CITY OF ATASCADERO

COMMUNITY DEVELOPMENT DEPARTMENT

Notice of Intent to Adopt Mitigated Negative Declaration

APPLICATION	PLN 2014-1519 Amendment	**Environmental Document No.**	2019-0002		
PROJECT TITLE	Principal Mixed-use Amendment, CUP, Tentative Tract Map, Zone Change				
APPLICANT NAME & PHONE NUMBER	Barry Ephraim, ECR Principal, LLC	**Contact Email**	ctaylor@atascadero.org		
MAILING ADDRESS:	125 South Bowling Green Way	Los Angeles, CA		90049	
STAFF CONTACT:	Callie Taylor, Senior Planner	(805) 470-3448	ctaylor@atascadero.org		
PROJECT ADDRESS:	9105, 9107, 9109 Principal Ave, 9300 Pino Solo	Atascadero, CA 93422	**APN:**	030-491-001; 013; 019; 020	

PROJECT DESCRIPTION:
The project consists of an amendment to a previously approved Planned Development #24 mixed-use project. The applicant is proposing revisions to the approved master plan of development and a new Tentative Tract Map to increase the unit count to 55 residential units, which includes a 10% density bonus for providing affordable housing. The master plan of development includes 1,830 square feet of office area as a part of the live-work units on Principal Avenue, and one drive-through carwash which is currently under construction as it was previously approved and analyzed through CEQA under the previous project approved in 2015. A 6,500 sq. ft. area directly adjacent to El Camino Real is proposed to be changed from RMF-10 zoning to Commercial Retail (CR) to allow for future commercial development along the El Camino corridor at a later date. The project site is approximately 5.4 acres with an average slope of less than 10 percent. There are six (6) native oak trees proposed for removal as a part of the revised project. Project access will be provided at two driveways on Principal Avenue.
General Plan Designation: Medium Density Residential (MDR) / General Commercial (GC)
Zoning District: Residential Multi-Family (RMF-10) / Planned Development (PD-24) / Commercial Retail (CR)

LEAD AGENCY: City of Atascadero
Community Development Department
6500 Palma Avenue, Atascadero, CA 93422

DOCUMENT AVAILABLE ONLINE: **http://www.atascadero.org/environmentaldocs**

STATE CLEARING HOUSE REVIEW: ☒ Yes NO ☐

REVIEW PERIOD BEGINS: **2/8/2019** **REVIEW PERIOD ENDS:** **3/10/2019**

PUBLIC HEARING REQUIRED: ☐ No ☒ Yes Date to be determined

PUBLIC NOTICE: The City of Atascadero is releasing a draft Initial Study and Mitigated Negative declaration for *9105, 9107, 9109 Principal Ave, 9300 Pino Solo* for review and comment to all effected agencies, organizations, and interested parties. Reviewers should focus on the content and accuracy of the report and the potential impacts upon the environment. The notice for this project is in compliance with the California Environmental Quality Act (CEQA). Persons responding to this notice are urged to submit their comments in writing. Written comments should be delivered the City (lead agency) no later than 5pm on the date listed as "review period ends". Submittal of written comments via email is also accepted and should be directed to the Staff contact at the above email address. This document may be viewed by visiting the Community Development Department, listed under the lead agency address, or accessed via the City's website.

CITY OF ATASCADERO

COMMUNITY DEVELOPMENT DEPARTMENT

Initial Study Summary – Environmental Checklist

APPLICATION PLN 2014-1519 Amendment **Environmental Document No.** 2019-0002

PROJECT TITLE: Principal Mixed-use Amendment, CUP, Tentative Tract Map, Zone Change

Environmental Factors Potentially Affected: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Hazards / Hazardous Materials	☐ Recreation
☐ Agricultural Resources	☐ Hydrology / Water Quality	☐ Transportation / Traffic
☐ Air Quality	☐ Land Use / Planning	☐ Tribal Cultural Resources
☐ Biological Resources	☐ Mineral Resources	☐ Utilities / Service Systems
☐ Cultural Resources	☐ Noise	☐ Mandatory Findings of Significance
☐ Geology and Soils	☐ Population / Housing	
☐ Greenhouse Gas Emissions	☐ Public Services	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation, the Community Development Director finds that:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Callie Taylor	Callie J. Taylor	2/7/19
Prepared by (Print)	**Signature**	**Date**
Phil Dunsmore	Phil Dunsmore	2-7-19
Reviewed by (Print)	**Signature**	**Date**

PROJECT ENVIRONMENTAL ANALYSIS

The City of Atascadero's environmental review process incorporates all of the requirements for completing the Initial Study as required by the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The Initial Study includes Staff's on-site inspection of the project site and surrounding and a detailed review of the information on file for the proposed project. In addition, available background information is reviewed for each project. Relevant information regarding soil types and characteristics, geological information, significant vegetation and/or wildlife resources, water availability, wastewater disposal service, existing land uses and surrounding land use categories and other information relevant to the environmental review process are evaluated for each project. Exhibit A includes the references used, as well as the agencies or groups that were contacted as a part of this initial study. The City of Atascadero uses the checklist to summarize the results of the research accomplished during the initial environmental review of the project.

Persons, agencies, or organizations interested in obtaining more information regarding the environmental review process for a project should contact the Community Development Department, 6500 Palma Avenue, Atascadero, CA 93422 or call (805) 461-5000.

A. PROPOSED PROJECT

Description: The project consists of an amendment to a previously approved Planned Development #24 mixed-use project. The applicant is proposing revisions to the approved master plan of development and a new Tentative Tract Map to increase the unit count to 55 residential units, which includes a 10% density bonus for providing affordable housing. The master plan of development includes 1,830 square feet of office area as a part of the live-work units on Principal Avenue, and one drive-through carwash which is currently under construction as it was previously approved and analyzed through CEQA under the previous project approved in 2015. A 6,500 sq. ft. area directly adjacent to El Camino Real is proposed to be changed from RMF-10 zoning to Commercial Retail (CR) to allow for future commercial development along the El Camino corridor at a later date. The project site is approximately 5.4 acres with an average slope of less than 10 percent. There are six (6) native oak trees proposed for removal as a part of the revised project. Project access will be provided at two driveways on Principal Avenue.
General Plan Designation: Medium Density Residential (MDR) / General Commercial (GC)
Zoning District: Residential Multi-Family (RMF-10) / Planned Development (PD-24) / Commercial Retail (CR)

Assessor parcel number(s): 030-491-001; 013; 019; 020

Latitude: 35° 28' 9.83" N **Longitude:** 120° 38' 59.67" W

Other public agencies whose approval is required: Department of Fish and Wildlife (if construction is required in designated waters of the US)
Army Corps of Engineers (if construction is required in designated waters of the US)

B. EXISTING SETTING

Land use designation: Medium Density Residential (MDR) / General Commercial (GC)

Zoning district Residential Multi-Family (RMF-10) / Planned Development (PD-24) / Commercial Retail (CR)

Parcel size: 5.25 acres

Topography: Mostly flat **Average Slope:** 10%

Vegetation:	Oaks, annual grasses, development located adjacent to drainage swale with riparian vegetation
Existing use:	Carwash currently under construction, remaining parcel is vacant
Surrounding land use:	Residential Single-Family (RSF-Y), Multi-family (RMF-20) & Commercial Retail (CR)
Surrounding zoning:	Residential Single-Family, Multi-family, & Commercial Retail

North:	South:	East:	West:
Residential Single-Family (RSF-Y) / Commercial Retail (CR) / Gusta Rd	Residential Multi-Family (RMF-20) / Commercial Retail / Principal Avenue	Residential Single-Family (RSF-Y)	Commercial Retail (CR) / El Camino Real

C. ENVIRONMENTAL ANALYSIS

During the initial study process, at least one issue was identified as having a potentially significant environmental effect (see following Initial Study). The potentially significant items associated with the proposed project can be minimized to less than significant levels.

