908	1,362	1,816
Purchased groundwater allocations	0	200	300	400	497
SWP ^e	0	0	0	0	0
Recycled water ^d	0	400	800	1,200	1,622
<i>Subtotal</i>	<i>0</i>	<i>1,054</i>	<i>2,008</i>	<i>2,962</i>	<i>3,935</i>
Total Potential Supplies	5,983	7,037	7,991	8,945	9,918
Total Estimated Demands	4,416	4,480	5,265	5,689	6,113
Net Surplus	1,567	2,197	2,726	3,256	3,805

State Water Project Water

The County of Ventura contracted for 20,000 afy of State Water Project (SWP) water, with 5,000 afy of that amount subcontracted to the UWCD, which has designated 2,198 afy of SWP water for use by the

¹⁵ City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 6-9.

City.¹⁶ The City has discussed a contract with UWCD to ensure that 2,198 afy is reserved for the City. The City does not anticipate directly receiving SWP water in the near future.¹⁷ However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Since the 2016~~0~~ UWMP was prepared, the California Department of Water Resources has updated its State Water Project Delivery Reliability Report three times (2011, 2013, and 2015). The biennial Report assists SWP contractors in assessing the reliability of the SWP component of their overall supplies. The 2015 SWP Reliability Report updates the DWR estimate of future water delivery reliability through 2035. The City's 2016~~0~~ UWMP update incorporates this updated information from DWR. The updated analysis in the 2015 SWP Reliability Report showed that the primary component of the annual SWP deliveries (referred to as Table A deliveries) would be less under current and future conditions.¹⁸

The 2015 SWP Reliability Report recognized continuing challenges to the ability of the SWP to deliver full contractual allotments of SWP water. For current conditions, the dominant factor for these reductions is the restrictive operational requirements contained in the federal biological opinions. Deliveries estimated for the 2015 Report expressly account for the operational restrictions of the biological opinions issued by the U.S. Fish and Wildlife Service in December 2008 and the National Marine Fisheries Service in June 2009 governing the SWP and Central Valley Project (CVP) operations. SWP exports have decreased since 2005, although the bulk of the change occurred by 2009 as the federal BOs went into effect, restricting operations. These effects are also reflected in the SWP delivery estimates. The most salient findings in this report are as follows:

- Under existing conditions, the average annual delivery of Table A water estimated for this 2015 Report is 2,550 thousand acre-feet per year (tafy), 3 tafy less than the 2,553 tafy estimated for the 2013 Report.
- The likelihood of existing-condition SWP Article 21 deliveries (supplemental deliveries to Table A water) being greater than 20 tafy has decreased by 3 percent relative to the likelihood presented in the 2013 Report.

For future conditions, the 2015 SWP Reliability Report conservatively assumed that the restrictions imposed by the biological opinions will still be in place, and includes the potential effects of climate change to estimate future deliveries. The changes in run-off patterns and amounts were included along with a potential rise in sea level. Sea level rise has the potential to require more water to be released to repel salinity from entering the San Francisco Bay/Sacramento-San Joaquin Delta Estuary ("Bay-Delta") to meet

16 City of Santa Paula, Final 2016~~2010~~-UWMP Update (June 2011/August 2017), 4213.

17 City of Santa Paula, Final 2016 UWMP Update (August 2017), 13. ~~City of Santa Paula, Final 2010 UWMP Update (June 2011), 44.~~

18 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015* (July 1, 2015), <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

the water quality objectives established for the Delta. For the 2015 SWP Reliability Report, the changes in run-off patterns and amounts were incorporated into the analyses, but the potential rise in sea level was not.

The analyses in the 2015 SWP Reliability Report indicated that the SWP, using existing facilities operated under then current regulatory and operational constraints and future anticipated conditions, and with all contractors requesting delivery of their full Table A amounts in most years, could deliver 60 percent of Table A amounts on a long-term average basis.

Many of the same specific challenges to SWP operations described in the State Water Project Delivery Reliability Report 2013 remained in 2015—most notably, the effects on SWP pumping caused by issuance of the 2008 and 2009 federal biological opinions (BOs), which were reflected in the SWP delivery reliability report. The analyses in this report consider climate change and the effects of sea level rise on water quality, but do not incorporate the probability of catastrophic levee failure.

Recycled Water

Construction of the new City Water Recycling Facility (WRF) that meets California Title 22 regulations for recycled water was completed in early 2010.¹⁹ The WRF has a capacity of 3.15 million gallons per day (mgd), with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd.

The 2016~~9~~ UWMP estimates recycled water urban demand within the City (and adjacent areas) will be approximately 1,622,000 afy. The 2010~~6~~ UWMP anticipates that the City will develop a recycled water program for landscape irrigation and that the estimate amounts that could be delivered in the future are 4800 afy by 2020, 1,200~~800~~ afy by 2025, ~~and 1,622-200~~ afy by 2030, 1,600 afy by 2035, 2,000 afy by 2040.²⁰ The recycled water demand could be fully met with recycled water from the new WRF.

Currently, there are no recycled water systems in the proposed Project vicinity. However, the 2012 Wastewater Master Plan has included West Area 2 to have a future wastewater flow of 0.082 mgd or 919 afy during average dry weather season.²¹

19 City of Santa Paula, *Wastewater System Master Plan* (June 2012), 1.

20 City of Santa Paula, *Final 2016 UWMP Update* (August 2017), 13; ~~City of Santa Paula, *Final 2010 UWMP Update* (June 2011), 47.~~

21 City of Santa Paula, *Wastewater System Master Plan* (June 2012)

Water Conveyance System

The City's domestic water supply is conveyed via gravity throughout its distribution network system. The City currently delivers a portion of the overall domestic water supplies to the Project Site. The closest existing domestic water system to the Project Site includes a main line within Telegraph Road.

Wastewater

The City of Santa Paula Public Works Water Division provides wastewater services to the City.

On-site Sewer

The Project Site is not connected to the City's wastewater treatment system. There are two small farmworker dwelling units and ancillary agricultural facilities located on-site. These residences and the ancillary facilities utilize septic systems to store wastewater, which is periodically pumped and disposed of via private sewage collection services. The nearest sewer system pipeline is an 8-inch line located beneath Telegraph Road to the north of the Project Site.

Citywide Sewer System

The City's Wastewater System Master Plan, prepared by Boyle Engineering and updated by the City of Santa Paula in June 2012, addresses the provisions of wastewater collection facilities to serve the West Area 2 Expansion Area. In May 2015, Jensen Design & Survey, Inc. prepared the Sanitary Sewer Technical Report to provide a blueprint for the design of the sanitary system within the Specific Plan area and to develop conceptual design parameters. The wastewater system consists of approximately 60 miles of collection lines, with pipeline diameters ranging from 6 to 24 inches, 0.5 miles of force mains, 1,190 manholes, and two lift stations. Wastewater flows are conveyed by gravity through the existing pipe network. Two City-owned and -operated sewer lift stations (Harding Park and Lemonwood pump stations) are also used to convey these flows in areas where gravity flow is inadequate. These flows are eventually treated at the existing wastewater treatment plant (WTP) located in the southwest corner of the City.

In January 2012, the City adopted the 2011 Sanitary Sewer Management Program, which provides long-term maintenance for the system to preserve and provide adequate collection and transportation of local wastewater.

Treatment Plant Capacity

The City residents generate and treat approximately 2 mgd of sewage. The City has defined geographic boundaries in which residential, commercial, public, and industrial areas are defined. Each group generates wastewater, which enters the sewer system and is ultimately treated at the WTP. The City constructed a water recycling facility (WRF) for the treatment of sewage generated by the City to replace

the original WTP. The new WRF began operations in May of 2010. This new facility has a normal operating capacity of 3.15 mgd with a final build-out capacity of 4.2 mgd, and a peak operating capacity of 7.0 mgd. The process design is a membrane bioreactor (MBR) and reduces energy costs by more than 35 percent. The facility, which has a footprint of 1.5 acres, is completely enclosed for maximum odor and noise control.

The WRF will be capable of producing California Code of Regulations (CCR) Title 22 unrestricted water reuse for agricultural and municipal needs. The treated effluent produced meets the Los Angeles Regional Water Quality Control Board's (RWQCB's) current wastewater discharge requirements, as well as California Department of Health Service (DHS) requirements for recycled water use. Prior discharges to the Santa Clara River received advanced secondary treatment.

Solid Waste

Solid waste collection services are provided in the City of Santa Paula by a private solid waste collection company and disposed of at the Toland Road Landfill, operated by the Ventura Regional Sanitation District (VRSD).

The City participates in a curbside recycling program, which includes the recycling of glass (food and beverage containers), metal (aluminum cans, etc.), and plastic. Curbside pickup of paper, cardboard, and yard trimmings is provided, as well as community drop-off events for residents to dispose of large items, household hazardous waste, and motor oil and filters.

In 2015, the City disposed of 25,684 tons of solid waste at all landfills identified below except for the Bakersfield Metropolitan (Bena) Sanitary Landfill.²² The City provides refuse collection, recycling, and disposal through contracts with Crown Disposal Co., Inc., a private hauling company. Crown Disposal collects 100 percent of the City's solid waste. The solid waste is disposed of at Toland Road Sanitary Landfill; Chiquita Canyon Sanitary Landfill; Simi Landfill and Recycling Center; Azusa Land Reclamation Co. Landfill; Antelope Valley Public Landfills I and II; and the Bakersfield Metropolitan (Bena) Sanitary Landfill. **Table 4.14-8, Solid Waste Facilities**, provides the characteristics of the disposal waste facilities that currently accept waste from the City.

22 California Department of Resources Recycling and Recovery (CalRecycle), Disposal Reporting System (DRS), Jurisdiction Disposal by Facility during 2015 for Santa Paula.

**Table 4.14-8
Solid Waste Facilities**

Facility	Daily Capacity (tons/day)	Remaining Capacity (cy)	Ceased Operation Date
Toland Road Sanitary Landfill	1,500	21,983,000 ^a	2027
Chiquita Canyon Sanitary Landfill	6,000	8,617,126 ^b	2019
Simi Valley Landfill & Recycling Center	9,250	119,600,000 ^c	2052
Azusa Land Reclamation Co. Landfill	8,000	51,512,201 ^d	N/A
Antelope Valley Public Landfills I and II	3,564	20,400,000 ^e	2042
Bakersfield Metropolitan (Bena) Sanitary Landfill	4,500	32,808,260 ^f	2046

Source: CalRecycle, Solid Waste Information System (SWIS) database,
<http://www.calrecycle.ca.gov/SWFacilities/Directory/Search.aspx>, accessed October 2016.

Note: cy = cubic yards.

^a As of June 2006.

^b As of April 2016.

^c As of September 2012.

^d As of March 1996.

^e As of April 2011.

^f As of July 2013.

The existing uses within the Project Site include two small farmworker dwelling units and agricultural operations for the production of orchards, row crops, and a limited number of livestock. Therefore, the Project Site currently generates approximately 4.08 tons of solid waste per year.²³ The existing amount of agricultural crop residual is considered negligible because it is a subcomponent of the “other organic” standard material type developed by CalRecycle (formerly the California Integrated Waste Management Board).²⁴

4.14.2 REGULATORY SETTING

Water

Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires a variety of actions to protect drinking water and its sources. SDWA authorizes the U.S.

23 Solid Waste generation is 2.04 tons per year per residential unit. Source: Ventura County Solid Waste Management Department, Estimated Solid Waste Generation Rates for Industrial/Commercial/Residential Establishments, Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts.

24 CalRecycle (formerly the California Integrated Waste Management Board), *California 2008 Waste Characterization Study* (August 2009), 107.

Environmental Protection Agency (USEPA) to set national health-based standards for drinking water to protect against both naturally occurring and man-made contaminants that may be found in drinking water. The USEPA, state agencies, and water purveyors work together to ensure that SDWA standards are met.

State

California Department of Water Resources

The State of California Department of Water Resources (DWR) released its *State Water Project Final Delivery Capability Report* (“Report”) in July 2015. The Report updates the estimated water delivery capacity of the SWP for current conditions and two decades from 2015.²⁵ The estimates include the best-known future effects of climate change and the anticipated changes in Sacramento River basin land uses. The assessment of current and future SWP reliability allows DWR to plan for reliable future water supplies in California.

Comprehensive Water Legislation

In November 2009, four legislative bills (SBX7-1, SBX7-6, SBX7-7, and SBX7-8) and the supporting bond bill (SBX7-2), creating a comprehensive water package designed to meet California’s water challenges, were approved by then-governor Arnold Schwarzenegger.²⁶ The legislation establishes the governmental framework to achieve the coequal goals of providing a more reliable water supply to California and restoring and enhancing the Delta ecosystem. The package includes requirements to improve the management of California’s water resources by monitoring groundwater basins; developing agricultural water management plans; reducing statewide per capita water consumption 20 percent by 2020; and reporting water diversions and uses in the Delta. It also appropriates \$250 million for grants and expenditures for projects to reduce dependence on the Delta if the bond issue is approved by the voters in the future.

The Safe, Clean, and Reliable Drinking Water Supply Act of 2010 (SBX 7-2) was placed and passed on the November 2014 ballot as California Proposition 1, the Water Bond (AB 1471). AB 1471 provides funding for California’s aging water infrastructure, as well as for projects and programs to improve the ecosystem and water supply reliability for California. The bond bill includes \$2.7 billion for actions improving Bay-Delta sustainability. These investments will help to reduce seismic risk to

25 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015* (July 1, 2015), <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

26 Department of Water Resources (DWR), *California Water Plan Update 2009*, vol. 4 (December 2009). Reference Guide, Legislation, 2009 Comprehensive Water Package, Special Session Policy Bills and Bond Summary, (November 2009).

Bay-Delta water supplies, protect drinking water quality, and reduce conflict between water management and environmental protection.

Part of the comprehensive water package included SBX7-7 (Steinberg, Chapter 4, Statutes of 2009—Statewide Water Conservation). This bill creates a framework for future planning and actions by urban and agricultural water suppliers to reduce California’s water use. SBX7-7 requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020. CVWD has included the provisions of SBX7-7 in its 2010 UWMP and has reduced water demand by 20 percent since 2006.

On January 17, 2014, California Governor Brown declared a drought state of emergency, and directed state officials to take all necessary actions to prepare for these drought conditions.²⁷ State agencies, led by the Department of Water Resources, are in the process of executing a statewide water conservation campaign, calling on Californians to reduce their water usage by 20 percent.

Recent Regulations, Executive Orders and SWRCB Actions

Executive Orders

On January 17, 2014, Governor Edmund G. Brown Jr. declared a drought state of emergency.²⁸ On April 25, 2014, the governor signed Executive Order B-26-14²⁹ (April 2014 Proclamation) stating, among other things, that

severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.

On December 22, 2014, Governor Brown issued Executive Order B-28-14,³⁰ which extended the suspension of certain activities subject to CEQA contained in the January 2014 and April 2014 Proclamations, including the SWRCB adoption of emergency regulations pursuant to Water Code section 1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency

27 Office of the Governor, “Governor Brown Declares Drought State of Emergency,” January 17, 2014, <http://gov.ca.gov/news.php?id=18368>.

28 Office of the Governor, “Governor Brown Declares Drought State of Emergency,” January 17, 2014, <http://gov.ca.gov/news.php?id=18368>.

29 State of California, Executive Order for State Drought Actions, B-26-14, April 25, 2014, <http://gov.ca.gov/news.php?id=18496>.

30 State of California, Office of Governor Edmund G. Brown Jr., “Executive Order B-28-14” (December 22, 2014), <https://www.gov.ca.gov/news.php?id=18815>.

conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers—those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, excluding wholesalers—to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed Executive Order B-29-15,³¹ directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage, compared to the amount used in 2013, through February 2016. The governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandates that the governor's January 17, 2014, Proclamation, April 25, 2014, Proclamation, Executive Order B-26-14, and Executive Order B-28-14 remain in full force and effect except as modified.

State Water Resources Control Board

In 2014, the State Water Resources Control Board (SWRCB) determined that an emergency existed due to severe drought conditions and that adoption of the proposed emergency regulation was necessary to address the emergency. California is currently in the fourth year of a significant drought resulting in severe impacts to California's water supplies and its ability to meet all the demands for water in the State.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015.³² The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

31 State of California, Executive Department, Executive Order B-29-15 (April 1, 2015), http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf

32 State Water Resources Control Board, Resolution No. 2015-2032, Emergency Regulation for Statewide Urban Water Conservation (adopted May 5, 2015).

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers which are assigned a conservation standard, ranging between four percent and 36 percent.³³

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB and from March 2016 to June 2016, they had achieved 24.2 percent water savings. The Governor issued new Executive Order, as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions and the City now has a zero percent conservation standard.³⁴

Legislative Actions

Sustainable Groundwater Management Act

In September 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history. SGMA empowers local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities.

The three bills that make up SGMA are AB 1739 (Dickinson), SB 1168 (Pavley), and SB 1319 (Pavley).

AB 1739—Groundwater Management

AB 1739 (Dickinson) authorizes the DWR or a groundwater sustainability agency (GSA) to provide technical assistance to entities that extract or use groundwater to promote water conservation and protect groundwater resources. This bill requires the DWR, by January 1, 2017, to publish on its Internet website best management practices for the sustainable management of groundwater, and requires the DWR to prepare and release a report by December 31, 2016, on the agency's best estimate of water available for replenishment of groundwater in the state.

AB 1739 –requires a GSA to submit a groundwater sustainability plan (GSP) to DWR for review upon adoption. The bill authorizes a local agency to submit to DWR for evaluation and assessment an alternative

33 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015).

http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approved_regs2015.pdf.

34 State Water Resources Control Board, Self-Certification Conservation Standards—"Stress-test" (by supplier), http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf. Accessed October 18, 2016.

that the local agency believes satisfies the objectives of these provisions. AB 1739 also requires DWR to review any of the above-described submissions at least every 5 years after initial submission to DWR.

In addition, AB 1739 -requires that prior to the adoption or any substantial amendment of a general plan, the planning agency review and consider a GSP; groundwater management plan; groundwater management court order, judgment, or decree; adjudication of water rights; or a certain order or interim plan by the SWRCB. AB 1739 requires the planning agency to refer a proposed action to adopt or substantially amend a general plan to any GSA that has adopted a GSP or local agency that otherwise manages groundwater, and to the SWRCB if it has adopted an interim plan that includes territory within the planning area.

SB 1168—Groundwater Management

SB 1168 (Pavley) notes that the policy of the state is that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. This bill states that sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

SB 1168 requires DWR to categorize each basin as high, medium, low, or very low priority. The initial priority for each basin was to be established no later than January 31, 2015. The bill authorizes a local agency to request that DWR revise the boundaries of a basin and required DWR to adopt by January 1, 2016, regulations on the methodology and criteria to be used to evaluate the proposed revision.

In addition, all groundwater basins designated as high- or medium-priority basins by the DWR that are designated as basins subject to critical conditions of overdraft are to be managed under a GSP or coordinated GSPs by January 31, 2020; all other groundwater basins designated as high- or medium-priority basins are to be managed under a GSP or coordinated GSPs by January 31, 2022.

This bill would authorize any local agency, as defined, or combination of local agencies to elect to be a GSA and would require, within 30 days of electing to be or forming a GSA, said agency to inform the DWR of its election or formation and its intent to undertake sustainable groundwater management.

SB 1319—Groundwater

SB 1319 (Pavley) prohibits the SWRCB from establishing an interim plan to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters until January 1,

2025. This provision delays the similar provision in AB 1739 from 2022 to 2025. The bill further requires the SWRCB to exclude any portion of a basin in compliance with groundwater management requirements from probationary status. This provision narrows the similar provision in AB 1739 to only apply to the portion of the basin that is out of compliance.

The bill requires the SWRCB to include any element of a GSP or the entire plan in its interim plan if SWRCB finds it would help meet the sustainability goal. This provision revises the similar provision in AB 1739 to allow for the inclusion of local plans when developing interim plans for basins with probationary status.

A GSP has not yet been adopted for the Santa Paula Basin pursuant to SGMA and is not required until 2022.

SB 1262 (Pavley)—Water Supply Planning

In September 2016, Governor Brown signed SB 1262 (Pavley), which states that if a water supply for a proposed project includes groundwater from a basin that is not adjudicated and is designated as medium or high priority, the following additional information must be included in the WSA: whether DWR has identified the basin as being subject to critical conditions of overdraft; and if a GSA has adopted a (GSP) or approved an alternative plan under the SGMA, a copy of the GSP, or an alternative plan. For a basin that is not adjudicated and is designated by DWR as low or very low priority, the WSA must include information as to whether DWR has identified the basin as being overdrafted or projected that the basin will become overdrafted if present management conditions continue.

SB 1262 is not effective until January 1, 2017. However, as noted earlier, pursuant to SB 1262 and the amended Water Code Section 10910, the Santa Paula Basin is an adjudicated Basin of which the DWR has not indicated is in overdraft.³⁵

Water Supply Availability and Reliability

The City is required under California Water Code (Sections 10610 to 10656) to assess citywide water supply and demand over the next 20 years in 5-year increments in its UWMP. The City completed its most recent update in 2016~~0~~. The 2016~~0~~ update examines water planning, including recycled water, over a 20-year period in 5-year increments; identifies and quantifies adequate water supplies for existing and future water demands in normal, dry, and multiple dry years; identifies actions to prepare for and implement during a catastrophic interruption of water supplies; and implements conservation and efficient use of

35 California's Groundwater Bulletin 118, Santa Clara River Valley Basin Santa Paula Subbasin, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/4-4.04.pdf.

urban water supplies. The UWMP determined that the City's current water supplies are sufficient to meet proposed General Plan development levels to 2020.

Water Supply Assessment Study

The California Water Code, Section 10912 requires that a detailed report regarding water availability and planning for additional water supplies be included for the following types of projects:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A proposed hotel or motel, or both, having more than 500 rooms
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- A mixed-use project that includes one or more of the projects specified in this subdivision
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project

In addition, Government Code Section 66473.7 requires that adequate water supplies be demonstrated as available for the following:

- A proposed residential development of more than 500 dwelling units, if the public water system (PWS) has more than 5,000 service connections
- Any proposed development that increases connections by 10 percent or more, if the PWS has fewer than 5,000 connections

California Green Building Standards Code

The purpose of the California Green Building Standards Code ("CALGreen") is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental quality

The residential mandatory measures are provided in chapter 4 and the nonresidential ones in chapter 5 of the CALGreen Code.

In response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and most recently Executive Order B-29-15 (issued April 1, 2015), California Department of Housing and Community Development (HCD) proposed emergency building standard regulations pertaining to the reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. HCD, in coordination with the California Building Standards Commission (CBSC), Department of Water Resources (DWR), the Division of the State Architect, and other stakeholders, developed emergency regulations that amend the 2016 CALGreen Code.³⁶

CALGreen provides mandatory residential measures, such as stormwater drainage and retention systems, which are thought to prevent flooding of adjacent properties and prevent pollution from stormwater runoff by retaining soil on site or by providing filtering to restrict sedimentation from reaching stormwater drainage systems and receiving streams or rivers. To comply, the retention basin must be sized and shown on the site plan, and water has to be filtered and routed to a public drainage system. The new residential structure also must comply with local stormwater ordinances. The drainage system must also be shown on the site plan (swales, drain piping, retention areas, and groundwater recharge).

The code also requires a 20 percent reduction of indoor water use, and it utilizes both a prescriptive and performance method. The prescriptive method provides some technical features that must be followed:

- Showerheads \leq 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi)
- Lavatory faucets \leq 0.5 gpm at 60 psi
- Kitchen faucets \leq 1.8 gpm at 60 psi
- Urinals \leq 0.5 gal/flush
- Water closets \leq 1.28 gallon/flush

36 California Department of Housing and Community Development, Finding of Emergency Regarding the 2013 California Green Building Standards Code (CALGreen), California Code of Regulations, tit. 24, pt. 11.

CALGreen also specifies acceptable performance standards for plumbing fixtures with reduced water usage. Fixtures can be installed if they meet standards listed in the code.

Outdoor water usage is regulated. CALGreen requires irrigation controls to be weather or soil moisture based and to automatically adjust irrigation in response to changes in plants' needs as weather conditions change, or have rain sensors or communication systems that account for local rainfall.

Local

2016~~0~~ Urban Water Management Plan Update

Section 10610 et seq. of the California Water Code, known as the Urban Water Management Planning Act, calls for creation and periodic update of UWMPs by all urban water suppliers and sets forth the requirements for such plans, including definition of relevant terms.

Under the definition given in Section 10617, an urban water supplier is an entity “providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually.” Water for this development will be supplied from the City of Santa Paula’s existing water system, which is supplied via groundwater wells throughout the City.

In 2017~~4~~, the City of Santa Paula completed an UWMP update that included the portions of the East Area 2 Annexation Area located east of the City, south of the Ventura County Transportation Commission railroad, surrounds Hallock Drive area, but excluded the triangle area north of Hallock Drive.³⁷ This UWMP did not discuss the specific development and activities contemplated by the Santa Paula West Business Park, although it did discuss, in general terms, the nature and extent of the long-term water supply for the City for the West Area 2 and included an estimated 1,906,000 square feet of commercial/industrial/institutional uses on approximately 125 acres. Much of this general discussion is cited and paraphrased in this WSA. The UWMP contains an analysis of the factors required by Government Code section 66437.7 (a)(2), and such factors apply to this WSA.

Accordingly, ~~this WSA~~ the attached WSA, in concert with the UWMP prepared by the City, includes all necessary data and analyses required by California Water Code section 10910 et seq. and by Government Code section 66437.7 et seq.

~~The 2010 UWMP is currently being updated to meet the DWR’s requirements for the 5-year update for 2015; a revised update is anticipated in early 2017.~~

37 City of Santa Paula, *General Plan*, “Land Use Element” (2011), LU-24.

Water In-Lieu Fee Ordinance

In accordance with City of Santa Paula Municipal Code (SPMC) Section 52.021 (Water Resource In-Lieu Fee Ordinance No. 1058), landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. The intent of the Ordinance is to ensure that new urban land users provide sufficient water resources for their needs without taxing existing users. If the associated water rights are not sufficient to serve the proposed development's anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This ordinance applies to water rights within City limits as well as parcels outside City limits who must receive service from the City Water Enterprise.

City Municipal Code—Ordinance Section 52.038, Water Waste

"No person shall [un]lawfully or neglectfully waste water in any manner whatsoever. Continued wasting of water after mailing of [City] notice by registered mail to the customer of record at the mailing address of record by the [City] Director may result in discontinued water service." This Code is a beneficial tool to curb misuse and waste of potable water within the City. The provisions of the Code can be used during periods of normal water supply and supply deficiency. Violation of this Code is subject to City penalties.

City Municipal Code—Ordinance 1223, Chapter 59, Landscape Water Conservation Standards

In accordance with Government Code 65565(c) for the purpose of complying with California law and promoting water conservation, the City maintains Ordinance 1223, Landscape Water Conservation Standards, to be utilized in conjunction with the City of Santa Paula Land Development Provisions for Landscaping and the Guidelines for Implementation of Water Efficient Landscape. Compliance with the guidelines and Landscape Water Conservation Standards is mandatory for all new development projects that are subject to discretionary review by the City of Santa Paula.

Wastewater

Federal

Clean Water Act

As noted elsewhere, the federal Clean Water Act (CWA) Section 401 regulates the discharges of pollutants into Waters of the United States from any point or nonpoint source. Individual permits are issued for certain defined sources of discharge, while nonpoint source runoff from construction sites and urban development is regulated under a series of general permits. Construction that disturbs 1 acre or more is regulated under the National Pollutant Discharge Elimination System (NPDES) stormwater program. In the State of California, the program is administered by the local RWQCB.

Federal Pretreatment Regulations

Part 403 in the Code of Federal Regulations establishes the responsibilities of federal, state, and local government, industry and the public with respect to implementing National Pretreatment Standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works (POTW) or that may contaminate sewage sludge.

Title 22 Recycled Water

Title 22 sets bacteriological water quality standards based on the expected degree of public contact with recycled water.³⁸ Title 22 establishes the quality and/or treatment processes required for an effluent to be used for a specific nonpotable application. The following categories of recycled water are identified:

- Disinfected tertiary recycled water
- Disinfected secondary-2.2 recycled water
- Disinfected secondary-23 recycled water
- Un-disinfected secondary recycled water

In addition to recycled water uses and treatment requirements, Title 22 addresses sampling and analysis requirements at the treatment plant, preparation of an engineering report prior to production or use of recycled water, general treatment design requirements, reliability requirements, and alternative methods of treatment.

State

The California Ocean Plan was originally adopted by the SWRCB and approved by the USEPA in June 1972, and is revised every three years. Among the California Ocean Plan requirements are the following water quality objectives (Chapter II):

General Provisions

- a. *This chapter sets forth limits or levels of water quality characteristics for ocean waters to ensure the reasonable protection of beneficial uses and the prevention of nuisance. The discharge of waste shall not cause violation of these objectives.*
- b. *The Water Quality Objectives and Effluent Limitations are defined by a statistical distribution when appropriate. This method recognizes the normally occurring variations*

38 20 CCR, sec. 1605.1 Federal and State Standards for Federally Regulated Appliances, and 1605.3, State Standards for Non-Federally Regulated Appliances.

in treatment efficiency and sampling and analytical techniques and does not condone poor operating practices.

c. *Physical Characteristics*

1. *Floating particulates and grease and oil shall not be visible.*
2. *The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface.*
3. *Natural light shall not be significantly reduced at any point outside the initial dilution zone as the result of the discharge of waste.*
4. *The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.*

d. *Chemical Characteristics*

1. *The dissolved oxygen concentration shall not at any time be depressed more than 10 percent from that which occurs naturally, as the result of the discharge of oxygen demanding waste materials.*
2. *The pH shall not be changed at any time more than 0.2 units from that which occurs naturally.*
3. *The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions.*
4. *The concentration of substances set forth in Chapter II, Table B, in marine sediments shall not be increased to levels which would degrade indigenous biota.*
5. *The concentration of organic materials in marine sediments shall not be increased to levels that would degrade marine life.*
6. *Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.*

e. *Biological Characteristics*

1. *_____ Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.*

2. *The natural taste, odor, and color of fish, shellfish, or other marine resources used for human consumption shall not be altered.*
3. *The concentration of organic materials in fish, shellfish or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health.*

Local

The Los Angeles RWQCB regulates the treatment of wastewater at treatment plants and the discharge of the treated wastewater into receiving waters. The City is responsible for adhering to Los Angeles RWQCB regulations as they apply to wastewater generated and discharged by the WRF. The resulting effluent from the treatment process must meet the Waste Discharge Requirements (WDR) Order No. R4-2007-0028 as amended by WDR Order No. R4-2010-0074.

Solid Waste

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is the nation's primary law governing the disposal of solid and hazardous waste. The RCRA set national goals for reducing the amount of waste generated and ensuring that wastes are managed in an environmentally sound manner. The Solid Waste Program encourages states to develop comprehensive plans to manage nonhazardous industrial solid waste and municipal solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste. RCRA regulations encourage source reduction and recycling, and promote the safe disposal of municipal waste.

State

Assembly Bill 939

Assembly Bill (AB) 939 (Chapter 1095, Statutes of 1989), the Integrated Waste Management Act, required, among other things, all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. In addition, AB 939 requires each county and incorporated cities to prepare a Source Reduction and Recycling Element for its jurisdiction, identifying waste characterization; source reduction; recycling; composting, solid waste facility capacity; education and public information; funding; special waste (asbestos, sewage sludge, etc.); and household hazardous waste, in addition to a countywide Siting Element specifying areas for transformation or disposal sites to provide capacity for solid waste generated in the jurisdiction that cannot be reduced or recycled for a 15-year period. Each city plan must demonstrate integration with the relevant county plan. The plans must

promote (in order of priority) source reduction, recycling and composting, and environmentally safe transformation and land disposal. Elements of the plans must be updated every 5 years.

California’s 75-Percent “Recycling” Goal

On October 6, 2011, Governor Brown signed AB 341, establishing a State policy goal that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature that recommends strategies to achieve the policy goal by January 1, 2014. The bill also mandates that local jurisdictions implement commercial recycling by July 1, 2012.

Local

Santa Paula Municipal Code Chapter 50.015

Per Santa Paula Municipal Code, responsible persons must arrange for solid waste collection service with the city or a franchisee.³⁹ Regulations regarding the use of containers stipulate the following:

- Responsible persons must keep in a suitable place one or more containers capable of holding, without spilling, leaking, or emitting odors, all solid waste that accumulates on the premises between the times of two successive collections.
- Responsible persons must deposit in containers or commercial bins provided by the city or franchisee all solid waste generated or accumulated on premises.
- It is unlawful for any person to place ashes that are not cold and free from fire in any container.

Santa Paula Municipal Code Chapter 50.140

In response to AB 393, the City adopted Santa Paula Municipal Code Section 50.140, which requires permit applicants working on construction, remodeling, and/or demolition projects within City limits to practice waste prevention; to reuse, recycle or salvage; and, least preferred, to deposit waste in landfills.

- Waste generators must complete a Certificate of Implementation and a Waste Reduction & Recycling Summary Report (WRRS). The thresholds for planning and reporting job site waste diversion are:
 - Commercial and residential additions or alterations that require a building permit and are greater than 500 square feet
 - Demolition of any structure requiring a permit, regardless of cost or value
 - All new construction (pursuant to the Green Building Code)

³⁹ Santa Paula Municipal Code, tit. V, Public Works, ch. 50.015.

4.14.3 THRESHOLDS OF SIGNIFICANCE

To assist in determining whether a project would have a significant effect on the environment, the CEQA identifies criteria for conditions that may be deemed to constitute a substantial or potentially substantial adverse change in physical conditions. Specifically, Appendix G of the State CEQA Guidelines (Environmental Checklist Form) lists the following thresholds, under which a project may be deemed to have a significant impact on utilities and service systems if it would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?
- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?
- Comply with federal, state, and local statutes and regulations related to solid waste?

4.14.4 PROJECT IMPACTS

Threshold: **Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

The City's Public Works Department oversees management of all water and wastewater issues for the City. The City recently constructed a new WRF in 2010 that treats the wastewater generated within City limits. The City is located within the jurisdiction of the Los Angeles RWQCB.

The Los Angeles RWQCB regulates the treatment of wastewater at treatment plants and the discharge of the treated wastewater into receiving waters. The City is responsible for adhering to Los Angeles RWQCB regulations as they apply to wastewater generated and discharged by the WRF. The resulting effluent from the treatment process must meet WDR Order No. R4-2007-0028 as amended by WDR Order No. R4-2010-0074. Development of the Project will result in the removal of the existing septic tanks that currently serve the site. Once developed and occupied, uses within the Specific Plan area will generate wastewater that will be connected to the City's sewer system and conveyed through a series of pipelines to the WRF

for treatment. Effluent from the treatment plant must comply with the SPMC to meet the requirements of the WDR permit issued to the City by the Los Angeles RWQCB.

As a result, the treated effluent will not exceed applicable requirements, and the Project's potential impacts related to wastewater treatment are less than significant.

Threshold: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Water and Recycled Water System

The Specific Plan's domestic water system would receive water via proposed 10- and 12-inch water mains as identified in **Figure 2.0-11, Domestic and Recycled Water Master Plan**. The point of connections (POCs) for the Project would be along Faulkner Road and Telegraph Road. The existing 8-inch water line located beneath Beckwith Road would remain in place.

From the point of connections, a new 12-inch line would proceed north through the Project Site. The proposed distribution system will be comprised of 8-inch through 12-inch mains. The water mains located beneath Beckwith Road and Faulkner Road would be publicly owned and maintained, while the remaining on-site domestic and fire would be master metered.

Construction of the City's WRF was completed early 2010. The treatment capacity of the City WRF is 4.2 mgd, or 4,704 afy. The City WRF produces water that meets California Title 22 regulations for recycled water. At present, recycled water is not available within the City of Santa Paula area. Estimated recycled water urban demand within the City (and adjacent areas) will be approximately 1,622 AFY. The recycled water demand could be fully met with recycled water from the new WRF.

The City purchased the WRF in 2015; however, the City presently does not have the funds to distribute the water. According to the City's Potable Water System Master Plan, the City would, in the future, develop a recycled water system conveyance plan that would include a line in Telegraph Road. The Project includes an on-site recycled water distribution system to irrigate the greenbelt and other irrigation areas. This will allow the Specific Plan area to make use of recycled water when the City completes its planned recycled water plan and extends a line to the point of connection in the railroad right of way at Beckwith Road.

The Specific Plan's recycled water system would operate via a proposed 12-inch distribution main constructed beneath Telegraph Road, which is currently within City limits. The proposed recycled water distribution system will be comprised of 6-inch mains from the POC of the City's recycled water system.

This terminus would become the main POC for the proposed Project, in addition to a POC located beneath the Ventura County Transportation Commission (VCTC) railroad right-of-way.

Water and recycled water pipeline construction impacts would be less than significant because they would be required to comply with the City's noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation. In addition, no new or increased severity of impacts would occur as a result of the Project.

Wastewater Collection System and Treatment

As previously described, there is no existing sewer system in the Specific Plan area. The City's Wastewater System Master Plan identifies and describes the improvements required to service the Project Site, such as a new off-site mainline that will need to be completed prior to implementation of the Specific Plan. The connection of the Project Site to the City's system would utilize a new lift station at the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Specific Plan area. These improvements would bring the site's POC for sewer service to this proposed lift station and would require completion prior to implementation of Specific Plan. The Sewer System Master Plan for the Specific Plan is shown in **Figure 2.0-12, Sewer System Master Plan**.

Construction of these improvements would require temporary construction and lane closures where the sewer line is constructed within the road rights-of way. Pipeline construction impacts would be less than significant because they would be required to comply with the City's noise ordinance, construction traffic management plan, requirements to cease construction should cultural resources be uncovered, and restrictions to avoid underground pipelines during excavation.

The new WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2.0 mgd, so there is unused capacity at the facility to accept the incremental addition of 0.029 mgd that is anticipated from occupancy of the Specific Plan area. Therefore, the Project would have less than significant impacts to wastewater treatment capacity within the City.

Threshold: **Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

As provided in **Table 4.14-9, Estimated Wastewater Generation**, the estimated total wastewater generation for the full build-out of uses within the Specific Plan area is approximately 0.01 mgd.

**Table 4.14-9
Estimated Wastewater Generation**

Land Use	Building Square Footage	Wastewater Generation Rates	Total Daily Generation (mgd)
Commercial/Light Industrial	442,743.8	41.1 gpd/ksf	0.018
Light Industrial	196,978.3	41.1 gpd/ksf	0.008
		Total	0.026

*Notes: gpd = gallons per day; ksf = thousand square feet; mgd = million gallons per day.
Building square footage found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.*

As noted previously, the WRF has a normal operating capacity of 3.15 mgd, with a final build-out capacity of 4.2 mgd and a peak operating capacity of 7.0 mgd. The City is currently generating approximately 2 mgd, so there is unused capacity at the facility to accept the incremental addition of 0.026 mgd from occupancy of the Specific Plan. The West Area 2 Expansion Area was included in the City's Wastewater System Master Plan as projected development within the City, with an estimated wastewater generation of 0.0818 mgd. Thus, the Project's estimated daily wastewater generation would be approximately 32 percent of the projected development potential for the West Area 2 Expansion. As the Project would not exceed the City's Wastewater System Master Plan projected capacity of the WRF, impacts would be less than significant.

The proposed Project's physical constraints and point of connection at the sewer main in Todd Lane will not accommodate a gravity line using standard allowable design slopes and good design practices. Therefore, a lift station is proposed for the system at the southeast corner of the Project Site. The lift station will be designed to the City of Santa Paula standards being automated with redundant pumps and adequate alarm systems. Complete design will be done during the Project improvement plan preparation.

The Specific Plan is proposing the best-fit alignment to connect to the existing 42-inch sewer main in Todd Lane, leading to the City of Santa Paula WRF. On site, the sewer will drain through one new 8-inch main running east-west along the southerly property line in Faulkner Road. The gravity system will continue toward Faulkner Road, through a new 12-inch casing pipe under State Route (SR) 126, and then south along the Todd drainage channel to a new lift station located at the northwest of Todd Lane at the channel. The proposed lift station will pump flows through the existing 6-inch force main located in Todd Lane. The existing 6-inch force main travels east underneath the existing 9-by-6-foot concrete box culvert and discharges to the existing 8-inch sewer in Todd Lane. This existing 8-inch sewer connects to the existing 42-inch sewer located in Todd Lane, which discharges to the City of Santa Paula WRF.

As concluded in the Sanitary Sewer Technical Report, the Project Site sewer system will be in accordance with the City of Santa Paula design guidelines. The Santa Paula West sewer system is in agreement with the design flows anticipated within the City's Wastewater Master Plan for this development. Also, the main backbone, will have additional capacity before reaching 50% pipe utilization of 253 gpm (0.564 cfs) for future connections and therefore there would be no impacts.