CITY OF ATASCADERO
INITIAL STUDY CHECKLIST

1. AESTHETICS – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Have a substantial adverse effect on an adopted scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☒	☐	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

EXISTING SETTING: The project site is not located within a state scenic highway. The proposed project is located on a section of El Camino Real that is primarily commercial development and is not designated a scenic vista. The surrounding existing residences consists of single-family development ranging from lots less than ½ acre to lots that are greater than one (1) acre in size directly adjacent (north of the proposed project) and to the east of the proposed project along Pino Solo Avenue. Development to the south of the proposed project includes high

density residential units and non-residential development. There are 20 native oak trees on the subject site, ranging in size from 10" to 49" in diameter.

PROPOSED PROJECT: The proposed project does not impact or obscure an adopted scenic vista. The project site is not located within a state scenic highway. The proposed project's residential development / mixed-use is consistent with development to the south of the project. Proposed residences include two-story buildings that are designed with four-sided architecture to be visually appealing and compatible with surrounding uses. A landscape plan and section drawings have been submitted to demonstrate how additional landscaping will buffer the new residential units from existing residential development on Pino Solo. With adoption of mitigation measure 1.c.1, the impact is deemed less than significant. Six (6) native trees are proposed for removal for construction of the project. The native tree removals shall be mitigated for compliance with the native tree ordinance by either payment of tree mitigation fees, or by replanting of native trees on site. New street trees shall be planted in the front yards of the new homes as shown on the proposed landscape plan.

The proposed architecture of the non-residential use (car wash) is consistent with the surrounding neighborhood character of the commercial properties along El Camino Real. Proposed architecture consists of a mix of vertical siding and galvanized steel to evoke an agrarian motif. The location of the car wash is at the corner of El Camino Real and Principal Avenue and acts as the project entry. The proposed residential architecture is consistent with the neighboring large lot residential development and the overall surroundings.

All proposed lighting within the residential portion of the proposed project will be residential in nature. The Atascadero Municipal Code (AMC) contains language under section 9-4.137, exterior lighting, stating that "no light glare shall be transmitted or reflected in such concentration or intensity as to be detrimental or harmful to persons or to interfere with the use of surrounding properties or streets." To ensure that the residential portion does not create a substantial light source that adversely affect nighttime views, implementation of mitigation measure 1.d.1 would reduce this impact to less than significant thresholds.

The architectural materials of the proposed car wash are reflective and have the potential to create off site glare once construction is completed. Those reflective materials include galvanized metal, or aluminum. This could affect traffic on El Camino Real and daytime views in the area. Daytime off-site glare can be mitigated with additional landscaping around the proposed use, as well as, non-reflective coating or similar reflectivity reducing agent applied on all reflective surfaces. With incorporation of mitigation measure 1.d.2, and 1.d.3, the impact will be reduced to a less than significant threshold.

Additional lighting from the proposed car-wash will be included. This lighting has a potential to spill off-site and change the character of the existing neighborhood. To ensure no off-sight glare, consistent with the Atascadero Municipal Code, mitigation measure 1.d.4 has been provided to ensure review of a photometric plan as a part of the building permit submittal and an on-site inspection prior to final occupancy of the proposed car-wash to ensure no off-site glare is produced. Implementation of this measure will reduce this impact to a less than significant threshold.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 1.c.1: A landscaping plan shall be submitted for all lots adjacent to existing residential development and must identify locations of proposed evergreen trees or similar

screening trees with a minimum box size of 24-inches. These trees shall be spaced throughout an individual lot to ensure screening of existing residences and proposed new development.

Mitigation Measure 1.d.1: All lighting shall be designed to eliminate any off site glare. All exterior site lights shall utilize full cut-off, "hooded" lighting fixtures to prevent offsite light spillage and glare. Any luminaire pole height shall not exceed 20-feet in height, limit intensity to 2.0 foot candles at ingress /egress, and otherwise 0.6 foot candle minimum to 1.0 maximum in parking areas. No light shall be permitted to spill off-site. Fixtures shall be shield cut-off type so that no light sources are visible from offsite.

Mitigation Measure 1.d.2: Applicant must submit a landscaping plan, concurrent with building permit submittal, for the proposed carwash use. Landscaping plan shall include tree plantings 30-feet on center along El Camino Real and additional plantings along property boundary perimeter in designated landscaping planters.

Mitigation Measure 1.d.3: At the time of building permit submittal for car-wash portion of the proposed project, building plans shall indicate the use of a non-reflective coating, or other glare reducing applications on all galvanized or corrugated metal surfaces utilized as a part of the proposed car-wash structure. Materials must be noted on construction detail sheets and lead project designer of record must submit a letter certifying application of materials prior to building permit final.

Mitigation Measure 1.d.4: At the time of building permit submittal for car wash portion of the proposed project, applicant must submit a photometric plan showing locations of proposed on-site lighting. All exterior site lights shall utilize full cut-off, "hooded" lighting fixtures to prevent offsite light spillage and glare. Fixtures shall be shield cut-off type. Prior to final occupancy, City Staff and the applicant shall meet on-site and review lights at nighttime condition to ensure that there is no off-site light spillage or glare.

2. AGRICULTURE AND FORESTRY RESOURCES – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) to nonagricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land, timberland or timberland zoned Timberland Production?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
e) 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 forest land to non-forest use?	☐	☐	☐	☒

EXISTING SETTING: The property is not shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency as prime farmland. The property is not in an agricultural zone and is not under a Williamson Act contract based on review of Atascadero GIS / San Luis Obispo Agriculture mapping information.

PROPOSED PROJECT: The project is an amendment to a previously approved mixed use planned development, and is located in an area identified for this type of use and density. The subdivision is a mixed-use residential and commercial retail property on a vacant site along the El Camino Real corridor in an area with no significance for agricultural production. The project does not involve rezoning of forest land or timberland, is not under a Williamson Act contract, and will not result in a loss of forest land and will not result in a conversion of forest land to non-forest use or farmland to non-agricultural uses. Therefore, there is no impact.

MITIGATION / CONCLUSION: No impacts are expected. No mitigation is required.

3. AIR QUALITY – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☒	☐	☐
c) 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)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

EXISTING SETTING: San Luis Obispo County is a nonattainment area for ozone and fine particulate matter (PM_{10}) (SLO County Clean Air Plan, 2001). The site is located adjacent to single family, multifamily, and commercial properties. The site is currently vacant (with the exception of the carwash currently under construction) as the abandoned buildings which were previously located on site were removed in 2017.

PROPOSED PROJECT: The project proposes revisions to the previously approved master plan of development which was approved in 2015 for 37 residential units, 3,215 square feet of live work office space, and a 1,645 sf drive-through carwash. The proposed amendment would increase the residential unit count to a total of 55 residential units.

The quantity of ozone and PM_{10} that might be created by 55 residential units is not expected to exceed thresholds of significance established by the SLO County Air Pollution Control District. According to the Operational and Construction Screening Criteria for Project Air Quality Analysis (Table 1-1, SLOAPCD, 2017), Single Family Housing would have to be at or over 76 dwelling units in order to be expected to exceed the APCD GHG Numerical Threshold (operational and construction), and would have to be at or above 128 units to exceed the APCD Ozone Precursor Significance Threshold. Based on the overseeing agency's screening criteria for the residential portion of the proposed project, the impact is determined to be less than significant.

In order to exceed SLOAPCD significance thresholds, an Auto Care Center would need to meet or exceed 73,000 square feet and a General Office Building would have to meet or exceed 75,000 square feet. Both the proposed 1,645 square foot carwash, which is determined to be an Auto Care Center, as well as the proposed 1st floor office uses in the live work building, are well below the threshold screening criteria established by the overseeing agency, therefore the impact is determined to be less than significant.

The overall proposed project does not exceed air quality and emissions thresholds set by the Operational Screening Criteria for Project Air Quality Analysis (Table 1-1, SLOAPCD, 2017), therefore not creating a significant impact.

Construction activities, including site grading, have the potential to produce small quantities of air pollution that include dust and equipment exhaust. Air quality impacts from construction will be temporary and short term. The project must be conditioned to comply with all applicable APCD regulations pertaining to the control of fugitive dust (PM-10) as showed in Section 2 "Assessing and Mitigating Construction Impacts" of the April 2012 CEQA Air Quality Handbook to reduce air quality impacts. With the implementation of these mitigation measures, the impact is considered less than significant.

No further demolition is proposed on site as the site was cleared and previously abandoned buildings on the site were removed in 2017. Undergrounding of utilities is included as part of the proposed project, and therefore, mitigation measures related to demolition and asbestos have been included to reduce potential impacts to less than significant.

The construction of the project will not concentrate pollutants or create objectionable odors based on the proposed uses and screening criteria established by the San Luis Obispo Air Pollution Control District. Therefore, the impact is considered less than significant.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 3.b.1: The project shall be conditioned to comply with all applicable District regulations pertaining to the control of fugitive dust (PM-10) as contained in Section 2 of the CEQA Air Quality Handbook "Assessing and Mitigating Construction Impacts." The applicant and contractors shall manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule 402).

a. Reduce the amount of the disturbed area where possible;
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible; **Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control.** For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook;
c. All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed;
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive, grass seed and watered until vegetation is established;
f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers shall be used with reclaimed water should be used where feasible. Roads shall be pre-wetted prior to sweeping when feasible;
l. All PM10 mitigation measures required should be shown on grading and building plans; and,
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Their duties shall include holidays and

weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

Mitigation Measure 3.b.2: The project shall be conditioned to comply with all applicable APCD regulations pertaining to Naturally Occurring Asbestos (NOA). Prior to any grading activities a geologic evaluation should be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, and exemptions request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety program for approval by the APCD. Technical Appendix 4.4 of the SLO County APCD CEQA Air Quality Handbook includes a map of zones throughout San Luis Obispo County where NOA has been found and geological evaluation is required prior to any grading.

Mitigation Measure 3.b.3: Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during the demolition or remodeling of existing buildings or the disturbance, demolition, or relocation of above or below ground utility pipes/pipelines (e.g., transite pipes or insulation on pipes). This project includes these activities and therefore it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include, but are not limited to: 1) written notification, within at least 10 business days of activities commencing, to the APCD, 2) asbestos survey conducted by a Certified Asbestos Consultant, and, 3) applicable removal and disposal requirements of identified ACM. Applicant shall contact the APCD Enforcement Division at (805) 781-5912 for further information prior to any demolition onsite or relocation of above or below ground utility pipes/pipelines**.**

Mitigation Measure 3.b.4: Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. There shall be no developmental burning of vegetative material as part of the proposed project.

Mitigation Measure 3.b.5: Portable equipment, 50 horsepower (hp) or greater, used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit.

The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendices, page 4-4, in the APCD's 2012 CEQA Handbook.

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generator;
- Internal combustion engines;
- Rock and pavement crushing; and
- Tub grinders.

Prior to the start of the project, the applicant shall contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

Mitigation Measure 3.b.6: Under APCD Rule 504, only APCD approved wood burning devices can be installed in new dwelling units. These devices include:

- All EPA-Certified Phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled woodheaters; and
- Dedicated gas-fired fireplaces.

The applicant shall contact the APCD Enforcement Division at 781-5912 with any questions regarding wood burning devices.

4. BIOLOGICAL RESOURCES – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) 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 (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or CDFW and USFWS?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) 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?	☐	☒	☐	☐

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
e) Conflict with policies or ordinances protecting biological resources, such as the tree native tree ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

EXISTING SETTING: A Biological and Wetland Resources Assessment was completed by Sage Institutes for the original project on February 10, 2015. The areas currently proposed for development are consistent with the analysis provided in the 2015 biological report. A supplemental Biological and Wetland Resources Assessment Addendum was completed on June 28, 2016, which included Floristic Inventory and Rare Plant Survey report for the project area. The supplemental report was completed to fufill Mitigation Measure 4.a.2, which was included with the original project MND certified in 2015.

SII botanist Melinda Elster conducted walking field surveys of the entire project area on April 18 and May 3, 2016. SII Principal Ecologist David Wolff conducted a walking field survey of the entire project site on June 6, 2016. All plant species observed were identified and recorded during each field survey. To ensure adequacy of the floristic inventory and rare plant survey, it was conducted in accordance with the guidelines recommended by the California Native Plant Society (CNPS), the California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS)

The 2015 BA query of the California Natural Diversity Data Base (CNDDB) revealed the recorded occurrences of 12 special-status plant species within a five-mile radius of the project site. The special-status plant species occurrences recorded in the CNDDB are commonly associated with a specific soil type, moisture regime, habitat, and/or elevation range that dictates the range or microhabitat of the species. As documented in the 2015 BA, grassland plant species associated with sandy soils had the potential to occur on the site. None of the CNDDB rare plant occurrences are on or in close proximity to the project area, and most are in varied undisturbed habitat areas outside the city.

The springtime floristic inventory and rare plant survey conducted on the project area confirmed the findings in the 2015 BA that the dominate habitat type of the project area was disturbed non-native annual grassland habitat. The site supports native and non-native grasses and broadleaf herbaceous species amidst the scattered oaks onsite, and willow riparian corridor along the drainage. All plant species observed were identifiable during the three field surveys conducted over the project area so there were no limitations in completing the rare plant survey for 2016 in accordance with accepted agency and industry standards. The winter rains along with the warm and mostly dry February and March 2016 manifested substantial grassland species growth to further support the adequacy of the survey.

PROPOSED PROJECT: The project would subdivide the existing 5.25 acre lot, and 55 new residential units would be constructed, along with the drive-through carwash which is currently under construction on the project site. The project will not impact any adopted conservation plan. No rare, threatened, or endangered plant species were observed within the project area

during the SII field surveys. The biological report provides a list of all plant species observed during the SII 2016 floristic inventory and rare plant survey documenting the negative findings.

Based on the biological and wetland resource assessment, the proposed project site may provide habitat for common resident and migratory wildlife species typical to the regional. However, given that the site is surrounded by urban development, wildlife use is likely limited. No special status species were visible or recorded on-site. Based on the site conditions, the project biologist has determined that a potential exists to disturb the silvery legless lizard habitat that may be present on-site. To ensure that the proposed project does not disturb or adversely affect the silvery legless lizard, mitigation measure 4.a.1 has been included to reduce this potential impact to less than significant threshold.