Threshold: Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

The Project Site is currently developed with agricultural uses as well as two residences and ancillary facilities for on-site agricultural operations. Implementation of the Specific Plan would result in the conversion of agricultural uses with urban development on the site, thus altering existing stormwater drainage on the Project Site.

Treatment systems incorporated into the Project design will be based on the treatment volume calculation guidelines provided in the Ventura County Water Quality Manual. The treatment types will include bioswales, bioretention cells, infiltration trenches, permeable pavement and/or detention basins as needed based on the proposed site plan layout. As a basis for design, the proposed Project must meet or not exceed the storm drainage requirements of the US Army Corps of Engineers (USACE), Ventura County Watershed Protection District (VCWWD), and the City of Santa Paula (on-site drainage systems) where applicable.

Drainage for the Specific Plan is presented in **Figure 2.0-14, Grading and Drainage Master Plan;** and the Storm Drain Plan is shown in **Figure 2.0-15, Storm Drain Plan.** Storm drain facilities would be sized to meet City of Santa Paula standards and accommodate the increased runoff generated by the increase in impervious surfaces on the Project Site. It should also be noted the development of the Project Site would occur in phases, as market conditions allow. Thus, the Project Site's storm drain plan may change throughout build-out of the site and would subsequently be subject to City approval.

The storm drain system would collect on-site runoff and direct most of it to three separate detention basins prior to outletting into storm drains that connect to the existing culverts under SR 126. The existing SR 126 culverts are exposed, but once the site is elevated by fill, the pipes would be underground and integrated into the new storm drain system. Peak flows would not exceed existing conditions, so there would not be adverse effects downstream.

The storm drain system includes a series of storm drain pipelines, detention basins, and a trapezoidal channel that will run along the Adams Barranca. One acre of land within the Project Site would be set

aside for detention basins totaling approximately 6 af of volume for detention and retention requirements. The basin along Adams Barranca would include debris catchment facilities to reduce debris from storm flows that have caused problems at the railroad culvert and the Caltrans culvert in this channel. These detention basins would serve dual roles of flood protection and water quality enhancement. The trapezoidal channel will be approximately 6 feet in depth, with a 15-foot bottom width and 2:1 side slopes that will accommodate flood waters in a large storm event and protect the buildings on site; in addition, the channel will remove a portion of the property from the floodplain through a LOMR (Letter of Map Revision) with the Federal Emergency Management Agency. The new channel would join with the existing Adams Barranca at the railroad crossing and the SR 126 crossing.

The detention basins will significantly reduce peak runoffs downstream by storing the peak event flows and lagging their release after the storm peak. The Project's proposed design features and drainage plan would not result in an increase in stormwater runoff from the site or exceed stormwater drainage requirements established by the USACE, VCWWD, or City. Impacts would be less than significant.

Threshold: **Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

Water Supply and Demand

At full build-out, the development under the Specific Plan would allow for the development of up to a total of approximately 1,264,982.4 square feet of commercial/light industrial uses and approximately 562,795.2 square feet of light industrial uses on the Project Site. Both of these land uses have a floor to area ratio (FAR) of 0.35 that would allow approximately 442,743.8 square feet of commercial/light industrial buildings and approximately 196,978.3 square feet of light industrial buildings. In addition, the boundary of the site adjacent to the Adams Barranca would be designated for approximately 4.9 acres of passive open space.

Demand for the proposed Project is approximately 39.8 afy (20.5 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation). The potable demand of 22 afy for the Commercial/Light Industrial and Light Industrial uses is 25 percent of the West Area 2 total supply allocation. The landscaped areas will be irrigated using reclaimed water to be delivered from the City's wastewater treatment plant.

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently agricultural uses on the Project Site use approximately 281.1 afy (average over the past 5 years). As such, the Project's consumption will be a net reduction in total water use of 241.3 afy.

It should be noted that the West Area 2 Planning Area has been allocated a supply of ~~88.887.7~~ 87.7 afy based on future development.⁴⁰ The Project would use a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can a portion of the existing water currently used for irrigation. It should be noted that that this portion of the pumped water will be pumped instead by the City from other wells, and not from the current well on site.

The Project will use reclaimed water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City forecasts having between 400 afy (~~2015~~2020) and 1,622,000 afy (204035) of reclaimed water available for use. The Project will require only a portion of the recycled water (~~2.94.4~~ percent in 2017 and ~~1.10.9~~ percent in 204035). As shown on **Table 4.14-10, Project Supply and Demand Comparison—Average Year (afy)**, shows the Project water demand as a percent of total supply throughout various milestones in the build-out schedule. By 2027 (build-out), the Project is estimated to demand 39.87 afy of water. Water demand from the Project based on the 2016 UWMP represents 0.61 percent of the City's total projected urban water demand in 2017, decreasing to 0.41 percent in 2037. The projected demand for the Project will account for only a small fraction of the projected demands.

~~Water demand from the Project represents 0.81 percent of City's total projected urban water demand in 2017, and decreasing to 0.65 percent in 2037.~~

The 20160 UWMP Update projects total water demands for the Santa Paula Business Park through 2035 2040 and demonstrates that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands. Therefore, there would be no impacts to available water supplies and no new or expanded entitlements are needed.

⁴⁰ City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 3-2, 46 (1,905,750 square feet of development at 15 gal/sq. ft./year is 87.7 afy).

**Table 4.14-10
Project Supply and Demand Comparison—Average Year (afy)**

	2015	2017	2020	2025	2027	2030	2035	2037	2040
Total City supply ^a	6,637 ^b 7,037.0	6,462 ^c 7,419 ^b	6,9087,991.0	7,7558,945.0	8,0949,334.2 ^e	8,6039,918.0	9,4509,918.0	9,788 ^d 9,918.0 ^d	10,295
West Area 2 allocation ^e	87.788.8	87.788.8	87.788.8	87.788.8	87.788.8	87.788.8	87.788.8	87.788.8	87.7
Existing agricultural use ^f	281.1281.1	0.00.0	0.00.0	0.00.0	0.00.0	0.00.0	0.00.0	0.00.0	0.0
Project demand ^g	00	39.739.8	39.739.8	39.739.8	39.739.8	39.739.8	39.739.8	39.739.8	39.7
Percent of City's total supply	0%0%	0.61%0.84%	0.57%0.76%	0.51%0.70%	0.49%0.66%	0.46%0.66%	0.42%0.66%	0.41%0.66%	0.39%
Net change from agricultural use	00	(241.4)(241.3)	(241.4)(241.3)	(241.4)(241.3)	(241.4)(241.3)	(241.4)(241.3)	(241.4)(241.3)	(241.4)(241.3)	(241.4)
Available reclaimed water	0400	0600 ^b	400800	8001,200	9601,368.8 ^e	1,2001,622	1,6001,622	1,7601,622 ^d	2,000
Project demand for reclaimed water	00	017.8	17.817.8	17.817.8	17.817.8	17.817.8	17.817.8	17.817.8	17.8
Percent of available reclaimed water	0.00%0.00%	0.00%2.97%	4.45%2.23%	2.23%1.48%	1.85%1.33%	1.48%1.11%	1.11%1.11%	1.10%1.11%	0.89%

Notes:

^a City of Santa Paula, Final 2016 2010 Urban Water Management Plan UWMP (June 2011) August 2017) Table 4-4, p. 694.

^b value extrapolated from 2015 and 2020 data.

^c Value extrapolated from 2025 and 2030 data.

^d Value carried over from 2035 data.

^e City of Santa Paula, Final 2016 UWMP (August 2017) 2010 Urban Water Management Plan (June 2011) Table 2-4, p. 3916.

^f See Table 3 of the Water Supply Assessment.

^g See Table 2 of the Water Supply Assessment.

^h City of Santa Paula, 2010 Urban Water Management Plan (June 2011), Table 4-6, p. 47.

Threshold: Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Threshold: Comply with federal, state, and local statutes and regulations related to solid waste?

The Project would generate solid waste during construction. This waste would be generated as a result of the demolition of existing on-site structures, pavement, and agricultural waste as well as the construction of new commercial and light industrial development. Much of the solid waste generated from construction of the Project would be recyclable, such as wood and metal scrap and formed construction board (cement and drywall board). As provided by the SPMC, Section 50.140, Construction and Demolition Diversion, demolition and construction must divert 50 percent of waste tonnage from landfills. Separate calculations and reports are required for the demolition and construction portion of projects involving

both activities. Impacts related to construction solid waste generation are considered potentially significant.

All new development allowed within the Specific Plan will support recycling to reduce the amount of solid waste sent to the landfill. Waste carts for trash, recycling, and green waste would be provided. Estimates of the amount of solid waste that would be generated during operation have been calculated using the waste generation factors contained in the Ventura County Solid Waste Management Department Guidelines of Preparation of Environmental Assessments for Solid Waste Impacts, and are listed in **Table 4.14-11, Estimated Solid Waste Generation**.

**Table 4.14-11
Estimated Solid Waste Generation**

Land Use	Building Square Footage	Generation Rate	Solid Waste Generation (tons/year)	Solid Waste Generation (tons/day)
Commercial/Light Industrial	442,743.8	0.0024 tons/sq. ft./yr.	1,062.58	2.91
Light Industrial	196,978.3	0.0108 tons/sq. ft./yr. ^a	2,127.37	5.83
Total Solid Waste Generation			3,189.95	8.74

Source: Ventura County Solid Waste Management Department. Guidelines of Preparation of Environmental Assessments for Solid Waste Impacts. May 1998.

^a 0.0108 was used for Light Industrial since there is no generation rate for this type of use.

Notes: sq. ft. = square feet; yr. = year.

Building square footage found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.

The Project Site currently generates approximately 4.08 tons of solid waste per year. Under the Specific Plan, future operations would generate approximately 3,189.95 tons of solid waste per year, which equates to approximately 8.74 tons of solid wastes per day that will be delivered to landfills.⁴¹ As mentioned previously, the Toland Road Landfill, due to its location and capacity, is the primary provider of solid waste disposal to the City of Santa Paula; other landfills in the region are also used but to a lesser extent. The Toland Road Landfill is permitted to accept a maximum of 1,500 tons of solid waste per day, with a remaining capacity of 21,983,000 cubic yards. The proposed Project would account for less than 1 percent of the Toland Road Landfill permitted daily capacity.

Additionally, the next closest landfills to the Project Site are the Chiquita Canyon Sanitary Landfill and Simi Valley Landfill & Recycling Center. The proposed Project would account for less than 1 percent of the maximum permitted daily capacity for these two landfills. However, the Chiquita Canyon Sanitary Landfill is only permitted through 2019. While there would be a substantial increase in generated solid waste on the Project Site, adequate landfill capacity appears to be available within the City and nearby landfills.

41 Toland Road Landfill is open 5 days per week, which is approximately 260 days per year. 3,189.95 tons/260 days = 12.27 tons/day.

Solid waste generated during construction and operation of the Project would be required to comply with all federal, state, and local statutes and regulations to reduce and recycle solid waste. Therefore, impacts would be less than significant.

As previously mentioned, the proposed Project would comply with AB 939 and AB 231 and the City's Construction and Demolition Diversion section of the Municipal Code, which states that demolition, construction, and remodeling shall divert 50 percent of waste tonnage from landfills. However, given that future landfill capacity may not be ensured through the life of the development of the Specific Plan, for many years after occupancy, impacts to solid waste would be potentially significant.

4.14.5 CUMULATIVE IMPACTS

Water

The 2016~~0~~ UWMP prepared for the City projects water demand within the City's service area through the year 2040~~35~~. The 2016~~0~~ UWMP analyzes future water demand at build-out conditions for normal, dry year, and multiple dry water years. As indicated in the analysis above, there is expected to be a surplus of water during normal, dry year, and multiple dry year scenarios. The Specific Plan's demand for water use would ~~meet~~ be consistent with the projected development demands within the City. Additionally, the Project would use less water than the existing agricultural operations. Therefore, the cumulative increase in water demand of related projects and build-out of the City pursuant to the General Plan is considered less than significant.

Wastewater

In association with the related projects identified in **Section 3.0, Related Projects**, the Specific Plan and related projects would result in a cumulative increase in projected wastewater flow within the City of Santa Paula. As shown in **Table 4.14-12, Cumulative Wastewater Generation**, the development of related projects would result in a generation flow of 2.36~~472~~ mgd at build-out. Combined with the net increase of approximately 0.01 mgd from the Project, the cumulative wastewater generation by the Specific Plan and related projects would be approximately 2.38~~274~~ mgd.

Table 4.14-12
Cumulative Wastewater Generation

Land Use	Unit	Wastewater Generation Rates	Total Daily Generation (mgd)
Residential	1,77086 units ^a	163 gpd/person ^b	1.0547
Commercial	2179,547298 sq. ft.	41.1 gpd/ksf ^b	0.009
Industrial	8957,474 sq. ft.	41.1 gpd/ksf ^b	0.0335
Adams Canyon ^c	—	—	0.499 ^b
Fagan Canyon ^d	—	—	0.178 ^b
East Area 2 (East Gateway) ^e	—	—	0.533 ^b
West Area 2^f	—	—	0.063 ^b
Related Projects Total			2.36472
Project Net			0.01
Total Cumulative			2.37482

Source: City of Santa Paula Planning Department (2014) and East Area 1 Amendment Supplemental EIR (September 2014).

Notes: sq. ft. = square feet; ksf = thousand square feet; gpd = gallons per day; and afy = acre feet per year.

^a 3.63 persons/unit

^b From East Area 1 Amendment Supplemental EIR. Generation rate derived from the assumption that 80 percent of water demand is returned as wastewater per the 2010 City of Santa Paula Wastewater Master Plan

^c Blended per the 2016~~0~~ UWMP. Includes 495 residential units, 100,000 sq. ft. commercial/industrial/institutional, and 200 acres of parks and recreation land.

^d Blended per the 2016~~0~~ UWMP. Includes 450 dwelling units and 100,000 sq. ft. of commercial/industrial/institutional space, and 7 acres of parks and recreation land.

^e Blended per the 2016~~0~~ UWMP. Includes 1,602,000 sq. ft. of commercial/industrial/institutional space.

^f West Area 2 accounts for the entire 125 acre expansion area.

East Area 1 is added into residential, commercial and industrial as appropriate.

Zone 2 of the wastewater treatment service area would undergo various infrastructure improvements to handle the future wastewater flows with the development the West Area 2 and other existing and proposed uses within the zone. Development of the Specific Plan includes construction of a new lift station at the intersection of Beckwith Road and Faulkner Road at the southeast corner of the Specific Plan area, north of SR 126. Completion of proposed Project improvements would convey most of the wastewater flow to the POC along the existing sewer lines north of the site along Telegraph Road. In addition, the WRF has been designed to accept wastewater from the cumulative growth of the City under the General Plan, including all related projects. As such, the Project's contribution to cumulative wastewater system and treatment impacts would be less than significant.

Solid Waste

Development under the Specific Plan and the related projects would add incremental increases in solid waste disposal at landfills located within Ventura County. Approximately 12 years of capacity remain at the Toland Road Sanitary Landfill, 4 years at the Chiquita Canyon Sanitary Landfill, 37 years at the Simi

Valley Landfill & Recycling Center, 10 years at the Azusa Land Reclamation Co. Landfill, 27 years at Antelope Valley Public Landfills I and II, and 23 years at the Bakersfield Metropolitan (Bena) Solid Waste Landfill. .

Assuming that all of the expansion areas and other probable future developments are completely built out according to the City's General Plan, the cumulative solid waste generation would total ~~58,788,602~~ **58,788,602,216** tons per year, as shown in **Table 4.14-13, Estimated Cumulative Solid Waste Generation**. The Specific Plan would account for approximately ~~58~~ percent of the City's future estimated cumulative solid waste generation.

**Table 4.14-13
Estimated Cumulative Solid Waste Generation**

Land Use	Unit	Solid Waste Generation Rates	Solid Waste Generation (tons/day)	Solid Waste Generation (tons/year)
Residential ^a	1,770 86 units ^b	0.00612 tons/household/day	10.8 93	2,842 3,953
Commercial ^a	219,547 sq. ft. 217,298 sq. ft.	0.0025 tons /1000 sq. ft./day	0.55 4	141 201
Industrial ^a	857,474 sq. ft. 805,474 sq. ft.	0.0025 tons/1000 sq. ft./day	2.1 401	524 781
East Gateway Project ^c	-		39.5	10,275
Fagan Canyon ^d	-		6.9	1,798
Adams Canyon ^d	-		5.0	1,291
West Area 2 ^{de}	-		24.9	6,480
Existing City uses ^d	-		113.6	29,531
Other City build-out ^f	-		22.7	5,906
Total			226.1208	58,7886022,216

Source: Ventura County Solid Waste Management Department, *Estimated Solid Waste Generation Rates for Industrial/Commercial/Residential Establishments, Guidelines for Preparation of Environmental Assessments for Solid Waste Impacts*.
<https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>

Note:

Tons per year were determined using the Toland Road Landfill number of operational days within a year (260 operational days).

^a Land uses include development from East Area 1.

^b 3.63 persons/unit

^c East Gateway Project solid waste generation was determined by the East Gateway Draft EIR.

^d Data from East Area 1 Specific Plan Amendment Supplemental EIR.

^e West Area 2 includes entire 125 acre expansion area.

^f Other build-out assumes 20 percent of solid waste generated by existing uses to account for all other probable future projects identified in the City's Development Activity List.

The City would continue to implement programs for source reduction and recycling and require that subsequent projects complete environmental review to minimize solid waste disposal at the six disposal facilities. Furthermore, the State has set a goal to recycle, source-reduce, or compost 75 percent of solid waste generated.

The City would utilize the Toland Road Sanitary Landfill until the landfill reaches capacity. At the time Toland Road Sanitary Landfill closes, the City would utilize the capacity of the five remaining landfills previously used for solid waste disposal. The combined remaining capacity of the five landfills is estimated to last for 95 years, or an average of 19 years.

As such, cumulative impacts would be less than significant because the six landfills discussed above have sufficient capacity for decades to service the development of the Specific Plan and other development requiring solid waste disposal.

4.14.6 MITIGATION MEASURES

The following measures have been identified to mitigate the identified solid waste impacts.

SW-1 Before issuance of a demolition permit or construction permit, the applicant must implement waste reduction and recycling programs to divert construction solid waste from the area landfill. A construction recycling plan must be submitted and approved by the Director of Public Works. A final report as to the amount recycled must be provided to the Director of Public Works at the completion of construction activities documenting the waste reduction efforts conducted, including a listing of solid waste diversion amounts, and the amount of waste sent to landfills. The report must also document how the construction contractor complied with applicable state and local statutes and regulations to reduce and recycle solid waste generated during construction.

4.14.7 RESIDUAL IMPACTS AFTER MITIGATION

Implementation of **Mitigation Measure SW-1** would reduce impacts to utilities and services to less than significant levels.

APPENDIX B

Agricultural Survey Letters

May 8, 2017

Mr. Ilan Bender
Bender Farms
410 Beckwith Road
Santa Paula, CA 93060

RE: Agricultural Conservation Easement Survey

On behalf of McGaelic Group and Bender Farms, is conducting a survey to see if any interest in Agricultural Land Owners permanently conserving their Agricultural Land into an Agricultural Conservation Easement:

Are you interested in permanently placing your Agricultural Land in an Agricultural Conservation Easement **NO**

At what price? _____

Approximate Number of Agricultural acres 57

If you have any questions please contact, Michael Penrod (805) 373-8808 ext: 105 or Chad Penrod (805) 373-8808 ext: 106

Sincerely,

Michael Penrod

Comments: BENDER FARMS OWNS APPROXIMATELY 57 ACRES AND IS NOT INTERESTED IN PLACING THEM IN AN AGRICULTURAL CONSERVATION EASEMENT

Please return to:
Parkstone Companies
860 Hampshire Road, Suite U
Westlake Village, CA 91361



May 8, 2017

Mr. Harold Edwards
Limoneira Company
1141 Cummings Road
Santa Paula, CA 93060

RE: **Agricultural Conservation Easement Survey**

On behalf of McGaelic Group and Bender Farms, is conducting a survey to see if any interest in Agricultural Land Owners permanently conserving their Agricultural Land into an Agricultural Conservation Easement:

Are you interested in permanently placing your Agricultural Land in an Agricultural Conservation Easement

YES/NO

At what price?

No Price

Approximate Number of Agricultural acres

4,000 Acres - Ventura County

If you have any questions please contact, Michael Penrod (805) 373-8808 ext: 105 or Chad Penrod (805) 373-8808 ext: 106

Sincerely,

Michael Penrod

Comments: _____

Please return to:
Parkstone Companies
860 Hampshire Road, Suite U
Westlake Village, CA 91361



May 15, 2017

Mr. Tim McGrath
McGrath Ranch
P.O. Box 4549
Ventura, CA 93007

RE: **Agricultural Conservation Easement Survey**

On behalf of McGaelic Group and Bender Farms, is conducting a survey to see if any interest in Agricultural Land Owners permanently conserving their Agricultural Land into an Agricultural Conservation Easement:

Are you interested in permanently placing your Agricultural Land in an Agricultural Conservation Easement

YES NO

At what price?

NONE

Approximate Number of Agricultural acres

100

Signature: *Tim McGrath*

If you have any questions please contact, Michael Penrod (805) 373-8808 ext: 105 or Chad Penrod (805) 373-8808 ext: 106

Sincerely,

Michael Penrod

Comments: _____

Please return to:

Parkstone Companies
860 Hampshire Road, Suite U
Westlake Village, CA 91361

860 Hampshire Rd., Ste. U, Westlake Village, CA 91361 • Phone: 805-373-8808 • Fax: 805-379-1219 • www.parkstoneinc.com

May 8, 2017

Mr. Mike Brucker
JKJ Farms

RE: **Agricultural Conservation Easement Survey**

On behalf of McGaelic Group and Bender Farms, is conducting a survey to see if any interest in Agricultural Land Owners permanently conserving their Agricultural Land into an Agricultural Conservation Easement:

Are you interested in permanently placing your
Agricultural Land in an Agricultural Conservation
Easement

YES/NO

At what price?

N/A

Approximate Number of Agricultural acres

43

If you have any questions please contact, Michael Penrod (805) 373-8808 ext: 105 or Chad Penrod (805) 373-8808 ext: 106

Sincerely,



ILAN BENDER

Comments: _____

Please return to:
Parkstone Companies
860 Hampshire Road, Suite U
Westlake Village, CA 91361

November 28, 2017

Mr. Kenneth M. High Jr. Esq.
300 Esplanade Dr. Suite 850
Oxnard, CA 93036

RE: Agricultural Conservation Easement Survey

On behalf of McGaelic Group LP and Bender Farms, which own approximately 49 acres of agricultural land on the westerly boundary of the City of Santa Paula now in the process of being annexed, zoned and developed into a business park, Parkstone Companies is conducting a survey to see if any owners of other prime agricultural lands in Ventura County are interested in selling an Agricultural Conservation Easement for the purpose of forever waiving development rights on their land, thereby partially mitigating the loss of this farm land to development. It would be greatly appreciated if you could please forward this letter to any of your clients who own prime agricultural land in Ventura County and see if they would be willing to participate in the survey. Doing so would be very help in giving guidance as to the extent of any interest by land owners in participating in this sort of transaction. All that need be done is to have the land owner fill in the blanks below and return this letter.

Currently, LAFCO staff is planning on recommending to the LAFCO Board that it condition annexation on the owner mitigating the loss of farm land to development by requiring that equal or greater acreage in Ventura County be subjected to Agricultural Conservation Easements. We are therefore attempting to determine the extent, if any, of interest by land owners in granting such easements.

Land Owner's name.

Red Hat Enterprises Ranch LP

Are you interested in selling a permanent
Agricultural Conservation Easement

NO
YES

At what price per acre

NOT INTERESTED AT ANY \$

Approximate Number of Agricultural acres owned

110

APN, address or approximate land location.

1/2 CORN POLE, CENTRAL

Currently used for the growing of

LEMONS & AVOCADOS

{0019129.0006 11090801.}

Red Hat Enterprises LLC
By Ken High
Member of General Partner

If you have any questions please contact, Michael Penrod or Chad Penrod at (805) 373-8808 ext: 105 or ext: 106, respectively. Otherwise, please return this form in the envelope provided.

Sincerely,

Michael Penrod
Parkstone Companies

APPENDIX C

Letter Correspondence from Doug Shaw

Douglas H. Shaw, Jr.
First Vice President
Lic. 00857630

2761 Park View Court
Oxnard, CA 93036

CBRE, Inc.
Advisory & Transaction Services

T +1 805 288 4672
F +1 805 288 4750
C +1 805 844 1750

March 28, 2017

doug.shaw@cbre.com
www.cbre.com/doug.shaw

Mike Penrod
Chad Penrod
McGaelic Group
Via Electronic Mail
penrod@parkstoneinc.com

**RE: Santa Paula West – Building Sizes
Santa Paula, California**

Dear Mike and Chad:

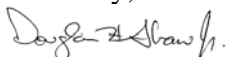
We talked about my concerns related to requiring smaller buildings on the Santa Paula West property. Tenants in the market can range from 10,000 sf up to 200,000 sf. Even larger in some cases. Limiting the maximum size of any individual building to 30,000 sf would drastically limit our ability to lease or sell the properties as we won't be able to respond to a large number of potential tenants. In addition, limiting the clear height would also be a "deal killer" for most tenants. In today's market, low clear height buildings do not lease as quickly and for most tenants, it would immediately remove that property from consideration. We are in an ecommerce era with most companies needing a minimum of 24' clear under the beam at the lowest point of the warehouse on up to 30' and even 32' clear.

For example, one of Santa Paula's largest tenants is Calavo. One of Calavo's competitors is Mission Produce in Oxnard. Mission recently finished a 200,000 sf cooler building that is 30 foot clear. If Calavo ever wants to expand and this limitation is enacted, they will have to relocate to another city in order to compete in their industry. Limoneira would be in a very similar situation.

Economically, this would mean it will take significantly longer to locate potential buyers and tenants putting the project at a huge disadvantage vs. competing properties in the neighboring cities. Since Time is the downfall of many real estate projects, limiting the size of buildings in the Santa Paula West project could cause the project severe economic damage.

Please let me know if you have any questions.

Sincerely,



Douglas H. Shaw, Jr.

APPENDIX D

Final Water Supply Assessment

Final
Water Supply Assessment

For the Proposed
Santa Paula West Business Park

Specific Plan

Prepared for:

City of Santa Paula
Planning Department
200 South 10th Street
Santa Paula, California, 93060

Prepared by:

Meridian Consultants LLC
920 Hampshire Road, Suite A5
Westlake Village, California 91361

January 2018

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EXECUTIVE SUMMARY

The purpose of this water supply assessment (WSA) is to document the sufficiency of the local water supply to meet the demand of development that could occur under the Santa Paula West Business Park Specific Plan (“Specific Plan” or “Project”). The Specific Plan area (“Project Site”) covers an area of approximately 53.81 acres of the West Area 2 Expansion Area of the City of Santa Paula’s General Plan. The Project includes the annexation of the Specific Plan area into the incorporated City limits. The Project includes a series of related actions, such as an amendment to the City’s General Plan Land Use Element and the zoning designations from the rezoning of the annexation area.

The Project land use designations, zoning, development standards, and other related land use specifications will govern future permitting of developments within the Specific Plan area. The Specific Plan designates the Project Site for light industrial and commercial uses, which is consistent with existing City rezoning and General Plan designations. These designations allow for the development of land uses consistent with offices, manufacturing, research and development, professional office, and limited commercial retail uses. Under the Specific Plan, these land use areas designated for development are integrated into one cohesive business park type of layout, complete with vehicular circulation, pedestrian walkways, and utility infrastructure.

The City’s General Plan requires the preparation and adoption of a Specific Plan for any identified expansion area prior to the City initiating annexation of the area to the City. Prior to considering the proposed Specific Plan for approval, the City is required to comply with the California Environmental Quality Act (CEQA). The City is currently preparing an Environmental Impact Report (EIR) to comply with CEQA.

The California Water Code (Sections 10910 through 10915) requires the preparation of a WSA by the public water system supplier that would provide water to the proposed project for all projects as defined in Section 10912 of the Water Code. This includes any mixed-use project including commercial space with a floor area greater than 250,000 square feet. The goal of a WSA is to provide information on the availability of water supplies to be included in EIRs.

The City of Santa Paula Public Works Department, Water Division, provides water service in the City of Santa Paula and would provide water service to the proposed Project after annexation of the site to the City. Currently, the Santa Paula Groundwater Basin (“Santa Paula Basin”) is the City’s sole source of water supply. Rights to withdraw groundwater from the Santa Paula Basin have been adjudicated, and the Santa Paula Basin is managed in accordance with this adjudication to ensure a safe groundwater yield. Recent

demand for water for the existing agricultural and associated uses on Santa Paula West Specific Plan site has averaged approximately 281.1 acre-feet per year (afy).

The eastern boundary of the Santa Paula Basin also demarcates the western boundary of the Fillmore Groundwater Basin (“Fillmore Basin”), which is generally located to the northeast of the Santa Paula Basin and upstream in relation to the Santa Clara River, which flows across both basins.

The City is required under California Water Code (Sections 10610 to 10656) to assess citywide water supply and demand during the next 20 years in 5-year increments in its Urban Water Management Plan (UWMP). The City completed its 2016 UWMP Update in 2017. The 2016 UWMP addresses water planning, including recycled water planning during a 20-year period in 5-year increments; identifies and quantifies adequate water supplies for existing and future water demands in normal, dry, and multiple dry years; identifies actions to prepare for and implement during a catastrophic interruption of water supplies; and implements conservation and efficient use of urban water supplies. No decrease in availability of groundwater supplies is anticipated through the year 2040.

Conservative assumptions concerning future water demand are used in this WSA. The City’s 2016 UWMP provides per capita and specific use (commercial, industrial, and residential) demand rates for estimating future water demand. This WSA utilizes the commercial and industrial rates provided in the UWMP.

The City has constructed a new Water Recycling Facility (WRF). The City WRF will produce recycled water that meets California Title 22 regulations. The WRF has a permitted dry-weather capacity of 4.2 million gallons per day (mgd) and a permitted wet-weather (also maximum) capacity of 8.0 mgd. Recycled water is anticipated to be available for irrigation of landscape areas in 2020.

To estimate water demand for the type and amount of land uses that would be permitted by the proposed Project, the water demand factors contained in the City’s 2016 UWMP were used. Based on these factors, the annual average water demand for the proposed Project is approximately 39.7 afy (20.4 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation).

The estimated supply for West Area 2 per the 2016 UWMP Update is 87.7 afy.¹ The potable demand of 21.9 afy for the Commercial/Light Industrial and Light Industrial uses is 25 percent of the West Area 2 total supply estimation. The landscape areas will be irrigated using recycled water to be delivered from the City’s wastewater treatment plant.

1 City of Santa Paula, *Final Urban Water Management Plan [UWMP] 2016 Update* (August 2017), 46, Table 3-2 (1,905,750 square feet of development at 15 gal/sq ft/year is 87.7 afy).

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently, agricultural uses on the Project Site use approximately 281.1 afy (average during the past 5 years; see **Table 3**). As such, the proposed Project's consumption will be a net reduction in total water use of 241.4 afy (281.1 afy current agricultural water use less 39.7 afy projected water use equals 241.4 afy net reduction in water use).

It should be noted that the West Area 2 Planning Area has an estimated supply of 87.7 afy based on future development. The proposed Project could utilize a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can a portion of the existing water currently used for irrigation. Existing wells will be utilized for construction water as the site is graded, in accordance with the Specific Plan, and then will be abandoned pursuant to state and local regulations.

The Project will use recycled water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City's 2016 UWMP forecast having between 400 afy (2020) and 2,000 afy (2040) of recycled water available for use (see **Table 13**). Based on these forecasts, the Project will require only a portion of the recycled water (4.45 percent in 2020 and 0.89 percent in 2040).

The Santa Paula West Business Park recycled water system would operate via a proposed 12-inch distribution main called for by the City's Recycled Water Plan. This will allow the project to use recycled water when the City extends a recycled water line to the site and the plant is producing sufficient recycled water to supply the site.

In accordance with the City of Santa Paula Municipal Code, landowners or developers are required to either provide water rights sufficient to serve the property or pay an equivalent in-lieu fee as a condition of project approval or when the property is annexed. Upon annexation, the applicants will transfer a portion of these rights in sufficient quantity to meet all the anticipated water demands of the project.

In summary, this Water Supply Assessment for the proposed Project concludes that the City of Santa Paula's projected water supply for the 20-year period from 2017 to 2037 is adequate to meet the demand projected for the project, existing and planned future uses in the City in normal, single dry, and multiple dry years.

1.0 INTRODUCTION

The environmental review of the proposed Project is being prepared in compliance with the California Environmental Quality Act (CEQA) process. The City of Santa Paula (“City”), the Public Water System (PWS) for the proposed Project, has determined that a water supply assessment (WSA) is necessary to complete the proposed Project’s CEQA process.

1.1 PURPOSE OF DOCUMENT

The purpose of this water assessment is to document the sufficiency of the local water supply to meet the demand associated with the proposed land uses of the Santa Paula West Business Park Specific Plan (proposed Project). It should be noted that this WSA addresses the overall water supply available to the City to meet the demands of existing customers and other future demands.

Adequacy of the delivery system is addressed in the City’s Final 2016 Urban Water Management Plan Update (Final 2016 UWMP Update). The WSA reviews and makes a finding of reasonable sufficiency of water supplies that either are available or will be available to the City to meet future demand. The California Water Code requires a determination for a 20-year period (2017–2037) from the start of project development.

1.1.1 Water Supply Assessment

Requirements for the preparation of a WSA are set forth in Section 10910 of the California Water Code (“Water Code”) in accordance with SB 610, which was enacted in 2001 and became effective January 1, 2002. The Water Code requires a WSA be prepared for any project that would consist of one or more of the following:

- A proposed residential development of more than 500 dwelling units
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space
- A hotel or motel with more than 500 rooms
- An industrial, manufacturing or processing plant, or industrial park planned to house more than 1,000 people, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- A mixed-use project that includes one or more of the projects specified above
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project

- For public water systems with fewer than 5,000 service connections, a project that meets the following criteria:
 - A proposed residential, business, commercial, hotel or motel, or industrial development that would account for an increase of 10 percent or more in the number of a public water system’s existing service connections
 - A mixed-use project that would demand an amount of water equivalent to, or greater than, the amount of water required by residential development that would represent an increase of 10 percent or more in the number of the public water system’s existing service connections

The proposed development is a “project” as defined by Water Code Section 10912 and requires a WSA because it consists of an industrial park occupying more than 40 acres of land.

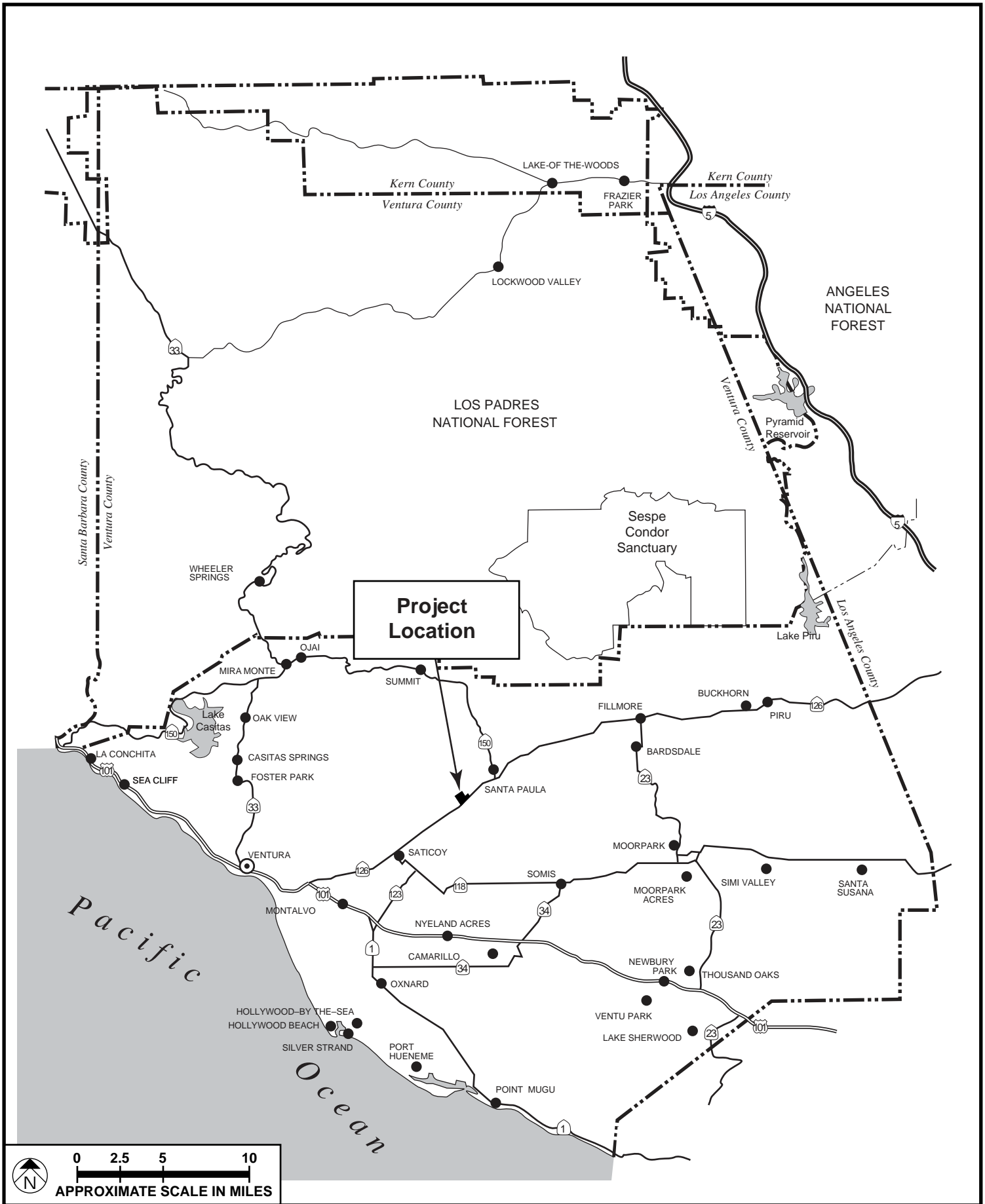
Section 10657 of the California Water Code requires cities and counties to request specific information on water supplies from the PWS that would serve any project that is subject to CEQA and is defined as a project in Water Code Section 10912. This information is to be incorporated into the environmental review document prepared pursuant to CEQA.

1.2 LOCATION

1.2.1 Regional Setting

The Santa Paula West Business Park Specific Plan area is directly adjacent to the western boundary of the City of Santa Paula, within the City Urban Restriction Boundary (CURB) of the City.

The City encompasses 4.5 square miles of incorporated area located approximately 17 miles inland from the Pacific Ocean in central Ventura County, as shown in **Figure 1, Regional Location Map**. The City lies within the Santa Clara River Valley, approximately 12 miles east of the City of San Buenaventura and approximately 9 miles west of the City of Fillmore.



SOURCE: Meridian Consultants – 2015

FIGURE 1



Regional Location Map

1.2.2 Community Setting

The Project Site is bound to the north by Telegraph Road, to the east by existing industrial and commercial development in the existing Santa Paula city limits, to the south by agriculture, and to the west by the Adams Barranca.

The Santa Paula West Business Park is located within the CURB of the City of Santa Paula, with frontage along State Route 126 and Telegraph Road, and is bisected by the railroad right-of-way as illustrated on **Figure 2, Project Location Map**. While it is just west of the Santa Paula City limits, it is within the City of Santa Paula Sphere of influence (SOI), and is outside of the Santa Paula–Ventura Greenbelt. Annexation of the Santa Paula West Business Park into the City of Santa Paula is planned to occur as part of the Specific Plan approval process.

1.3 PROJECT DESCRIPTION

1.3.1 Specific Plan Overview

The proposed Project consists of a specific plan for 53.81 acres of area located within the City's SOI. The uses envisioned within the Santa Paula West Business Park will be a mix of low-intensity industrial (such as light manufacturing or research and development), professional office, and supporting commercial businesses that are currently permitted in the Commercial/Light industrial and Light Industrial Zones of the City of Santa Paula.

The Santa Paula West Business Park Specific Plan would be adopted by the City, which would approve any request for annexation into the City. The Specific Plan would establish the necessary plans, development standards, regulations, infrastructure requirements, design guidelines, and implementation programs on which subsequent Project-related development activities would be founded.

It is intended that local public works projects, design review plans, detailed site plans, grading and building permits, or any other action requiring ministerial or discretionary approval applicable to the Project Site would be consistent with the Specific Plan.

The 20-year scenario is used to illustrate total Project demand within the required 20-year WSA time frame (2017-2037) established by SB 610.