The Biological and Wetland Resources Assessment identifies an ephemeral drainage that runs along the western site boundary as illustrated by the National Wetlands Inventory map. The ephemeral drainage supports a willow and cottonwood riparian habitat and appears to essentially flow to the start of a mapped blue line creek approximately 790 feet downstream of the project site. Given the defined channel characteristics that continue as tributary to a mapped blue line creek, the Assessment identifies the drainage as a waters of the U.S. and waters of the State subject to U.S. Army Corps of Engineers and California Department of Fish and Wildlife (CDFW) jurisdiction. Per the City's requirements, the project will comply with the twenty (20) foot setback from designated waters of the US. No development is proposed within the ephemeral drainage / riparian area, however drainage improvements appear to be located within the identified riparian area. To reduce any potential significant impacts to waters of the US, waters of the State, and riparian habitat, mitigation measure 4.b.c.1 and 4.b.c.2 are incorporated.

The Biological and Wetland Resources Assessment concludes that vegetation and tree removal during the nesting season for birds could result in the destruction of active bird's nests. Destruction of active nests is prohibited by the Fish and Game Code of California Sections 3503 and 3503.1. To reduce this potential impact to nesting birds, implementation of mitigation measure 4.d.1 and 4.d.2 will reduce this impact to a less than significant threshold.

An updated arborist report has been provided for the currently proposed project. The report identifies twenty (20) mature oak trees within the project boundary. Six (6) trees are proposed for removal. The City's Native Tree ordinance contains standards that dedicate when a tree may be removed. In this instance, proposed development cannot be modified to accommodate the preservation of the identified native trees. The applicant has demonstrated, to the extent feasible, the preservation of native trees through site design and location of project amenities. Any future construction will be subject to the Atascadero Native Tree Ordinance, which requires a tree protection plan when construction occurs near native trees and mitigation when native trees must be removed. Mitigation measures are included to ensure compliance with the tree ordinance for tree protection and replanting mitigation. With the proposed mitigation measures incorporated, conflict with the City's Native Tree Ordinance is determined to be less than significant.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 4.a.1: A qualified biologist shall conduct a pre-construction survey within 30 days of initial site disturbance to identify whether silvery legless lizards are present. If silvery legless lizards are detected, a biological monitor shall be present during initial ground disturbing and vegetation removal activities to allow for a salvage and relocation effort for the lizard and other ground dwelling common wildlife that may be present.

Mitigation Measure 4.a.2: Conduct a springtime rare plant survey to determine the presence/absence of any special-status plants. Should any be discovered, implement a seed and/or plant salvage program and incorporate the salvaged material into the drainage setback and detention basin landscaped areas.

Mitigation Measure 4.b.c.1: The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the Corps or written documentation from the Corps that no permit would be required for work in the ephemeral drainage. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on riparian/wetland habitat to achieve the goal of a no net loss of wetland values and functions. As such, regulatory compliance would reduce potential impacts on waters of the U.S. to a less than- significant level.

Mitigation Measure 4.b.c.2: The applicant shall obtain compliance with Section 1600 et.seq. of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for work within the ephemeral drainage and riparian habitat (stream zone). Should an agreement be required, the applicant shall implement all the terms and conditions of the agreement to the satisfaction of the CDFW. The CDFW Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFW may require compensatory mitigation for unavoidable impacts on riparian habitat in the form of onsite riparian habitat restoration to the extent feasible. As such, regulatory compliance would reduce potential impacts on waters of the state to a less-than-significant level.

Mitigation Measure 4.d.1: Vegetation removal and initial site disturbance shall be conducted between September 1 and January 31 outside of the nesting season for birds. If vegetation and/or tree removal is planned for the bird nesting season (February 1 to August 31), then preconstruction nesting bird surveys shall be required to determine if any active nests would be impacted by project construction. If no active nests are found, then no further mitigation shall be required.

Mitigation Measure 4.d.2: If any active nests are found that would be impacted by construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected with the non-disturbance buffer zone until the adults and young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

Mitigation Measure 4.e.1: Grading and excavation work shall be consistent with the City of Atascadero Tree Ordinance. Special precautions when working around native trees include:

1. All existing trees outside of the limits of work shall remain.
2. Earthwork shall not exceed the limits of the project area.
3. Low branches in danger of being torn from trees shall be pruned prior to any heavy equipment work being done.
4. Vehicles and stockpiled material shall be stored outside the drip line of all trees.
5. All trees within twenty feet of construction work shall be fenced for protection with 4-foot chain link, snow or safety fencing placed per the approved tree protection plan. Tree protection fencing shall be in place prior to any site excavation or grading. Fencing shall remain in place until completion of all construction activities.
6. Any roots that are encountered during excavation shall be clean cut by hand and sealed with an approved tree seal.
7. Utilities such as water, gas, power, cable, storm drainage, and sewer should be redirected from under the canopy of any trees that are to remain.
8. Where a building is placed within the canopy of a tree the foundation should be redesigned so that it bridges across any root systems.
9. Any foundation or other structure that encroaches within the drip line of trees to be saved shall be dug by hand.
10. At no time shall tree roots be ripped with construction equipment.

Mitigation Measure 4.e.2: Tree protection fencing shall be installed at the locations called out by the project arborist in a Tree Protection Plan, which shall be submitted with building permits. An inspection of the tree fencing shall be done by City staff prior to issuance of building permits.

Mitigation Measure 4.e.3: The following measure shall be incorporated on-site during the construction process of the proposed project:

1. A minimum height construction protective barrier shall be erected around the drip line of the tree plus 4'. The fence shall be supported with "T" posts at no more than 6' o.c. and tied at least 3 places per post. This fence shall be installed by the General Contractor before any rough grading is allowed on the site. Approval for this stage must be obtained in writing from either the Arborist or the Counties/Cities representative.
2. Earthwork shall not exceed the limits of the project area.
3. Low branches in danger of being torn during construction process shall be pruned prior to any heavy equipment work being undertaken.
4. Once the rough grading is accomplished the fence may be moved closer to the trunk of the tree for finish grading. At no time shall the fence be placed within the Critical Root Zone (CRZ). This location is determined by the diameter of the trunk at Diameter Breast Height (DBH). (4.5' above grade) and is 1' per 1" diameter in the direction of the drip line. At no time shall the fence be moved closer to the trunk than the drip line.
5. Any roots that are encountered over 2" diameter, during the excavation process shall be clean cut perpendicular to the direction of root growth with a handsaw. At no time shall tree seal be applied to any cut. Any roots over 2" diameter the county/city representative shall be notified to determine the preferred course of action.

6. All trenching with CRZ area shall require hand trenching to preserve and protect roots over 2" in diameter.
7. No grading of trenching is allowed within the CRZ fenced area without written permission from the County/City representative or a certified arborist.
8. Any roots over 4" in diameter are not to be cut or ripped until inspected and approved in writing by the arborist.
9. If, for whatever reason, work must be accomplished inside the drip line 4"-6" of mulch must be applied first to decrease the possibilities of compaction upon written approval from the arborist.
10. There shall be a pre-construction meeting between the Engineering/Planning staff of the County/City, Grading equipment operators, Project Superintendent and the Arborist to review the project conditions and requirements prior to any grubbing or earth work for any portions of the project site. All tree protection fencing shall be installed for inspection prior to this meeting.
11. All trees shall be pruned before any construction takes place that are in the development areas to be saved if they might be damaged by the construction equipment. This must be accomplished by a bonded, licensed, and certified Tree Service Contractor.
12. All debris shall be cleared from the area or chipped and spread on the site or stacked in orderly piles for future use by the Owner, at the Owners request.
13. In locations where paving is to occur within the drip line grub only and do not compact unless authorized in writing. Permeable pavers or other preamble surface must be approved by the Arborist.

Mitigation Measure 4.e.4: Upon project completion and prior to final occupancy a final status report shall be prepared by the project arborist certifying that the tree protection plan was implemented, the trees designated for protection were protected during construction, and the construction-related tree protection measures are no longer required for tree protection.

Mitigation Measure 4.e.5: All utilities shall remain outside the driplines of native trees to the extent feasible. Any utilities that encroach on the critical root zone of protected trees shall be monitored during excavation by an arborist to ensure damage to native tree roots is minimized.

5. CULTURAL RESOURCES – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Cause a substantial adverse change in the significance of a historical resource?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

EXISTING SETTING: The project site was previously developed with two single-family residences which were demolished in 2017. A drainage swale is located on site, which conveys drainage water from an outlet near the edge of El Camino Real right-of-way, across the property. There are no known significant historical, archeological, paleontological or geological resources located on site.

PROPOSED PROJECT: Geographical Information systems (GIS) of the City of Atascadero show that there are no known historic or archaeological resources located on or adjacent to the site. No known human remains have been found or documented in the vicinity of the project. It is possible unknown resources could be unearthed during any future construction. The Atascadero Municipal Code requires construction work to stop if archeological resources are discovered. Interested parties must be contacted for proper disposition of any significant archeological resource or human remains. With implementation of mitigation measure 5.d.1, the potential for a significant impact is rendered to less than significant thresholds.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation 5.d.1: In the event that human remains are discovered on the property, all work on the project shall stop and the Atascadero Police Department and the County Coroner shall be contacted. The Atascadero Community Development Department shall be notified. If the human remains are identified as being Native American, the California Native American Heritage Commission (NAHC) shall be contacted at (916) 653-4082 within 24 hours. A representative from both the Chumash Tribe and the Salinan Tribe shall be notified and present during the excavation of any remains.

6. GEOLOGY AND SOILS – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Result in the exposure to or production of unstable earth conditions including the following: • Landslides; • Earthquakes; • Liquefaction; • Land subsidence or other similar hazards?	☐	☐	☒	☐

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
b) Be within a California Geological Survey "Alquist-Priolo" Earthquake Fault Zone, or other known fault zone? (consultant Division of Mines and Geology Special Publication #42)	☐	☐	☐	☒
c) Result in soil erosion, topographic changes, loss of topsoil or unstable soil conditions from proposed improvements such as grading, vegetation removal, excavation or use of fill soil?	☐	☒	☐	☐
d) Include any structures located on known expansive soils?	☐	☐	☒	☐
e) Be inconsistent with the goals and policies of the City's Safety element relating to geologic and seismic hazards?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

EXISTING SETTING: As illustrated by the Fault map included in the attachments, the project site is not located on any known earthquake faults. The property contains no unusual geological formations. Although there are no known faults within the project area, there are faults located near the City that have been known to create seismic events. The 2003 San Simeon earthquake was the last known large seismic event that affected the proposed project area. The City adopts the California Building Code as its building code and updates this code during each required adoption cycle. This code is continually updated with requirements to make building safer during a seismic event. Incorporation of the latest California Building Code requirements at the time of building permit submittal will reduce the exposure of people and structures to strong ground shaking to a less than significant level.

PROPOSED PROJECT: Geographical information systems show the project site to be in an area of low risk for both landslides and liquefaction. The Geotechnical Engineering Report submitted for the project indicates that the upper soils on the site are considered to be highly erodible; therefore, stabilization of the soils during and following construction will be essential to reduce erosion damage. Construction activities on the site will be required to comply with sedimentation and erosion control measures prescribed by the City Engineer as well as mitigation proposed by the geotechnical report. Mitigation measure 6.b.1 through 6.b.4 shall be implemented and potential significant impacts to a less than significant threshold.

Geographical Information System's expansion determination indicates that the bearing soils lie in the "Low to Moderate" and "Moderate" expansion potential ranges. Due to the site area's non-expansive soils and crushed rock, draft Preliminary Stormwater Control Plan and Basin Analysis Reports prepared for the project concluded that no special measures with respect to expansive soils are considered necessary. Therefore, impacts are considered less than significant.

The site will be served by local utility systems and will not require the use of septic tanks or alternative wastewater disposal systems.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 6.c.1: The on-site subdivision / grading permit plans shall include erosion control measures to prevent soil, dirt, and debris from entering the storm drain system during and after construction, consistent with mitigation or construction methods outlined in the geotechnical report. Plans shall be approved by the City Engineer prior to issuance.

Mitigation Measure 6.c.2: All cut and fill slopes mitigated with an appropriate erosion control method (erosion control blanket, hydro-mulch, or straw mulch appropriately anchored) immediately after completion of earthwork, as approved by the City Engineer. All disturbed slopes shall have appropriate erosion control methods in place.

Mitigation Measure 6.c.3: The contractor will be responsible for the clean up of any mud or debris that is tracked onto public streets by construction vehicles. An approved device must be in place prior to commencement of grading activities. This device shall be approved by the City Engineer.

Mitigation Measure 6.c.4: A re-vegetation plan shall be submitted with building permits. All disturbed cut and fill slopes shall be vegetated as specified in a landscaping plan. The landscaping plan must be approved by both the Community Development Department and the Public Works Department.

7. GREENHOUSE GAS EMISSIONS – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

EXISTING SETTING: The site is located on the El Camino real corridor, in close proximity to shopping, services, and bus routes. Transportation is responsible for 43% of the carbon emissions in the Atascadero community while residential electricity natural gas use is responsible for 29% of emissions (Atascadero Climate Action Plan, 2014).

PROPOSED PROJECT: The project will create 55 new residential units, in addition to the mixed-use live work space and the drive-through carwash. Each new residence creates an incremental increase in greenhouse gas production. However, the residences are infill development on a vacant site surrounded by residential and commercial uses. The project site

is located along major transit routes, and in close proximity to shopping and services. Sidewalks are included within the project, and connect to surrounding public streets to allow for neighborhood access. Any new construction will be subject to California Green Building Code energy-efficiency standards.

According to the Operational Screening Criteria for Project Air Quality Analysis (Table 1-1, SLOAPCD, 2017), Single Family Housing would have to be at or over 76 dwelling units in order to be expected to exceed the APCD GHG Numerical Threshold (operational and construction), and would have to be at or above 128 units to exceed the APCD Daily Ozone Precursor Significance Threshold. In order to exceed SLOAPCD significance thresholds, an Auto Care Center would need to meet or exceed 73,000 square feet and a General Office Building would have to meet or exceed 75,000 square feet.

The proposed project includes 55 residential units, a 1,645 square foot car wash, and less than 2,000 square feet of office space, and is therefore do not exceed air quality and emissions thresholds set by the Operational Screening Criteria for Project Air Quality Analysis (Table 1-1, SLOAPCD, 2017.) Therefore the proposed project's impacts are determined to be less than significant.

The proposed project is a mixed-use project with residential, commercial, and office uses on an infill site within the urban services line. The project is designed to provide a pedestrian-friendly and interconnected streetscape with good access to/from the development for pedestrians, bicyclists, and transit users Buildings are designed to be oriented to face public streets with parking and vehicular access from within interior project roads and driveways. The proposed project is not in conflict with the City's adopted Climate Action Plan, and therefore the impact is determined to be less than significant.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

8. HAZARDS AND HAZARDOUS MATERIALS – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
d) 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?	☐	☐	☐	☒
e) 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 result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) 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?	☐	☐	☒	☐

EXISTING SETTING: There are no known hazardous materials on the site or nearby. The property is not a listed hazardous material site on the EnviroStor database. The property is not within 2 miles of an airport. The proposed project is within the urban core of the City along the El Camino Real corridor and is not located near wildlands.