1.3.2 Land Use Plan

The proposed Project would be a mix of low-intensity industrial (such as light manufacturing or research and development), professional office, and supporting commercial businesses that are currently permitted in the Commercial/Light industrial (C-LI) and Light Industrial Zones (LI) of the City of Santa Paula. These uses would cover approximately 41.96 acres, as shown in **Figure 3, Zoning Implementation Plan**.

In addition, the Project would have approximately 4.9 acres of open space and approximately 6.95 acres of roadways that would not require any use of water. The Project Site would total approximately 53.81 acres, as shown in **Table 1, Land Use Summary**.

Table 1
Land Use Summary

Land Use Type	Acres	Percent of Site
Commercial/Light Industrial	41.96	78.0%
Roadways (Approximate)	6.95	12.9%
Open Space/Passive	4.90	9.1%
Gross Area of SP West BP	53.81	100.0%

The Santa Paula West Business Park Specific Plan includes lists of permitted uses, including those permitted without any conditions and those that require conditional use permits (CUPs) and public use permits. All development within the Santa Paula West Business Park will adhere to the standards of the Specific Plan.

1.3.3 Water and Wastewater

Public Water Supply

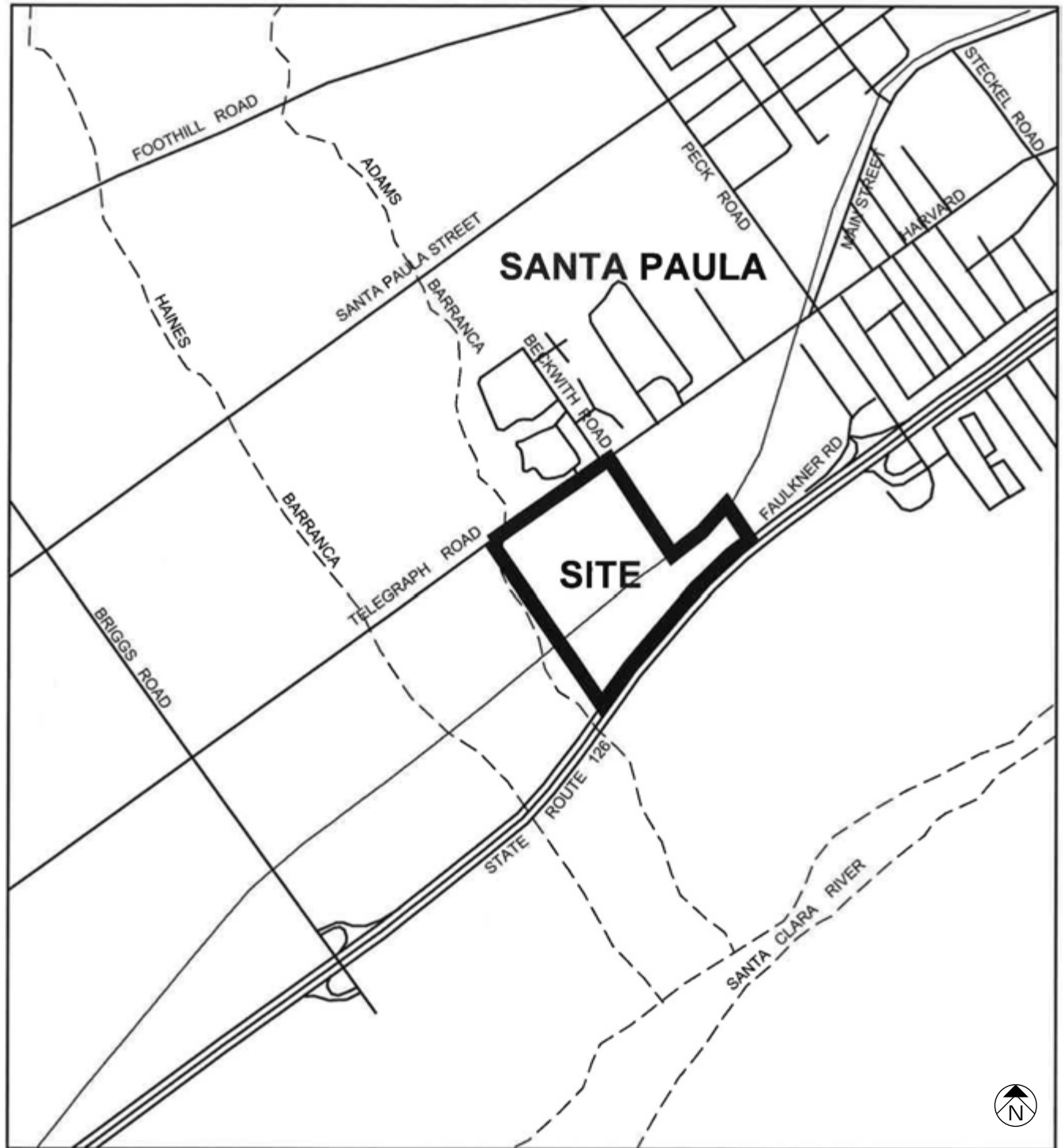
Surface water and groundwater resources within the City of Santa Paula are managed by the United Water Conservation District. However, the City is responsible for water supply and distribution within its 4.5-square-mile service area. The Project is located outside of the City's corporate boundary but within the West Area 2 identified in the General Plan for future expansion. A portion of the Project area is currently located in the City's water service area, and the entire site would be located within the City's service area after annexation of the site to the City.

As of 2015, the City had approximately 7,400 connections, and total demand within the City was 3,907 acre-feet (af).² The City does not generally provide wholesale water to any other agencies nor sell water to customers outside the City's service area. However, in 2010 the City provided 39 af to the Middleroad Mutual Water Company, and 44 af in 2015. The City does not use potable supplies for saline barriers, groundwater recharge, conjunctive use, raw water, or recycled water uses.³

Development in the City has been dependent on groundwater as a source of supply. However, the demand for groundwater is within the limits of natural recharge of the Santa Paula Basin.

² City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 3

³ City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 42.



SOURCE: Jensen Design and Survey – October 2016

FIGURE 2

M H/P

TELEGRAPH ROAD

LEGEND

- Railroad (RR Overlay Zone - Not a Part)
200,122 S.F. = 4.59 Acres
- C/LI (Commercial / Light Industrial)
1,264,982.4 S.F. = 29.04 Acres
- LI (Light Industrial)
562,795.2 S.F. = 12.92 Acres
- Open Space/Passive
16.00 Acres

COUNTY AG

COUNTY AG

C/LI

C/LI

RAILROAD - RW (NOT A PART)

C/H

C/LI

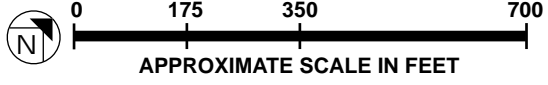
PROPOSED ST. B

FAULKNER ROAD

STATE ROUTE 126

BECKWITH ROAD

BECKWITH ROAD



SOURCE: Jensen Design and Survey – October 2016

FIGURE 3

Potable Water

The City of Santa Paula would provide water service for the Project Site. Existing wells will be utilized for construction water as the site is graded, in accordance with the Specific Plan, and then will be abandoned pursuant to state and local regulations.

As shown on **Figure 4, Conceptual Domestic and Recycled Water Plan**, the system for the Specific Plan domestic water system would operate entirely within the City's 200 Zone, and would receive water via proposed 12-inch distribution mains as called for in the City's Potable Water System Master Plan. The points of connection (POCs) for the Project will be at Faulkner Road and Telegraph Road. The existing 8-inch ACP located in Beckwith Road will remain in place.

From the POC, a new 12-inch line will proceed north through the proposed Project. The proposed potable distribution system will comprise 8-inch through 12-inch mains. The water mains located in Beckwith Road, Road "A," and Faulkner Road will be publicly owned and maintained, while the remaining on-site domestic water and fire lines be master metered.

Irrigation and Fire Suppression System

A water system analysis would be prepared during the final construction documents to ensure that the required fire flow is provided at each fire hydrant and each fire sprinkler system. Every building would be required to provide an approved fire sprinkler system.

Wastewater

The City of Santa Paula would provide service for the Project Site. The City's wastewater system includes more than 50 miles of sewer lines and the new City Water Recycling Facility (WRF).

The average daily flow rate for the City WRF during the period from 2010 through 2015 is 1.85 mgd. The annual average daily flow in 2015 was 1.75 mgd. Projected wastewater flow to the City's WRF is nearly 2,400 afy for the year 2040, based on normal water-year data, current wastewater flow, and new potential wastewater flows.⁴

There is no existing sewer system in the Santa Paula West Business Park Specific Plan area. The City's *Wastewater System Management Plan* identifies a new off-site mainline that will need to be completed prior to implementation of the Specific Plan. These improvements would bring the POC for sewer service for the Santa Paula West Business Park to north along Faulkner Road at the southeast corner of the Santa Paula West Business Park area. **Figure 5, Conceptual Sewer Plan**, identifies the lines, directions, and points of connection.

⁴ City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 76.

1.4 PROJECT SPECIFIC WATER DEMAND

To estimate water demand for the type and amount of land uses that would be permitted by the proposed Specific Plan, the water demand factors contained in the City's 2016 UWMP Update were used.

The unit water usage for this WSA are based on indoor water use performance standard as provided in the California Water Code for residential water demand; the American Water Works Association Research Foundation for commercial water demands; and the City's Landscape Ordinance, which meets the water conservation goals of the California Department of Water Resources (DWR) Model Water Efficient Landscape Ordinance. The overall goal of the ordinance is to reduce landscape water use; reduce or eliminate runoff in streets; and limit turf.

The Project planning area includes a total of 53.81 acres within West Area 2 in the City's Planning Area. To provide a more accurate estimate of the proposed Project's water demand, a site-specific analysis was completed. Potable water demand was calculated for all uses based on Project-specific estimates.

The projected water demands are distinguished between indoor and outdoor usage. **Table 2, Estimated Project Water Demands**, summarizes the indoor water demands of the residential portion of the Project.

Table 2
Estimated Project Water Demands

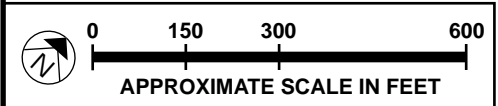
Land Use	Sq. Ft./ Acreage	Demand Rate ^a	Annual Demand (afy)
Commercial/Light Industrial ^b	442,743.8	15 gal./sq. ft./yr.	20.4
Light Industrial ^b	196,978.3	2.49 gal./sq. ft./yr.	1.5
Landscaped areas ^c	8.1	2.2 AF/acre/yr.	<u>17.8</u>
Total Estimated Demand			39.7

Notes: afy = acre-feet per year; gal./sq. ft./yr. = gallons per square foot per year.

^a Demand Rates per City of Santa Paula, Final 2016 UWMP Update (August 2017), 46, Table 3-2.

^b Building square footage for C-LI and LI land uses found by multiplying total area square footage by 0.35 FAR per the October 2016 Specific Plan.

^c Landscaped areas assume 15% of total area or 8.07 acres per the October 2016 Specific Plan.



SOURCE: Jensen Design and Survey – October 2016

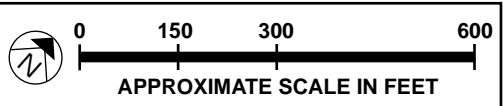
FIGURE 4



LEGEND

- - - Existing sewer main
- Proposed sewer main

Proposed Lift Station
 Point of Connection
 approximately 500'
 northeast at existing
 sewer manhole in
 Faulkner Road



SOURCE: Jensen Design and Survey – October 2016

FIGURE 5

The estimated supply to West Area 2 per the Final 2016 UWMP Update is 87.7 afy.⁵ The estimated potable demand for the proposed Project is approximately 25 percent of the West Area 2 total supply.⁶ The landscaped areas will be irrigated using recycled water to be delivered from the City's wastewater treatment plant. Construction is expected to begin in 2017 and be completed by 2020.

The Project will replace existing agricultural uses on the site. As such, a portion of the water currently used for agricultural irrigation will be used instead for Project consumption.

In addition to the previously described City-specific water conservation measures, Project developers shall be required to implement the following features to assure the most efficient use of water resources throughout the life of the Project:⁷

- Develop a budget for landscape irrigation use, pursuant to Section 5.304.1 of the City's Municipal Code.
- For new water service or for addition or alteration requiring upgraded water service for landscaped areas of at least 1,000 square feet but not more than 5,000 square feet (the level at which Water Code Section 535 applies), separate submeters or metering devices shall be installed for outdoor potable water use.
- Automatic irrigation system controllers (weather with rain sensors or soil moisture based) installed at the time of final inspection.
- All planted landscape areas within the Santa Paula West Business Park will have irrigation systems that are fully automatic and employ the latest "Low Volume" water conservation design criteria. No overspray of irrigation water onto walkways, common area hardscape areas, or any architectural walls will be allowed.
- Landscape plant and tree materials will be chosen for aesthetic quality and will consist of at least 75 percent low maintenance, California or drought tolerant, and ability to retain and treat storm water runoff.

1.5 REGULATORY SETTING

1.5.1 California Department of Water Resources

The DWR released its *State Water Project Final Delivery Capability Report* ("Report") in July 2015. The Report updates the estimated water delivery capacity of the State Water Project (SWP) for current conditions and two decades from 2015.⁸ The estimates include the best-known future effects of climate

5 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 46, Table 3-2 (1,905,750 square feet of development at 15 gal/sq ft/year is 87.7 afy).

6 Estimated potable water demand is approximately 21.9 afy, total estimated water demand for West Area 2 is 87.7 afy.

7 California Green Building Code (2013), tit. 24, pt. 11, Revision Record for the State of California (July 1, 2015).

8 Department of Water Resources (DWR), *The State Water Project Final Delivery Capability Report 2015* (July 1, 2015), <https://msb.water.ca.gov/documents/86800/144575dd-0be1-4d2d-aeff-8d7a2a7b21e4>.

change and the anticipated changes in Sacramento River basin land uses. The assessment of current and future SWP reliability allows DWR to plan for reliable future water supplies in California.

1.5.2 Comprehensive Water Legislation

In November 2009, four legislative bills (SBX7-1, SBX7-6, SBX7-7, and SBX7-8) and the supporting bond bill (SBX7-2), creating a comprehensive water package designed to meet California’s water challenges, were approved by then-governor Arnold Schwarzenegger.⁹ The legislation establishes the governmental framework to achieve the co-equal goals of providing a more reliable water supply to California and restoring and enhancing the San Francisco Bay/Sacramento–San Joaquin Delta Estuary (“Bay-Delta”) ecosystem. The package includes requirements to improve the management of our water resources by monitoring groundwater basins, developing agricultural water management plans, reducing statewide per capita water consumption 20 percent by 2020, and reporting water diversions and uses in the Delta. It also appropriates \$250 million for grants and expenditures for projects to reduce dependence on the Delta if the bond issue is approved by the voters in the future.

The Safe, Clean, and Reliable Drinking Water Supply Act of 2010 (SBX7-2) was placed and passed on the November 2014 ballot as California Proposition 1, the Water Bond (Assembly Bill [AB] 1471). AB 1471 provides funding for California’s aging water infrastructure, as well as for projects and programs to improve the ecosystem and water supply reliability for California. The bond bill includes \$2.7 billion for actions improving Bay-Delta sustainability. These investments will help to reduce seismic risk to Bay-Delta water supplies, protect drinking water quality, and reduce conflict between water management and environmental protection.

Part of the comprehensive water package included SBX7-7 (Steinberg, Chapter 4, Statutes of 2009—Statewide Water Conservation). This bill creates a framework for future planning and actions by urban and agricultural water suppliers to reduce California’s water use. SBX7-7 requires the development of agricultural water management plans and requires urban water agencies to reduce statewide per capita water consumption 20 percent by 2020.

9 DWR, *California Water Plan Update 2009*, vol. 4 (December 2009); Reference Guide, Legislation, 2009 Comprehensive Water Package, Special Session Policy Bills and Bond Summary (November 2009).

1.5.3 Recent Regulations, Executive Orders and SWRCB Actions

Executive Orders

On January 17, 2014, Governor Brown declared a drought state of emergency.¹⁰ On April 25, 2014, the governor signed Executive Order (EO) B-26-14¹¹ (April 2014 Proclamation) stating, among other things, that

severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015.

On December 22, 2014, Governor Brown issued EO B-28-14,¹² which extended the suspension of certain activities subject to CEQA contained in the January 2014 and April 2014 Proclamations, including the State Water Resources Control Board (SWRCB) adoption of emergency regulations, pursuant to Water Code Section 1058.5, through May 31, 2016. On March 17, 2015, the SWRCB adopted an expanded emergency conservation regulation prohibiting certain irrigation practices, restricting certain commercial activities, and ordering all urban water suppliers to implement mandatory restrictions on outdoor irrigation. The emergency regulation orders larger urban water suppliers—those providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 af of water annually, excluding wholesalers—to provide monthly data on water production, enforcement, and outdoor water conservation measures being implemented.

On April 1, 2015, Governor Brown signed EO B-29-15,¹³ directing the SWRCB to impose restrictions to achieve a statewide 25 percent reduction in potable urban water usage, compared to the amount used in 2013, through February 2016. The governor instructed the SWRCB to consider the relative per capita water usage of each supplier's service area and to require those areas with high per capita use to achieve proportionally greater reductions than those with low use. The order mandated that the governor's

10 Office of the Governor, "Governor Brown Declares Drought State of Emergency" (January 17, 2014), <http://gov.ca.gov/news.php?id=18368>.

11 Office of the Governor, "Governor Brown Issues Executive Order to Redouble State Drought Actions" (April 25, 2014), <http://gov.ca.gov/news.php?id=18496>.

12 Office of the Governor, "Executive Order B-28-14" (December 22, 2014), <https://www.gov.ca.gov/news.php?id=18815>.

13 State of California, Executive Department, "Executive Order B-29-15" (April 1, 2015), http://gov.ca.gov/docs/4.1.15_Executive_Order.pdf.

January 17, 2014, Proclamation, his April 25, 2014, Proclamation, EO B-26-14, and EO B-28-14 remain in full force and effect except as modified.

As of April 7, 2017, the State of California Drought Emergency¹⁴ has been lifted by Governor Brown due to increased rainfall. However, the governor retained the prohibition on wasteful practices, and conservation will continue to be required. Based on the only dialogue occurring with the SWRCB, conservation is expected to become more stringent through the years.

State Water Resources Control Board

In 2014, the SWRCB determined that an emergency existed due to severe drought conditions and that adoption of the proposed emergency regulation was necessary to address the emergency.

On May 5, 2015, the SWRCB adopted an emergency conservation regulation in accordance with the governor's directive. The provisions of the emergency regulation went into effect on May 18, 2015.¹⁵ The emergency regulation identifies how much water communities must conserve based on their average residential water use, per person per day, last summer. Every person should be able keep indoor water use to no more than 55 gallons per day. For the most part, the amount of water that each person uses in excess of this amount is water that is applied to lawns and other ornamental landscapes.

To reduce water use by 25 percent statewide, a regulation adopted by the SWRCB places each urban water supplier into one of eight tiers, each of which is assigned a conservation standard, ranging between 4 and 36 percent.¹⁶

As of March 2016, the City of Santa Paula had a Conservation Standard of 26 percent as directed by the SWRCB; from March to June 2016, the City had achieved 24.2 percent water savings. The Governor issued a new EO as of June 1, 2016, reducing the Conservation Standards as a result of improved conditions, and the City now has a zero percent conservation standard.¹⁷

14 Executive Order B-40-17, https://www.gov.ca.gov/docs/4.7.17_Exec_Order_B-40-17.pdf.

15 State Water Resources Control Board, Resolution No. 2015-2032, Emergency Regulation for Statewide Urban Water Conservation (adopted May 5, 2015).

16 State of California, Office of Administrative Law, OAL File No. 2015-0506-02 EE, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board (May 18, 2015).
http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/emergency_regulations/oal_approve_d_regs2015.pdf.

17 State Water Resources Control Board, Self-Certification Conservation Standards—“Stress-test” (by supplier), http://www.waterboards.ca.gov/water_issues/programs/conservation_portal/docs/emergency_reg/uw_self-cert_summary.pdf. Accessed October 18, 2016.

Legislative Actions

Sustainable Groundwater Management Act

In September 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act (SGMA). The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history. Moreover, SGMA empowers local agencies to adopt groundwater management plans that are tailored to the resources and needs of their communities.

The three bills that make up SGMA are AB 1739 (Dickinson), SB 1168 (Pavley) and SB 1319 (Pavley).

AB 1739—Groundwater Management

AB 1739 (Dickinson) authorizes the DWR or a groundwater sustainability agency (GSA) to provide technical assistance to entities that extract or use groundwater to promote water conservation and protect groundwater resources. This bill requires the DWR, by January 1, 2017, to publish on its Internet website best management practices for the sustainable management of groundwater, and requires the DWR to prepare and release a report by December 31, 2016, on the agency's best estimate of water available for replenishment of groundwater in the state.

AB 1739 requires a GSA to submit a groundwater sustainability plan (GSP) to DWR for review upon adoption. The bill authorizes a local agency to submit to DWR for evaluation and assessment an alternative that the local agency believes satisfies the objectives of these provisions. AB 1739 also requires DWR to review any of the above-described submissions at least every 5 years after initial submission to DWR.

In addition, AB 1739 requires that prior to the adoption or any substantial amendment of a general plan, the planning agency review and consider a GSP; groundwater management plan; groundwater management court order, judgment, or decree; adjudication of water rights; or a certain order or interim plan by the SWRCB. AB 1739 requires the planning agency to refer a proposed action to adopt or substantially amend a general plan to any GSA that has adopted a GSP or local agency that otherwise manages groundwater, and to the SWRCB if it has adopted an interim plan that includes territory within the planning area.

SB 1168—Groundwater Management

SB 1168 (Pavley) notes that the policy of the state is that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. This bill states that sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

SB 1168 requires DWR to categorize each basin as high, medium, low, or very low priority. The initial priority for each basin was to be established no later than January 31, 2015. The bill authorizes a local agency to request that DWR revise the boundaries of a basin and required DWR to adopt by January 1, 2016, regulations on the methodology and criteria to be used to evaluate the proposed revision.

In addition, all groundwater basins designated as high- or medium-priority basins by the DWR that are designated as basins subject to critical conditions of overdraft are to be managed under a GSP or coordinated GSPs by January 31, 2020; all other groundwater basins designated as high- or medium-priority basins are to be managed under a GSP or coordinated GSPs by January 31, 2022.

This bill would authorize any local agency, as defined, or combination of local agencies to elect to be a GSA and would require, within 30 days of electing to be or forming a GSA, said agency to inform the DWR of its election or formation and its intent to undertake sustainable groundwater management.

SB 1319—Groundwater

SB 1319 (Pavley) prohibits the SWRCB from establishing an interim plan to remedy a condition where the groundwater extractions result in significant depletions of interconnected surface waters until January 1, 2025. This provision delays the similar provision in AB 1739 from 2022 to 2025. The bill further requires the SWRCB to exclude any portion of a basin in compliance with groundwater management requirements from probationary status. This provision narrows the similar provision in AB 1739 to only apply to the portion of the basin that is out of compliance.

The bill requires the SWRCB to include any element of a GSP or the entire plan in its interim plan if SWRCB finds it would help meet the sustainability goal. This provision revises the similar provision in AB 1739 to allow for the inclusion of local plans when developing interim plans for basins with probationary status.

A GSP has not yet been adopted for the Santa Paula Basin pursuant to SGMA and is not required until 2022.

SB 1262 (Pavley)—Water Supply Planning

In September 2016, Governor Brown signed SB 1262 (Pavley), which states that if a water supply for a proposed project includes groundwater from a basin that is not adjudicated and is designated as medium or high priority, the following additional information must be included in the WSA: whether DWR has identified the basin as being subject to critical conditions of overdraft; and if a GSA has adopted a (GSP) or approved an alternative plan under the SGMA, a copy of the GSP, or an alternative plan. For a basin that is not adjudicated and is designated by DWR as low or very low priority, the WSA must include information as to whether DWR has identified the basin as being overdrafted or projected that the basin will become overdrafted if present management conditions continue.

SB 1262 is not effective until January 1, 2017. However, as noted earlier, pursuant to SB 1262 and the amended Water Code Section 10910, the Santa Paula Basin is an adjudicated Basin of which the DWR has not indicated is in overdraft.¹⁸

1.5.4 United Water Conservation District

The United Water Conservation District (UWCD or District) is a public agency that encompasses nearly 213,000 acres of central and southern Ventura County. The District covers the downstream (Ventura County) portion of the valley of the Santa Clara River, as well as the Oxnard Plain. The District serves as a steward for managing the surface water and groundwater resources for all or portions of eight interconnected groundwater sub-basins. The developed areas of the District are a mix of agriculture and urban areas, with prime agricultural land supporting high-dollar crops such as avocados, berries, row crops, tomatoes, lemons, oranges, flowers, ornamental nursery stock, and sod. Approximately 370,000 people live within the District boundaries, including those living in the cities of Oxnard, Port Hueneme, Santa Paula, Fillmore, and eastern Ventura.

The District is authorized under its principal act (California Water Code Section 74000 et. Seq.) to exercise multiple powers; including the authority to conduct water resource investigations, acquire water rights, build facilities to store and recharge water, construct wells and pipelines for water deliveries, commence actions involving water rights and water use, prevent interference with or diminution of stream/river flows and their associated natural subterranean supply of water, and to acquire and operate recreational facilities in connection with dams, reservoirs, or other District works.

18 California's Groundwater Bulletin 118, Santa Clara River Valley Basin Santa Paula Subbasin, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/4-4.04.pdf.

1.5.5 City of Santa Paula

Urban Water Management Plan

Section 10610 et seq. of the California Water Code, known as the Urban Water Management Planning Act, calls for creation and periodic update of UWMPs by all urban water suppliers and sets forth the requirements for such plans, including definition of relevant terms.

Under the definition given in Section 10617, an urban water supplier is an entity “providing water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 af of water annually.” Water for this development will be supplied from the City of Santa Paula’s existing water system which is supplied via groundwater wells throughout the City.

Accordingly, this WSA, in concert with the most recent Final 2016 UWMP prepared by the City, includes all necessary data and analyses required by California Water Code section 10910 et seq. and by Government Code section 66437.7 et seq.

In 2017, the City of Santa Paula completed an UWMP update based on the current and future uses within the City. This UWMP did not discuss the specific development and activities contemplated by the Santa Paula West Business Park, although it did discuss, in general terms, the nature and extent of the long-term water supply for the City for the West Area 2 and included an estimated 1,906,000 square feet of commercial/industrial/institutional uses on approximately 125 acres. The UWMP update is based on more current and future uses within the City. Much of this general discussion is cited and paraphrased in this WSA. The UWMP contains an analysis of the factors required by Government Code section 66437.7 (a)(2), and such factors apply to this WSA.

2.0 WATER DEMANDS

2.1 HISTORICAL AND CURRENT CONDITIONS

2.1.1 Existing Land Use

The local economy is composed of agricultural, industrial, and commercial interests. Residential development is currently the single largest land use. Santa Paula currently has a housing stock totaling approximately 9,100 units. Of these, 67 percent are single-family houses or condos; 26 percent are multifamily units; and 7 percent are mobile homes and trailers. Because a significant amount of its residential growth occurred prior to 1970, more than half of the housing stock in Santa Paula is more than 45 years old.¹⁹ Commercial development comprises less than 5 percent of the City's area, and industrial uses comprise approximately 6 percent.²⁰ City total water demands for the period of 1990 to 2014 ranged from a low of 4,376 af (1995) to 6,153 af (1990), with an average of 4,993 afy during that period.²¹ Projected water demands in 2020 are 4,609 af.²²

Future land uses are based on the City's General Plan. Within the City's existing limits and planning areas there is a potential for the following: 2,052 residential dwelling units (single- and multifamily); 131 acres of new commercial, industrial, and institutional development; and 797 acres of parks, recreation, golf courses, and open space, and 2 schools.²³

The City's General Plan anticipates approval of an amendment of the City's 1978 SOI to include six Expansion Areas, with a variety of land uses. Amending the SOI boundary and annexing the Expansion Areas to the City requires the authorization of the Local Agency Formation Commission (LAFCO); previous LAFCO hearings approved Adams Canyon, Fagan Canyon, East Area 1, East Area 2, and West Area 2 for inclusion into the City's SOI. Annexation of each Expansion Area will occur on a case-by-case basis after the completion of a Specific Plan and a market and fiscal evaluation; the City has recently completed annexation of two of these identified areas (East Area 1 [2010] and East Area 2 [2013]). In addition, each annexation area will require environmental review in accordance with CEQA. Ultimate build-out of residential units will be in accordance with the City's existing Growth Management Ordinance adopted in 1985. Type and amount of development that actually occurs will depend on many factors.

19 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 37.

20 City of Santa Paula, *General Plan, "Land Use Element"* (rev. January 22, 2013), City Council Resolution No. 6821.

21 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 41.

22 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 48, Table 3-3.

23 City of Santa Paula, *General Plan, "Land Use Element."* Rev 1/22/13, City Council Resolution No. 6821.

The proposed Project is located within the boundaries of the West Area 2 Expansion Area. The City's 2016 UWMP Update projects an estimated water demand of 87.7 afy for West Area 2.²⁴ At approximately 53.81 acres, the Santa Paula West Business Park Specific Plan would take up approximately 43 percent of the 125-acre West Area 2 planned expansion as designated in the General Plan.²⁵ As such, based on a pro rata share of the proposed development contemplated in the General Plan for West Area 2 and the corresponding water demand estimated in the 2016 UWMP Update, the proposed Project has a projected demand of 39.7 afy.

The Santa Paula West Business Park Specific Plan site is currently in agricultural use.²⁶ Water is currently supplied by a single on-site water well, which supplies water for both domestic and agricultural irrigation use.

2.1.2 Existing Water Supply and Demand

The existing land uses within the Specific Plan area includes approximately 54 acres of agricultural land, fallow agricultural land, and a small amount of industrial uses.

Water supply for irrigation on the Specific Plan area has been historically supplied from an on-site well that overlies the Santa Paula Basin. The existing well in the area (E11S) is owned and operated by McGaelic Group and Bender combined.

Approximately 49 acres of the Santa Paula West Specific Plan site is under cultivation for avocados, herbs, and a variety of row crops. Production records for the irrigation well for the period 2010 to 2014 are shown on **Table 3, Existing Well Pumping Records 2010 – 2014**. Water usage has been from one well but delivered to several parcels including McGaelic West (McGrath owners), Ilan Bender, and Jaime Santana; only the McGaelic West and Bender parcels are within the Project Site.²⁷ As shown on **Table 3**, during the last 5 years (2010 to 2014), the total water used on site has averaged 281.1 afy.

24 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 46, Table 3-2.

25 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

26 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

27 Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015) (June 9, 2015).

Table 3
Existing Well Pumping Records 2010–2014

Year	McGaelic West (acre-feet)	Bender (acre-feet)	Total Usage (acre-feet)
2010	N/A	112.9	112.9
2011	122.9	89.4	212.3
2012	176.5	162.9	339.4
2013	187.8	232.7	420.5
2014	120.8	199.6	320.4
Total	608.0	797.5	1,405.5
2010–2014 Average per year	121.6	159.5	281.1

Source: Email from Beverly Gutierrez, Hoffman, Vance & Worthington, Inc., Existing Water Use Spreadsheet (2015).

2.2 WATER CONSERVATION MEASURES

2.2.1 State of California Measures

The State of California Assembly Bill (AB) 1881 was enacted in 2009 to help California move forward as a leader in sustainable landscaping and water efficiency and to address the danger of our drought situation. Many residential and commercial properties currently use outdated irrigation technology; AB 1881 is a forward-thinking standard that prevents excessive or wasteful irrigation techniques by emphasizing the use and application of modern irrigation technology.²⁸

With current drought conditions persisting, emergency regulation amendments are proposed.

Mandatory Prohibitions on Water Wasting

“Water waste” can be defined as any excessive, unnecessary or unwarranted use of water, including, but not limited to, any use that causes unnecessary runoff beyond the boundaries of any property as served by its meter and any failure to repair as soon as reasonably possible any leak or rupture in any water pipes, faucets, valves, plumbing fixtures, or other water service appliances.

California Code of Regulations: Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted in January 1, 2010, to, but not limited to, promote the conservation and efficient use of water and to prevent the waste of water; establish a

²⁸ Assembly Bill No. 1881, ch. 559 (January 23, 2006; approved, September 28, 2006; filed, September 28, 2006).

structure for planning, designing, installing, maintaining and managing water-efficient landscapes in new construction and rehabilitated projects; establish provisions for water management practices and water waste prevention for existing landscapes; and to encourage local agencies and water purveyors to use economic incentives that promote the efficient use of water, such as implementing a tiered rate structure.²⁹

California Green Building Standards Code (CALGreen)

The purpose of California Green Building Standards Code (“CALGreen”) is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories:

1. Planning and design
2. Energy efficiency
3. Water efficiency and conservation
4. Material conservation and resource efficiency
5. Environmental quality

The residential mandatory measures are provided in chapter 4 and the nonresidential ones in chapter 5 of the CALGreen Code.

In response to State of Emergency proclamations issued by Governor Brown in January and April of 2014, and the EO B-29-15 (issued April 1, 2015), California Department of Housing and Community Development (HCD) proposed emergency building standard regulations pertaining to the reduction of potable water use for exterior landscape irrigation for newly constructed residential buildings. HCD, in coordination with the California Building Standards Commission (CBSC),

DWR, the Division of the State Architect, and other stakeholders developed emergency regulations that amend the 2016 CALGreen Code.³⁰

CALGreen provides mandatory residential measures, such as stormwater drainage and retention systems, which are thought to prevent flooding of adjacent properties and prevent pollution from stormwater

29 California Code of Regulations, tit. 23, Waters, div. 2, Department of Water Resources, ch. 2.7, Model Water Efficient Landscape Ordinance.

30 California Department of Housing and Community Development, Finding of Emergency Regarding the 2013 California Green Building Standards Code (CALGreen), California Code of Regulations, tit. 24, pt. 11.

runoff by retaining soil on site or by providing filtering to restrict sedimentation from reaching stormwater drainage systems and receiving streams or rivers. To comply, the retention basin must be sized and shown on the site plan, and water has to be filtered and routed to a public drainage system. The new residential structure also must comply with local stormwater ordinances. The drainage system must also be shown on the site plan (swales, drain piping, retention areas, and groundwater recharge).

The code also requires a 20 percent reduction of indoor water use, and it utilizes both a prescriptive and performance method. The prescriptive method provides some technical features that must be followed:

- Showerheads \leq 2.0 gallons per minute (gpm) at 80 pounds per square inch (psi)
- Lavatory faucets \leq 0.5 gpm at 60 psi
- Kitchen faucets \leq 1.8 gpm at 60 psi
- Urinals \leq 0.5 gal/flush
- Water closets \leq 1.28 gallon/flush

CALGreen also specifies acceptable performance standards for plumbing fixtures with reduced water usage. Fixtures can be installed if they meet standards listed in the code.

Outdoor water usage is also regulated. CALGreen requires irrigation controls to be weather or soil moisture based and to automatically adjust irrigation in response to changes in plants' needs as weather conditions change, or have rain sensors or communication systems that account for local rainfall.

2.2.2 City of Santa Paula

Urban Water Management Plan (UWMP) Update

The City of Santa Paula has implemented water conservation measures to ensure that customers use water efficiently and that negligent use will have appropriate consequences. Water conservation policies are described in the Final 2016 UWMP Update.

Below is a partial list of current adopted water conservation policies from the Final 2016 UWMP Update:³¹

- Water waste prevention ordinances
- Metering
- Conservation pricing
- Public education and outreach
- Water loss control
- Conservation program coordination and staffing
- Other demand management measures that significantly impact water use

31 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 99.

The combined effect of these policies places responsibility for water conservation on both the developer and the City.

City Municipal Code, Ordinance 993 Section 52.038—Water Waste

“No person shall [un]lawfully or neglectfully waste water in any manner whatsoever. Continued wasting of water after mailing of [City] notice by registered mail to the customer of record at the mailing address of record by the [City] Director may result in discontinued water service.”³² This Code is a beneficial tool to curb misuse and waste of potable water within the City. The provisions of the Code can be utilized during periods of normal water supply and supply deficiency. Violation of this Code is subject to City penalties.

City Municipal Code, Ordinance 1223, Chapter 59—Landscape Water Conservation Standards

In accordance with Government Code 65565(c) for the purpose of complying with California law and promoting water conservation the City maintains Ordinance 1223, Landscape Water Conservation Standards, to be utilized in conjunction with the City of Santa Paula land Development Provisions for Landscaping and the Guidelines for Implementation of Water Efficient Landscape.³³ Compliance with the guidelines and Landscape Water conservation Standards is mandatory for all new development projects that are subject to discretionary review by the City of Santa Paula.

Water Shortage Contingency Plan

The City’s Water Shortage Contingency Plan was originally prepared to comply with AB 11x (1991). The bill required every urban water supplier to file a plan due to the worsening 1986-1992 drought.

The City has several options for meeting future water demands, including increased deliveries of local groundwater, increased deliveries of imported water, evaluating recycled water, and supporting water demand management programs. This has allowed the City, to date, to meet demands in spite of the prior drought conditions. Water shortages can be triggered by a hydrologic limitation in supply (i.e., a prolonged period of below-normal precipitation and runoff), limitations or failure of supply and treatment infrastructure, or both. Hydrologic or drought limitations tend to develop and abate more slowly, whereas infrastructure failure tends to happen quickly and relatively unpredictably.

Drought periods going back to 1929 have caused pumping levels to decrease, however there never has been a necessity to implement mandatory restrictions of water use. More efficient use of water was

32 City of Santa Paula, Santa Paula Municipal Code, Ordinance 993, sec. 52.038—Water Waste.

33 City of Santa Paula, Santa Paula Municipal Code, Ordinance 1223, ch. 59—Landscape Water Conservation Standards Ordinance (December 2009).

encouraged during the 1976 to 1977 period. An even greater awareness of water conservation occurred during the 1987 to 1992 drought. This increased awareness resulted in more efficient use of water.

Additional supply reductions could be caused by regional power outage, terrorist activity, earthquake, tsunami or other significant meteorological event. The City prepared an Emergency Response Plan (2004) which provides details of emergency responses for numerous significant events that may affect the City's water system.

Reductions in Santa Paula Basin Production Required by the Stipulated Judgment

According to the Judgment if it is found that the safe yield of the Santa Paula Basin is less than the total pumping allocations, then the pumping allocations shall be reduced. The Judgment specified that reductions in pumping will be required in the order of priority specified in **Table 4, Water Shortage Contingency—Rationing Stages to Address Water Supply Shortages**.

Table 4
Water Shortage Contingency—Rationing Stages to Address Water Supply Shortages

Stage	Water Supply Conditions
1	All uses in excess of the pumping allocations will be cut back to the approved allocations
2	Cumulative pumping allocation of the Santa Paula Basin Pumpers Association (SPBPA) will be reduced by 500 af annually. This reduction will reflect reasonable conservation that can be achieved. The SPBPA will determine how a reduction in its cumulative allocation will be implemented
3	Pumping allocation of the City of San Buenaventura shall be reduced to 1,141 af per year. This allocation reflects the City of San Buenaventura's historical maximum annual production prior to the Judgment
4	The remaining pumping allocations of all parties to the Judgment will be further reduced simultaneously. The SPBPA will reduce their total annual allocations by 2,000 af. The City of San Buenaventura will reduce their total annual allocations by 500 AF
5	The City of San Buenaventura will cease pumping from the Santa Paula Basin
6	The remaining pumping allocations of the SPBPA will be reduced by the amount required to bring production into balance with the revised safe yield of the Santa Paula Basin

Source: City of Santa Paula, 2016 UWMP Update (August 2017), 17–18.

Proposed Water Demand Reduction Program

The City is establishing a water demand reduction program for worst-case planning purposes consisting of the implementation of a five-stage water demand reduction program. Stage 1 would impose a voluntary 10 percent water demand reduction goal, Stage 2 would impose a 20 percent mandatory reduction goal, and Stage 3 would impose a 30 percent mandatory reduction goal, Stage 4 would impose a 40 percent mandatory reduction goal, and Stage 5 would impose a 50 percent mandatory reduction

goal. Each stage would be implemented as needed based on actual or anticipated supply reductions. The City's Public Works Director would monitor water supplies and demands on a daily basis, which would allow the City to determine the effects of reductions on water production within the system. If evidence of a shortage exists, the Public Works Director would determine the extent of the severity and recommend the applicable stage. The Public Works Director would notify the City Council of the water supply situation, and the Council would be responsible for ratifying the proposed measures.