PROPOSED PROJECT: The proposed project does not generate or involve the use of significant amounts of hazardous materials. Proposed project does not impair implementation with an adopted emergency response plan or evacuation plan.

Geographical information systems show the project site to be in a high fire hazard zone. The project will not interfere with local roads used for emergency evacuation. Implementation of the Mitigation Measure 8.h.1 will render this impact to a less than significant threshold.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 8.h.1: Construction will comply with section the California Building and Fire Codes. New residences in the City are required to install fire sprinklers. Fire protection

measures shall include the use of non-combustible exterior construction and roofs and fire-resistant building materials.

9. HYDROLOGY / WATER QUALITY – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) 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 preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) 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?	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) 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?	☐	☐	☐	☒

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

EXISTING SETTING: The site is currently predominantly vacant, with construction underway on the carwash that was previously approved for construction in 2015. The remainder of the site is unimproved. A drainage swale runs through the north side of the subject property from a drainage culvert at the edge of El Camino Real. The drainage is not identified as "blueline creek," however, it there is riparian vegetation including willows in this area. The property is outside the federal Flood Hazard Boundary and Flood Insurance Rate Map areas. The property is outside the Salinas Dam inundation area. The property is too far from the ocean to be affected by a tsunami or seiche.

PROPOSED PROJECT: The proposed project will add additional wastewater discharge and reduce storrmwater infiltration on a primarily vacant site. Overall, the proposed project will have a less than significant impact on water quality standards. Erosion, sediment and environmental control measures specified in the project description shall be implemented as necessary to ensure reduced pollutant releases and minimize potential environmental impacts of the project.

The current vacant site does provide some level of groundwater recharge due it its vacant and unimproved state. The project has been designed to incorporate the Regional Water Quality Control Board's Post-Stormwater Construction standards. This includes incorporation of low impact development swales, and basins that allow for natural infiltration of stormwater that would typically be conveyed into the City's stormwater drainage system. Implementation of the RWQCB's Post Stormwater Construction standards render the depletion or interference with groundwater recharge as a less than significant impact.

The proposed project will not alter the course of a stream, river or identified waters of the United States (US). The existing drainage pattern of the site will be altered to accommodate development of the proposed project. The Central Coast Regional Water Quality Control Board adopted Post-Stormwater Construction standards to address this type of issue. The applicant has submitted a 2017 draft preliminary drainage plan that incorporates standards outlined by this agency to reduce on-site drainage impacts. Therefore, this impact is deemed less than significant.

The proposed project has the potential to contribute runoff water or provide additional sources of polluted run-off. The Regional Water Quality Control Board's Post-Stormwater Construction standards address these potentially significant impacts by requiring runoff be treated on-site rather than conveyed off-site by typical curb/gutter/ system. The use of infiltration basins and low-impact development bio-swales treat stormwater runoff and allow it to naturally percolate

back into the soil, removing harmful sediments in a natural state. The project will implement Low Impact Design principals and install Stormwater Control Measures, and will be designed to satisfy the requirements of the City's Post Construction Storm Water Quality Ordinance. Construction activities are subject to review for compliance with City drainage and grading regulations. Drainage will not be permitted to create or intensify any hazards for persons or property in the vicinity. Implementation of proposed drainage improvements, consistent with Mitigation Measure 9.d.e.f.1-2 will reduce this impact to a threshold of less than significant.

Future housing will be outside of the 100-year flood hazard area. The project area is not subject to inundation by a tsunami.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 9.d.e.f.1: The project shall be designed to comply with the Regional Water Quality Control Board's Post Construction Stormwater Management requirements for development projects in the Central Coast region. This shall be done through a combination of pervious pavement, landscaped areas, and shallow, unfenced retention ponds and detention basins, or other methods consistent with the Post Construction Stormwater Management requirements.

Mitigation Measure 9.d.e.f.2: The developer is responsible for ensuring that all contractors are aware of all storm water quality measures and that such measures are implemented. Failure to comply with the approved construction Best Management Practices will result in the issuance of correction notices, citations, or stop orders.

10. LAND USE & PLANNING – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

EXISTING SETTING: The project is within a multi-family and commercial mixed-use Planned Development zoning district. The RMF-10 zoning has a density of 10 units per acre, and the CR zoning has a residential density of up to 24 units per acre, where residential can be constructed on upper floors only (not ground level.)

PROPOSED PROJECT: The proposed project includes 55 residential units within attached and detached homes. The applicant is proposing to utilize the California State Density bonus law to include affordable units on site with a density bonus of 10% to increase the unit count above the standard base density. The proposal for increased density is consistent with City ordinances and State Density Bonus law.

The proposed lots meet all other applicable land use regulations for the proposed Planned Development #24 amendment and General Plan policies. The project will not physically divide an established community, but will act as a mixed-use transition between the commercial zone and the adjacent single-family neighborhood. The proposed project is in compliance with the General Plan Policy 3.1, allowing mixed-use infill development in the mid-block portion of a General Commercial area along El Camino Real. A mixed-use development is consistent and compatible with the surrounding neighborhood.

The proposed project and uses comply with the Planned Development Overlay Zone No. 24 that is established on all parcels within the project boundary. The Atascadero Zoning Ordinance indicates that the proposed car wash is allowable in the Commercial Retail (CR) zone. Residential uses are an appropriate use in the Medium Density Residential (MDR) General Plan designation as well as Residential Multiple Family (RMF-10) zone. Surrounding properties are zoned Limited Single Family Residential (RSF-Y), Commercial Retail (CR), Commercial Service (CS), and Commercial Tourist (CT). The site's zoning and use is consistent with the General Plan.

The project is consistent with the open space and conservation policies identified in the General Plan. No habitat conservation plan will be affected.

MITIGATION / CONCLUSION: No impacts are expected. No mitigation is required.

11. MINERAL RESOURCES – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
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?	☐	☐	☐	☒

EXISTING SETTING: The project is within an established commercial and multi-family mixed-use zoning district without known mineral resources.

PROPOSED PROJECT: No mining is proposed as a part of the proposed project. No known mineral resources have been identified in the area. Therefore, there is no impact.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

12. NOISE – Will the project result in:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) 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?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

EXISTING SETTING: The project is located on a vacant site along the El Camino Real corridor, adjacent to commercial to the north and west, and adjacent to single-family residential to the east.

PROPOSED PROJECT: The proposed project contains several new sources of noise to the existing neighborhood. The use that may generate noise levels in excess of established standards is the car wash use located at the intersection of El Camino Real and Principal Avenue. The car wash facility‘s operation will include several noise sources. A 2014 Acoustic Study found the drying blower at the exit of the wash tunnel to be the most significant noise source, and the vacuum units, which will be running during normal optional hours are identified as a secondary noise source that may generate noise in excess of the City’s Noise Ordinance. Based on estimations, the blowers would be in operation for thirty one (31) minutes during a busy hour.

The Acoustic Study determined that with the implementation of recommended mitigations, the project will not result in significant exposure of persons to the generation of noise levels in

excess of standards established in the local general plan or noise ordinance. These mitigation measures were included with the Mitigated Negative Declaration which was certified in 2015, and the measures have been incorporated into the design of the carwash which is currently under construction. With the mitigation measures incorporated, the sound levels are reduced to less than significant levels by relocation of the blower or by increasing the level of acoustical isolation for the several residential units that are impacted. Based on this analysis, mitigation measures have been included to require both relocation of the dryer blower, and additional construction materials to reduce noise impacts for both existing and potential new residents within the proposed project boundaries. Implementation of Mitigation Measures 12.a.1 through 12.a.4 will reduce noise impacts to a threshold of less than significance.

The Acoustic Study concludes that people will not be exposed to excessive ground borne vibration or ground borne noise levels. The car wash will not produce vibrations at levels that would be detectable at the closest sensitive uses. Therefore the impact is deemed less than significant.

Existing ambient noise levels measured at the boundary of the residential area during a peak traffic hour are at the 52 dB level. The project would produce a 58 dB level, without special mitigation, thereby exceeding existing ambient noise levels. A noise level mitigation of 6 decibles is needed to bring the project into conformance with City standards, as evaluated in in the August 2014 Acoustic Study. The Acoustic Study concludes that the project will not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project provided that mitigation measures are incorporated.

The area presently is exposed to noise from traffic on El Camino Real that is in excess of the limits permitted by City code. While the project will add to the nose levels the increment will not substantially change the present environment. Therefore, incorporation of mitigation measures 12.a.1 through 12.a.4 will render these impacts less than significant.

Construction is expected to involve some heavy machinery and use of impact tools that will temporarily increase the ambient noise levels in the project vicinity above levels existing without the project. Construction activities shall comply with the City of Atascadero Noise Ordinance for hours of operation (between 7am and 9pm). Therefore the impact is considered less than significant.

The project is not located within an airport land use plan or private airstrip.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 12.a.1: In order to reduce the impact of the air blower noise associated with the carwash, blowers shall be placed deeper in the carwash tunnel, as recommended in the August 2014 Acoustic Study.

Mitigation Measure 12.a.2: Acoustical protection shall be added to the facades of the residences within the project that face the car wash site, as recommended in the August 2014 Acoustic Study.

Mitigation Measure 12.a.3: Following completion of the car wash phase of construction, noise levels shall be reassessed to determine the need for a noise barrier wall. If determined to be necessary to comply with City noise ordinance standards, the wall shall be constructed at the

side of the exit drive, and shall be designed to be several feet higher than the height of the blower closest to the exit. A wall extending eight feet from the end of the tunnel would reduce sideline noise levels by six decibels.

Mitigation Measure 12.a.4: The Acoustic Study recommends the following design and structural specifications for achieving a 25 decibel noise reduction.

- Installation of an air conditioning or a mechanical ventilation system so that windows in rooms and office spaces facing east can remain closed.
- Exterior doors facing east should be solid core with sweeps and seals that make a positive closure.
- Exterior walls should be constructed of stucco 7/8" three coats over plywood 5/8" on exterior.
- Interior surfacing should be 5/8" for drywall interior. Additional acoustic insulation could be achieved by two layers of drywall or application over resilient furring channels.
- Glass in both windows and doors should not exceed twenty percent (20%) of the floor area in a room. This is for conventional windows. It is reasonable to permit an increased opening size if the window assembly conforms to the specifications providing a greater than 25 decibel NLR. The greatest improvement in the sound insulation of windows can be achieved by using thicker glass and a larger air space between panes in dual glazed windows. STC values may be used in estimating a window's sound blocking qualities by the newer, Outdoor-Indoor Transmission Class or OITC (ASTM E1332) value is preferred and more appropriate for units exposed to transportation noise.
- Voids around windows should be filled with insulation and wood blocking, and the perimeter of windows thoroughly caulked.
- Vents and openings should be minimized on the sides of the buildings exposed to the road and if vents are required, they should be designed with acoustical baffles.

13. POPULATION & HOUSING – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

EXISTING SETTING: The project site is currently vacant, with the carwash currently under construction on the front portion of the project site. Two (2) single family residential structures were previously demolished in 2017, as they were vacant and in extremely poor condition as they had been abandoned for many years.

PROPOSED PROJECT: The project proposes 55 residential units through a subdivision of currently vacant parcels. Based on the 2010 US Census, the City's average household size is 2.51 persons per unit. The total amount of units proposed by the amended project is 55 units. The total projected population of the project at build out is approximately 138 persons. This represents less than 1% of the City's total population of 28,310, based on the 2010 US Census. Therefore, the proposed residences as a part of the proposed project will not have substantial growth inducing effects. The proposed project will have a less than significant impact on growth.

No housing or persons will be displaced. The units which were previously demolished had been abandoned for many years and were not inhabitable. Therefore, there is no significant impact to population or housing as a result of the project.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

14. PUBLIC SERVICE:

Will the proposed project have an effect upon, or result in the need for new or altered public services in any of the following areas:	**Potentially Significant**	**Impact Requires Mitigation**	**Insignificant Impact**	**Not Applicable**
a) Emergency Services (Atascadero Fire)?	☐	☐	☒	☐
b) Police Services (Atascadero Police)?	☐	☐	☒	☐
c) Public Schools?	☐	☐	☒	☐
d) Parks?	☐	☐	☒	☐
e) Other public facilities?	☐	☐	☐	☒

EXISTING SETTING: The project is within an established mixed-use multi-family residential and commercial zoning district.

PROPOSED PROJECT: Each new residence in Atascadero creates an incremental increase in the demand on public services. New residential units are subject to development impact fees and school fees that account for the increased demand.

Development Impact Fees: Development Impact Fees are required to be paid for any new development within the City of Atascadero when a building permit is issued. The City's adopted Development Impact Fees fall into the following categories: Drainage Fees (including the Amapoa Tecorida Drainage Area Fee); Streets, Road, Bridge Fees; Sewer Fees; Public Safety Fees; and Park Fees, Miscellaneous Fees. In addition, school fees are collected by the

Atascadero Unified School District. The amount of impact fees is determined by the date that the building permit is issued, or when a vesting tentative map has been deemed complete. The proposed project was deemed complete on March 17, 2015.

Fire and Police: Impact fees are charged for new development, to help pay the cost of providing new facilities, equipment, and personnel to serve the expanding city. The Fire Department of the City of Atascadero it will be able to adequately service the proposed project. The applicant shall comply with all requirements of the Fire Department. The City of Atascadero Police Department has also indicated that the proposed project poses no problems to the police to adequately service it. In addition to typical fire and police development impact fee payments, the proposed project will need to annex into the City's Community Facilities District (CFD). Since 2005, the City requires new development to annex into the City's CFD to off-set on-going costs to provide police, fire, and parks services. The proposed project will not result in substantial adverse impacts to these public services, therefore the impact is less than significant.

Schools: At buildout, the city's population will overburden the existing school system unless additional classroom space is added. The Atascadero Unified School District charges impact fees to fund additional schools as needed. State law restricts mitigation of school impacts to the levying of these fees and other measures adopted by the

school district. Provision of adequate facilities for the population is the responsibility of the school district. Fees will be required through construction permits for the residence. With payment of impact fees, the proposed project's impact to school facilities is less than significant.

Parks: The proposed project will not increase demand on existing City parks and recreation facilities. As a part of the proposed project, Common recreational facilities are proposed within the development include a garden, TOT lot, and other passive recreation features. The proposed project applicant will be required to pay development impact fees as a part of building permit issuance for additional park facilities within the City. In addition, the project will be required to annex into the City's CFD for on-going maintenance costs of existing parks. With the payment of these fees and annexation into the City's CFD, the impact is less than significant.