Proposed specific water demand reduction measures and triggering mechanisms for each stage are listed in the Final 2016 UWMP Update and presented below.³⁴

Stage 1: 10 Percent Voluntary Reduction—Supply Watch

Stage 1 would be implemented when 10 percent reduction in water production capacity (or supplies) occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. All restrictions during Stage 1 are voluntary. The goal for Stage 1 is a 10 percent reduction in water demand. Measures to be implemented during this stage include but are not limited to the following:

- City to communicate to the customers through press releases, brochures, mailings, and/or water bills the need to voluntarily conserve water and the many ways possible to conserve without affecting their overall lifestyles.
- Water customers requested to voluntarily limit the irrigation of landscaped areas.
- Water customers requested to voluntary limit nonessential water use. Nonessential water used defined as:
 - Use of water to wash any motor vehicle, motorbike, airplane, or other vehicle.
 - Use of water to wash down sidewalks, walkways, driveways, parking lots, tennis courts, or other hard-surfaced areas.
 - Use of water to wash down buildings or structures for purposes other than immediate fire protection.
 - Flushing gutters or permitting water to run or accumulate in any gutter or street.
 - Use of water to fill, refill, or add to any outdoor or indoor swimming pools, or Jacuzzi-type pools.
 - Use of water in a fountain or pond for aesthetic or scenic purposes except where necessary to support aquatic life.
 - Failure to repair a controllable leak within a reasonable period after having been given notice directing the repair of such leak.

34 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 93.

Stage 2: 20 Percent Mandatory Reduction—Supply Caution

Stage 2 would be implemented when up to a 20 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. All restrictions in Stage 2 are mandatory. The goal for Stage 2 is 20 percent reduction in City customer water demand. Measures to be implemented during this stage include but are not limited to the following:

- Continue to maintain Stage 1 measures; however, they become mandatory in Stage 2.
- City to mail information to water customers regarding the importance of significant water use reductions.
- Assess a monetary fee to repeat offenders of water demand reduction measures.
- Prohibit watering landscape between 8:00 AM to 6:00 PM.
- All restaurants are prohibited from serving water to patrons except upon request of the patron.
- Perform an evaluation of Stage 1 water conservation measures and implement those not completed. Public Works Director to report to the City Council as appropriate.
- Appoint a Water Conservation Coordinator. This can be an individual already working for the City with related duties.

Stage 3: 30 Percent Mandatory Reduction—Supply Warning

Stage 3 would be implemented when up to a 30 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or other event. The goal for this stage is 30 percent reduction in City customer water demand. Measures to be implemented during this stage include but are not limited to the following:

- Continue to maintain measures included in Stages 1 and 2.
- Landscape irrigation by means of hand-held hoses, hand-held buckets, soaker hoses, drip irrigation, hose-end sprinklers, or permanently installed automatic sprinkler systems are limited to twice per week. Landscape irrigation by grey water and recycled water authorized.
- Perform an evaluation of Stage 2 water conservation measures and implement those not completed. Public Works Director to report to the City Council as appropriate.

Stage 4: 40 Percent Mandatory Reduction—Supply Danger

Stage 4 would be implemented when up to a 40 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or another event. All restrictions in Stage 4 are mandatory. The goal for Stage 4 is 40 percent reduction in City customer water demand. Measures to be implemented during this stage include but are not limited to the following:

- Continue to maintain measures included in Stages 1 to 3.
- Landscape irrigation by means of hand-held hoses, hand-held buckets, soaker hoses, drip irrigation, hose-end sprinklers, or permanently installed automatic sprinkler systems are limited to once per week. Landscape irrigation by grey water and recycled water authorized.
- Perform an evaluation of Stage 3 water conservation measures and implement those not completed. Public Works Director to report to the City Council as appropriate.

Stage 5: 50 Percent Mandatory Reduction—Supply Critical

Stage 5 would be implemented when up to a 50 percent reduction in water production capacity occurs or is anticipated. This reduction could be due to fire, earthquake, system failures, water quality contamination, or another event. All restrictions in Stage 5 are mandatory. The goal for Stage 5 is 50 percent reduction in City customer water demand. Measures to be implemented during this stage include but are not limited to the following:

- Continue to maintain measures included in Stages 1 to 4.
- Landscape irrigation shall be prohibited except by grey water and recycled water.
- Perform an evaluation of Stage 4 water conservation measures and implement those not completed. Public Works Director to report to the City Council as appropriate.
- Consider implementing a customer water allocation based on a yearly average for metered services. For those users who exceed their allocation, impose a 25 percent fee for the excess water demand (based on prior month's usage). Install a flow restrictor on meter for repeat offenders of excessive use.
- All water use not required for health and safety is prohibited.

3.0 WATER SUPPLY ASSESSMENT

A WSA is required to identify and describe the water supply sources of the PWS that will serve the project.

State Water Code Section 10910(d) requires a WSA to include identification of any existing SWP water, water rights, or water service contracts relevant to the identified water supply for the proposed Project. A complete discussion of SWP source and Table A allocations is provided, as well as a description of the quantities of water received in prior years by the PWS is also to be provided.³⁵

3.1 IDENTIFICATION OF WATER SOURCES

3.1.1 Primary Water Source

The City of Santa Paula will provide water service to the proposed Project.³⁶ The City currently has secured water rights from two sources: groundwater allocation from the Santa Paula Basin and a surface water wheeling agreement with the Canyon Irrigation Company. Surface water from Santa Paula Creek was a major source of potable water supply for the City's service area until wells were drilled into the Santa Paula Basin to augment the supply from Santa Paula Creek. Currently the Santa Paula Basin is the City's sole source of water supply.

3.1.2 Analysis of Water Supply

Groundwater

As previously stated, the City of Santa Paula has been dependent primarily on groundwater as a source of domestic water supply. Groundwater is also used to supply water for crop irrigation and commercial and industrial uses within the City.

Water Code Section 10910 (f) requires additional information when a groundwater basin is cited as the water supply source for a project including a description of the basin, the rights of the PWS to use the basin, the overdraft status of the basin, any past or planned overdraft mitigation efforts, historical use of the basin by the PWS, projected use of the basin by the project, and a sufficiency analysis of the basin.

Description of the Aquifer

The Santa Paula Basin is a subbasin of the larger Santa Clara River Valley Groundwater Basin. Other subbasins within the Santa Clara River Valley Groundwater Basin include the Fillmore, Piru, Mound, and Oxnard Subbasins. Each of the five subbasins is an alluvial basin recharged, in part, by the Santa Clara

³⁵ California Water Code, sec. 10910–10915, 10910(b).

³⁶ City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

River.³⁷ For the sake of simplicity, and because the subbasins are subject to varying forms of management, this WSA refers to the Santa Paula Basin as basin rather than subbasin.

The Santa Paula Basin underlies the City of Santa Paula and unincorporated areas to the southwest of the City within the Santa Clara River Valley. The basin is bounded by the impervious rocks of the Topatopa Mountains to the north, impervious rocks of Oak Ridge and South Mountain, the Oak Ridge fault, and Saticoy fault on the south.³⁸ The eastern edge of the basin is marked by a bedrock constriction, with the boundary placed at the position of maximum rising water. The western boundary separates the Santa Paula basin from the Mound and Oxnard Subbasins, with the western boundary placed where there is a distinct change in the slope of the water table. Ground surface elevations range from 140 feet above sea level in the west to about 1,000 feet above sea level along the Santa Paula Creek drainage. The Santa Clara River and Santa Paula Creek drain the valley westward toward the Pacific Ocean. Average annual precipitation ranges from 14 to 18 inches.

The principal fresh water-bearing strata of the Santa Paula Basin are the Pleistocene San Pedro Formation, Pleistocene river deposits of the ancient Santa Clara River, alluvial fan deposits shed from the uplifted mountain blocks, and recent river and stream sediments deposited locally along the Santa Clara River and its tributaries. These water-bearing sediments are underlain by relatively impermeable Pliocene and older units. The sediments of the basin have been warped into a syncline that is oriented in a northeast-southwest direction along the center of the basin. To the east, the Santa Paula basin is in hydraulic connection with the Fillmore basin, its' primary source of recharge. To the south, the Oak Ridge fault forms a partial barrier to groundwater movement. On the north, the portion of the aquifer represented by the San Pedro Formation is exposed in an outcrop along the Sulphur Mountain foothills.

The western boundary of the Santa Paula Basin is more complex, with local uplift, artesian conditions, and faults mapped by some investigators. Although there is general agreement that there is hydraulic connection between Santa Paula Basin, the Oxnard Forebay Basin, and the Mound Basin, the degree of connection is uncertain. The Santa Paula Basin has a storage capacity of approximately 754,000 af. The basin is estimated to be approximately 90 percent full, with about 675,000 af of groundwater in storage.³⁹

37 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118 Update 2003 (October 2003).

38 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118 Update 2003 (October 2003).

39 California Resources Agency, DWR, *California's Groundwater*, Bulletin 118, Santa Clara River Valley Basin: Santa Paula Subbasin (February 2004).

As reported by the Ventura County Watershed Protection District, the 2016 total precipitation for Santa Paula was 9.88 inches. The accumulated total rainfall to date for 2017 is 25.66, approximately 142.2 percent of normal (18.05 inches).⁴⁰

The Santa Paula Basin is recharged by percolation of surface flow from the Santa Clara River, Santa Paula Creek, and other minor tributary streams, as well as subsurface flow from the Fillmore Basin.⁴¹ Some of the surface flow in the Santa Clara River originates as release from Lake Piru and contains natural runoff of precipitation and imported SWP water, it is important to note that there has not been a release from Lake Piru in the last year due to drought.⁴² Control of the quagga mussel is another limiting factor for water release.⁴³ Percolation of precipitation and unused irrigation waters provide additional recharge. Groundwater in the Santa Paula Basin generally flows toward the southwest.⁴⁴

Groundwater Extraction

While there have been periodic declines in water levels within the Santa Paula Basin, it is not considered to be in a state of overdraft. The “assumed initial yield” of the basin is 33,500 afy. Under the terms of the Judgment, a 7-year study period (1996 to 2003) formed the basis for determining actual safe yield. After 7 years, water use data was analyzed to refine the assumed initial yield of 33,500 afy. United Water Conservation District prepared a report on the status of the Santa Paula Basin.⁴⁵ The UWCD Report concluded that the average groundwater production during the period 1983 to 1995 was 26,000 af. According to the Report, no overdraft was observed at the documented production rates over the period 1983 to 1995. The Report also identified that during the period 1997 to 2003 parties to the Judgment had cumulatively produced 42,111 af less than their combined total allocation for this period. Yield of the Santa Paula Groundwater Basin appeared to be no less than 26,000 afy.⁴⁶ Approximately 12,000 acres or agricultural land is irrigated by groundwater in the Santa Paula Basin. Groundwater extractions are reported on the semiannual groundwater production statements filed with UWCD’s Finance Department by individual pumpers. These production statements constitute all known pumping from the Santa Paula

40 Ventura County Watershed Protection District, Watershed Resource and Technology Division, *Automated Daily Rainfall Report: Current Rain Totals and Percent of Normal* (June 9, 2015).

41 United Water Conservation District (UWCD), *Combined 2013 and 2014 Santa Paula Basin Annual Report*, professional paper 2016-01, prepared by the Santa Paula Basin Technical Advisory Committee (January 2016).

42 UWCD, Groundwater Resources Department, *Groundwater and Surface Water Conditions Report—2013* (May 2014).

43Carolynn S. Culver, A. Kimo Morris, and Michael Anghera, *Dive Assessment of the Quagga Mussel Infestation at Lake Piru* (February 2014), <http://www.unitedwater.org/images/stories/Lake-Piru/Quagga-Mussel/DiveAssessmentRptPiruFeb2014.pdf>.

44 State of California, Resources Agency, Department of Water Resources, *California Groundwater*, Bulletin 118 Update 2003, October 2003.

45 UWCD, *Santa Paula Basin 2003 Annual Report*, <https://www.unitedwater.org/images/stories/Resource-Conservation/GW-Management/Groundwater-Hearing/Exhibits/U62%20-%20Santa%20Paula%20Basin%202003%20Annual%20Report.pdf> (November 2004).

46 UWCD, *Santa Paula Basin 2003 Annual Report*, <https://www.unitedwater.org/images/stories/Resource-Conservation/GW-Management/Groundwater-Hearing/Exhibits/U62%20-%20Santa%20Paula%20Basin%202003%20Annual%20Report.pdf> (November 2004).

basin. In calendar year 2011, 24,202 af of groundwater was extracted from the Santa Paula basin. A summary of the 2011 extractions is shown in **Table 5, Summary of Recent Groundwater Extractions**. The 2014 reported groundwater extractions of 27,437 af were greater than the average for the period of record (1980 to 2014) average of 25,771 af.⁴⁷ In addition to this information, the Urban Water Management Plan provides supplemental groundwater pumping data for the City of Santa Paula as a whole, including projected pumping figures ongoing until 2040.

Table 5
Summary of Recent Groundwater Extractions

Pumper	2013 Extractions (af)	2014 Extractions (af)
City of San Buenaventura	901	791
Santa Paula Basin Pumpers Association (SPBPA) Pumpers with Individual Party Allocations (adjusted extractions)	25,530	26,610
SPBPA Pumpers with Individual Party Allocations (reported extractions)	25,554	26,613
Nonstipulated Parties	14	17
De Minimis Pumpers	16	16
Total Production		
Adjusted by SPBPA	26,461	27,434
Reported to UWCD)	26,485	27,437

Source: United Water Conservation District, Combined 2013 and 2014 Santa Paula Basin Annual Report, professional paper 2016-01, prepared by Santa Paula Basin Technical Advisory Committee (January 2016).

Note: af = acre-feet.

Long-term, gradual declines in water levels have been observed in many parts of the basin. These declines have not been rapid, and are relatively small; however, they may be indicative of changing hydrologic conditions in the basin that warrant further monitoring and, if the trend persists, the development of alternative basin management strategies.

Water production for the period 2005 to 2015 is presented in **Table 6, City of Santa Paula Water Production**. According to City Water Division staff, total water produced in 2010 was 4,455 af, and in 2015 was 3,907 af. City water production in 2005 was 5,047 af (592 af greater when compared to 2010, and 1,140 af greater when compared to 2015). The highest annual water demand for the period 2005 to 2015 was recorded in 2007 with 5,347 af produced. Groundwater production during 2011 was less than the average in recent years, and precipitation was above average. This resulted in water level rises or stable water levels from 2010 to 2011.

⁴⁷ UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

Table 6
City of Santa Paula Water Production

Year	Groundwater Production from City Wells (af)
2005	5,047
2006	5,143
2007	5,347
2008	5,290
2009	4,902
2010	4,455
2011	4,473
2012	4,721
2013	4,998
2014	4,648
2015	3,907

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), 64, Table 4-3.

Note: afy = acre-feet per year.

The City's current groundwater supply includes production from five active wells. Domestic water is pumped from Well Nos. 1-B, 11, 12, 13, and 14. and **Table 7, City of Santa Paula Groundwater Resources 2015**, summarizes the City's groundwater resources by well, including current status, well capacity, and 2015 production. The City no longer operates Wells Nos. 2, 8, and 9 due to a history of elevated nitrate levels in water extracted from these sources. These wells were sold to an agricultural enterprise.⁴⁸

Table 7
City of Santa Paula Groundwater Resources 2015

Well No.	Status	Capacity (gpm)	2015 Production (af)
1-B	Active	812	104
11	Active	1,203	392
12	Active	1,179	1,527
13	Active	2,042	378
14	Active	3,375	1,507
Total			3,908

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), 63, Table 4-2.

Notes: gpm = gallons per minute; af = acre-feet.

⁴⁸ City of Santa Paula, Final UWMP 2016 Update (August 2017), 66.

Pumping Allocations

The Judgment governs groundwater production on a 7-year rolling average, which allows parties to produce more or less allocation in any particular year so long as their rolling 7-year average does not exceed their allocation. The average is a rolling average, in 2014 the average extraction amount will be based on the period from 2008 to 2014.

The total combined pumping allocations of the SPBPA (party and nonparty) and the City of San Buenaventura (Ventura) are now at 30,771.6 afy. Amendments to the Judgment in 2010 provided the Santa Paula Basin Pumpers Association with an additional 280.2 af of allocation, which was granted to pumpers that were not previously parties to or identified within the Judgment. The current allocations were calculated and granted using the lesser of the following two options: (1) the average production reported to UWCD from calendar years 2002 through 2008; or (2) the average production reported to UWCD prior to the Judgment (1989 to 1995). Additionally, a total of 40.7 af of SPBPA's allocation is held in "reserve" by the SPBPA for nonparty pumpers have declined to stipulate and become parties to the Judgment. In addition, the City of Ventura has acquired 225.8 af of prior SPBPA allocation through water allocation transfers to the City.⁴⁹

The SPBPA's calendar year 2013 and 2014 allocations were 27,545.8 afy (excluding nonparties) distributed among its members with a 7-year average surplus of 2,123.8 af from pumping below the allocation. The City of San Ventura's 2013 and 2014 allocations were 3,000 af plus 225.8 af of prior Santa Paula Basin Pumpers Association allocation with a 7-year average surplus of 2,293.6 af from pumping below its allocation.⁵⁰

The Judgment also allows for de minimis production by landowners that are not allocated an Individual Party Allocation, which allows these landowners to produce groundwater for uses on their overlying property so long as such use does not exceed 5 aft in any particular year. In calendar years 2013 and 2014, there were five de minimis producers.⁵¹

Historical Groundwater Levels

Historically, water level trends in the Santa Paula basin were summarized through the use of a Groundwater Level Index. The index includes nine key wells in the basin that were selected for their relatively long record and geographic distribution across the basin. The following observations were made of the Groundwater Level Index graph:

49 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

50 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

51 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

- 1983 to drought period of 1990 and 1991: declining index that directly mimics the declining cumulative departure from average precipitation trend;
- 1991 to 1998: characterized as a wetter period than previous with an increasing index and cumulative departure from average precipitation;
- 1998 to 2011: a net positive cumulative departure from average precipitation during this period with partial rebounds in the groundwater level index during particularly wet water years 2005 and 2011;
- 2011 to 2014: a steep decline in groundwater level index, corresponding to below-average precipitation since water year 2012, including the driest back-to-back water years 2013 and 2014 recorded since 1898 and 1899.

Since 2005, there have been 3 above-average precipitation years, including 2011, and 5 below-average precipitation years. In general, the trend in the Groundwater Level Index tends to follow the trend in the cumulative departure from average precipitation curve, that is, trending down during drier-than-average periods and trending up during wetter-than-average periods.⁵² As an update, since the year 2012, rainfall has declined to drought conditions, then increased again in 2015. Total annual precipitation data for the Santa Paula area from 2010 to 2016 is presented in **Table 8, Annual Precipitation Totals: 2010–2016**.

Table 8
Annual Precipitation Totals: 2010–2016

Calendar Year	Total Annual Precipitation Station 173A (in.)	Total Annual Precipitation Station 245B (in.)	Total Annual Precipitation Station 018B (in.)
2010	27.09	(18.48*)	—
2011	31.76	25.76	27.35
2012	12.55	9.85	6.52
2013	8.35	5.96	9.38
2014	9.67	6.15	—
2015	NA	11.22	NA
2016	NA	9.88	NA

Source: Exported from Ventura County Watershed Protection District Hydrologic Data Server, Annual Rainfall Totals. Data from Station 245B (Santa Paula-Wilson Ranch), #173A (Santa Paula-Ferndale Ranch), and #018B (Santa Paula-Limoneira Ranch)

**Data from Station #245A (Santa Paula-UWCD)*

Historical Groundwater Extraction

The historical groundwater extractions for the Santa Paula basin are shown in **Table 9, Historical Santa Paula Basin Groundwater Extractions**. The extractions vary from a high of 33,453 af in 1990 during the peak of the last drought to a low of 16,710 af during the very wet year of 1983. The extractions during

⁵² UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

2010 (a wet year) were reportedly 4,322 aft below what was extracted in 2014, which received about one-third less water during the rainfall year.

Table 9
Historical Santa Paula Basin Groundwater Extractions

Calendar Year	Groundwater Extractions (acre-feet)	Calendar Year	Groundwater Extractions (acre-feet)	Calendar Year	Groundwater Extractions (acre-feet)
1980	26,820	1992	24,355	2004	27,306
1981	27,545	1993	26,998	2005	24,700
1982	22,925	1994	26,244	2006	24,830
1983	16,710	1995	25,042	2007	28,077
1984	29,455	1996	26,008	2008	26,686
1985	26,533	1997	28,961	2009	25,820
1986	21,617	1998	21,622	2010	23,115
1987	24,852	1999	27,700	2011	24,202
1988	25,370	2000	26,798	2012	25,824
1989	29,362	2001	22,530	2013	26,485
1990	33,453	2002	27,259	2014	27,437
1991	27,056	2003	22,280	Average	25,695

Source: United Water Conservation District, Combined 2013 and 2014 Santa Paula Basin Annual Report, professional paper 2016-01, prepared by the Santa Paula Basin Technical Advisory Committee (January 2016).

While there have been periodic declines in water levels within the Santa Paula Basin, members of the SPBPA agree that the Santa Paula Basin is not in a state of overdraft. The parties agreed that the “assumed initial yield” of the basin is 33,500 afy. Under the terms of the Judgment, a 7-year study period (1996 to 2003) formed the basis for determining actual safe yield. After 7 years, water use data was analyzed to refine the assumed initial yield of 33,500 afy. United Water Conservation District prepared a report⁵³ on the status of the Santa Paula Basin. The UWCD report concluded that the average groundwater production during the period 1983 to 1995 was 26,000 af. According to the Report, no overdraft was observed at the documented production rates during the period 1983 to 1995. The Report also identified that during the period 1997 to 2003, parties to the Judgment had cumulatively produced 42,111 af less than their combined total allocation for this period. Yield of the Santa Paula Groundwater Basin appeared to be no

53 UWCD, *Santa Paula Basin 2003 Annual Report*, <https://www.unitedwater.org/images/stories/Resource-Conservation/GW-Management/Groundwater-Hearing/Exhibits/U62%20-%20Santa%20Paula%20Basin%202003%20Annual%20Report.pdf> (November 2004).

less than 26,000 afy.⁵⁴ However, the Report did not recommend a change in the basin’s yield. The UWCD is conducting an analysis to update the current safe yield of the basin with completion anticipated in 2016.⁵⁵

Aquifer Adjudication

Disagreement over the issue of safe yield of groundwater between the UWCD and other parties using water from the Santa Paula Basin, including the City of Santa Paula and the City of San Buenaventura (Ventura), led to the adjudication of groundwater rights within the Santa Paula Basin in 1996. A stipulated judgment was agreed to by the parties, and after review and approval by the Ventura County Superior Court, was entered as a final judgment (“Judgment”) to adjudicate groundwater rights within the basin. In summary, the Judgment adjudicates groundwater rights, regulates individual and collective pumping, provides for basin management through a Technical Advisory Committee (TAC), and reserves jurisdiction in the Superior Court to resolve future disputes and provide for supplementary orders as necessary.⁵⁶

The Judgment allocates the use of groundwater in the Santa Paula Basin between the City of Ventura and the SPBPA, which is a consortium of water users in the Santa Paula area, including the City and farming interests. UWCD is also a party to the Judgment. Although UWCD does not produce water from the Santa Paula Basin, the basin is located within its boundaries, and UWCD is authorized to engage in groundwater management and replenishment activities and to act to protect water supplies that are of common benefit to the lands and residents within UWCD.⁵⁷

Currently, the SPBPA possesses a collective groundwater right allocation of 27,551 afy that it holds in trust for its membership. The Judgment further subdivides the collective 27,515 afy allocation as sub-allocations to each of the SPBPA members and a few nonparties.⁵⁸ The allocations and sub-allocations for 2016 are summarized in **Table 10, Santa Paula Basin Water Allocations (2016)**.

Pursuant to the terms of the Judgment and recent acquisitions, the City of Santa Paula has a sub-allocation of 5,560 afy available for urban uses.⁵⁹ However, the City transferred 673 afy to Canyon Irrigation Company in January 1998. This amount could be adjusted if the terms of the Judgment are modified, or if

54 UWCD, Santa Paula Basin 2003 Annual Report, <https://www.unitedwater.org/images/stories/Resource-Conservation/GW-Management/Groundwater-Hearing/Exhibits/U62%20-%20Santa%20Paula%20Basin%202003%20Annual%20Report.pdf> (November 2004).

55 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 62.

56 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 12.

57 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 12.

58 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 61.

59 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), Appendix D, Table 6-9 Retail: Water Supplies—Projected.

the City acquires additional water rights from areas subject to development or from other users within the SPBPA.⁶⁰

Table 10
Santa Paula Basin Water Allocations (2016)

Water User	Allocation (afy)
Santa Paula Basin Pumpers Association	
City ^a	5,560
Canyon Irrigation Company	673
Farmers Irrigation Company	9,913
Limoneira	3,549
Alta Mutual Water Company	763
All Other SPBPA Users ^b	7,093
Subtotal SPBPA	27,551
City of San Buenaventura	3,261
Unallocated Reserve	2,688
Total	33,500

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 4-1, p. 62.

Note: afy = acre-feet per year.

^a City of Santa Paula, Final UWMP 2016 Update (August 2017), Appendix D, Table 6-9 Retail: Water Supplies—Projected.

^b Includes Bender and McGaelic Farms.

The City of Ventura has an allocation to pump on average 3,261 afy under a Class II Emergency. A long-term drought situation affecting surface water supplies would be considered a Class II Emergency. In addition, the Judgment also provides for an unallocated reserve of 2,688 afy.⁶¹

Water on the Project Site used for irrigation has been historically supplied from on-site wells. All wells are listed in the Judgment as being within the Santa Paula Basin. Withdrawals from all of the wells have been accounted for under the Santa Paula Basin Judgment. Currently, the members of the SPBPA have a cumulative allocation to pump on average 27,515 afy.⁶² The Judgment sets forth an “assumed initial yield” of the basin at 33,500 afy, subject to modification if credible technical information demonstrates a need for a change. The Judgment also set forth a 7-year study period to evaluate the appropriateness of the assumed initial basin yield of 33,500 afy, which began on January 1, 1996. The average is a rolling average; thus, for 2011, the average extraction amount was based on the period from 2005 to 2011. After the 7-

60 City of Santa Paula, Final UWMP 2016 Update (August 2017), 61.

61 City of Santa Paula, Final UWMP 2016 Update (August 2017), 62, Table 4-1.

62 City of Santa Paula, Final UWMP 2016 Update (August 2017), 18.

year study period, UWCD and the other members of the TAC collaborated to produce a study of the basin's groundwater conditions and the implications for the initial 33,500 afy yield allocation.⁶³

Groundwater production during 2014 was greater than the average in recent years, and precipitation was less than average. Production has remained less than the pumping allocations.⁶⁴ The observed decline in groundwater levels has been a matter of some concern, but the decline has not been abrupt and further monitoring and research is in process to determine the cause of the decline and the most appropriate and cost-effective remedial action should this trend continue without stabilizing. More in-depth monitoring and research is underway to correlate annual basin recharge, discharge, and water level changes used to understand and determine the basin status.

UWCD has historical groundwater elevation data for 150 wells, 90 of which extensive records exist.⁶⁵ The other wells either have been destroyed or are no longer being monitored. Recorded groundwater level highs in 2009 and 2010 are below the recorded groundwater level highs seen in 1998. From 1998 to 2009, 47 wells show groundwater level declines, 1 well shows a groundwater level rise, 1 well shows no change in groundwater level, and 26 wells have no groundwater level measurements in 1998 or 2009. From 1998 to 2010, 49 wells show groundwater level declines, 1 well shows a groundwater level rise, 2 wells show no change in groundwater levels, and 23 wells have no groundwater level measurements in 1998 or 2010.

Since 1998, the basin has experienced only two significant wet years: 2001 at 26.54 inches of precipitation, and 2005 at 40.54 inches of precipitation.⁶⁶ The next highest precipitation years were in 2011 at 23.80, 2003 at 19.94 inches, and at 2010 at 19.33 inches. The groundwater level declines in the basin since 1998 are in response to this relatively dry period. If the basin is operating within a yield, groundwater levels should recover to 1998 levels or at least to 2005 levels with the onset of a wet period.⁶⁷

The estimated subsurface outflow was reported by DWR in Bulletin 118 to be 7,200 afy. Average annual extraction was estimated to be 21,612 afy in Bulletin 118.⁶⁸ Based on the most recent data from 2003, the average annual pumping rate of approximately 26,000 afy for the period from 1983 through 1995 is considered sustainable.⁶⁹ Furthermore, it is the opinion of the Santa Paula Technical Advisory Committee that the yield of the basin is greater than the average annual production of 26,000 af. Fluctuations in

63 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield*, prepared for Santa Paula Basin Technical Advisory Committee (July 2003).

64 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016)

65 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016)

66 UWCD, *2011 Santa Paula Basin Annual Report*, professional paper 2012-001 (September 2013).

67 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016)

68 California Department of Water Resources, *California's Groundwater Bulletin 118* (February 2004).

69 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield*, prepared for Santa Paula Basin Technical Advisory Committee (July 2003).

groundwater levels correlate with precipitation trends, and long-term observations suggest that the basin was not in a state of overdraft.⁷⁰ However, the TAC recommended that the yield remain at 33,500 afy.⁷¹

Water Code section 10631 requires that this WSA (a) identify whether the DWR has determined, in the most recent official department bulletin, whether the Santa Paula Basin is presently in a state of overdraft or at risk of becoming overdrafted under current conditions; and (b) provide an analysis of the sufficiency of the basin's groundwater supply to meet the projected water demands of the of the proposed Project. DWR's most recent assessment of conditions in the Santa Paula Basin was issued as part of DWR's Bulletin 118, Update 2003, which does not state that any portion of the Santa Paula Basin is presently, or was previously, in a state of overdraft.⁷² Bulletin 118 does, however, report as follows:

Hydrographs from the Santa Paula Subbasin show a range of up to 55 feet in water level elevation since 1975. The hydrographs show an annual cyclic rise and fall of water level of about 20 feet with longer-term variations apparently following precipitation cycles. The subbasin was at a low level in 1991 and 1992, then recovered by 1994 and has remained stable since then.

A basin yield study by experts for the City of Ventura, SPBPA, and UWCD suggests that the safe yield of the basin is probably near the historic pumping amount.⁷³

The 2013 and 2014 Combined Annual Report for the Santa Paula Basin concluded that the majority of the wells monitored in the Santa Paula basin have experienced a gradual groundwater level decline; however, the changes vary from well to well and period to period with some wells showing a slight increase in groundwater levels, but the majority of wells showing a modest decline in water levels."⁷⁴

As the forgoing discussion illustrates the Santa Paula Basin is comprehensively managed by the TAC, UWCD, and the reserved jurisdiction of the Court, as provided in the Judgment. The basin's water tables have stabilized and appear to be sufficient to support the allocation of groundwater rights set forth within the Judgment. Moreover, groundwater production rights are defined and limited as a collective whole and in relation to each of SPBPA's individual members. This confinement and definition of the groundwater rights existing within the Santa Paula Basin provides additional certainty for the long-term reliability of the groundwater supply from the basin.

70 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

71 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

72 State of California, Resources Agency, Department of Water Resources, *California Groundwater*, Bulletin 118, Update 2003 (October 2003).

73 Santa Paula Basins Expert Group, *Investigation of Santa Paula Basin Yield* (July 2003).

74 UWCD, *Combined 2013 and 2014 Santa Paula Basin Annual Report* (January 2016).

Groundwater Allocation Transfers from Developed Properties

In accordance with City Municipal Code section 52.021 (Water Resource In-Lieu Fee Ordinance No. 1058), landowners or developers are required to transfer their groundwater rights to the City as a condition of project approval. The intent of the Ordinance is to ensure that new urban land users provide sufficient water resources for their needs without taxing existing users. If the associated water rights are not sufficient to serve the proposed development's anticipated water use (as determined by the City), or if the water rights are held by another entity who cannot or will not dedicate those rights to the City, the developer must purchase additional water rights and dedicate them to the City or pay a water resource in-lieu fee to the City. This ordinance applies to water rights within City limits as well as parcels outside City limits who must receive service from the City Water Enterprise.

Table 11 Existing and Potential City Water Resources and Demand 2016 UWMP contains a summary of existing and potential water resources for the City. The City identified 1,925 afy of potential groundwater allocations that could be transferred to the City from overlying landowners within the City General Plan boundary. One property includes a reserve of 110 afy for agricultural uses. Thus, the maximum potential net groundwater transfer is 1,815 afy (further reduced to 1,738 afy in 2017 due to recent transfers). These transfers will occur in phases during the next 20 years as development occurs within the City. Transfers of allocations will need to be reported to the Technical Advisory Committee in accordance with the Judgment. The SPBPA will then transfer the applicable number of memberships (allocations) when transfers are between association members; a membership is equal to 1 afy of groundwater allocation.⁷⁵

⁷⁵ City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 71.

Table 11
Existing and Projected City Water Resources and Demand (afy) 2016 UWMP

Supplies vs Demands	2015***	2017*	2020	2025	2027*	2030	2035	2037*	2040
Existing Supplies									
City Wells ^a	5,483	5,514	5,560	5,560	5,560	5,560	5,560	5,560	5,560
Santa Paula Creek ^b	500	500	500	500	500	500	500	500	500
Subtotal	5,983	6,014	6,060	6,060	6,060	6,060	6,060	6,060	6,060
Projected Supplies									
Groundwater Allocation Transfers ^c	454	348**	348	695	834	1,043	1,390	1,529	1,738
Purchased Groundwater Allocations ^d	200	100**	100	200	240	300	400	439	497
SWP ³	0	0	0	0	0	0	0	0	0
Recycled Water ^f	0	0	400	800	960	1,200	1,600	1,760	2,000
Subtotal	654	448	848	1,695	2,034	2,543	3,390	3,728	4,235
Total Projected Supplies	6,637	6,462	6,908	7,755	8,094	8,603	9,450	9,788	10,295
Existing Demands									
Current Potable Demands ^h	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630	3,630
Current Water Losses	277	277	277	277	277	277	277	277	277
Subtotal	3,907	3,907	3,907	3,907	3,907	3,907	3,907	3,907	3,907
Potential Demands									
New Potable Demands ^h	N/A	N/A	287	575	690	862	1,150	1,265	1,437
New Potable Water Losses ⁱ	N/A	N/A	14	29	35	43	57	63	72
New Recycled Demands ^f	N/A	N/A	380	760	912	1,140	1,520	1,672	1,900
New Recycled Water Losses ⁱ	N/A	N/A	20	40	48	60	80	88	100
Subtotal	N/A	N/A	701	1,404	1,685	2,105	2,807	3,088	3,509
Total Estimated Demand (Potential + Existing Demand)	4,840	4,745	4,608	5,311	5,592	6,012	6,714	6,995	7,416

Project Demands as % of Total City Supply	0%	0.61%	0.57%	0.51%	0.49%	0.46%	0.42%	0.41%	0.39%
Difference (Supply less Demand)	1,797	1,717	2,300	2,444	2,502	2,591	2,736	2,793	2,879

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), 11.

* Projected data.

** Data taken from 2020 data.

*** 2015 data taken from Final 2010 UWMP (June 2011).

Notes:

All values rounded to the nearest 1 acre-foot (af).

Santa Paula West Area Business Park Specific Plan would start construction in 2017 and be completed by 2027. Conservatively assumed full build-out Project Demand numbers in 2017.

afy = acre-feet per year.

^a The City's current allocation is 5,488 afy (California, 2011; Frank B. and Associates, 2016), updated in the 2016 UWMP to 5,560 afy 2016 UWMP Update (August 2017), Appendix D, Table 6-9 Retail: Water Supplies - Projected

^b The City currently wheels the 500 afy of surface water from Santa Paula Creek to Farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.

^c The City anticipates receiving 1,816 afy of groundwater allocation transfers via agricultural land development by 2040. For planning purposes, the 1,816 afy is distributed equally from 2020 to 2040. Note that the method for dividing up groundwater allocations through the years was done differently in the 2016 Draft UWMP than in the 2010 Final UWMP, where allocation transfers were achieved during four equal 5-year periods (approximately 454 afy per 5-year period).

^d The City anticipates purchasing 497 afy of additional groundwater allocations by 2040. For planning purposes, the 497 afy is distributed equally from 2020 to 2040.

^e For planning purposes, the City does not anticipate receiving SWP water during the period 2020-2040.

^f The City anticipates initiating a recycled water program by 2020. Estimate includes new community landscaped areas with irrigation, a potential golf course, and potential agricultural irrigation. It is anticipated that approximately 2,000 afy could be developed by 2040. For planning purposes, the 2,000 afy is distributed equally from 2020 to 2040.

^g Existing demand is from 2015 data and is made up of 2,106 af from single-family residential, 868 af, from multifamily residential, 493 af from commercial/institutional, 48 af from industrial, 49 af from landscape irrigation, 22 af from other, 44 af from sales to Middleroad Mutual Water Company, and 277 af from estimate losses.

^h City anticipates 2,808 afy of new potential residential, commercial institutional, industrial, and landscape development by 2040 for build-out of potential projects.

ⁱ Estimated at 5 percent of total new demands.

The 2016 UWMP Update anticipates that the City will acquire through allocation transfers 448 afy by 2020, 895 afy by 2025, 1,343 afy by 2030, 1,790 by 2035, and 2,235 afy by 2040.⁷⁶

Implementation of these water supply programs is anticipated to provide the City with sufficient water supplies to meet future water demand. As shown in **Table 11**, the potential water supplies available to the City exceed the estimated water demand at City build-out conditions.

Purchased Groundwater Allocations

In 2005, it was determined that there were 497 afy of potentially available groundwater allocations held by others within the Santa Paula Groundwater Basin boundary that were not being utilized). The City has the option to independently pursue the acquisition of groundwater allocations at any time in the future. The 2016 UWMP Update estimated that the City may purchase additional allocations of 348 afy by 2020, 695 afy by 2025, 1,043 afy by 2030, 1,390 by 2035, and 1,738 afy by 2040.⁷⁷

State Water Project Water

The SWP's California Aqueduct is owned and operated by DWR. Ventura County contracted for 20,000 afy of SWP water with 5,000 afy of that amount subcontracted to the UWCD. The UWCD has designated 2,198 afy of SWP water for use by the City.⁷⁸

DWR estimates it will be able to deliver 85 percent, or 3,563,951 af, of requested SWP water in 2017.⁷⁹ The estimated demands by SWP contractors for deliveries of Table A water, 4,172,000 af per year, is assumed to be the maximum delivery SWP delivery amount for the 2016 Delivery Capability Report. DWR considered several factors, including existing conditions, SWP operational constraints such as the conditions of the recent Biological Opinions for Delta Smelt, Salmonids and Longfin Smelt incidental take permit, and 2017 contractor demands. DWR may revise allocations if warranted by the year's developing hydrologic and water supply conditions.

Historical allocation made by the SWP for the state as a whole and for the Ventura County Watershed Protection District (WPD) are represented in the **Table 12, SWP Historical Deliveries: 2010–2017**.

76 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), Table 6-9.

77 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 11.

78 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 13.

79 Department of Water Resources, California State Water Project, "Notice to State Water Project Contractors No. 17-05: 2017 State Water Project Allocation—85 Percent" (April 14, 2017).

For planning purposes, the City does not anticipate directly receiving SWP water in the near future. However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Table 12
SWP Historical Deliveries: 2010–2017
(acre-feet)

Calendar Year	Percent Allocation	Total State Allocation	Ventura County WPD Approved Allocation
2010	50%	2,086,000	10,000
2011	80%	3,337,701	16,000
2012	65%	2,711,967	13,000
2013	35%	1,460,342	7,000
2014	5%	208,628	1,000
2015	20%	839,566	4,000
2016	60%	2,527,629	12,000
2017	85%	3,563,951	17,000

DWR, SWPAO – Water Deliveries, Notice to Contractors, Historical State Water Project Table A Allocations Calendar Year 2010–2017.
<http://www.water.ca.gov/swpao/deliveries.cfm>

Surface Water

The Santa Paula Creek has been and remains a valuable source of water for the City. The Creek has a drainage area of approximately 40 square miles⁸⁰. The City owned the rights to the first 12 cubic feet per second (5,386 gallons per minute) of flow within the Santa Paula Creek.⁸¹

Santa Paula Creek facilities are located off the east side of Highway 150 approximately 3.5 miles north of Highway 126. Water is diverted to a 27-inch concrete pipe and flows by gravity into the 500,000-gallon Canyon Reservoir. From the Canyon Reservoir water either flows by gravity or is pumped by each irrigation customer.⁸²

On 17 February 1998, the City entered into a lease and agreement with the Canyon Irrigation Company concerning the operation, maintenance, and capacity rights of the Canyon Irrigation System and associated surface and groundwater rights. Per the terms of the agreement⁸³, the City transferred: (1) its

80 Santa Paula Water Works, *Hydrogeologic Assessment of the Santa Paula Groundwater Basin*, prepared by Richard C. Slade & Associates (1995).

81 Santa Paula Water Works, *Water System Report* (1993).

82 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 67.

83 City of Santa Paula, *Lease and Agreement Regarding the Canyon Irrigation System Between City of Santa Paula and Canyon Irrigation Company*, 1998.

obligation to provide irrigation water service to the Canyon Irrigation System customers; (2) its financial obligation of implementing system maintenance and capital facilities replacement and repairs; (3) all real property and appurtenant facilities necessary for operation of the system; and (4) groundwater rights to the Santa Paula Basin of 673 af. Additionally, the City leased the full capacity of the Canyon Irrigation System and the exclusive right to divert surface water sources flowing in the Santa Paula Creek to the Canyon Irrigation Company. In accordance with the lease and agreement, the City will purchase an annual average of 500 afy of surface water from Santa Paula Creek (or, at the option of the Canyon Irrigation Company, water from other sources, which is surplus to the irrigation needs of its members), for a total of no less than 5,000 af during a 10-year period commencing February 17, 1998. During the subsequent 20-year period, the City has the right to continue to purchase an average of 500 afy of surplus water supplies. If available, the City may also purchase additional surplus water supplies beyond the 500 afy mentioned previously from the Canyon Irrigation Company throughout the next 30 years.⁸⁴

The City currently wheels the 500 afy of surface water from Santa Paula Creek to Farmers Irrigation Company, which uses the surface water in lieu of pumped groundwater, and the City gains 500 afy groundwater pumping credits in the Santa Paula Basin.⁸⁵

Recycled Water

Construction of the new Santa Paula Water Recycling Facility (WRF) was completed early 2010. The city of Santa Paula purchased the facility on May 1, 2015. The WRF has a permitted dry-weather capacity of 4.2 mgd and permitted wet-weather (also maximum) capacity of 8.0 mgd. The City WRF produces water that meets California Title 22 regulations for recycled water. At present, recycled water is available within the City of Santa Paula area however, there is no infrastructure. The 2016 UWMP estimated recycled water urban demand within the City (and adjacent areas) would be approximately 2,000 afy by the year 2040, as identified in **Table 13, Projected City of Santa Paula 2016 UWMP Recycled Water Demand (afy).**

84 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 67.

85 City of Santa Paula, *Final UWMP 2016 Update* (August 2017), 67.

Table 13
Projected City of Santa Paula 2016 UWMP Recycled Water Demand (afy)

Potential Use	2015	2020	2025	2030	2035	2040
Existing Landscape Irrigation ^a	0	0	0	0	0	0
Potential New Landscape Irrigation ^b	0	200	200	300	500	700
Golf Course Irrigation ^{b,c}	0	0	300	300	300	300
Agricultural Irrigation ^d	0	180	260	540	720	900
Groundwater Recharge ^e	0	0	0	0	0	0
Indirect/Direct Potable Reuse ^e	0	0	0	0	0	0
Water Losses ^f	0	20	40	60	80	100
Total^g	0	400	800	1,200	1,600	2,000

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017). Table 4-5.

Note: All values rounded to the nearest acre-foot.

^a For planning purposes, existing landscape areas with irrigation will remain on potable water until such time that areas are converted to recycled water.

^b All new community landscape areas, including golf courses, will be designed to be irrigated with recycled water (with potable water as backup supply).

^c For planning purposes, the City estimates construction and operation of one new golf course (associated with Adams Canyon). If a golf course is not built or in operation, then recycled water could be sold to agriculture or beneficially used for groundwater recharge.

^d For planning purposes, City's recycled water program may include potential sale of recycled water for agricultural irrigation.

^e Not anticipated at this time.

^f Estimated at 5 percent of total new demands.

^g Total amount of recycled water available estimated to be 2,000 afy based on Santa Paula WRF influent and effluent flows for the period 2010–2015. For planning purposes, the 2,000 afy is distributed equally from 2020 to 2040.

Projected use of recycled water may include approximately 1,050 afy of urban landscape irrigation. At present, the urban landscaped areas proposed to be irrigated with recycled water will generally be within new developments constructed with recycled water infrastructure. In general, the initial phases of the recycled water program will not provide recycled water to existing urban landscaped areas due to the complexities and cost associated with converting to recycled water use. An additional 950 afy may be available for agricultural irrigation. However, one City report identified up to 13,590 afy of potential recycled water demand from local agricultural interests. Therefore, estimates for recycled water supply and demand are considered to be conservative.⁸⁶

Although the potential may exist in the future, the City of Santa Paula is not developing plans for groundwater recharge.⁸⁷ The Judgment does not preclude the recharge of the Santa Paula Basin, and indeed includes provisions for potential recharge. According to the Judgment, such storage would require approval of the TAC, must not adversely impact the water quality of the Santa Paula Basin, and must not cause injury to any vested rights. In the event the storage of water causes the Santa Paula Basin to spill,

⁸⁶ City of Santa Paula, Final UWMP 2016 Update (August 2017), 78.

⁸⁷ City of Santa Paula, Final UWMP 2016 Update (August 2017), 78.

the first water lost to the Santa Paula Basin is deemed to be the stored water. Furthermore, title is retained to water stored underground, and stored water (minus losses) may be pumped in addition to the approved pumping allocations, provided no injury is caused to any intervener or party to the Judgment. In other words, if the City recharged 1,000 afy to the basin, they would be entitled to pump an additional 1,000 afy above and beyond their stipulated allocation.⁸⁸

Currently there are no recycled water systems in the proposed Project vicinity. However, the 2012 Wastewater Master Plan has included West Area 2 to have a future wastewater flow of 0.082 million gallons per day or 919 af per year during an average dry-weather season.⁸⁹ The proposed Project includes an on-site recycled water distribution system to irrigate the greenbelt and other irrigation areas. This will allow the Santa Paula West Business Park to make use of recycled water when the City completes its planned recycled water plan and extends a line to the point of connection in the railroad right of way at Beckwith Road.⁹⁰

The proposed Specific Plan recycled water system would operate via a proposed 12-inch distribution main constructed in Faulkner Road, within the City limits. This terminus would become the main POC for the proposed Project. The proposed distribution system will be comprised of 6-inch mains from the POC of the City's recycled water system.

3.2 ANALYSIS OF WATER SUPPLY AND DEMAND

The available supplies and water demands for the City's service area were analyzed to assess its ability to satisfy demands during three scenarios: a normal water year, a single dry year, and multiple dry years.

This WSA addresses the City's water supply and demand as it relates to a variety of concerns including:

1. Information and data available from the City's Final 2016 UWMP Plan Update,
2. Issues related to water supply reliability relating to nongroundwater sources (Santa Paula Creek, and SWP water),
3. Consideration of information available from the DWR's *State Water Project Final Delivery Capability Report July 2015*.

88 City of Santa Paula, *Final UWMP 2016 Update* (August 2017).

89 City of Santa Paula, *Wastewater System Master Plan* (June 2012).

90 City of Santa Paula, *Santa Paula West Business Park Specific Plan* (amended October 2016).

Table 14, Projected Supply Reliability by Source, illustrates the assumptions associated with projected supply reliability by source and is used in the following discussion of City water supply and demand scenarios as they relate to the proposed Project.

Table 14
Projected Supply Reliability by Source

Supply Sources	Normal Water	Single Dry	Multiple Dry Years		
	Year	Year	Year 1	Year 2	Year 3
City Wells	100%	100%	100%	100%	100%
Santa Paula Creek	100%	100%	100%	100%	100%

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017), Appendix D, Table 7-1.

Average and Dry Year Water Supply and Demand

The following tables provide the City's projected urban water supplies and demands in an average year, a single dry year, and multiple dry years.

Table 15, Supply and Demand Comparison 2016 UWMP—Average Year (afy), shows the City's projected urban water supplies and demands in an average year based on the 2016 UWMP.

Table 16, Supply and Demand Comparison 2016 UWMP—Single Dry Year (afy), shows the City's projected urban water supplies and demands in a single dry year based on the 2016 UWMP.

Table 17, Supply and Demand Comparison 2016 UWMP—Multiple Dry Years (afy), shows the City's projected urban water supplies and demand through 2040. According to the UWMP, the City's sources of supply are adequate for multiple dry years, for a 20-year period based on the 2016 UWMP.

Table 15
Supply and Demand Comparison 2016 UWMP—Average Year (afy)

Supply vs Demand	2020	2025	2030	2035	2040
Supply Totals	6,908	7,755	8,603	9,450	10,295
Demand Totals	4,608	5,311	6,012	6,714	7,416
Difference	2,300	2,444	2,591	2,736	2,879

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017).

Note: afy = acre-feet per year.

Table 16
Supply and Demand Comparison 2016 UWMP—Single Dry Year (afy)

Supply vs Demand	2020	2025	2030	2035	2040
Supply Totals	6,908	7,755	8,603	9,450	10,295
Demand Totals	4,608	5,311	6,012	6,714	7,416
Difference	2,300	2,444	2,591	2,736	2,879

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017).

Note: afy = acre-feet per year.

Table 17
Supply and Demand Comparison 2016 UWMP—Multiple Dry-Years (afy)

Period	Supply vs Demand	2020	2025	2030	2035	2040
Multiple Dry Year	Supply Totals	6,908	7,755	8,603	9,450	10,295
First-Year Supply	Demand Totals	4,608	5,311	6,012	6,714	7,416
	Difference	2,300	2,444	2,591	2,736	2,879
Multiple Dry Year	Supply Totals	6,908	7,755	8,603	9,450	10,295
Second-Year Supply	Demand Totals	4,608	5,311	6,012	6,714	7,416
	Difference	2,300	2,444	2,591	2,736	2,879
Multiple Dry Year	Supply Totals	6,908	7,755	8,603	9,450	10,295
Third-Year Supply	Demand Totals	4,608	5,311	6,012	6,714	7,416
	Difference	2,300	2,444	2,591	2,736	2,879

Source: City of Santa Paula, Final 2016 UWMP Update (August 2017).

Note: afy = acre-feet per year.

Project Supply and Demand

The proposed Project will demand 39.7 afy at full build-out (see **Table 2**).

The estimated supply to West Area 2 per the 2016 UWMP Update is 87.7 afy.⁹¹ The estimated water demand for the proposed Project is approximately 39.7 afy (20.4 afy for Commercial/Light Industrial use, 1.5 afy for Light Industrial use, and 17.8 afy for landscape irrigation). The potable demand of 21.9 afy for the Commercial/Light Industrial and Light Industrial uses, is approximately 25 percent of the West Area 2 total estimated amount. The landscaped areas will be irrigated using recycled water to be delivered from the City's wastewater treatment plant.

91 City of Santa Paula, Final UWMP 2016 Update (August 2017), 46, Table 3-2, (1,905,750 square feet of development at 15 gal/sq. ft./year is 87.7 afy).

The Project will replace existing agricultural uses on the site. As such, water currently used for agricultural irrigation will be used instead for Project consumption. Currently agricultural uses on the Project Site consume approximately 281.1 afy (average during the past 5 years; see **Table 3**). As such, the proposed Project's consumption of 39.7 afy will be a net reduction in total water use of 241.4 afy.

It should be noted that the West Area 2 Planning Area has an estimated supply of 87.7 afy based on future development. The proposed Project could utilize a portion of this allocation. However, with the removal of the agricultural uses currently on the Project Site, the Project can use a portion of the existing water currently used for irrigation. It should be noted that this portion of the pumped water will be pumped instead by the City from other wells, and not from the current well on site.

The Project will use recycled water (17.8 afy) that will be available from the City's wastewater treatment facility for irrigation; this will further reduce the demand on potable water supplies. The City's 2016 UWMP forecast having between 400 afy (2020) and 2,000 afy (2040) of recycled water available for use (see **Table 13**). Based on these forecasts, the Project will require only a portion of the recycled water (4.45 percent in 2020 and 0.89 percent in 2040).

Table 18, Project Supply and Demand Comparison 2016 UWMP—Average Year (afy) shows the proposed Project water demand as a percent of total supply throughout various milestones in the build-out schedule. By 2027 (build-out), the Project is estimated to demand 39.7 afy of water. Water demand from the Project based on the 2016 UWMP represents 0.61 percent of the City's total projected urban water demand in 2017, decreasing to 0.41 percent in 2037. The projected demand for the Project will account for only a small fraction of the projected City-wide demands.

Table 18
Project Supply and Demand Comparison 2016 UWMP—Average Year (afy)

	2015	2017	2020	2025	2027	2030	2035	2037	2040
Total City Supply ^a	6,637 ^b	6,462 ^c	6,908	7,755	8,094	8,603	9,450	9,788 ^d	10,295
West Area 2 Allocation ^e	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
Existing Agricultural Use ^f	281.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Project Demand ^g	0	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7
Percent of City's Total Supply	0%	0.61%	0.57%	0.51%	0.49%	0.46%	0.42%	0.41%	0.39%
Net change from agricultural use	0	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)	(241.4)
Available recycled water	0	0	400	800	960	1,200	1,600	1,760	2,000
Project demand for recycled water (Part of Total Project Demand)	0	0	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Percent of available recycled water	0.00%	0.00%	4.45%	2.23%	1.85%	1.48%	1.11%	1.10%	0.89%

Note: afy = acre-feet per year.

^a City of Santa Paula, Final 2016 UWMP Update (August 2017), Table 4-4, p. 69

^b 2015 Data taken from Final 2010 UWMP (June 2011).

^c Value extrapolated from 2015 and 2020 data.

^d Value extrapolated from 2035 and 2040 data.

^e City of Santa Paula, Final 2016 UWMP Update (August 2017), 46, Table 3-2 (1,905,750 square feet of development at 15 gal/sq. ft./year is 87.7 afy).

^f See Table 3.

^g See Table 2.

3.3 CONCLUSIONS

City of Santa Paula Service Area

Based on the information, analysis, and findings documented in this WSA, substantial evidence exists to support a determination that there will be sufficient water supplies to meet the current and future demands of the Project in addition to all forecasted demands for the 20-year period from initial development (2017 to 2037). This is based on the volume of water available in the Santa Paula Basin, and water rights and water supply contracts. The City has committed sufficient resources to further implement the primary elements of the Final 2016 UWMP, which include the purchase of additional water supplies, water conservation, and source substitution (use of agricultural irrigation water and recycled water).

The domestic water supply (potable) for the Project will be supplied by water from on-site water well pumping from the Santa Paula Basin that will ultimately be transferred to the City, encompassing the City of Santa Paula. Groundwater storage will be used in dry years to make up the difference between supply and demand. The Santa Paula groundwater basin has an “assumed initial yield” of the basin is 33,500 afy and currently contains about 26 million af and acts as a very large reservoir. It is capable of meeting the water demands of the City for extended normal and drought periods.

As discussed in the Final 2016 UWMP and this WSA, the City of Santa Paula has many programs to eliminate overdraft and maximize the water resources recycled wastewater, and water conservation including water rates, landscaping ordinance, outreach and education.

The proposed Project falls within the boundaries of the West Area 2 Expansion Area. At 53.81 acres, the Santa Paula West Business Park Specific Plan would take up approximately 43 percent of the 125-acre planned expansion. The City’s General Plan projects an estimated water demand of 87.7 afy for West Area 2. As such, the proposed Project has a projected demand of 39.7 afy, which is included in the General Plan. However, the Project will replace existing agricultural uses that extract well water from the Santa Paula Basin; as such, the Project will result in a net reduction (241.4 afy) of water use on site at build-out.

Currently, the entire potable water supply for the City is obtained by pumping from the Santa Paula Basin. The City has obtained additional groundwater pumping rights through a wheeling agreement with the Canyon Irrigation Company. The potential future water supplies include groundwater rights transfers to the City as new development occurs, City acquisition of potentially available groundwater allocations within the Santa Paula Basin, recycled water, and groundwater production from the Fillmore Basin.

The SPBPA and TAC monitor current and future groundwater pumping within the Santa Paula Basin. The City is not limited to its allocation in any single year, but may produce as much as seven times its annual average allocations during a 7-year period. There are no restrictions regarding pumping in single dry- or

multiple dry-water years subject to court order. As discussed earlier, the Santa Paula Basin Yield Study did not recommend that restrictions be imposed on the amount of groundwater that can be pumped during dry periods. Therefore, groundwater pumping by the City is not anticipated to be subject to any reductions in the dry year analysis.

Recycled water production will not be affected by single dry- or multiple dry-water years. Recycled water supply is directly related to wastewater generation, which is generally associated with indoor potable water use. Currently, there are no restrictions within the City regarding the use of potable water during dry periods. Additionally, the currently proposed uses of recycled water are restricted to nonpotable irrigation that, if reduced during dry periods, would have little or no impact on the community. Therefore, it is not anticipated that the recycled water supply will be reduced during dry periods.

SWP dry-year restrictions are not known due to the lack of specificity regarding how the water will be delivered. For the purposes of this analysis, it is assumed that no SWP water will be delivered in the near future. However, the City may trade, transfer, and/or sell a portion of the SWP water rights to augment existing supplies.

Project Water Requirements

As shown in this WSA analysis, the projected demand for the proposed Project will account for only a small fraction of the total projected demands set forth in the City's General Plan, Land Use Element, for the total projected demands through 2037.

The proposed Project-specific water demand at build-out is 39.7 afy, which includes 21.9 afy of potable use and 17.8 afy for landscape irrigation that can be supplied with recycled water.

The proposed Project incorporates features that reduce the overall water demand and provide for a reduction in use. As previously explained, it is assumed that Project water demand is included within the estimated West Area 2 supply and demand projections necessary to recharge the groundwater basin. In 2037, the proposed Project would utilize approximately 0.41 percent of the total City projected available supply for 2037 based on the Final 2016 UWMP Update. As such, the proposed Project's demand is within the allowable demand necessary to manage the groundwater basin.

4.0 LIST OF ACRONYMS

AB	Assembly Bill
af	acre-feet, equal to approximately 325,851 gallons
afy	acre-feet per year
CEQA	California Environmental Quality Act
DWR	California Department of Water Resources
gpd	gallons per day
gpm	gallons per minute
mgd	million gallons per day
psi	pounds per square inch
PWS	public water system
SB	Senate Bill
SWP	State Water Project
SWRCB	State Water Resources Control Board
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment

5.0 REFERENCES

The following sources were used during the preparation of this water supply assessment:

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NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
(916) 373-5471 Fax



October 26, 2016

Janna Minsk / Trayci Nelson
City of Santa Paula / Michael Baker International

Sent via e-mail: jminsk@spcity.org
Cc: tnelson@mbakerintl.com

RE: Proposed Santa Paula West Business Park Specific Plan Project, City of Santa Paula, Ventura County, California

Dear Ms. Minsk and Ms. Nelson:

Government Code §65352.3 requires **local governments** to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose of protecting, and/or mitigating impacts to cultural places in creating or amending general plans, including specific plans. Attached is a consultation list of tribes traditionally and culturally affiliated with the area that may have cultural places located within the boundaries of the project referenced above.

As a part of consultation, the NAHC recommends that local governments conduct record searches through the NAHC and California Historic Resources Information System (CHRIS) to determine if any cultural places are located within the area(s) affected by the proposed action. The form to request searches of the NAHC Sacred Lands File (SLF) can be found at <http://nahc.ca.gov/wp-content/uploads/2015/08/Local-Government-Tribal-Consultation-List-Request-Form-Update.pdf>.

Local governments should be aware that records maintained by the NAHC and CHRIS are not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of tribal cultural resources.

If you receive notification of change of addresses and phone numbers from tribes on the attached list, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: gayle.totton@nahc.ca.gov.

Sincerely,

A handwritten signature in blue ink that reads "Gayle Totton".

Gayle Totton, M.A., PhD.
Associate Governmental Program Analyst

**Native American Heritage Commission
Tribal Consultation List
Ventura County
10/26/2016**

***Barbareno/Ventureno Band of
Mission Indians***

Julie Lynn Tumamait-Stennsle,
Chairperson
365 North Poli Ave Chumash
Ojai, CA, 93023
Phone: (805)646-6214
jtumamait@hotmail.com

***Coastal Band of the Chumash
Nation***

Mia Lopez, Chairperson
Phone: (805) 324 - 0135 Chumash
cbctribalchair@gmail.com

***Northern Chumash Tribal
Council***

Fred Collins, Spokesperson
67 South Street Chumash
San Luis Obispo, CA, 93401
fcollins@northernchumash.org

***Santa Ynez Band of Mission
Indians***

Kenneth Kahn, Chairperson
P.O. Box 517 Chumash
Santa Ynez, CA, 93460
Phone: (805) 688 - 7997
Fax: (805) 686-9578
kkahn@santaynezchumash.org

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 6097.98 of the Public Resources Code and section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Government Code Sections 65352.3 and 65362.4 et seq for the proposed Santa Paula West Business Park Specific Plan Project, Ventura County.



"Citrus Capital of the World"

City of Santa Paula

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November 3, 2016

Barbareño/Ventureño Band of Mission Indians
Julie Tumamait-Stenslie
Chairperson
365 North Poll Avenue
Ojai, CA 93023

Subject: Senate Bill 18 Consultation Notification for the proposed Santa Paula West Business Park Specific Plan (Project No. 13-CDP-04) (City of Santa Paula/County of Ventura)

Dear Ms. Tumamait-Stenslie:

The City of Santa Paula has completed the Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan project and is starting the 45-day public review period required by the California Environmental Quality Act (CEQA) process. In addition, since the project involves a Specific Plan, the City is contacting and consulting with California Native American tribes in compliance with Senate Bill 18 (SB18). As such, the City of Santa Paula is sending the Barbareño/Ventureño Band of Mission Indians this consultation notification in compliance with SB18. The purpose of this consultation notification is to obtain any questions, comments, or concerns you may have pertaining to the proposed project. The City of Santa Paula values your input regarding the proposed project and encourages you to submit comments. As defined in SB18, this notification begins the 90-day comment period which will run concurrent with the 45-day CEQA review period.

The City of Santa Paula is the lead agency for the Santa Paula West Business Park Specific Plan project. The Specific Plan site is a 53.81-acre (agricultural land) area near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The site is bound to the north by Telegraph Road, to the south by SR 126, to the east by existing industrial and commercial development in the existing City limits, and to the west by the Adams Barranca and agricultural operations. The site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way.

The Specific Plan would guide future land use development on approximately 53.81 acres of the City's 125-acre West Area 2 designation. West Area 2 was included as an expansion area in the City's General Plan, which was approved by the City of Santa Paula in 1998. This designation allows for a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The land uses envisioned within the Specific Plan would be a mix of low-intensity industrial (such as light manufacturing or research and development), professional offices, and supporting commercial businesses. These uses are allowed in the Commercial/Light Industrial and Light Industrial zones.

If you have any questions or wish to schedule a formal consultation, please do not hesitate to contact me at (805) 933-4214 x244 or via e-mail at jminsk@spcity.org. You may also contact Trayci Nelson, the Project Manager, at (562) 202-2492 or via email at tnelson@mbakerintl.com.

Sincerely,

Janna Minsk, AICP
Planning Director

Enclosures



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City of Santa Paula

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November 3, 2016

Coastal Band of the Chumash Nation
Mia Lopez
Chairperson
cbcncntribalchair@gmail.com
(via email)

Subject: Senate Bill 18 Consultation Notification for the proposed Santa Paula West Business Park Specific Plan (Project No. 13-CDP-04) (City of Santa Paula/County of Ventura)

Dear Ms. Lopez:

The City of Santa Paula has completed the Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan project and is starting the 45-day public review period required by the California Environmental Quality Act (CEQA) process. In addition, since the project involves a Specific Plan, the City is contacting and consulting with California Native American tribes in compliance with Senate Bill 18 (SB18). As such, the City of Santa Paula is sending the Coastal Band of the Chumash Nation this consultation notification in compliance with SB18. The purpose of this consultation notification is to obtain any questions, comments, or concerns you may have pertaining to the proposed project. The City of Santa Paula values your input regarding the proposed project and encourages you to submit comments. As defined in SB18, this notification begins the 90-day comment period which will run concurrent with the 45-day CEQA review period.

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The Specific Plan would guide future land use development on approximately 53.81 acres of the City's 125-acre West Area 2 designation. West Area 2 was included as an expansion area in the City's General Plan, which was approved by the City of Santa Paula in 1998. This designation allows for a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and infrastructure. The land uses envisioned within the Specific Plan would be a mix of low-intensity industrial (such as light manufacturing or research and development), professional offices, and supporting commercial businesses. These uses are allowed in the Commercial/Light Industrial and Light Industrial zones.

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Sincerely,

Janna Minsk, AICP
Planning Director

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November 3, 2016

Northern Chumash Tribal Council
Fred Collins
Spokesperson
67 South Street
San Luis Obispo, CA 93401

Subject: Senate Bill 18 Consultation Notification for the proposed Santa Paula West Business Park Specific Plan (Project No. 13-CDP-04) (City of Santa Paula/County of Ventura)

Dear Mr. Collins:

The City of Santa Paula has completed the Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan project and is starting the 45-day public review period required by the California Environmental Quality Act (CEQA) process. In addition, since the project involves a Specific Plan, the City is contacting and consulting with California Native American tribes in compliance with Senate Bill 18 (SB18). As such, the City of Santa Paula is sending the Northern Chumash Tribal Council this consultation notification in compliance with SB18. The purpose of this consultation notification is to obtain any questions, comments, or concerns you may have pertaining to the proposed project. The City of Santa Paula values your input regarding the proposed project and encourages you to submit comments. As defined in SB18, this notification begins the 90-day comment period which will run concurrent with the 45-day CEQA review period.

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Sincerely,

Janna Minsk, AICP
Planning Director

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November 3, 2016

Santa Ynez Band of Mission Indians
Kenneth Kahn
Chairperson
P.O. Box 517
Santa Ynez, CA 93460

Subject: Senate Bill 18 Consultation Notification for the proposed Santa Paula West Business Park Specific Plan (Project No. 13-CDP-04) (City of Santa Paula/County of Ventura)

Dear Mr. Kahn:

The City of Santa Paula has completed the Draft Environmental Impact Report (DEIR) for the Santa Paula West Business Park Specific Plan project and is starting the 45-day public review period required by the California Environmental Quality Act (CEQA) process. In addition, since the project involves a Specific Plan, the City is contacting and consulting with California Native American tribes in compliance with Senate Bill 18 (SB18). As such, the City of Santa Paula is sending the Santa Ynez Band of Mission Indians this consultation notification in compliance with SB18. The purpose of this consultation notification is to obtain any questions, comments, or concerns you may have pertaining to the proposed project. The City of Santa Paula values your input regarding the proposed project and encourages you to submit comments. As defined in SB18, this notification begins the 90-day comment period which will run concurrent with the 45-day CEQA review period.

The City of Santa Paula is the lead agency for the Santa Paula West Business Park Specific Plan project. The Specific Plan site is a 53.81-acre (agricultural land) area near the western boundary of the City of Santa Paula and currently lies within the unincorporated County of Ventura. The site is bound to the north by Telegraph Road, to the south by SR 126, to the east by existing industrial and commercial development in the existing City limits, and to the west by the Adams Barranca and agricultural operations. The site is bisected by the Ventura County Transportation Commission (VCTC) railroad right-of-way.

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If you have any questions or wish to schedule a formal consultation, please do not hesitate to contact me at (805) 933-4214 x244 or via e-mail at jminsk@spcity.org. You may also contact Trayci Nelson, the Project Manager, at (562) 202-2492 or via email at tnelson@mbakerintl.com.

Sincerely,

Janna Minsk, AICP
Planning Director

Enclosures

APPENDIX F

Baseline Traffic and Growth Validation



MEMORANDUM

Date: September 18, 2018
To: Chad Penrod, McGaelic Group, Ltd.
From: Netai Basu & Vivian Lee, Fehr & Peers
Subject: Santa Paula West Business Park Specific Plan EIR – Traffic Baseline and Growth Forecast Validation

LA18-3037.00

EXECUTIVE SUMMARY

In early 2015, Fehr & Peers completed the “Traffic Impact Analysis for the Santa Paula West Business Park Specific Plan” (March 2015, Fehr & Peers). That study was based, in part, on traffic counts collected in 2014. The draft EIR was released in November 2016, and the final EIR is currently in preparation. Because four years have passed since the baseline counts were taken, City staff asked for a comparison of the 2014 baseline traffic volumes with more recent traffic volumes in order to confirm the reasonableness of the conclusions of the EIR study. In response, Fehr & Peers collected more recent traffic counts, compared it with the baseline data used in the EIR, and conducted other checks to determine whether and how local conditions have changed. This memorandum presents a summary of the new data collected and comparisons made, leading to a determination that the conclusions of the traffic study remain valid.

DATA COLLECTION

The 2015 traffic study analyzed weekday AM and PM peak hour conditions at 16 intersections near the project site, as well as five freeway segments. More recent traffic counts from February 2016 were obtained from the City of Santa Paula’s General Plan Update, Existing Conditions report for 13 of the 16 existing study intersections. Traffic volume data from Caltrans was also reviewed to determine the level of change near the project site at the five freeway segments. In addition, 24-hour daily traffic counts were collected at eight locations in May 2018 and compared with the 2016 daily counts in the Santa Paula General Plan Update. New counts can be found in the attachment to this memo. Recent baseline counts from Ventura County Transportation Commission (VCTC) were also requested but the counts were not deemed relevant for the purposes of this memo because they were too old (Year 2012).



Additionally, lane configurations and signal phasing were field-checked in May 2018. Based on the recent field observations, changes were identified at only one location, Intersection 6. The northbound approach at Steckel Drive & Main Street has been reconfigured from one shared through-left and one shared through-right to one shared left-through lane and one right-turn lane. This appears to be related to a curb extension (installed as part of the Santa Paula Bike Trail) on the far side of the intersection.

SUMMARY OF KEY VOLUME COMPARISONS

Intersection Volumes

A comparison of the existing 2014 volumes and the cumulative base 2031 volumes presented in the draft EIR traffic study is shown in **Table 1**. By 2031, the volumes are forecasted to increase between 11.7% and 139.3%. This increase factors in an ambient growth rate of 0.5% and traffic increase from related projects in the area. The compounded annual growth rate ranges from 0.7% to 5.3% during the AM peak hour and 0.8% to 5.2% in the PM peak hour. The compounded annual growth rate for total intersection volumes is 2.2% during the AM peak hour and 2.1% during the PM peak hour.

Table 2 shows a comparison of the weekday AM and PM peak hour intersection between years 2014 and 2016 at 13 of the 16 study intersections. As shown, the changes in volume range from -89 to 206 in the AM peak hour and from -162 to 446 in the PM peak hour. The percentage change in total intersection volumes at each count location between 2014 and 2016 ranged from -14.2% to 10.2% in the AM peak hour and from -11.2% to 43.2% in the PM peak hour. The compounded annual growth rate ranges from -7.4% to 5% in the AM peak hour and -5.8% to 19.7% in the PM peak hour. The count locations are shown in **Figure 1**.

The total intersection volumes both increased and decreased at the 13 intersections analyzed in the draft EIR. Most increased or decreased within 10% except for Intersection 6 (Steckel Drive & Main Street), where the percentage change in total intersection volumes decreased by 7% in the Am peak hour and increased by about 43% in the PM peak hour. Intersection 8b (Peck Road/Main Street & Telegraph Road/Harvard Boulevard) also increased by 14.1%; however, the higher percentage increase in traffic is largely due to the small volume of traffic at this location. Overall, the change in total intersection volume throughout the study area decreased by about 1.0% in the AM peak hour and increased by 2.7% in the PM peak hour over the course of two years. The compounded annual growth rate for total intersection volumes was -0.5% during the AM peak hour and 1.4% during the PM peak hour.



-  Project Site
-  Future Roadways
-  Study Intersection
-  Intersection with 2016 Count
-  Roadway Segment
-  Freeway Segment



Figure 1
Count Locations

Table 1: Comparison of Intersection Traffic Volumes Between Existing 2014 and Cumulative Base 2031

Intersection	Traffic Control	Peak Hour	Year 2014	Year 2031	Delta	Change in	CAGR ³
			Total Volume ¹	Total Volume ²	(2031-2014)	Volume	
1 Ojai Santa Paula Road/10th Street & Harvard Boulevard	Signal	AM	2,054	2,708	654	31.8%	1.6%
		PM	2,232	3,012	780	34.9%	1.8%
2 8th Street & Main Street	Signal	AM	914	1,183	269	29.4%	1.5%
		PM	1,102	1,411	309	28.0%	1.5%
3 8th Street & Harvard Boulevard	Signal	AM	1,138	1,755	617	54.2%	2.6%
		PM	1,468	2,135	667	45.4%	2.2%
4 Palm Avenue & Main Street	Signal	AM	1,356	1,800	444	32.7%	1.7%
		PM	1,442	1,928	486	33.7%	1.7%
5 Palm Avenue & Harvard Boulevard	Signal	AM	2,026	2,889	863	42.6%	2.1%
		PM	2,397	3,285	888	37.0%	1.9%
6 Steckel Drive & Main Street	AWSC	AM	944	1,272	328	34.7%	1.8%
		PM	1,054	1,489	435	41.3%	2.1%
7 Steckel Drive & Harvard Boulevard	Signal	AM	1,229	1,715	486	39.5%	2.0%
		PM	1,571	2,114	543	34.6%	1.8%
8 Peck Road & Telegraph Road/Harvard Boulevard	Signal	AM	1,635	2,336	701	42.9%	2.1%
		PM	1,772	2,534	762	43.0%	2.1%
8b Peck Road/Main Street & Telegraph Road/Harvard Boulevard (5th Leg)	Signal	AM	324	410	86	26.5%	1.4%
		PM	163	227	64	39.3%	2.0%
9 Peck Road & Faulkner Road	Signal	AM	1,079	1,523	444	41.1%	2.0%
		PM	1,265	1,791	526	41.6%	2.1%
10 Peck Road & SR-126 EB Ramps/Acacia Way	AWSC	AM	627	892	265	42.3%	2.1%
		PM	974	1,331	357	36.7%	1.9%
11 SR-126 WB Ramps & Faulkner Road	AWSC	AM	731	991	260	35.6%	1.8%
		PM	625	892	267	42.7%	2.1%
12 Beckwith Road & Telegraph Road/Harvard Boulevard	TWSC	AM	625	698	73	11.7%	0.7%
		PM	728	831	103	14.1%	0.8%
13 Briggs Road & Telegraph Road/Harvard Boulevard	Signal	AM	768	1,322	554	72.1%	3.2%
		PM	765	1,283	518	67.7%	3.1%
14 Briggs Road & Faulkner Road	TWSC	AM	356	852	496	139.3%	5.3%
		PM	321	761	440	137.1%	5.2%
15 Briggs Road & SR-126 WB Ramps	TWSC	AM	387	887	500	129.2%	5.0%
		PM	377	821	444	117.8%	4.7%
16 Briggs Road & SR-126 EB Ramps	TWSC	AM	260	474	214	82.3%	3.6%
		PM	310	579	269	86.8%	3.7%
Total for All Analyzed Intersections		AM	16,453	23,707	7,254	44.1%	2.2%
		PM	18,566	26,424	7,858	42.3%	2.1%

Notes:

¹ Baseline traffic counts used in the TIA for the Santa Paula West Business Park Specific Plan were collected during the weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak-period conditions in August 2014.

² Forecasted cumulative base 2031 counts from the TIA for the Santa Paula West Business Park Specific Plan.

³ CAGR = Compounded annual growth rate

Table 2: Comparison of Intersection Traffic Volumes Between Existing 2014 and 2016

	Intersection	Traffic Control	Peak Hour	Year 2014	Year 2016	Delta (2016-2014)	Change in Volume	CAGR ³
				Total Volume ¹	Total Volume ²			
1	Ojai Santa Paula Road/10th Street & Harvard Boulevard	Signal	AM	2,054	2,055	1	0.0%	0.0%
			PM	2,232	2,137	-95	-4.3%	-2.2%
2	8th Street & Main Street	Signal	AM	914	899	-15	-1.6%	-0.8%
			PM	1,102	1,147	45	4.1%	2.0%
3	8th Street & Harvard Boulevard	Signal	AM	1,138	1,142	4	0.4%	0.2%
			PM	1,468	1,306	-162	-11.0%	-5.7%
4	Palm Avenue & Main Street	Signal	AM	1,356	1,306	-50	-3.7%	-1.9%
			PM	1,442	1,377	-65	-4.5%	-2.3%
5	Palm Avenue & Harvard Boulevard	Signal	AM	2,026	2,232	206	10.2%	5.0%
			PM	2,397	2,377	-20	-0.8%	-0.4%
6	Steckel Drive & Main Street	AWSC	AM	944	875	-69	-7.3%	-3.7%
			PM	1,054	1,509	455	43.2%	19.7%
7	Steckel Drive & Harvard Boulevard	Signal	AM	1,229	1,263	34	2.8%	1.4%
			PM	1,571	1,561	-10	-0.6%	-0.3%
8	Peck Road & Telegraph Road/Harvard Boulevard	Signal	AM	1,635	1,559	-76	-4.6%	-2.4%
			PM	1,772	1,996	224	12.6%	6.1%
8b	Peck Road/Main Street & Telegraph Road/Harvard Boulevard (5th Leg)	Signal	AM	324	332	8	2.5%	1.2%
			PM	163	186	23	14.1%	6.8%
9	Peck Road & Faulkner Road	Signal	AM	1,079		No Data		
			PM	1,265		No Data		
10	Peck Road & SR-126 EB Ramps/Acacia Way	AWSC	AM	627	538	-89	-14.2%	-7.4%
			PM	974	865	-109	-11.2%	-5.8%
11	SR-126 WB Ramps & Faulkner Road	AWSC	AM	731	665	-66	-9.0%	-4.6%
			PM	625	699	74	11.8%	5.8%
12	Beckwith Road & Telegraph Road/Harvard Boulevard	TWSC	AM	625		No Data		
			PM	728		No Data		
13	Briggs Road & Telegraph Road/Harvard Boulevard	Signal	AM	768	725	-43	-5.6%	-2.8%
			PM	765	793	28	3.7%	1.8%
14	Briggs Road & Faulkner Road	TWSC	AM	356		No Data		
			PM	321		No Data		
15	Briggs Road & SR-126 WB Ramps	TWSC	AM	387	393	6	1.6%	0.8%
			PM	377	402	25	6.6%	3.3%
16	Briggs Road & SR-126 EB Ramps	TWSC	AM	260	268	8	3.1%	1.5%
			PM	310	343	33	10.6%	5.2%
Total for All Analyzed Intersections			AM	14,393	14,252	-141	-1.0%	-0.5%
			PM	16,252	16,698	446	2.7%	1.4%

Notes:

¹ Baseline traffic counts used in the TIA for the Santa Paula West Business Park Specific Plan were collected during the weekday morning (7:00 to 9:00 AM) and evening (4:00 to 6:00 PM) peak-period conditions in August 2014.

² Source: City of Santa Paula General Plan Update, Existing Conditions Report - Circulation and Mobility, September 2017. Count date: February 2016.

https://www.mysantapaula.com/uploads/3/9/9/4/39948751/appendix_a_-_existing_conditions_report.pdf

³ CAGR = Compounded annual growth rate



Roadway Segment Volumes

Table 3 shows a comparison of the 24-hour daily volumes between years 2016 and 2018 for eight roadway segments. New 2018 counts were collected to compare to the 24-hour daily volumes reported in the City of Santa Paula's General Plan Update. The changes in volume range from -1,243 to 2,371. The percentage change in daily volumes at each count location between 2016 and 2018 ranged from -10.7% and 37.8%. Additionally, the compounded annual growth rate ranged from -5.5% to 17.4%. The count locations are shown in **Figure 1**.

Of the eight count locations, half of the locations saw an increase in volume and half saw a decrease in volume. The highest increase occurred on Telegraph Road, west of Peck Road where the volume increased by 37.8%, followed by Briggs Road between Faulkner Road & Telegraph Road, where the volume increased by 23.8%. However, the counts from the General Plan Update and the new counts taken in May 2018 may vary in exact location on the roadway segment, which may account for the higher increases. Overall, the change in total ADT volumes increased by 3.1% over the course of two years. The compounded annual growth rate for all roadway segments was 1.5%.

Freeway Segment Volumes

Table 4 shows a comparison of the Caltrans peak hour bi-directional volume between years 2014 and 2016 for the five existing freeway segment locations. The changes in volume range from -100 to 600. The percentage change at each count location between 2016 and 2018 ranged from -3.8% to 18.5%. Additionally, the compounded annual growth rate ranged from -1.9% and 8.8%. The count locations are shown in **Figure 1**.

The highest increase in volumes occurred on the SR-126 between 10th Street and Palm Avenue. This segment saw an 18.5% increase during the two-year period. Overall, the change in volumes for all freeway segments was 3.4% with a compounded annual growth rate of 1.7%.

Table 3: Comparison of 24-Hour Roadway Segment Volumes Between Years 2016 and 2018

Roadway Segment		Year 2016 24-Hr Volume ¹	Year 2018 24-Hr Volume ²	Delta (2018-2016)	Change in Volume	CAGR ³
1	Briggs Road between Faulkner Road & Telegraph Road	3,476	4,305	829	23.8%	11.3%
2	Telegraph Road between Briggs Road & Peck Road	6,266	8,637	2,371	37.8%	17.4%
3	Peck Road between Faulkner Road & Acacia Way	8,272	8,608	336	4.1%	2.0%
4	Harvard Boulevard between Peck Road & Stecker Drive	13,125	11,882	-1,243	-9.5%	-4.9%
5	Main Street between Peck Road & Cameron Street	5,406	5,099	-307	-5.7%	-2.9%
6	Main Street between Palm Avenue & 8th Street	10,085	9,003	-1,082	-10.7%	-5.5%
7	Havard Boulevard between Palm Avenue & 8th Street	12,587	14,645	2,058	16.4%	7.9%
8	10th Street between Harvard Boulevard & Ventura Street	15,901	15,269	-632	-4.0%	-2.0%
Total for All Roadway Segments		75,118	77,448	2,330	3.1%	1.5%

Notes:

¹ Source: City of Santa Paula General Plan Update, Existing Conditions Report - Circulation and Mobility, September 2017. Count date: February 2016.
https://www.mysantapaula.com/uploads/3/9/9/4/39948751/appendix_a_-_existing_conditions_report.pdf

² New counts were collected in May 2018.

³ CAGR = Compounded annual growth rate

Table 4: Comparison of Freeway Segment Volumes Between Years 2014 and 2016

Freeway Segment	Year 2014 Peak Hour Bi-Directional Volume ¹	Year 2016 Peak Hour Bi-Directional Volume ²	Delta (2016-2014)	Change in Volume	CAGR ³
1 SR-126 - Hallock Drive to 10th Street (SR-150)	2,650	2,550	-100	-3.8%	-1.9%
2 SR-126 - 10th Street (SR-150) to Palm Avenue	3,250	3,850	600	18.5%	8.8%
3 SR-126 - Palm Avenue to Peck Road	3,300	3,500	200	6.1%	3.0%
4 SR-126 Peck Road to Briggs Road	4,200	4,150	-50	-1.2%	-0.6%
5 SR-126 Briggs Road to Wells Road	4,450	4,400	-50	-1.1%	-0.6%
Total for All Freeway Segments	17,850	18,450	600	3.4%	1.7%

Notes:

¹ Source: 2014 Traffic Volumes on California State Highways, Caltrans. <http://www.dot.ca.gov/trafficops/census/volumes2014/>
 Accessed: May 2018

² Source: 2016 Traffic Volumes on California State Highways, Caltrans. <http://www.dot.ca.gov/trafficops/census/volumes2016/>
 Accessed: May 2018

³ CAGR = Compounded annual growth rate



FUTURE TRAFFIC VOLUMES

Related Projects and Ambient Growth Factor

Because the project future traffic volumes are based in part on traffic volumes from 18 related projects, more recent information was collected to update the trip generation estimates from what is in the original traffic impact study. In 2014, there were 18 related projects with a totaling 49,538 daily vehicle trips, 4,609 AM peak hour trips, and 5,346 PM peak hour trips. As of May 2018, there are two additional projects that have been added to the list for a total of 50,458 daily trips, 4,708 AM peak hour trips, and 5,432 PM peak hour trips. One project is a fast food restaurant located approximately 1.5 miles from the project site and the other is an industrial site located south of SR-126, about a half mile south of the project site. In addition, six related projects have since been completed and are in operation as of May 2018. **Table 5** shows the updated related projects list with corresponding trip generation.

An ambient growth factor of 0.5% was used to determine future traffic volumes in the original traffic impact study. The current SCAG travel demand model was reviewed to identify the long-term level of traffic growth anticipated near Santa Paula. Year 2016 and Year 2040 forecasts from the eight selected roadway segments were compared to determine the anticipated growth rate over the 24-year period. **Table 6** shows that the compounded annual growth rate ranged from -0.33% to 1.55% in the AM peak hour and -0.20% to 0.44% in the PM peak hour. The compounded annual growth rate for the total volumes for all roadway segments was less than 0.1% for both the AM and PM peak hours.

Table 5: Trip Generation Estimates for Santa Paula West Business Park Related Projects

Project Location	Land Use	Size	ITE Code[a]	Trip Generation							
				Daily	AM			PM			
					In	Out	Total	In	Out	Total	
1	Cliff Dr & Forrest Dr	Single Family Units	19 du	210	181	4	10	14	12	7	19
2	North of Foothill Rd & Steckel Dr	Single Family Units	88 du	210	838	17	49	66	55	33	88
3	North of Foothill Rd & Peck Rd	Single Family Units	79 du	210	752	15	44	59	50	29	79
4	Fagan Canyon	Single Family Units	450 du	210	4,284	85	253	338	284	166	450
		Retail	76.2 ksf	820	3,254	45	28	73	136	147	283
		Active Parks [b]	32 ac	412	73	1	0	1	2	1	3
		School [c]	10 ac	520	387	74	61	135	22	23	45
5	Adams Canyon	Passive Open Space [d]	208 ac	413	135	2	2	4	2	2	4
		Single Family Units	495 du	210	4,712	93	278	371	312	183	495
		Public Elementary School [e]	40 ac	520	387	61	74	135	22	23	45
		Public Middle School [e]	300 su	522	486	89	73	162	n/a	n/a	n/a
		Public Recreational Facilities [f]	100 ac	413	65	1	1	2	1	1	2
		Destination Resort Hotel [g]	150 rooms	330	n/a	40	16	56	32	42	74
6	1445 East Main St	Golf Course [h]	18 hole	430	643	29	8	37	27	26	53
		Public Passive Open Space [d]	200 ac	413	130	2	2	4	2	2	4
		Motel	16 rooms	320	90	3	4	7	4	4	8
		Restaurant	0.5 ksf	932	64	3	2	5	3	2	5
		Live/work studios	9 du	220	60	1	4	5	4	2	6
7	East Area 1	Residential/School/Commercial [j]	from traffic study [b]		16,982	762	1,038	1,800	1,031	797	1,828
8	East Area 2/Gateway	Shopping Center/Business Park [i]	360 ksf	820/770	10,183	414	82	496	512	532	1,044
9	Cal Pipe	Manufacturing	44 ksf	140	168	25	7	32	12	20	32
10*	100-106 Calavo	General Light Industrial	35.7 ksf	110	249	29	4	33	4	31	35
11	324 W. Santa Maria St	Industrial Park	571.37 ksf	130	3,902	385	84	469	102	384	486
12*	310 S. Palm	Coffee/Donut Shop without Drive-Thru	1,798 ksf	936	n/a	49	48	97	19	18	37
13*	126-140 Santa Barbara St	Manufacturing	139.7 ksf	140	534	80	22	102	37	65	102
14*	Cemetery & Santa Paula St	Single Family Units	8 du	210	76	2	4	6	5	3	8
15*	125 Oak Street	Apartment	8 du	220	53	1	3	4	3	2	5
16*	327 Acacia Road	Apartment	6 du	220	40	1	2	3	3	1	4
		Apartment	37 du	220	246	4	15	19	15	8	23
17	1170 Montebello St	General Light Industrial	72.2 ksf	110	503	58	8	66	8	62	70
		Apartment	1 du	220	7	0	1	1	1	0	1
18	250 S Hallock Dr	General Light Industrial	7.8 du	110	54	6	1	7	1	7	8
		Apartment	1 du	220	7	0	1	1	1	0	1
TOTAL RELATED PROJECT TRAFFIC					49,538	2,381	2,228	4,609	2,723	2,623	5,346

NEW RELATED PROJECTS (May 2018)											
19	630 Todd Lane (south of SR-126)	General Light Industrial	52 ksf	110	362	42	6	48	6	44	50
20	132 Harvard Blvd [k]	Fast Food	2,249 ksf	934	558	13	38	51	10	27	37
TOTAL NEW RELATED PROJECT TRAFFIC					920	55	44	99	16	71	87

TOTAL UPDATED RELATED PROJECT TRAFFIC					50,458	2,436	2,272	4,708	2,739	2,694	5,432
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Notes:

- du = dwelling units; ac = acres; ksf = one thousand square feet
- * = Project is complete and in operation as of May 2018
- [a] Trip generation estimates based on "Trip Generation" (9th Edition, ITE, 2012) unless otherwise noted.
- [b] Trip generation rates for ITE LU 412 County Park used
- [c] General Plan Land Use Plan and Expansion Areas map does not indicate the size or type of the 10 acre school site; table assumes an elementary school with 300 students.
- [d] Treated as a state park.
- [e] General Plan Land Use Plan and Expansion Areas map does not indicate the size or type of schools on the 40-acre site; table assumes an elementary school and a middle school, with 300 students.
- [f] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the recreation center; table treats this acreage as additional passive open space.
- [g] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the resort hotel; table assumes a 150-room resort hotel.
- [h] General Plan Land Use Plan and Expansion Areas map does not indicate the size of the golf course; table assumes an 18-hole course.
- [i] Source: *Transportation Analysis Report East Area Gateway Project*, Fehr and Peers, 2012.
- [j] Source: *East Area 1 Specific Plan Transportation Analysis Report*, Fehr and Peers, 2014.
- [k] Assumes 50% pass-by credit based on data from the ITE Trip Generation handbook, 3rd Edition, 2014.
- Related project data obtained from the City of Santa Paula in December 2013 (RP 1-18) and May 2018 (RP 19-20).

Table 6: Comparison of SCAG Travel Demand Model Volumes Between Years 2016 Forecast and 2040 Forecast

Roadway Segment		Peak Hour	Year 2016 Forecast Volume ¹	Year 2040 Forecast Volume ¹	Delta (2040-2016)	Change in Volume	CAGR ²
1	Briggs Road between Faulkner Road & Telegraph Road	AM	825	762	-63	-7.6%	-0.33%
		PM	1,426	1,359	-67	-4.7%	-0.20%
2	Telegraph Road between Briggs Road & Peck Road	AM	672	769	97	14.4%	0.56%
		PM	1,275	1,415	140	11.0%	0.44%
3	Peck Road between Faulkner Road & Acacia Way	AM	633	698	65	10.3%	0.41%
		PM	1,707	1,785	78	4.6%	0.19%
4	Harvard Boulevard between Peck Road & Stecker Drive	AM	121	175	54	44.6%	1.55%
		PM	217	206	-11	-5.1%	-0.22%
5	Main Street between Peck Road & Cameron Street	AM	146	145	-1	-0.7%	-0.03%
		PM	219	218	-1	-0.5%	-0.02%
6	Main Street between Palm Avenue & 8th Street	AM	890	933	43	4.8%	0.20%
		PM	1,547	1,553	6	0.4%	0.02%
7	Harvard Boulevard between Palm Avenue & 8th Street	AM	572	573	1	0.2%	0.01%
		PM	834	821	-13	-1.6%	-0.07%
8	10th Street between Harvard Boulevard & Ventura Street	AM	2,585	2,422	-163	-6.3%	-0.27%
		PM	3,506	3,441	-65	-1.9%	-0.08%
Total for All Roadway Segments		AM	6,444	6,477	33	0.5%	0.02%
		PM	10,731	10,798	67	0.6%	0.03%

Notes:

¹ Source: 2016 SCAG RTP/SCS Travel Demand Model

² CAGR = Compounded annual growth rate



CONCLUSIONS

A comparison of more recent traffic counts and intersection operating conditions with the existing 2014 conditions analysis presented in the traffic study shows that there have been minor increases and decreases at certain locations. However, the overall compounded annual growth in the area has been less than what was estimated in analysis of the traffic study. The traffic study shows that total intersection volumes are anticipated to increase by over 2% per year while the comparison of recent intersection, roadway segment, and freeway segment volumes shows that growth has increased by less than 2% per year since 2014. The higher percentage of growth at certain locations does not appear to be a result of any systemic change in the area, nor do we believe it would change the existing LOS in the original study based on the 2014 volumes. The SCAG travel demand model also anticipates a slower rate of increase in growth over the next 24 years.

The addition of related projects is not expected to affect the results of the original analysis given their size and location. As for the change in lane configuration to Steckel Drive & Main Street, LOS was rerun for the intersection for cumulative plus project scenarios, with and without the Beckwith Road extension. The results show that had the EIR analysis accounted for the lane reconfiguration, forecasted LOS for both scenarios would remain unchanged and no significant impact would occur.

Based on this data and analysis, we have determined that the conclusions of the original traffic impact study remain valid and that no new significant impacts would occur that are not already identified in the original study.

If you have questions or require additional information, please call us at (213) 261-3050.



ATTACHMENT: 24-Hour Daily Counts

VOLUME

Briggs Rd Bet. Telegraph Rd & Faulkner Rd

Day: Tuesday
Date: 5/22/2018

City: Santa Paula
Project #: CA18_5369_001

DAILY TOTALS					NB	SB	EB	WB	Total		
					2,307	1,998	0	0	4,305		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	3			4	12:00	43	23			66
00:15	5	3			8	12:15	33	52			85
00:30	0	3			3	12:30	27	28			55
00:45	3	9	3	12	21	12:45	38	141	22	125	266
01:00	1	0			1	13:00	35	30			65
01:15	2	4			6	13:15	29	35			64
01:30	4	3			7	13:30	32	39			71
01:45	5	12	6	13	25	13:45	33	129	20	124	253
02:00	2	2			4	14:00	37	27			64
02:15	1	2			3	14:15	37	20			57
02:30	1	2			3	14:30	41	26			67
02:45	0	4	0	6	10	14:45	47	162	33	106	268
03:00	2	4			6	15:00	53	51			104
03:15	4	4			8	15:15	30	39			69
03:30	2	4			6	15:30	45	57			102
03:45	1	9	3	15	24	15:45	46	174	31	178	352
04:00	3	3			6	16:00	45	57			102
04:15	8	12			20	16:15	46	35			81
04:30	4	12			16	16:30	46	39			85
04:45	7	22	3	30	52	16:45	52	189	37	168	357
05:00	5	8			13	17:00	64	42			106
05:15	5	13			18	17:15	64	43			107
05:30	16	33			49	17:30	48	33			81
05:45	20	46	38	92	138	17:45	47	223	20	138	361
06:00	28	25			53	18:00	47	27			74
06:15	35	38			73	18:15	29	15			44
06:30	51	39			90	18:30	41	14			55
06:45	62	176	39	141	317	18:45	31	148	21	77	225
07:00	36	38			74	19:00	22	16			38
07:15	60	32			92	19:15	33	28			61
07:30	48	57			105	19:30	20	8			28
07:45	69	213	45	172	385	19:45	17	92	12	64	156
08:00	30	40			70	20:00	12	9			21
08:15	29	35			64	20:15	18	9			27
08:30	41	30			71	20:30	16	14			30
08:45	27	127	27	132	259	20:45	10	56	6	38	94
09:00	27	35			62	21:00	12	4			16
09:15	16	22			38	21:15	17	7			24
09:30	20	23			43	21:30	11	8			19
09:45	17	80	19	99	179	21:45	6	46	7	26	72
10:00	21	25			46	22:00	14	5			19
10:15	18	28			46	22:15	5	3			8
10:30	19	27			46	22:30	5	4			9
10:45	22	80	22	102	182	22:45	4	28	7	19	47
11:00	36	34			70	23:00	7	5			12
11:15	27	17			44	23:15	7	2			9
11:30	19	25			44	23:30	5	4			9
11:45	38	120	32	108	228	23:45	2	21	2	13	34
TOTALS	898	922			1820	TOTALS	1409	1076			2485
SPLIT %	49.3%	50.7%			42.3%	SPLIT %	56.7%	43.3%			57.7%

DAILY TOTALS					NB	SB	EB	WB	Total
					2,307	1,998	0	0	4,305
AM Peak Hour	07:00	07:30			07:00	PM Peak Hour	16:45	15:15	16:30
AM Pk Volume	213	177			385	PM Pk Volume	228	184	387
Pk Hr Factor	0.772	0.776			0.844	Pk Hr Factor	0.891	0.807	0.904
7 - 9 Volume	340	304	0	0	644	4 - 6 Volume	412	306	718
7 - 9 Peak Hour	07:00	07:30			07:00	4 - 6 Peak Hour	16:45	16:00	16:30
7 - 9 Pk Volume	213	177	0	0	385	4 - 6 Pk Volume	228	168	387
Pk Hr Factor	0.772	0.776	0.000	0.000	0.844	Pk Hr Factor	0.891	0.737	0.904

VOLUME

Telegraph Rd W/O Peck Rd

Day: Tuesday
Date: 5/22/2018City: Santa Paula
Project #: CA18_5369_002

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	4,208	4,429	8,637		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			4	4	8	12:00			78	89	167
00:15			0	3	3	12:15			76	72	148
00:30			4	3	7	12:30			70	66	136
00:45			4	12	14	12:45			57	281	303
01:00			1	1	2	13:00			68	78	146
01:15			3	3	6	13:15			67	73	140
01:30			4	3	7	13:30			72	82	154
01:45			0	8	2	13:45			87	294	307
02:00			5	2	7	14:00			72	74	146
02:15			0	1	1	14:15			75	76	151
02:30			0	2	2	14:30			81	60	141
02:45			2	7	3	14:45			100	328	306
03:00			4	1	5	15:00			113	70	183
03:15			3	4	7	15:15			93	68	161
03:30			2	2	4	15:30			112	91	203
03:45			5	14	1	15:45			113	431	311
04:00			9	8	17	16:00			98	75	173
04:15			3	7	10	16:15			101	77	178
04:30			9	12	21	16:30			113	83	196
04:45			11	32	13	16:45			94	406	312
05:00			11	15	26	17:00			116	73	189
05:15			17	30	47	17:15			86	91	177
05:30			18	54	72	17:30			93	78	171
05:45			32	78	67	17:45			77	372	333
06:00			33	76	109	18:00			62	81	143
06:15			20	79	99	18:15			64	55	119
06:30			31	58	89	18:30			77	58	135
06:45			34	118	82	18:45			50	253	252
07:00			38	65	103	19:00			49	53	102
07:15			42	66	108	19:15			53	58	111
07:30			50	91	141	19:30			45	54	99
07:45			58	188	71	19:45			48	195	213
08:00			47	70	117	20:00			45	36	81
08:15			49	71	120	20:15			45	49	94
08:30			53	39	92	20:30			31	40	71
08:45			59	208	63	20:45			38	159	158
09:00			38	47	85	21:00			25	32	57
09:15			39	55	94	21:15			31	28	59
09:30			48	52	100	21:30			19	14	33
09:45			49	174	51	21:45			12	87	95
10:00			45	57	102	22:00			20	17	37
10:15			47	60	107	22:15			12	16	28
10:30			57	56	113	22:30			19	16	35
10:45			49	198	46	22:45			15	66	61
11:00			51	61	112	23:00			13	7	20
11:15			64	58	122	23:15			13	4	17
11:30			67	64	131	23:30			8	3	11
11:45			75	257	78	23:45			8	42	3
TOTALS			1294	1761	3055	TOTALS			2914	2668	5582
SPLIT %			42.4%	57.6%	35.4%	SPLIT %			52.2%	47.8%	64.6%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	4,208	4,429	8,637		
AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			15:00	17:15	15:30
AM Pk Volume			299	305	604	PM Pk Volume			431	341	749
Pk Hr Factor			0.958	0.857	0.904	Pk Hr Factor			0.954	0.937	0.922
7 - 9 Volume	0	0	396	536	932	4 - 6 Volume	0	0	778	645	1423
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:15	17:00	16:15
7 - 9 Pk Volume	0	0	208	303	507	4 - 6 Pk Volume	0	0	424	333	734
Pk Hr Factor	0.000	0.000	0.881	0.832	0.899	Pk Hr Factor	0.000	0.000	0.914	0.915	0.936

VOLUME

Peck Rd Bet. Faulkner Rd & Acacia Way

Day: Tuesday
Date: 5/22/2018

City: Santa Paula
Project #: CA18_5369_003

DAILY TOTALS					NB	SB	EB	WB	Total		
					6,048	2,560	0	0	8,608		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	10	1			11	12:00	93	41			134
00:15	18	2			20	12:15	78	43			121
00:30	8	3			11	12:30	82	38			120
00:45	6	42	1	7	7	12:45	78	331	38	160	116
01:00	3	3			6	13:00	66	29			95
01:15	7	2			9	13:15	95	37			132
01:30	5	1			6	13:30	83	40			123
01:45	3	18	2	8	5	13:45	94	338	36	142	130
02:00	5	1			6	14:00	88	28			116
02:15	5	0			5	14:15	89	32			121
02:30	7	0			7	14:30	113	48			161
02:45	3	20	1	2	4	14:45	122	412	48	156	170
03:00	7	2			9	15:00	108	52			160
03:15	2	3			5	15:15	114	54			168
03:30	4	4			8	15:30	125	50			175
03:45	11	24	16	25	27	15:45	136	483	56	212	192
04:00	11	8			19	16:00	159	47			206
04:15	9	6			15	16:15	144	46			190
04:30	9	10			19	16:30	141	46			187
04:45	14	43	12	36	26	16:45	181	625	42	181	223
05:00	22	19			41	17:00	150	59			209
05:15	28	22			50	17:15	170	58			228
05:30	30	25			55	17:30	173	54			227
05:45	42	122	29	95	71	17:45	125	618	41	212	166
06:00	36	39			75	18:00	121	40			161
06:15	39	14			53	18:15	124	27			151
06:30	66	27			93	18:30	118	57			175
06:45	64	205	36	116	100	18:45	84	447	47	171	131
07:00	57	28			85	19:00	96	43			139
07:15	79	35			114	19:15	98	37			135
07:30	97	34			131	19:30	83	38			121
07:45	114	347	52	149	166	19:45	73	350	21	139	94
08:00	67	51			118	20:00	86	28			114
08:15	62	39			101	20:15	87	19			106
08:30	52	34			86	20:30	61	29			90
08:45	58	239	37	161	95	20:45	53	287	22	98	75
09:00	45	30			75	21:00	45	31			76
09:15	54	29			83	21:15	48	19			67
09:30	48	39			87	21:30	47	11			58
09:45	57	204	30	128	87	21:45	40	180	12	73	52
10:00	60	27			87	22:00	32	13			45
10:15	58	24			82	22:15	29	16			45
10:30	71	30			101	22:30	22	0			22
10:45	55	244	26	107	81	22:45	20	103	5	34	25
11:00	69	27			96	23:00	19	4			23
11:15	70	38			108	23:15	16	5			21
11:30	82	41			123	23:30	15	4			19
11:45	77	298	26	132	103	23:45	18	68	3	16	21
TOTALS	1806	966			2772	TOTALS	4242	1594			5836
SPLIT %	65.2%	34.8%			32.2%	SPLIT %	72.7%	27.3%			67.8%

DAILY TOTALS					NB	SB	EB	WB	Total	
					6,048	2,560	0	0	8,608	
AM Peak Hour	07:15	07:30			07:15	PM Peak Hour	16:45	16:45	16:45	
AM Pk Volume	357	176			529	PM Pk Volume	674	213	887	
Pk Hr Factor	0.783	0.846			0.797	Pk Hr Factor	0.931	0.903	0.973	
7 - 9 Volume	586	310	0	0	896	4 - 6 Volume	1243	393	0	1636
7 - 9 Peak Hour	07:15	07:30			07:15	4 - 6 Peak Hour	16:45	16:45	0	16:45
7 - 9 Pk Volume	357	176	0	0	529	4 - 6 Pk Volume	674	213	0	887
Pk Hr Factor	0.783	0.846	0.000	0.000	0.797	Pk Hr Factor	0.931	0.903	0.000	0.000

VOLUME

Harvard Blvd Bet. Acacia Rd & Elm St

Day: Tuesday
Date: 5/22/2018City: Santa Paula
Project #: CA18_5369_004

DAILY TOTALS					NB	SB					Total	
					0	0	EB	WB			11,882	
							6,420	5,462				
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL	
00:00			11	8	19	12:00			104	92	196	
00:15			11	1	12	12:15			100	102	202	
00:30			5	1	6	12:30			96	79	175	
00:45			2	29	3	12:45			83	383	85	358
01:00			1	2	3	13:00			88	78	166	
01:15			10	6	16	13:15			96	88	184	
01:30			5	4	9	13:30			84	97	181	
01:45			2	18	1	13:45			105	373	81	344
02:00			8	2	10	14:00			80	100	180	
02:15			4	1	5	14:15			107	78	185	
02:30			4	5	9	14:30			118	81	199	
02:45			3	19	4	14:45			141	446	98	357
03:00			5	3	8	15:00			149	90	239	
03:15			0	9	9	15:15			132	83	215	
03:30			2	3	5	15:30			138	82	220	
03:45			6	13	6	15:45			149	568	82	337
04:00			6	11	17	16:00			182	98	280	
04:15			7	13	20	16:15			165	99	264	
04:30			7	22	29	16:30			176	95	271	
04:45			13	33	14	16:45			175	698	87	379
05:00			18	30	48	17:00			176	86	262	
05:15			15	49	64	17:15			147	123	270	
05:30			22	87	109	17:30			175	108	283	
05:45			32	87	74	17:45			136	634	90	407
06:00			30	96	126	18:00			124	103	227	
06:15			16	90	106	18:15			127	70	197	
06:30			40	75	115	18:30			138	83	221	
06:45			51	137	73	18:45			108	497	65	321
07:00			45	68	113	19:00			101	79	180	
07:15			77	77	154	19:15			87	73	160	
07:30			91	121	212	19:30			92	67	159	
07:45			100	313	113	19:45			83	363	51	270
08:00			90	78	168	20:00			93	57	150	
08:15			81	77	158	20:15			85	62	147	
08:30			55	64	119	20:30			60	43	103	
08:45			74	300	65	20:45			57	295	40	202
09:00			74	54	128	21:00			48	45	93	
09:15			57	66	123	21:15			48	41	89	
09:30			56	71	127	21:30			42	26	68	
09:45			61	248	65	21:45			35	173	36	148
10:00			70	56	126	22:00			32	22	54	
10:15			62	63	125	22:15			26	19	45	
10:30			68	73	141	22:30			33	22	55	
10:45			66	266	73	22:45			16	107	17	80
11:00			73	83	156	23:00			18	11	29	
11:15			74	86	160	23:15			19	15	34	
11:30			101	91	192	23:30			16	4	20	
11:45			100	348	82	23:45			19	72	10	40
TOTALS			1811	2219	4030	TOTALS			4609	3243	7852	
SPLIT %			44.9%	55.1%	33.9%	SPLIT %			58.7%	41.3%	66.1%	

DAILY TOTALS					NB	SB					Total
					0	0	EB	WB			11,882
							6,420	5,462			
AM Peak Hour			11:30	07:15	11:30	PM Peak Hour			16:00	17:15	16:00
AM Pk Volume			405	389	772	PM Pk Volume			698	424	1077
Pk Hr Factor			0.974	0.804	0.955	Pk Hr Factor			0.959	0.862	0.962
7 - 9 Volume	0	0	613	663	1276	4 - 6 Volume	0	0	1332	786	2118
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:00	17:00	16:00
7 - 9 Pk Volume	0	0	362	389	751	4 - 6 Pk Volume	0	0	698	407	1077
Pk Hr Factor	0.000	0.000	0.905	0.804	0.881	Pk Hr Factor	0.000	0.000	0.959	0.827	0.962

VOLUME

Main St E/O Peck Rd

Day: Tuesday
Date: 5/22/2018

City: Santa Paula
Project #: CA18_5369_005

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	2,665	2,434	5,099		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			4	3	7	12:00			47	54	101
00:15			1	3	4	12:15			30	38	68
00:30			5	8	13	12:30			51	41	92
00:45			2	12	14	12:45			36	164	200
01:00			4	0	4	13:00			40	38	78
01:15			4	2	6	13:15			35	41	76
01:30			1	2	3	13:30			43	35	78
01:45			3	12	15	13:45			40	158	198
02:00			0	1	1	14:00			45	39	84
02:15			1	1	2	14:15			45	40	85
02:30			3	2	5	14:30			55	48	103
02:45			2	6	8	14:45			53	198	251
03:00			1	5	6	15:00			60	40	100
03:15			0	1	1	15:15			52	36	88
03:30			1	5	6	15:30			65	62	127
03:45			1	3	4	15:45			64	241	305
04:00			3	4	7	16:00			55	39	94
04:15			5	10	15	16:15			64	37	101
04:30			2	11	13	16:30			76	36	112
04:45			4	14	18	16:45			79	274	353
05:00			3	11	14	17:00			79	40	119
05:15			6	25	31	17:15			73	52	125
05:30			13	33	46	17:30			62	55	117
05:45			7	29	36	17:45			66	280	346
06:00			15	29	44	18:00			57	33	90
06:15			17	38	55	18:15			45	27	72
06:30			15	41	56	18:30			46	26	72
06:45			21	68	89	18:45			52	200	252
07:00			18	32	50	19:00			45	26	71
07:15			22	34	56	19:15			53	32	85
07:30			30	55	85	19:30			36	30	66
07:45			43	113	156	19:45			25	159	184
08:00			41	40	81	20:00			36	26	62
08:15			21	34	55	20:15			36	24	60
08:30			19	21	40	20:30			29	20	49
08:45			22	103	125	20:45			22	123	145
09:00			13	25	38	21:00			27	27	54
09:15			21	33	54	21:15			24	12	36
09:30			18	20	38	21:30			13	9	22
09:45			37	89	126	21:45			10	74	84
10:00			26	29	55	22:00			19	11	30
10:15			36	27	63	22:15			16	17	33
10:30			25	27	52	22:30			10	6	16
10:45			36	123	159	22:45			7	52	59
11:00			32	35	67	23:00			7	6	13
11:15			48	41	89	23:15			6	1	7
11:30			34	36	70	23:30			4	2	6
11:45			33	147	180	23:45			6	23	29
TOTALS			719	999	1718	TOTALS			1946	1435	3381
SPLIT %			41.9%	58.1%	33.7%	SPLIT %			57.6%	42.4%	66.3%

DAILY TOTALS					NB	SB	EB	WB	Total
					0	0	2,665	2,434	5,099

AM Peak Hour			11:15	07:15	11:45	PM Peak Hour			16:30	16:45	16:45
AM Pk Volume			162	191	343	PM Pk Volume			307	191	484
Pk Hr Factor			0.844	0.770	0.849	Pk Hr Factor			0.972	0.868	0.968
7 - 9 Volume	0	0	216	308	524	4 - 6 Volume	0	0	554	345	899
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:30	16:45	16:45
7 - 9 Pk Volume	0	0	136	191	327	4 - 6 Pk Volume	0	0	307	191	484
Pk Hr Factor	0.000	0.000	0.791	0.770	0.779	Pk Hr Factor	0.000	0.000	0.972	0.868	0.968

VOLUME

Main St Bet. 4th St & 7th St

Day: Tuesday
Date: 5/22/2018

City: Santa Paula
Project #: CA18_5369_006

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	4,933	4,070	9,003		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			9	0	9	12:00			109	73	182
00:15			4	1	5	12:15			86	61	147
00:30			3	3	6	12:30			92	80	172
00:45			2	18	20	12:45			72	359	431
01:00			1	1	2	13:00			77	58	135
01:15			2	3	5	13:15			78	69	147
01:30			5	5	10	13:30			60	54	114
01:45			2	10	12	13:45			79	294	373
02:00			1	0	1	14:00			85	85	170
02:15			1	1	2	14:15			65	84	149
02:30			1	0	1	14:30			119	95	214
02:45			1	4	5	14:45			118	387	505
03:00			1	2	3	15:00			99	73	172
03:15			1	6	7	15:15			101	105	206
03:30			2	1	3	15:30			103	83	186
03:45			1	5	6	15:45			94	397	491
04:00			1	0	1	16:00			130	77	207
04:15			4	7	11	16:15			90	89	179
04:30			8	9	17	16:30			112	74	186
04:45			11	24	35	16:45			90	422	512
05:00			17	9	26	17:00			109	107	216
05:15			16	10	26	17:15			109	88	197
05:30			17	21	38	17:30			108	78	186
05:45			17	67	84	17:45			121	447	568
06:00			21	26	47	18:00			101	71	172
06:15			26	31	57	18:15			91	66	157
06:30			23	42	65	18:30			71	65	136
06:45			31	101	132	18:45			91	354	445
07:00			30	37	67	19:00			81	68	149
07:15			42	44	86	19:15			89	56	145
07:30			94	54	148	19:30			94	62	156
07:45			130	296	426	19:45			72	336	408
08:00			69	67	136	20:00			54	44	98
08:15			55	44	99	20:15			52	53	105
08:30			50	33	83	20:30			41	44	85
08:45			52	226	278	20:45			51	198	249
09:00			50	37	87	21:00			37	39	76
09:15			56	32	88	21:15			30	32	62
09:30			50	56	106	21:30			37	21	58
09:45			50	206	256	21:45			28	132	160
10:00			53	63	116	22:00			17	17	34
10:15			54	41	95	22:15			21	8	29
10:30			72	58	130	22:30			16	10	26
10:45			71	250	321	22:45			11	65	76
11:00			64	46	110	23:00			10	5	15
11:15			64	61	125	23:15			3	14	17
11:30			87	54	141	23:30			12	3	15
11:45			90	305	395	23:45			5	30	35
TOTALS			1512	1287	2799	TOTALS			3421	2783	6204
SPLIT %			54.0%	46.0%	31.1%	SPLIT %			55.1%	44.9%	68.9%

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	4,933	4,070	9,003		
AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:00	14:30	17:00
AM Pk Volume			377	299	676	PM Pk Volume			447	366	813
Pk Hr Factor			0.865	0.879	0.929	Pk Hr Factor			0.924	0.871	0.931
7 - 9 Volume	0	0	522	398	920	4 - 6 Volume	0	0	869	682	1551
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	348	254	602	4 - 6 Pk Volume	0	0	447	358	805
Pk Hr Factor	0.000	0.000	0.669	0.713	0.687	Pk Hr Factor	0.000	0.000	0.924	0.836	0.931

VOLUME

Harvard Blvd Bet. 5th St & 7th St

Day: Tuesday
Date: 5/22/2018City: Santa Paula
Project #: CA18_5369_007

DAILY TOTALS					NB	SB	EB	WB	Total					
					0	0	6,723	7,922	14,645					
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL			
00:00			6	7	13	12:00			135	117	252			
00:15			6	6	12	12:15			124	135	259			
00:30			5	1	6	12:30			114	101	215			
00:45			8	25	6	12:45			104	477	109	462	213	939
01:00			3	0	3	13:00			108	128	236			
01:15			0	11	11	13:15			83	107	190			
01:30			7	0	7	13:30			100	143	243			
01:45			4	14	0	13:45			114	405	123	501	237	906
02:00			5	3	8	14:00			88	103	191			
02:15			2	1	3	14:15			107	130	237			
02:30			1	1	2	14:30			131	182	313			
02:45			1	9	3	14:45			146	472	190	605	336	1077
03:00			2	5	7	15:00			158	135	293			
03:15			1	4	5	15:15			130	139	269			
03:30			1	5	6	15:30			135	129	264			
03:45			1	5	6	15:45			121	544	146	549	267	1093
04:00			1	10	11	16:00			130	125	255			
04:15			8	11	19	16:15			143	174	317			
04:30			9	17	26	16:30			146	135	281			
04:45			20	38	23	16:45			130	549	164	598	294	1147
05:00			21	26	47	17:00			131	137	268			
05:15			31	52	83	17:15			137	160	297			
05:30			30	77	107	17:30			141	156	297			
05:45			53	135	76	17:45			123	532	194	647	317	1179
06:00			61	81	142	18:00			125	135	260			
06:15			51	86	137	18:15			107	110	217			
06:30			65	66	131	18:30			118	130	248			
06:45			51	228	70	18:45			118	468	128	503	246	971
07:00			39	87	126	19:00			104	156	260			
07:15			78	96	174	19:15			134	109	243			
07:30			113	223	336	19:30			110	100	210			
07:45			134	364	233	19:45			85	433	111	476	196	909
08:00			66	113	179	20:00			85	100	185			
08:15			73	83	156	20:15			76	95	171			
08:30			56	61	117	20:30			83	94	177			
08:45			62	257	87	20:45			72	316	87	376	159	692
09:00			66	80	146	21:00			85	85	170			
09:15			85	72	157	21:15			55	108	163			
09:30			90	79	169	21:30			59	55	114			
09:45			83	324	92	21:45			55	254	48	296	103	550
10:00			89	104	193	22:00			28	41	69			
10:15			81	82	163	22:15			28	23	51			
10:30			71	101	172	22:30			23	23	46			
10:45			89	330	88	22:45			30	109	20	107	50	216
11:00			82	102	184	23:00			18	15	33			
11:15			88	108	196	23:15			18	20	38			
11:30			118	85	203	23:30			11	13	24			
11:45			89	377	116	23:45			11	58	8	56	19	114
TOTALS				2106	2746	4852	TOTALS			4617	5176	9793		
SPLIT %				43.4%	56.6%	33.1%	SPLIT %			47.1%	52.9%	66.9%		

DAILY TOTALS					NB	SB	EB	WB	Total		
					0	0	6,723	7,922	14,645		
AM Peak Hour			11:30	07:15	07:15	PM Peak Hour			14:45	17:00	14:30
AM Pk Volume			466	665	1056	PM Pk Volume			569	647	1211
Pk Hr Factor			0.863	0.714	0.719	Pk Hr Factor			0.900	0.834	0.901
7 - 9 Volume	0	0	621	983	1604	4 - 6 Volume	0	0	1081	1245	2326
7 - 9 Peak Hour			07:15	07:15	07:15	4 - 6 Peak Hour			16:15	17:00	17:00
7 - 9 Pk Volume	0	0	391	665	1056	4 - 6 Pk Volume	0	0	550	647	1179
Pk Hr Factor	0.000	0.000	0.729	0.714	0.719	Pk Hr Factor	0.000	0.000	0.942	0.834	0.930

VOLUME

10th St Bet. Harvard Blvd & Ventura St

Day: Tuesday
Date: 5/22/2018

City: Santa Paula
Project #: CA18_5369_008

DAILY TOTALS					NB	SB	EB	WB	Total		
					7,009	8,260	0	0	15,269		
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	19	4			23	12:00	81	109			190
00:15	17	14			31	12:15	100	108			208
00:30	8	4			12	12:30	81	110			191
00:45	5	49	4	26	9	12:45	82	344	103	430	185
01:00	8	2			10	13:00	92	105			197
01:15	4	10			14	13:15	102	105			207
01:30	4	4			8	13:30	101	125			226
01:45	5	21	3	19	8	13:45	117	412	120	455	237
02:00	5	4			9	14:00	100	112			212
02:15	5	5			10	14:15	141	138			279
02:30	4	5			9	14:30	116	140			256
02:45	1	15	5	19	6	14:45	111	468	149	539	260
03:00	7	7			14	15:00	136	149			285
03:15	4	12			16	15:15	133	159			292
03:30	3	16			19	15:30	131	142			273
03:45	2	16	19	54	21	15:45	153	553	132	582	285
04:00	3	18			21	16:00	141	173			314
04:15	11	26			37	16:15	136	123			259
04:30	19	41			60	16:30	133	122			255
04:45	10	43	55	140	65	16:45	161	571	128	546	289
05:00	13	65			78	17:00	144	155			299
05:15	27	105			132	17:15	151	143			294
05:30	42	153			195	17:30	138	142			280
05:45	43	125	131	454	174	17:45	151	584	115	555	266
06:00	43	129			172	18:00	147	90			237
06:15	51	114			165	18:15	125	102			227
06:30	80	175			255	18:30	140	104			244
06:45	96	270	147	565	243	18:45	156	568	85	381	241
07:00	73	163			236	19:00	101	77			178
07:15	104	156			260	19:15	119	103			222
07:30	109	181			290	19:30	108	74			182
07:45	110	396	186	686	296	19:45	70	398	73	327	143
08:00	124	151			275	20:00	82	70			152
08:15	88	136			224	20:15	60	68			128
08:30	101	146			247	20:30	89	55			144
08:45	87	400	128	561	215	20:45	99	330	63	256	162
09:00	81	112			193	21:00	89	56			145
09:15	61	116			177	21:15	68	81			149
09:30	74	112			186	21:30	73	54			127
09:45	67	283	110	450	177	21:45	56	286	35	226	91
10:00	84	99			183	22:00	32	37			69
10:15	74	111			185	22:15	42	23			65
10:30	60	98			158	22:30	36	22			58
10:45	82	300	96	404	178	22:45	40	150	21	103	61
11:00	68	128			196	23:00	29	19			48
11:15	57	90			147	23:15	28	13			41
11:30	86	112			198	23:30	33	19			52
11:45	98	309	94	424	192	23:45	28	118	7	58	35
TOTALS	2227	3802			6029	TOTALS	4782	4458			9240
SPLIT %	36.9%	63.1%			39.5%	SPLIT %	51.8%	48.2%			60.5%

DAILY TOTALS					NB	SB	EB	WB	Total
					7,009	8,260	0	0	15,269
AM Peak Hour	07:15	07:00			07:15	PM Peak Hour	16:45	15:15	15:15
AM Pk Volume	447	686			1121	PM Pk Volume	594	606	1164
Pk Hr Factor	0.901	0.922			0.947	Pk Hr Factor	0.922	0.876	0.927
7 - 9 Volume	796	1247	0	0	2043	4 - 6 Volume	1155	1101	0
7 - 9 Peak Hour	07:15	07:00			07:15	4 - 6 Peak Hour	16:45	16:45	0
7 - 9 Pk Volume	447	686	0	0	1121	4 - 6 Pk Volume	594	568	0
Pk Hr Factor	0.901	0.922	0.000	0.000	0.947	Pk Hr Factor	0.922	0.916	0.000

Draft

ADDENDUM NO. 1 TO THE
FINAL ENVIRONMENTAL IMPACT REPORT

**SANTA PAULA WEST BUSINESS PARK
SPECIFIC PLAN EIR**

CITY OF SANTA PAULA

(SCH No. 2014081104)

CITY OF SANTA PAULA

Community Development Department
Planning Division
200 S. 10th St. / P.O. Box 569
Santa Paula, CA 93060

JULY 2023

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

When a Final Environmental Impact Report (EIR) has been certified for a project, the California Environmental Quality Act (CEQA) provides for the update of the information in the Final EIR to address changes to a project or changes to the circumstances under which a project will occur. An Addendum to a Final EIR may be prepared if changes or additions to the EIR are needed, but none of the conditions calling for a Subsequent EIR or Supplemental EIR as defined in the CEQA Guidelines have occurred.

The City of Santa Paula (City) certified the Final EIR for the approximately 54-acre Santa Paula West Business Park Specific Plan Project (“Specific Plan” or “Project”) in February 2019. The Specific Plan was proposed to provide a comprehensive set of plans, exhibits, regulations, conditions, and programs for the orderly development of a portion of the West Area 2 Expansion Area as defined in the City’s General Plan with commercial and light industrial uses.

As required by CEQA, the City adopted findings of fact for the significant impacts identified in the Final EIR and a statement of overriding considerations for those impacts identified as significant and unavoidable after the incorporation of all feasible mitigation measures which were adopted for the Project, consisting of several discretionary actions, including (1) approval of a General Plan Amendment, (2) adopting the Santa Paula West Specific Plan as rezoning for the property within the Specific Plan Area, (3) approval of a Master Vesting Tentative Map, (4) approval of Water Supply Assessment; and (5) authorization to file an application with the Ventura Local Agency Formation Commission (LAFCO) for the purpose of reorganizing (annexing) the Project Site within the City’s jurisdiction in accordance with the Cortese-Knox-Hertzberg Government Reorganization Act of 2000. In February 2013, the City filed an application with the Ventura LAFCO to reorganize (annex) the Project Site to the City of Santa Paula.

Subsequent to the filing of the annexation application, the Ventura County Watershed Protection District (VCWPD) requested that the City modify the drainage and flood control plan for the Project to provide for additional storage volume for floodwater. This Addendum to the Final EIR for the Santa Paula West Business Park Project evaluates changes to the drainage and flood control plan proposed in response to a request from the VCWPD and related changes to the approved Specific Plan. These changes are proposed to ensure the Santa Paula West Business Park Specific Plan is safe from flooding, that the Project will not adversely affect flooding conditions on adjacent properties or along FWY 126, and to maintain the existing volume of natural floodplain storage within the Specific Plan Area.

1.2 APPLICABLE REVIEW STANDARDS

When a Final EIR has been certified for a project, the CEQA and the CEQA Guidelines define standards and the procedure for an additional environmental review. Sections 15162-15164 of the CEQA Guidelines, 14 Cal. Code. Regs. §§ 15000 et seq., define the standards for determining the level of additional environmental review required when an EIR has been certified for a project.

When it can be determined, based on substantial evidence in light of the whole record, that changes to the Project or changes in the circumstances under which the Project would be undertaken constitute new information that would result in the identification of new significant impacts, or a substantial increase in the severity of significant impacts identified in the certified Final EIR, an Addendum to an EIR may be prepared. Public review of an Addendum is not required by CEQA. Instead, the information in an Addendum is to be considered with the previously certified Final EIR prior to a decision being made on the action being considered. If new significant impacts or a substantial increase in the severity of significant impacts identified in the certified Final EIR would occur, then preparation and circulation of a Subsequent or Supplemental EIR is required.

Based on review of the whole record, including the certified Final EIR, this Addendum concludes that no new significant impacts are likely to result from the proposed apartment project. This conclusion is drawn from the following findings pursuant to Section 15162(a) of the CEQA Guidelines:

1. No substantial changes are proposed in the Project that would require major revisions of the previous EIR due to the occurrence of new significant effects or a substantial increase in the severity of previously identified significant impact;
2. No substantial changes in circumstances under which the Project is undertaken would occur that would require major revisions of the previous EIR due to the occurrence of new significant environmental effects or a substantial increase in the severity of previously identified effects; and
3. No new information of substantial importance has been discovered that was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was prepared. Specifically, a review of current conditions and the proposed Project demonstrates the following:
 - a. The proposed Project would not have one or more significant effects not discussed in the previous EIR;
 - b. Significant effects previously examined would not be substantially more severe than shown in the Final EIR;
 - c. There are no new mitigation measures or alternatives previously found not to be feasible that would now in fact be feasible that would substantially reduce one or more significant effects of the proposed Project, and that the proposed Project proponents decline to adopt; and
 - d. No new mitigation measures or alternatives that are considerably different from those analyzed in the previous EIR that would substantially reduce one or more significant effects on the environment, and that the proposed Project proponents decline to adopt, are recommended.

Based on the information contained in this Addendum, the proposed modification of the drainage and flood control plan in the Santa Paula West Specific Plan would not result in any new significant impacts or any substantial increase in severity of the significant impacts identified in the Final EIR. Additionally,

no new information of substantial importance has been identified that indicates the Project would result in any new significant impacts or any substantial increase in the severity of the significant impacts identified in the Final EIR.

2.0 PROJECT DESCRIPTION

The Santa Paula West Business Park Specific Plan (SPW Business Park Specific Plan) was approved by the City of Santa Paula in February 2019 to guide future land use development on approximately 54 acres of property in the West Area 2 Planning Area, as defined in the City's General Plan planned for commercial and light industrial facilities. West Area 2 was identified as an expansion area in the City's 1998 General Plan, indicating the City's intent to annex this area. The SPW Specific Plan allows a variety of manufacturing, research and development, professional office, and limited commercial uses, with integrated vehicular circulation, pedestrian walkways, and supporting infrastructure.

2.1 Project Location

The SPW Business Park Specific Plan Area (Project Site) is approximately 54 acres of unincorporated land located adjacent to the western boundary of the City of Santa Paula, as shown in **Figure 2.0-1: Project Location** and **Figure 2.0-2: Project Site**. The Project Site is located within the Sphere of Influence (SOI) for the City of Santa Paula as approved by the Ventura LAFCO and the voter approved City of Santa Paula CURB (City Urban Restriction Boundary).

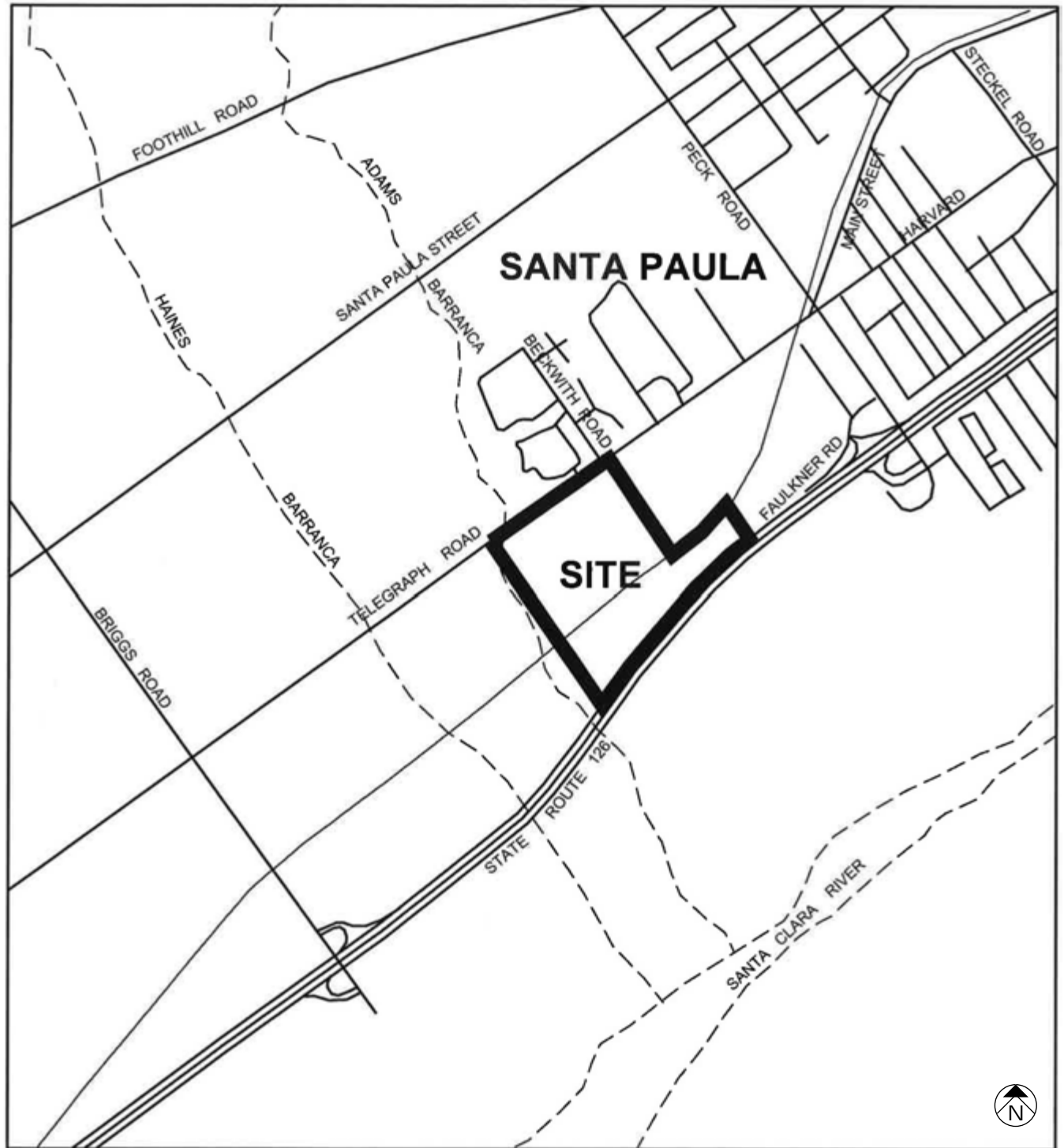
The Project Site is located within the Santa Paula, California, 7.5-minute United States Geological Survey (USGS) quadrangle and is comprised of five parcels identified as Assessor's Parcel Numbers (APNs) 098-0-010-150, 098-0-010-160, 098-0-010-190, 098-0-010-180, and 098-0-020-040. The Project Site is bound to the north by Telegraph Road, to the south by SR 126, to the east by existing industrial and commercial development in the existing City limits, and to the west by Adams Barranca and agricultural land. The Project Site is divided by the Ventura County Transportation Commission (VCTC) railroad right-of-way. Local access is provided by Telegraph Road, Beckwith Road, Clow Road, and Todd Lane.

2.2 Project Characteristics

2.2.1 APPROVED SPECIFIC PLAN

The City of Santa Paula General Plan designates the Project Site for Mixed-Use Commercial/Light Industrial uses (C-LI). Section 16.25.020 of the Santa Paula Municipal Code (SPMC) identifies this area as SP-6, Santa Paula West Business Park.

The Santa Paula West Business Park Specific Plan is a comprehensive set of plans, exhibits, regulations, conditions, and programs approved by the City to implement the City of Santa Paula General Plan by ensuring the orderly development of the Specific Plan Area as a coordinated office/industrial/business park, including a variety of manufacturing, research and development, professional office and limited commercial uses with integrated vehicular circulation, landscaping, pedestrian walkways, and supporting infrastructure.



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-1



SOURCE: Google Earth – 2023

FIGURE 2.0-2

Meridian
Consultants

Project Site

Figure 2.0-3 is the **Approved Land Use Master Plan** in the Specific Plan. As shown in **Table 2.0-1: Santa Paula West Business Park Specific Plan Approved Land Use Summary**, the approved Specific Plan identifies 41.96 acres for Commercial/Light Industrial uses, 6.95 acres for roads, and 4.9 acres for Open Space/Passive uses, including drainage and flood control facilities. The Specific Plan defines a Floor Area Ratio (FAR) of 35% for Commercial/Light Industrial Land, meaning buildings may occupy a maximum of 35% of the area available for development. As 41.96 acres is designated for Commercial/Light Industrial Development, the maximum amount of development allowed by the approved Specific Plan is approximately 1.83 million square feet.

**TABLE 2.0-1
SANTA PAULA WEST BUSINESS PARK SPECIFIC PLAN
APPROVED LAND USE SUMMARY**

Land Use	Acres	Percent of Project Site
Commercial/Light Industrial (C/LI)	41.96	78.0
Roadways (approximate)	6.95	12.9
Open Space/Passive	4.9	9.1
Total Gross Area	53.81	100

Adams Barranca, located along the western boundary of the Project Site, conveys storm water from north of the site to drainpipes under the SR 126 Freeway. The current effective FEMA Flood Insurance Rate Map (FIRM) dated 01/20/2010 shows that a portion of the Project Site is located partially within Zone A, indicating there is an approximate 1% Annual Chance (100-year) of flooding due to a lack of capacity within the channel and a lack of capacity at the SR 126 undercrossing.

The approved Specific Plan includes an interceptor channel along Telegraph Road on the northern edge of the Specific Plan Area with another interceptor channel parallel to Adams Barranca from Telegraph Road to Freeway 126 and with a discharge point back into Adams Barranca upstream of the SR 126 Freeway. As shown in **Figure 2.0-3: Approved Land Use Master Plan** flood control basins were also planned along Adams Barranca north of the rail line and in the southwest corner of the Project Site.

2.2.2 PROPOSED SPECIFIC PLAN AMENDMENT

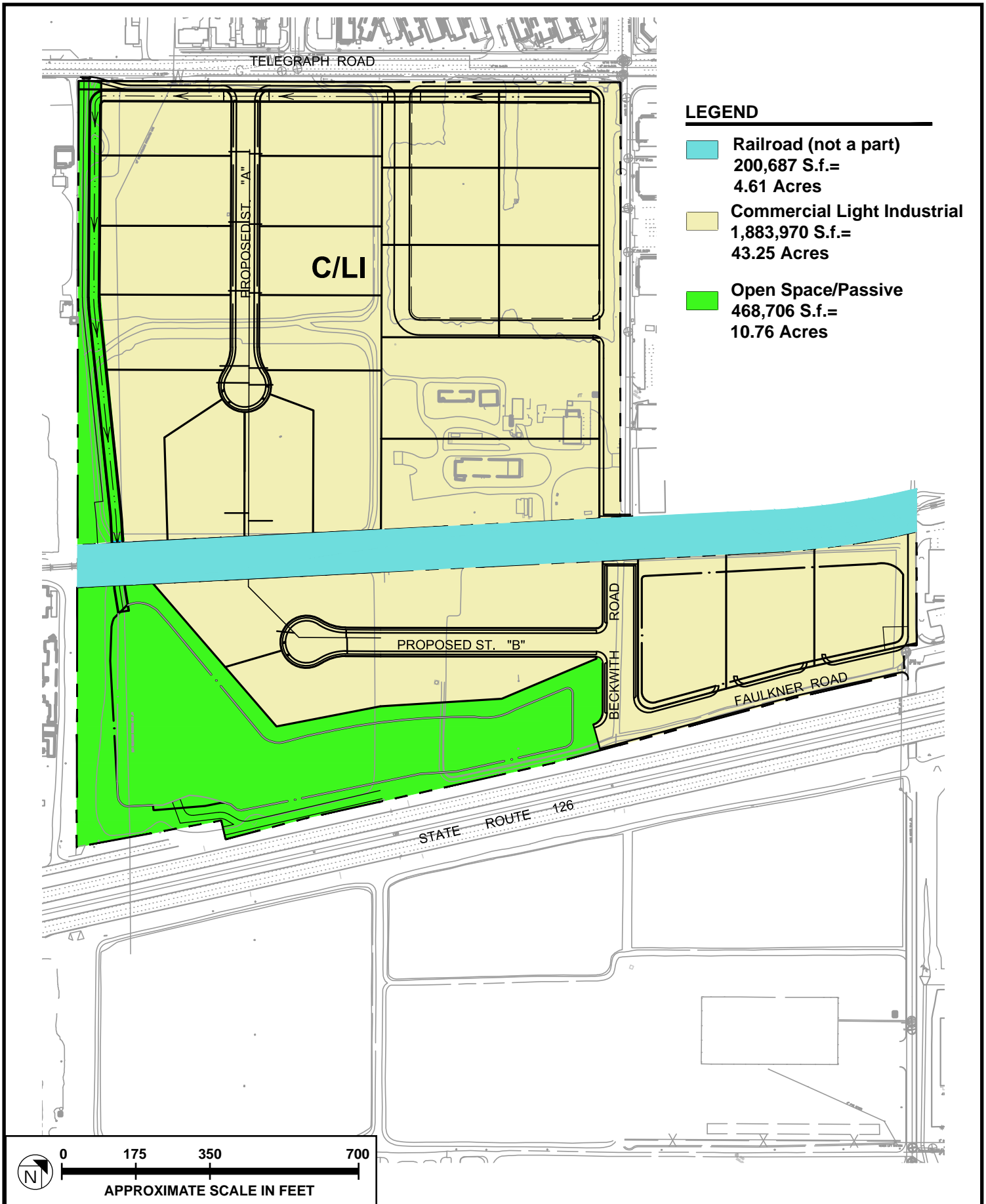
Based on consultation with the Ventura County Watershed Protection District (VCWPD), the drainage and flood control plan included in the approved Specific Plan was redesigned to ensure the Project Site would not be flooded or have any adverse effects on adjacent properties or the SR-126 Freeway, and would replace the existing natural floodplain storage on the Project Site. The proposed Specific Plan Amendment includes modifications to the drainage and flood control plan to increase the volume of floodwater from Adams Barranca that can be accommodated within the Specific Plan Area.

Figure 2.0-4 is the Proposed Land Use Master Plan and Table 2.0-2 is the Proposed Land Use Summary. Based on a new survey completed of the parcels included in the Specific Plan Area, the size of the Specific



SOURCE: Jensen Design and Survey – 2016

FIGURE 2.0-3



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-4

Plan Area has been adjusted from 53.81 to 54.01 acres. As shown in Table 2.0-2: Santa Paula West Business Park Specific Plan Proposed Land Use Summary, the amount of the Open Space/Passive land is proposed to increase by approximately 5.86 acres to 10.76 acres to accommodate a large flood control basin in the southwest portion of the Project Site. The amount of land available for Commercial/Light Industrial Development is reduced from 41.96 acres to 36.94 acres. With this reduction, the amount of development allowed by the Specific Plan is reduced by approximately 12%, from 1.83 million square feet to 1.61 million square feet.

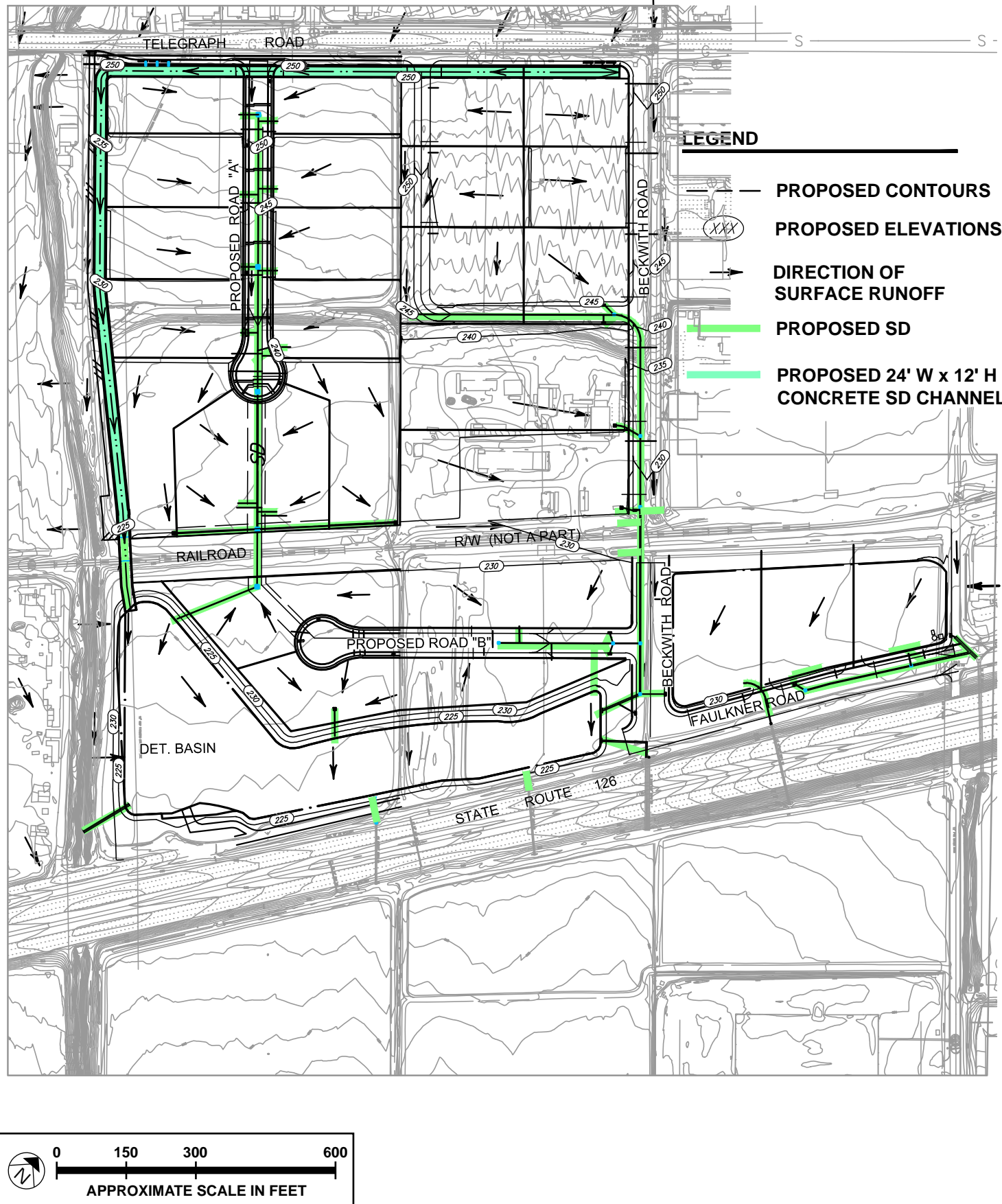
Land Use	APPROVED		PROPOSED		Change in Acres
	Acres	Percent of Project Site	Acres	Percent of Project Site	
Commercial/Light Industrial (C/LI)	41.96	78.0	36.94	68.4	- 5.02
Roadways (approximate)	6.95	12.9	6.31	11.7	- 0.64
Open Space/Passive	4.90	9.10	10.76	19.9	+ 5.86
Total Gross Area	53.81	100	54.01	100	0.20

Grading and Drainage Master Plans

The revised Drainage Master Plan is designed to meet or exceed the storm drainage requirements of the Ventura County Watershed Protection District (VCWWD) and the City of Santa Paula (on-site drainage systems), where applicable. The Conceptual Drainage Plan for the Project is illustrated in Figure 2.0-5: Conceptual Grading and Drainage Plan and Figure 2.0-6: Storm Drain Plan.

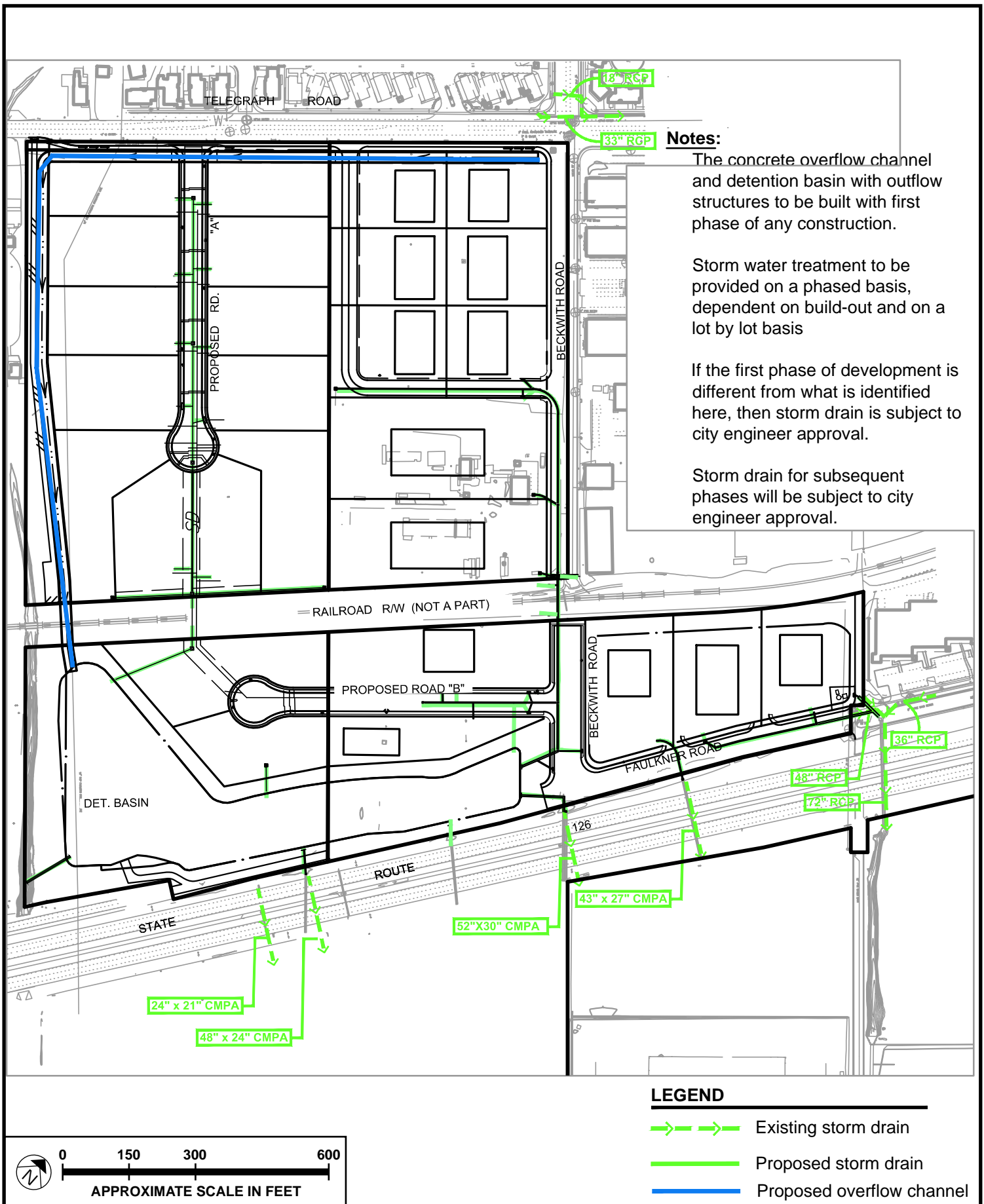
The Project Site will be graded to approximate the existing 2 percent land gradient, creating roadways and building pads in the lower areas with gradients in the 0.5 percent to 2 percent range. Elevations will be raised by up to approximately 4 feet - 6 feet above existing elevations to raise the site out of the floodplain. With the Conceptual Grading Plan in the approved Specific Plan, grading on the site would have involved approximately 80,000 cubic yards of cut and 179,000 cubic yards of fill, with approximately 99,000 cubic yards of imported soil needed. With the proposed Conceptual Grading Plan, grading on the site would include approximately 119,950 cubic yards of cut and 200,430 cubic yards of fill, with approximately 81,280 cubic yards of imported soil needed.

The proposed flood protection plan builds upon the approved flood control plan in the approved Specific Plan and is designed to meet or exceed the storm drainage requirements of both the Ventura County Watershed Protection District (VCWWD) and the City of Santa Paula (on-site drainage systems), where applicable.



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-5

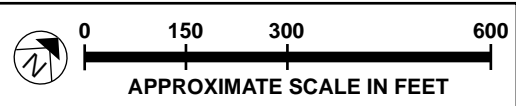


Notes:

- The concrete overflow channel and detention basin with outflow structures to be built with first phase of any construction.
- Storm water treatment to be provided on a phased basis, dependent on build-out and on a lot by lot basis
- If the first phase of development is different from what is identified here, then storm drain is subject to city engineer approval.
- Storm drain for subsequent phases will be subject to city engineer approval.

LEGEND

- → Existing storm drain
- Proposed storm drain
- Proposed overflow channel



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-6

An interceptor channel is planned to capture overflows from Telegraph Road and Adams Barranca during a 100-year storm event. Instead of discharging the flows back into Adams Barranca above the freeway, these overflows will enter a large on-site storage basin located where the 100-year flood is expected to flow over the freeway under the existing condition. This basin will collect on-site flood waters collected via the north and the west interceptor channels, provide a spillage area where flood flows will overtop the freeway similar to the existing condition, and serve as an on-site detention and stormwater quality treatment basin. Flows entering Beckwith Road from Telegraph Road to the railroad tracks will also be intercepted and collected at the Telegraph Road intersection via a series of catch basin inlets and storm drains in order to minimize the flows discharging south on Beckwith Road and overtopping the railroad tracks. Along the east end of the project site to the Beckwith Road extension, an earthen interceptor channel between the building pad areas and the railroad tracks will collect runoff that overflows the tracks and convey these flows to the Todd Lane Undercrossing.

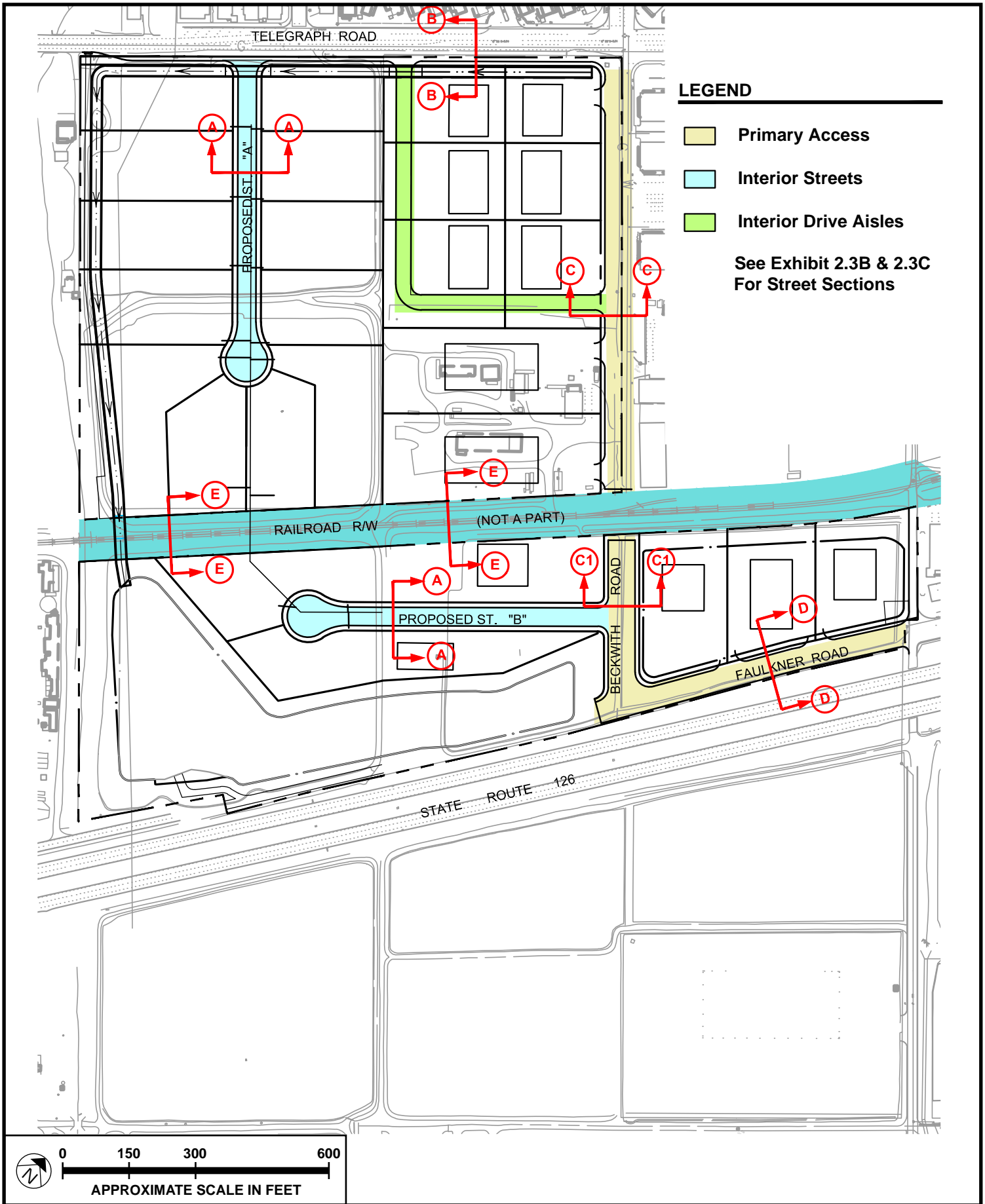
The storm drain system within the Specific Plan Area will collect on-site runoff and direct most of it to the large on-site privately maintained detention basin. This detention basin will significantly reduce peak runoff volumes downstream by storing the peak event flows and lagging their release after the storm peak. This basin will have a low level 36" RCP outlet pipe with a flap gate which will drain to Adams Barranca upstream of, or into, the double RCB Caltrans culvert below the freeway.

Site Access and Circulation

The Specific Plan includes a Circulation Master Plan that provides a framework and standards for road development to ensure a safe and adequate system of vehicular, pedestrian, and bicycle circulation. The vehicular circulation system consists of public roadway access from Telegraph Road, Beckwith Road, and Faulkner Road that would provide direct access to the Project Site driveways. Telegraph Road fronts the property to the north and is the principal arterial that would serve the Project. Primary north/south access to the Project Site north of the railroad right-of-way is Beckwith Road from Telegraph Road and east/west access is from Faulkner Road. Accommodating the larger detention basin in the southern portion of the Specific Plan Area requires minor changes to the configuration of the planned streets in this portion of the Project Site. The proposed **Vehicular Circulation Plan** is shown in **Figure 2.0-7**.

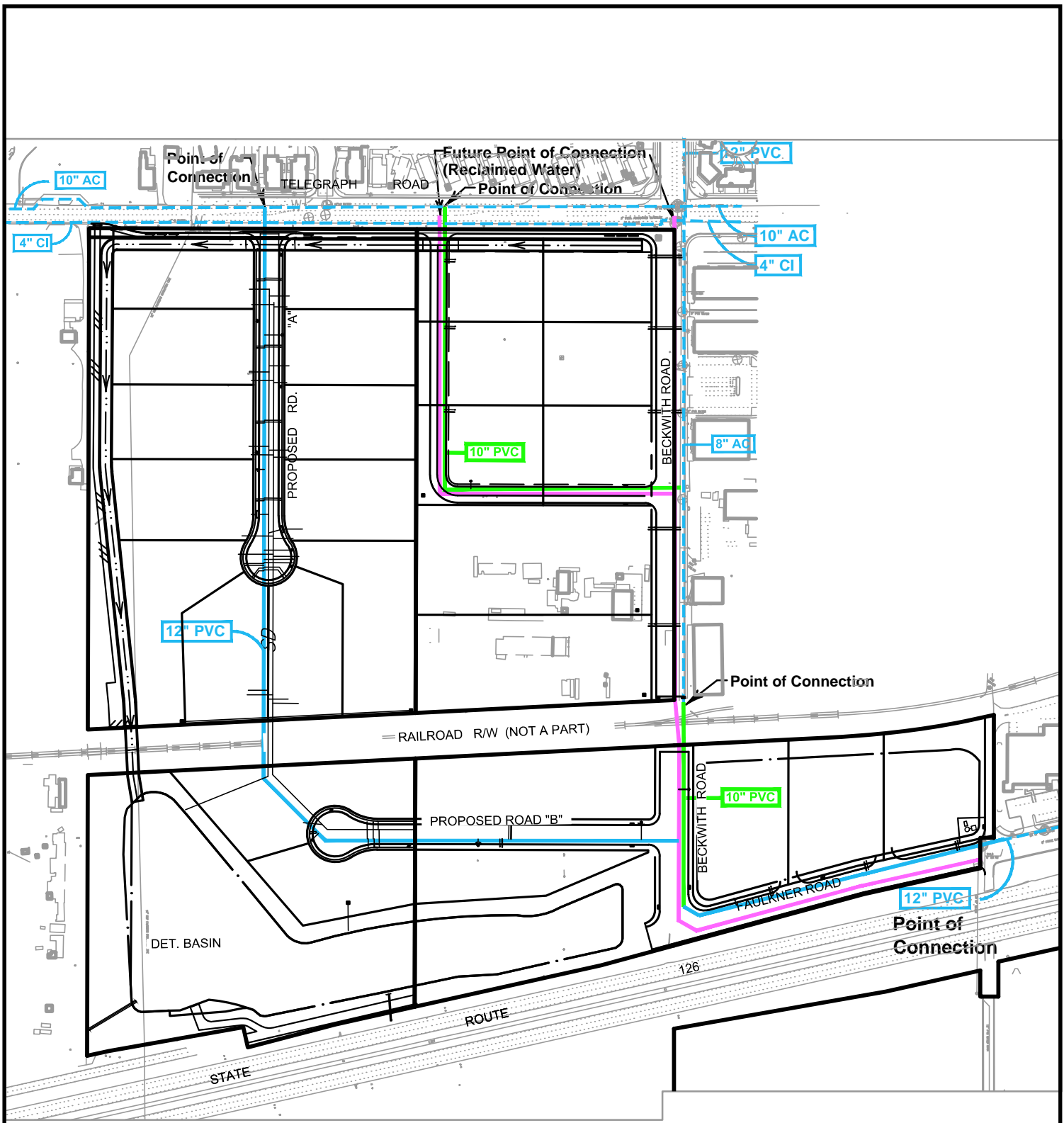
Utilities

The Specific Plan includes an infrastructure plan establishing the network of on- and off-site infrastructure construction requirements to support development of the Specific Plan. These include infrastructure to support potable water delivery, wastewater pipelines, a storm drain system, electricity and natural gas, and other facilities. Minor reconfiguration of these planned utilities is proposed to reflect the changes to the drainage and circulation master plans. The proposed utility plans are shown in **Figure 2.0-8: Domestic and Recycled Water Master Plan** and **Figure 2.0-9: Sewer System Master Plan**.



SOURCE: Jensen Design and Survey – 2023

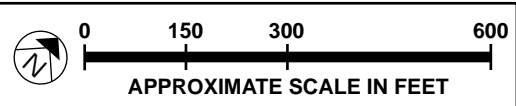
FIGURE 2.0-7



LEGEND

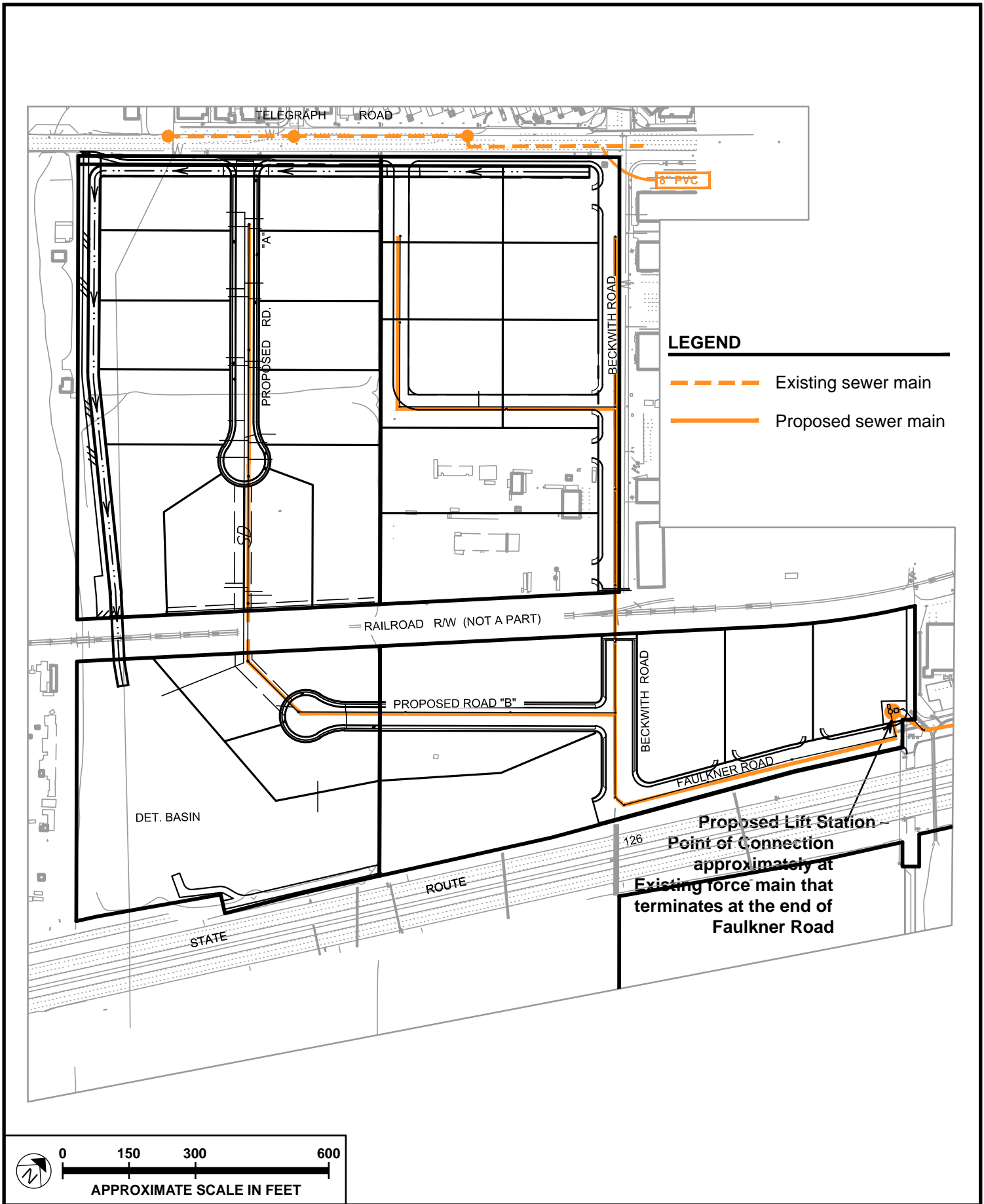
- - - Existing water main to remain
- Proposed 12" water main
- Proposed 6" reclaimed water main
- Proposed 10" water main

Notes:
 Water Demand for proposed Santa Paula West Specific Plan only.



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-8



SOURCE: Jensen Design and Survey – 2023

FIGURE 2.0-9

2.2.3 Project Approvals and Permits

The proposed Specific Plan Amendment will require review and approval by the City of Santa Paula. Subsequent to approval of the Specific Plan Amendment, the City will consider a revised Master Vesting Tentative Map. In February 2013, the City filed an application with the Ventura LAFCO to reorganize (annex) the Project Site to the City of Santa Paula. Review of this application is pending. In addition, the California Department of Transportation will need to approve an encroachment permit for construction within the State right of way for SR-126.

3.0 ENVIRONMENTAL ANALYSIS

This section includes separate subsections for each environmental topic addressed in the Santa Paula West Business Park Specific Plan Final EIR. Each topical section includes a summary of the information and conclusions of the analysis in the Final EIR. Updated information reflecting any changes in the environmental setting related to each topic is presented first in each subsection, followed by analysis of the environmental impacts of the proposed Project. For each topic, a determination is also made whether the proposed Project would result in any new significant impacts or any substantial increase in the severity of the impacts identified in the Final EIR.

3.1 Aesthetics

Summary of Analysis in the Final EIR

The Final EIR analyzed changes to the visual character of the Project Site and the surrounding area that would result from the commercial and light industrial development that would be allowed by the SPW Business Park Specific Plan. Scenic resources in the area include agricultural land; Adams Barranca on the west boundary of the Project Site; open space in foreground and middle-ground views available from SR 126; and background views of foothills and slopes rising to Santa Paula Ridge to the north from SR 126, Telegraph Road and other public streets in the area.

The existing visual character of the Project Site as viewed from SR 126, Telegraph Road, Beckwith Road, Todd Lane, and Faulkner Road, is predominantly agricultural in nature, with ancillary agricultural facilities, row crops, and orchards.

Development in accordance with the Specific Plan would result in extending the existing urbanized visual character of the City of Santa Paula westward onto the Project Site, and views from SR 126 and streets in the area would be affected. The SPW Specific Plan includes a landscape master plan and a feature of this plan is landscaping along Adams Barranca on the western edge of the Project Site to provide a buffer with the agricultural land located west of the Project Site.

More distant scenic vistas views of the Santa Clara River Valley would not be substantially affected by development of the Project Site. There are no existing structures on the Project Site that have historical significance, nor does the Project Site contain visually important trees or geologic features. Further, the Project would incorporate various open space/passive uses into the Project design to preserve the visual quality of Adams Barranca. However, the change in views from the public viewpoints near the Project was identified as a significant and unavoidable impact of the Project.

Additionally, the Project would result in a potential for an increase from glare from any reflective surfaces that may be associated with buildings on the site, and an increase in artificial light during the night, given that minimal outdoor lighting is currently emitted from the Project Site. **Mitigation Measure AES-1** was identified in the Final EIR to mitigate the impact of light and glare from the West Business Park Project by requiring submission and approval of a Lighting Plan for the site.

Analysis of Proposed Specific Plan Amendment

The primary change associated with the proposed Specific Plan Amendment is an increase in the size of the flood control basin planned in the southwest portion of the 54-acre Project Site by approximately 6 acres. This basin would extend from Adams Barranca east to Beckwith Road and would provide a visual buffer from SR-126 to development on the site. With the increased basin, development would only occur adjacent to SR 126 from Beckwith Road to the eastern edge of the Project Site. The overall visual character of the Project Site would still change from agricultural to urban.

No new potentially significant impacts would occur as a result of the proposed Specific Plan Amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of significant impacts previously identified in the Final EIR.

3.2 Agricultural Resources

Summary of Analysis in the Final EIR

The Final EIR identified that implementation of the SPW Business Park Specific Plan would result in the conversion of approximately 44.20 acres of Prime Farmland and 4.88 acres of Farmland of Statewide Importance.

Existing agricultural lands producing avocados, citrus fruits, and a variety of row crops are located south of the Specific Plan area, south of State Route (SR) 126, and near the western boundary of the SPW Business Park Specific Plan, west of Adams Barranca. Agricultural operations to the south are separated from the Project Site by SR 126.

The Final EIR included **Mitigation Measure A-1** to minimize impacts to Prime Farmland and Important Farmland. This measure requires the Applicant to provide payment for a conservation easement on officially designated Prime or Important Farmland, or contribute to a local, regional, or Statewide organization whose purpose is to acquire agricultural conservation easements for Prime and Important Farmland. The Final EIR concluded that even with implementation of this mitigation measure, the Project would result in significant and unavoidable impacts related to agricultural resources due to the conversion of land identified as Prime and Farmland of Statewide Importance to non-agricultural uses.

Analysis of Proposed Specific Plan Amendment

The proposed amendment would reduce the amount of the Project Site developed with commercial and light industrial uses to accommodate a larger flood control basin. The entire Project Site would, however, continue to be developed. For this reason, impacts on agricultural land would not change. **Mitigation Measure A-1** in the SPWBSP EIR would require payment to contribute to a conservation easement that would support a local, regional, or Statewide organization whose purpose is to acquire agricultural conservation easements for Prime and Important Farmland.

No new potentially significant impacts would occur as a result of the proposed Specific Plan Amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.3 Air Quality

Summary of Analysis in the Final EIR

The Final EIR included analysis of the consistency of the Project with the 2007 Air Quality Management Plan (AQMP), which was based on residential population growth projections within the various growth and non-growth areas of the County. As the SPW Business Park Specific Plan was proposed to implement the Santa Paula General Plan, the growth associated with the SPW Business Park Specific Plan was determined to not conflict with the 2007 AQMP. For this reason, the Final EIR determined the SPW Business Park Specific Plan would not jeopardize attainment of State and national ambient air quality standards in Ventura County.

The Final EIR estimated emissions from construction activities that would occur with the SPW Business Park Specific Plan and determined these emissions would exceed Ventura County Air Pollution Control District (VCAPCD) thresholds for ROG and NO_x throughout the entire construction period. Additionally, the Final EIR assessed the potential for increases in air emissions from subsequent development in the SPW Business Park Specific Plan Area after annexation. **Table 3.3-1: Estimated Operational Emissions – SPW Business Park Specific Plan Area** shows the emissions estimated from development in the SPW Business Park Specific Plan Area. As shown, the estimated daily operational emissions of ROG were above the thresholds of significance recommended by VCAPCD.

Source	Pollutant (pounds/day)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Maximum	29.71	22.93	103.64	0.41	29.44	8.33
<i>VCAPCD Thresholds</i>	<i>25.00</i>	<i>25.00</i>	<i>NT</i>	<i>NT</i>	<i>NT</i>	<i>NT</i>
Threshold exceeded?	Yes	No	No	No	No	No

Source: Meridian Consultants, 2013. Calculation data are provided in Santa Paula West Business Park Specific Plan DEIR.

Note:

*CO = carbon monoxide; NO_x = nitrogen oxide; PM10 = particulate matter less than 10 microns; PM2.5 = particulate matter less than 2.5 microns; ROG = reactive organic gas; SO_x = sulfur oxide.
NT = no threshold of significance.*

Mitigation measures recommended by VCAPCD to reduce emissions associated with the proposed development were included as features of the SPW Business Park Specific Plan Project. These measures included contribution to an off-site transportation demand management (TDM) fund and during clearing,

grading, earthmoving, or excavation operations, excessive fugitive dust emissions shall be controlled by regular watering or other dust-preventative measures using the following procedures, as specified by the VCAPCD and Rule 51.

Mitigation Measures AQ-1, AQ-2, AQ-3, AQ-4, and AQ-5 reduced impacts to construction air quality emissions to less than significant by reducing fugitive dust emissions and pollutants caused by construction equipment, periodic inspections of construction equipment vehicles, compliance with California Vehicle Code Section 23114 with special attention to subsections 2311(b)(F), (e)(2) and (e)(4), and adherence to VCAPCD Rule 74.2 (Architectural Coatings). Mitigation Measures AQ-6, AQ-7, and AQ-8 would reduce impacts during operation of the SPW Business Park Specific Plan Project by including low emission water heaters for commercial water heating, construct pedestrian and transit friendly facilities, and provide shuttle/minibus service to the site. Mitigation Measures AQ-9, AQ-10, and AQ-11 mitigate effects of releasing spores during construction by hiring construction employees, to the extent feasible, from local populations who may have previously been exposed and therefore immune, requiring respirators during periods of high dust, and the operator cab of area grading and construction equipment must be enclosed and air-conditioned. Mitigation Measures AQ-12 and AQ-11 require the Applicant to plant and maintain shade trees to reduce heat build-up on structures and require the preparation of a Transportation Demand Management plan (TDM) for review and approval by the City and VCAPCD.

Analysis of Proposed Specific Plan Amendment

The proposed Specific Plan Amendment Project would reduce the amount of land available for development within the 54-acre Specific Plan Area as the flood control basin would be 6 acres larger. The changes to the conceptual grading plan to accommodate the revised drainage and flood control plan would reduce the amount of soil imported and increase the overall volume of grading. Table 3.3-2: Maximum Construction Emissions, below, provides updated modeling of construction emissions using the latest version of CalEEMod, the Statewide land use emissions computer model designed to provide a uniform platform to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

TABLE 3.3-2 MAXIMUM CONSTRUCTION EMISSIONS						
Source	VOC	NOx	CO	SOx	PM10	PM2.5
pounds/day						
Year 2024	3.9	56.9	36.5	0.2	8.4	4.4
Year 2025	3.6	51.2	34.8	0.2	8.2	3.5
Year 2026	40.1	16.8	33.3	<0.1	6.2	1.8
Year 2027	40.1	8.2	15.3	<0.1	1.4	0.6
Maximum Emissions	40.1	56.9	36.5	0.2	8.4	4.4
SPW Business Park Final EIR Maximum Construction Emissions for Approved Project	235.2	158.7	118.4	0.6	35.1	13.1

As shown in Table 3.3-2, with the revised project, maximum emissions during construction would be reduced in comparison to the approved Project.

The amount of development within the Specific Plan Area would be less with the proposed amendment as the amount of the Specific Plan Area available for development would be reduced to accommodate the larger flood control basin. The amount of traffic generated by the Project would also be reduced. For these reasons, operational air quality emissions would also be reduced in comparison to the approved Project.

Mitigation Measures AQ-1 through AQ-12, as identified in the Final EIR and adopted by the City, would apply to the revised project and would reduce air quality impacts during construction and operation of the proposed Project to the maximum extent feasible.

No new significant impacts would result from the proposed Specific Plan Amendment and the additional information provided in this addendum does not identify any substantial increase in the severity of impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.4 Biological Resources

Summary of Analysis in the Final EIR

The Final EIR determined that no special-status plant species are expected to occur within the avocado orchards agricultural ditch, agricultural row crop communities, or disturbed areas on the Project Site. The Specific Plan designates the riparian habitat on the Project Site associated with Adams Barranca as Open Space. Mitigation Measure BR-1 was identified to reduce impacts to the native riparian habitat adjacent to the Project Site by requiring the locations of any protected trees to be identified on grading plans and provide a tree report identifying measures to preserve any tree(s) that could be affected by grading. Additionally, Mitigation Measures BR-2, BR-3, and BR-4 require landscaping and irrigation plans that incorporate native vegetation and water conservation, as well as nesting bird surveys to mitigate impacts to the surrounding habitat.

Adams Barranca, located adjacent to the site, provides marginal habitat for a variety of wildlife species. Mitigation Measures BR-5 and BR-6 require the Applicant to retain a qualified biologist to survey the Project Site for the presence of the American badger and to conduct roosting bat surveys within the Specific Plan area prior to site preparation activities.

Surveys identified approximately 0.117 acres and 1,116 linear feet of agricultural ditch that may represent an ephemeral drainage under the jurisdiction of the ACOE. Alteration of State-protected waters and associated riparian vegetation would require the acquisition of a Fish and Game Code Section 1602 SAA from the CDFW. Mitigation Measures BR-7 and BR-8 require a Streambed Alteration Agreement (SAA) and a Nationwide Permit (NWP) to be obtained, and mitigation measures recommended by the ACOE, CDFW, and the National Marine Fisheries shall be implemented. Further, Mitigation Measures BR-9 and BR-10 define additional mitigation measures to meet Regional Board and CDFW applicable standards.

Analysis of Proposed Specific Plan Amendment

The proposed amendment would enlarge the flood control basin in the southwest corner of the Project Site and reduce the amount of the Project Site available for commercial and light industrial development. Overall, the amount of the Project Site designated as open space would increase to account for the enlarged flood control basin. **Mitigation Measures BR-1 through BR-10**, as identified in the Final EIR and adopted for the Project, would continue to be applicable. No changes to these mitigation measures are proposed or needed.

No new potentially significant impacts would occur as a result of the proposed Specific Plan Amendment and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.5 Cultural Resources

Summary of Analysis in the Final EIR

The majority of the soil on the Project Site consists of younger alluvial soils, which have a low potential of containing significant paleontological resources. Because these depths of older alluvial soils are unknown, there is a moderate to high potential for earthmoving activities during construction to encounter fossils within the older alluvium on the Project Site. **Mitigation Measure CUL-1** mitigates this impact by requiring a qualified paleontologist to assess unexpected paleontological resources discovered during any ground-disturbance activities.

Ground-disturbing activities could potentially uncover previously unknown resources, including human remains. In the event that human remains are uncovered during subsurface excavation activities, implementation of **Mitigation Measure CUL-2** requires a qualified archaeologist to determine whether any bones encountered are human and to supervise appropriate treatment of any resources encountered.

A majority of the Project Site has been farmed with various row crops and orchards, which has continually disturbed the surface of the soils. While the Project Site does not contain any known sensitive archaeological resources within the disturbance area, the Santa Clara River Valley is considered sensitive, and there is potential for unknown resources to be uncovered by activities, such as grading, that disturb the ground surface. **Mitigation Measure CUL-3** would mitigate potential impacts to less than significant by requiring an independent qualified archaeologist to assess any archaeological resources discovered during construction.

Analysis of Proposed Specific Plan Amendment

With the amendment, the Project would include a 7.4-acre, 8-foot-deep on-site flood storage basin, in addition to the approved development, as part of the Specific Plan. As discussed in the Santa Paula West Business Park Specific Plan Final EIR, the soil on the Project Site is considered to have a low potential to contain significant paleontological resources. However, ground-disturbing activities could potentially

uncover previously unknown resources, including human remains. **Mitigation Measures CUL-1, CUL-2, and CUL-3** in the Santa Paula West Business Park Specific Plan Final EIR would reduce potential impacts to paleontological and archaeological resources, and human remains, by requiring a qualified archaeologist to assess the resource or human remains.

No new potentially significant impacts would occur as a result of the proposed Specific Plan Amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.6 Geology and Soils

Summary of Analysis in the Final EIR

The Final EIR evaluated potential impacts related to geology and soil conditions in the Specific Plan area. The Project Site is not located within a designated Alquist-Priolo Earthquake Fault Zone (APEFZ) or crossed by a known active fault. As such, the risk of loss, injury, or death associated with surface rupture of a known earthquake fault was identified as very low.

Most of the Project Site lies within a liquefaction hazard zone, an area where the historic occurrence of liquefaction or groundwater conditions indicate a potential for ground displacements as a result of liquefaction, as designated by the State of California and the City of Santa Paula. **Mitigation Measure G-1** would require additional explorations be performed to establish required removal depths and delineate any portion of the Project Site deemed susceptible to seismically induced settlement.

The native topsoil and alluvial soils within the Project Site may be moderately susceptible to erosion. Native topsoil and alluvial soils will be particularly prone to erosion during construction or earth moving activities, especially during heavy rains. The impact of erosion at the Project Site is considered to be potentially significant.

The alluvial soils present in the Project Site generally have a low expansion potential. However, soils with a higher expansion potential (medium or greater) are known to be present in the local area. Expansive soils could pose a risk to improvements planned for the area. The Project Site is not located within a Landslide Zone, but it does lie within a Liquefaction Zone. Liquefaction zones identify where the stability of foundation soils must be investigated and countermeasures undertaken in the design and construction of buildings for human occupancy. Statutes require that cities and counties use these zones as part of their construction permitting process, which the City of Santa Paula addresses through the building regulations contained in the Municipal Code. **Mitigation Measures G-2 and G-3** were identified in the Final EIR to reduce potential impacts to erosion and expansive soils to less than significant by requiring detailed, design-level geotechnical investigation reports for all future development within the Specific Plan Area, as well as require a final grading and erosion control plan to be approved prior to any construction to minimize erosion.

The Specific Plan area could be subject to strong ground shaking in the event of an earthquake originating along one of the faults within the area. All structures will be designed in accordance with the then-current CBC and applicable City codes to ensure safety in the event of an earthquake. Additionally, **Mitigation Measure G-1** requires additional explorations within the Project Site to determine any areas that might be susceptible to seismically induced settlement and identify design standards to address any settlement that may occur.

Further, the Project Site does not lie in a tsunami or seiche zone and, thus, would not create any impacts related to tsunami or seiche risk.

Analysis of Proposed Specific Plan Amendment

The proposed amendment would modify the drainage and flood control plan to allow for storage of floodwater within the Specific Plan Area. No other changes are proposed to the approved Specific Plan.

The adopted mitigation measures to address geology and soil conditions would continue to apply and no new potentially significant impacts would occur as a result of the proposed Project. The additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.7 Greenhouse Gases

Summary of Analysis in the Final EIR

The Specific Plan would result in short-term GHG emissions during construction. Construction activities associated with the Project would generate approximately 2,388 MTCO₂e of GHG emissions. Construction-related GHG emissions were annualized over the entire construction period and included in the annual operational emissions. As the VCAPCD had not approved GHG emission thresholds, thresholds developed by the South Coast Air Quality Management District were used in the analysis. All industrial land use projects that exceed 10,000 MTCO₂e per year would be considered potentially significant under the screening threshold developed by the SCAQMD. The estimated Project operational GHG emissions with project design features would be approximately 6,675 MTCO₂e per year, which would not exceed this screening threshold.

The SPW Business Park Project was determined to be consistent with applicable strategies of the 2008 CARB Climate Change Scoping Plan and the and the 2014 Updated Scoping Plan to reduce greenhouse gas emissions in California. GHG emission impacts were determined to be less than significant.

Analysis of Proposed Specific Plan Amendment

In efforts to reduce and mitigate climate change impacts, State and local governments have been implementing policies and initiatives aimed at reducing GHG emissions. California, one of the largest state contributors to the national GHG emission inventory, has adopted significant reduction targets and strategies. The State Legislature passed Senate Bill (SB) 32, which set a 2030 GHG emissions reduction

target of 40 percent below 1990 levels.¹ AB 32 requires the California Air Resources Board (CARB) to develop a Scoping Plan which lays out California's strategy for meeting the goals. The Scoping Plan must be updated every five years. The 2022 Scoping Plan is the most recent update that lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279.² The actions and outcomes in the plan will achieve: significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon. To meet the Statewide reduction targets, projects must contribute to slowing the increase in GHG emissions and should contribute to reducing the State's GHG output. In order to reach California's GHG reduction targets, per capita emissions would need to be reduced by approximately five percent each year from 2022 to 2030, with continued reductions through 2050.

The SPW Business Park Project would comply with the most recent CalGreen Code and Building Efficiency Standards per the California Energy Commission. Moreover, Statewide efforts like Executive Order B-55-18 (carbon neutrality) and CARB's Advanced Clean Fleets would further reduce greenhouse gas emissions during the lifetime of the proposed Project. As such, the proposed Project would not conflict with applicable strategies to reduce greenhouse gas emissions. As the amount of land available for development would be reduced with the proposed Specific Plan Amendment, the amount of development and GHG emissions associated with this development would be reduced in comparison to the approved project.

No new potentially significant GHG impacts would occur as a result of the proposed amendment, and the additional information provided in this addendum does not identify any substantial increase in the impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.8 Hazards and Hazardous Materials

Summary of Analysis in the Final EIR

The Final EIR identified that, based on the age of the on-site structures built prior to 1970, there is potential for the exposure of ACMs, PCBs, or LBPs at the SPWBSP Project Site. **Mitigation Measures HM-1, HM-2, HM-3, and HM-4** were identified to mitigate the effects of these hazardous materials on-site during construction and operation. These mitigation measures require the Applicant to submit verification to the City of Santa Paula Building and Safety Department that an asbestos survey has been conducted on any buildings and irrigation pipelines that are to be demolished or removed; a lead based paint survey has been conducted; all fluorescent light fixtures within the existing buildings shall be

1 California State Legislature. "Senate Bill 32." https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32. Accessed January 2023.

2 California Air Resources Board (CARB). *Final 2022 Scoping Plan Update*. <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents>. Accessed January 2023.

inspected for PCB; and pole-mounted transformers, light ballasts, or other equipment suspected to contain PCBs must be inspected for the presence of PCBs prior to before any disturbance or removal.

The Santa Paula West Business Park Specific Plan Area also has a history of being used for agricultural purposes, which typically included the use of organochlorine pesticides such as DDD, DDE, and DDT prior to use of these pesticides being prohibited. The Final EIR noted that the limited Phase II ESA that was conducted for the Project Site determined that exposure of residual pesticides is considered low. However, soil testing may not always indicate every condition within the Project, and clearing of existing debris or soils could uncover hazardous material contamination not previously known to occur on-site. **Mitigation Measure HM-5** was identified to reduce potentially significant impacts from the release of hazardous materials in the environment to less than significant by requiring implementation of investigation/remediation in the event that previously unknown soil and/or groundwater contamination is discovered during construction.

Analysis of Proposed Specific Plan Amendment

The proposed amendment would enlarge the flood control basin in the southwest corner of the Project Site and reduce the amount of the Project Site available for commercial and light industrial development. As discussed in the SPWBSP EIR, there is the potential for the Project Site to contain soil or debris that has been contaminated by chemicals from previous agricultural activities. Additionally, the few buildings on-site were built prior to 1970 and there is potential for the exposure of ACMs, PCBs, or LBPs. **Mitigation Measures HM-1, HM-2, HM-3, HM-4, and HM-5** in the SPWBSP EIR would be implemented to mitigate potential impacts from any hazardous materials that may be present in the existing buildings to be demolished and the potential for soil contamination.

No new potentially significant impacts would occur as a result of the proposed amendment and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.9 Hydrology and Water Resources

Summary of Analysis in the Final EIR

All future development within the SPW Business Park Specific Plan Area would be subject to the State Water Resource Control Board (SWRCB) and United States Environmental Protection Agency (USEPA) permits, as well as Stormwater Pollution Prevention Plan (SWPPP) requirements. To reduce the discharge of pollutants during construction of the proposed development, a site-specific SWPPP would be developed in accordance with the NPDES Program General permit, authorized under the Clean Water Act for Construction Activities.

The approved Specific Plan identified bioswales in parking landscape areas to treat stormwater runoff prior to discharge into Adams Barranca and the Santa Clara River. Biofilter inserts will be installed in

curb inlets to capture oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens. In addition, storm drain inlets and catch basins will have signage and stenciling to discourage illegal dumping. Filters and signage would be checked and/or replaced annually. With these project features, the Project would not result in significant impacts to water quality.

The conceptual drainage plan in the approved Specific Plan included an interceptor channel along Telegraph Road along the northern edge of the Project Site, with another interceptor channel parallel to Adams Barranca from Telegraph Road to Freeway 126, with a discharge point back into Adams Barranca upstream of the SR 126 Freeway. The channel designed along the western edge of the Project Site was designed to have the capacity to handle flows that overtop the eastern bank of Adams Barranca and the water that ponds on the Project Site due to the undersized culvert at SR 126.

The planned storm drain system would collect on-site runoff and direct it to two surface detention basins planned on the western edge of the Project Site along Adams Barranca, north of the railroad and north of the SR 126 Freeway. These detention basins were sized to treat 8% of the Q 50 (50 year storm event) runoff from the storm drain system consistent with the Ventura County Storm Water Quality Urban Impact Mitigation Plan (SQUIMP) guidelines and would reduce flow rates, allow sediment to settle, and allow for infiltration of runoff. The Final EIR concluded that the Project would not have an adverse effect on drainage and flood conditions on the Project Site or surrounding properties.

The Final EIR also determined the Project would not result in a significant new demand for water and will not substantially deplete groundwater supplies. In addition, the Specific Plan incorporates design features such as bioswales, bioretention cells, infiltration trenches, and permeable pavement, along with detention basins to allow surface water runoff percolation. Therefore, the Specific Plan would not substantially interfere with groundwater recharge. There will be no substantial impact to local groundwater recharge.

Analysis of Proposed Specific Plan Amendment

Based on consultation with the Ventura County Watershed Protection District (VCWPD), the drainage and flood control plan included in the approved Specific Plan was redesigned to ensure the Project Site would not be flooded or have any adverse effects on adjacent properties or the SR-126 Freeway, and would replace the existing natural floodplain storage on the Project Site. The proposed Specific Plan Amendment includes modifications to the drainage and flood control plan to increase the volume of floodwater from Adams Barranca that can be accommodated within the Specific Plan Area. The Flood Control Conceptual Design Report in **Appendix A** contains the hydrology modeling completed to define the revised design.³

3 Kasraie Consulting. *Flood Protection Conceptual Design* (Revised June 2022) *Santa Paula West Business Park Specific Plan EIR* (RMA 14-019-1). June 30, 2022. See **Appendix A**.

Instead of discharging the flows back into Adams Barranca above the freeway, the revised drainage plan in the proposed Specific Plan Amendment directs these overflows into a larger on-site storage basin located where the 100-year flood is expected to flow over the SR 126 freeway under the existing condition. This 7.4-acre, 8-foot deep basin would act as an “inlet bay” where most of the on-site flood waters would be collected via the north and the west interceptor channels. The basin would provide a spillage area where flood flows would overtop the freeway similarly to the existing condition, and it would be utilized to also serve as an on-site detention and stormwater quality treatment basin mitigation resulting in making more of the Project Site available for development. The proposed interceptor channels and storage basin would provide an additional 28.5 acre-ft (53% more) of floodplain storage when compared to the existing condition. This flood storage basin will have a low level 36” RCP outlet pipe with a flap gate which will drain to Adams Barranca upstream of, or into, the double RCB Caltrans culvert below the SR 126 freeway.

Soils and geotechnical studies will be completed at the time design plans are prepared to address soil slope and stability along the freeway under the proposed condition, and to determine appropriate erosion or settlement protection measures. Therefore, impacts related to flooding at the Project Site would be less than significant.

The flows entering Beckwith Road from Telegraph Road to the railroad tracks will also be intercepted and collected at the Telegraph Road intersection via a series of catch basin inlets and storm drains, so as to minimize the flows discharging south on Beckwith Road and overtopping the railroad tracks.

Along the east end of the Project Site to the Beckwith Road extension, an earthen interceptor channel, between the proposed building pad and existing railroad, will collect flows overflowing the tracks and will convey them to the Todd Lane Undercrossing.

The revised drainage and flood control plan meets the design criteria defined by the City in consultation with the VCWPD including that drainage flows at the current point of discharge from the Project Site at the SR 126 Freeway and at the Todd Lane Undercrossing will be equal or less than existing conditions; that flood conditions in Adams Barranca and adjacent properties will be equal or less than existing conditions; and that the flood control basin have the capacity to accommodate the existing floodplain storage on the Project Site.

As the amount of development would be reduced with the proposed Specific Plan Amendment, the water needed for the Project would be reduced. The Final EIR also determined the Project would not result in a significant new demand for water and will not substantially deplete groundwater supplies. The revised drainage and flood control plan continues to incorporate design features such as bioswales, bioretention cells, infiltration trenches, and permeable pavement, along with the larger detention basin to allow surface water runoff percolation. With these features, the Specific Plan would not substantially interfere with groundwater recharge and there will be no substantial impact to local groundwater recharge.

No new potentially significant impacts would occur as a result of the proposed Specific Plan Amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.10 Land Use

Summary of Analysis in the Final EIR

As proposed, the Santa Paula West Business Park Specific Plan Project involved annexation of approximately 54 acres of unincorporated territory to the City of Santa Paula. The parcels within the Specific Plan boundary would be subdivided with a Tentative Tract Map and roadways within the plan area would be created. The Final EIR concluded the annexation of the Project Site would be consistent with surrounding uses and would not divide any existing communities. Further, the annexation of the Santa Paula West Business Park Specific Plan Project would be in accordance with the City's General Plan to expand the City limits to coincide with the City's adopted Sphere of Influence (SOI) and City Urban Restriction Boundary (CURB).

The consistency of the Santa Paula West Business Park Specific Plan Project with applicable land use plans and policies was analyzed in the Final EIR. This evaluation addressed the consistency of the project with the City's General Plan and Municipal Code, the County of Ventura General Plan and Non-Coastal Zoning Ordinance, the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS), and the Ventura County Local Agency Formation Commission (LAFCo) policies. No significant impacts related to inconsistencies with applicable land use plans and policies were identified in the Final EIR and no mitigation measures were identified in the Final EIR.

Analysis of Proposed Specific Plan Amendment

The proposed amendment would reduce the amount of land available for development as a result of increasing the size of the flood control basin to accommodate overflows from Adams Barranca. The allowed land uses within the Santa Paula West Business Park Specific Plan Area would remain consistent with the existing General Plan land use designation and zoning with approval of the proposed Project. No new streets, utility lines, or other major infrastructure is proposed that would involve any substantial physical alterations to the existing community structure that would physically divide the City, within or out of the Project boundaries.

No new potentially significant impacts would occur as a result of the proposed amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.11 Noise

Summary of Analysis in the Final EIR

Construction noise levels at noise sensitive uses located near the Project Site receptors vary based on the location of construction activity and the amount of equipment in operation. While construction is temporary, the use of this equipment would generate both steady-state and episodic noise that will be heard from within the Project Site and at off-site locations in the surrounding areas. **Mitigation Measures N-1, N-2, N-3, and N-4** would mitigate impacts to sensitive receptors by requiring stationary construction equipment to be placed as far from noise sensitive uses as feasible during all phases of project construction; all construction equipment shall be equipped with appropriate mufflers in good working condition; submittal of a material haul route plan to the City of Santa Paula and the County of Ventura for review and approval; and during all site preparation, grading and construction, the construction contractor shall locate all stockpiling and vehicle staging areas away from existing residences, to the extent feasible.

The Final EIR identified that traffic growth from future development of the Santa Paula West Business Park Specific Plan would not result in significant noise increases, as shown in **Table 3.11-1: Roadway Noise Level 75 feet from Center**, in the Final EIR.

Additionally, while there is currently limited use of the Santa Paula Branch Rail line that passes through the Specific Plan Area, noise from any rail operations would represent an intermittent noise source. Light industrial and commercial uses would be allowed near the southern boundary of the Project Site, north of the Santa Paula Branch of the Southern Pacific Railroad tracks. Due to its proximity to the railroad track, uses allowed within the southern boundary of the Project Site would not be sensitive to the estimated noise level of 69.4 dB(A). Given vibration from the railroad track would not be constant and would be approximately 50 feet from the track, uses allowed within Santa Paula West Specific Plan Area would not be susceptible to ground-borne vibration. Therefore, impacts identified as less than significant.

Analysis of Proposed Specific Plan Amendment

The proposed reconfiguration of the land use plan to accommodate a larger flood control basin would not change the type of commercial and industrial uses allowed within the Specific Plan Area. For this reason, no new potentially significant impacts would occur as a result of the proposed Project, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.12 Public Services

Public Schools

Summary of Analysis in the Final EIR

The Final EIR determined there was some potential for future employees of businesses in the SPW Business Park Specific Plan Area with school age children to occupy the homes in the City. However, it was expected that the majority of the employees within the Specific Plan would either travel from outside of the City or would reside within the existing and future housing stock in the City. For this reason, it is not anticipated that the Project will generate many new students in the Santa Paula Unified School District (SPUSD). In any event, the Project will pay the school impact fee applicable to commercial and industrial development, which will mitigate any indirect impact on SDUSD school facilities.

Analysis of Proposed Specific Plan Amendment

As the proposed amendment would reduce the amount of commercial and industrial development in the Specific Plan Area, any potential indirect impacts to school facilities would be reduced in comparison to the approved project.

No new potentially significant impacts would occur as a result of the proposed amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

Fire Protection

Summary of Analysis in the Final EIR

The EIR discussed that development of the Santa Paula West Business Park would require building plans to be submitted to the Fire Department for review and approval to ensure compliance with UFC. Review of future development plans under the Specific Plan will be required to provide defensible space, serviceable access, adequate fire hydrants, adequate building addressing, adequate interior fire sprinkler systems, adequate fire or emergency alarm system, and approved locking systems for any gated access ways, among other standard conditions.

Future development within the Specific Plan Area would increase the demand for services and resources provided by the fire department over the long term. Adequate levels of fire prevention, suppression, and emergency medical response can be provided to the Specific Plan Area without detriment to the existing community through the resources available at the existing fire stations serving the City. The Final EIR concluded the Project would not require construction of new or expanded fire protection facilities.

Additionally, Mitigation Measures TRA-1, TRA-2, TRA-3, and TRA-4 identified in the Transportation section of the EIR would mitigate traffic congestion by improving the following intersections: Peck Road & Harvard Boulevard/Telegraph Road/Main Street, Peck Road & SR 126 EB On/Off Ramps/Acacia Way,

Beckwith Road & Telegraph Road, and Faulkner Road & SR 126 Westbound On/Off Ramps. With the required plan submittal and approval, and the transportation mitigation measures, impacts to fire protection services would be less than significant.

Analysis of Proposed Specific Plan Amendment

In 2018, the City of Santa Paula was annexed into the Ventura County Fire Department (VCFD) and a Memorandum of Agreement between the City and VCFD was executed describing services and funding.⁴ VCFD also protects the State Responsibility Area (SRA) lands within Santa Paula's Sphere of Influence under an agreement with CAL FIRE. The closest fire station to the Project Site is Station No. 26, located at 536 West Main Street, approximately 0.96 miles northeast of the Project Site.

Construction of the Project may result in accidents, fire, or emergency incidents that would require fire services. However, construction activities would be short-term and limited in scope. After construction, there would be an increase in demand for emergency medical and fire protection services. The VCFD determined that adequate service could be provided by the two existing fire stations in the City and construction of new or expanded fire protection facilities is not required.

No new potentially significant impacts would occur as a result of the proposed Project, and the additional information provided in this addendum does not identify any substantial increase in the impacts previously identified in the Santa Paula West Business Park Specific Plan EIR.

Police Protection

Summary of Analysis in the Final EIR

Development of the Specific Plan would increase the demand for services and resources provided by the Santa Paula Police Department. The Final EIR concluded that the Project would not require construction of new or expanded police protection facilities, project-related police protection impacts would be less than significant.

Analysis of Proposed Specific Plan Amendment

As the amount of new development would be reduced with the proposed Specific Plan Amendment, no new potentially significant impacts would occur, and the additional information provided in this addendum does not identify any substantial increase in the impacts previously identified in the Santa Paula West Business Park Specific Plan EIR.

4 City of Santa Paula. *General Plan 2040*. Page 6-7. <https://www.spcity.org/DocumentCenter/View/1700/Cityof-Santa-Paula-2040-General-Plan---Final-Adopted-2020-03-04>. Accessed January 2023.

Parks and Recreation

Summary of Analysis in the Final EIR

Because the Santa Paula West Business Park Project does not include any new residential zoning or any new residential development projects, the Final EIR concluded the Project would not result in an increase in the residential population that could visit the City's parks and recreation facilities. Project impacts would be less than significant.

Analysis of Proposed Specific Plan Amendment

No new potentially significant impacts would occur as a result of the proposed Project, and the additional information provided in this addendum does not identify any substantial increase in the severity of any impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.13 Transportation

Summary of Analysis in the Final EIR

The Final EIR estimated the development allowed by the Specific Plan would generate 5,546 Daily Trips, 646 AM Peak Hour and 732 PM Peak Hour trips. The traffic study addressed the potential for this additional traffic to impact 16 intersections from 10th Street to Briggs Road located north of the SR 126 Freeway. Significant impacts were identified at four intersections: 10th Street and Harvard Boulevard during the AM Peak Hour, Peck Road & Harvard Boulevard/Telegraph Road/Main Street during the AM Peak Hour, Peck Road & SR 126 Eastbound On/Off Ramps/Acacia Way during the PM Peak Hour, and Beckwith Road & Telegraph Road during the PM Peak Hour. Mitigation measures in the Final EIR identified improvements to these intersections that would mitigate all impacts to a less than significant level.

Analysis of Proposed Specific Plan Amendment

The California Environmental Quality Act was amended in July 2020 and it updated the way transportation impacts are measured in California for new development projects, such as to address the amount of vehicle miles traveled (VMT) instead of the level of congestion of roads and intersections.

As the proposed amendment would reduce the amount of development within the SPW Specific Plan Area, the number of trips and VMT generated would be reduced in comparison to the approved Project. For this reason, no new potentially significant impacts would occur as a result of the proposed amendment, and the additional information provided in this addendum does not identify any substantial increase in the impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.

3.14 Utilities and Service Systems

Summary of Analysis in the Final EIR

The Final EIR determined that water demand from the Project represented 0.81 percent of City's total projected urban water demand in 2017, and 0.65 percent in 2037. The City's 2010 Urban Water

Management Plan (UWMP) included the projected total water demand for the Santa Paula Business Park through 2035 and demonstrated that supplies are sufficient to meet demands. The projected demand for the Project will account for only a small fraction of the projected demands. Therefore, there would be no impacts to available water supplies and no new or expanded entitlements were determined to be needed.

The Final EIR also concluded that wastewater from the Project would not exceed applicable wastewater quality standards, and the Project impact related to wastewater treatment was less than significant. As concluded in the Sanitary Sewer Technical Report appended to the Final EIR, the Project sewer system will be designed in accordance with applicable City of Santa Paula guidelines. The proposed on-site sewer system would convey most of the wastewater flow to existing sewer lines north of the site along Telegraph Road. The projected wastewater flows are within the City's Wastewater Master Plan estimates for the Specific Plan Area. For these reasons, no significant impacts were identified.

The impact of the Project on solid waste collection and disposal services was also determined to be less than significant, as adequate landfill capacity is available in nearby landfills that serve the City. Solid waste generated during construction and operation of the Project would be required to comply with all federal, State, and local statutes and regulations to reduce and recycle solid waste.

Analysis of Proposed Specific Plan Amendment

As the amount of commercial and light industrial development would be reduced with the proposed amendment, utility demands would be less when compared to the approved project. No new potentially significant impacts would occur as a result of the proposed amendment, and the additional information provided in this addendum does not identify any substantial increase in the severity of impacts previously identified in the Santa Paula West Business Park Specific Plan Final EIR.