Other public facilities: The construction of the project will have no impact on construction of other public facilities. Therefore, no impact.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

15. RECREATION:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) 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?	☐	☒	☐	☐
b) 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?	☐	☐	☒	☐

EXISTING SETTING: The project is within an established mixed-use multi-family residential and commercial zoning district.

PROPOSED PROJECT: Each new residence in Atascadero creates an incremental increase in the demand on recreation facilities. Future residents are expected to use existing parks and recreational facilities, in addition to facilities that are provided on-site as a part of the proposed project. The numbers of proposed residents is not expected to result in substantial physical deterioration of any facilities. The proposed project requires discretionary approval and is required to annex into the City's Community Facilities District (CFD) to off-set additional maintenance costs created by new residences With implementation of mitigation measure 15.a.1, the impact is less than significant.

No new public recreation facilities are proposed with the project. A small private park, as well as private walking paths and open green spaces, will be developed by the owner as part of the residential project. The on-site private park, greenspaces, and pathways shall be maintained by the residential Homeowners Association (HOA). The project proposes three passive open space areas located throughout the development. Proposed open spaces are strategically placed to preserve the existing environment and will not have an adverse effect, therefore the impact is less than significant.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 15.a.1: The applicant, prior to final map recordation, shall annex into the City's Community Facilities District (CFD) that will be levied to residents on an annual basis within the proposed project boundary to off-set additional maintenance costs by new residents on existing recreation facilities maintained by the City.

16. TRANSPORTATION / TRAFFIC – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) 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?	☐	☒	☐	☐
b) 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?	☐	☒	☐	☐
c) 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?	☐	☐	☒	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

EXISTING SETTING: The project site is located between El Camino Real, Principal Avenue, and Pino Solo. The site is surrounded by existing development, including commercial, single-family, and multi-family.

PROPOSED PROJECT: A Transportation Impact Study was completed for the previously approved project in November 2014. The original report analyzed a project with 37 residential units, in addition to the office space and the carwash, and concluded that the previously proposed project was estimated to generate 633 new daily trips, 60 new AM peak hour trips, and 66 new PM peak hour trips. An addendum to the traffic report was completed by the project's transportation engineer in May 2018 to address the increased unit count being proposed. The traffic report addendum identified that the revised project, with 55 units, office space, and the carwash, would create a total of 676 daily trips, and increase of 43 daily trips compared to the previously approved project.

As identified in the traffic report, under existing plus the project scenario all study intersections would operate acceptably at Level of Service (LOS) B or better with the addition of project trips, with the exception of the Principal Avenue / El Camino Real Intersection. This intersection would operate at a LOS C at its project worse delay, which is the PM peak. Currently this intersection, without the project, operates at a LOS A. The Traffic Impact Study (TIS) indicates that at the existing plus project scenario, the intersection of Principal Avenue / El Camino Real has an existing average delay of less than a second delay at the PM peak, with the worse delay at 13 seconds during the PM Peak and 11.7 seconds during the AM peak. These delays will increase with the proposed project. The average delay will increase to almost 2 seconds during the AM peak and almost 1.2 seconds during the PM Peak. Worse wait time scenario will be approximately 12.4 seconds during the AM Peak, and 15 seconds during the PM Peak. Principal Avenue was studied with just a shared right turn/left turn lane on El Camino Real. The study recommends that dedicated turn lanes be added for right turn only / left turn only onto El Camino Real and additional striping "red curb / no parking" be added to accommodate site distance issues with the proposed new development. The TIS also studied signal warrants for the Principal Avenue / El Camino Real intersection. The proposed project does not meet warrants established by the California Manual on Uniform Traffic Control Devices 2014 edition (CAMUTCD). This manual provides guidance to ensure that traffic control devices are installed only if a traffic control signal will improve the overall safety and operation of the intersection and will not seriously disrupt progressive traffic flow. Mitigation Measures have been included to ensure construction of these improvements per the traffic impact study.

Cumulative plus project scenario the LOS delays increase at all identified intersections that were studied. The Traffic Report shows additional queuing delays at the US 101 / Santa Rosa Road northbound on-ramps as well as additional delays at the Santa Rosa Road / El Camino Real. The LOS at the Santa Rosa Road / El Camino Real intersection and the Principal Avenue / El Camino Real intersections remaining at acceptable levels with worse approach delays running at LOS C. Any LOS below of a LOS D is considered deficient under the City's General Plan. Proposed project traffic impact is considered less than significant.

Improvements to the Santa Rosa US HWY 101 interchange were completed in 2005, and a reimbursement area was established to recoup the costs for projects that would receive future benefit from these improvements. The project site is within the Santa Rosa reimbursement area adopted by City Council on February 16, 2016, and will be required to pay into the Santa Rosa / Highway 101 traffic signal reimbursement fund with issuance of the building permits within the project site.

US 101 Mainline Operations and Interchange – Santa Rosa Road

The TIS identified existing delays and LOS at the Santa Rosa Road / US 101 as LOS A during the AM peek and LOS B during the PM peek. Delays at the AM peek for the southbound ramp were estimated at 9.8 seconds and 7.2 seconds for the PM Peek. The Northbound ramps were estimated at 7.1 AM peek delays and 9.3 peek delays. Existing Plus Project delays at both on-ramps increased as a result of the proposed project. Existing plus project delays would increase from 9.8 seconds to 17 seconds at the US 101 southbound ramps (LOS B) and 13 seconds (LOS B) during the PM peek. Existing plus project delays at the US 101 northbound ramps

would increase at the PM peek only from 9.3 seconds to 15.2 seconds. The additional traffic will also cause the northbound ramps to exceed queuing storage (area that allows cars to enter the freeway), as indicated in the TIS. The queuing is expected increase, thus causing an interchange deficiency under Caltrans standards.

The Santa Rosa Road / US 101 interchange is an identified as a project (ST-37) under the City's Master Facilities Plan for improvements. The Study identified that the interchange required an estimated $8.1 million to construct interchange improvements that includes, but not limited to right-of-way acquisition, signal construction, lane configuration, interchange approach improvements up to 200 yards away from ingress / egress ramps. The City Council adopted this nexus fee study in 2006. The study assumed that the entire $8.1 million dollar cost to improve the intersection would be generated by the City's Traffic Impact Fee (TIF). The City's TIF fee assumes that all new development from 2006 on-forward would pay their "fair-share" to interchange improvements for the Santa Rosa Road interchange. The proposed project is creating additional deficiencies in the queuing at the northbound ramp of US 101. To mitigate those deficiencies, the City is required to collect TIF funds to put towards an ultimate improvement that would create a LOS of C or better at the interchange. The City collects $5,597 per unit (medium density) in TIF and additional non-residential fees for projects to fund all projects identified in the City's 2006 Master Facilities study. A mitigation measure has been included to collect the Circulation System TIF, which is included as a part of the overall development impact fee, on each unit within the proposed project to pay for its "fair-share" of improvements to the Santa Rosa Road interchange. Implementation of this mitigation measure creates an impact that is less than significant with mitigation incorporated.

No changes will occur to the air traffic patterns, and the project will not increase hazards due to sharp curves or incompatible uses. The proposed project provides adequate emergency vehicle access. The Fire department will review plans to determine suitable fire protection measures, therefore impact is less than significant. The project is consistent with the area circulation, the Atascadero Bike Plan, and per the General Plan. Adequate parking will be provided on-site for the proposed project.

MITIGATION / CONCLUSION: Mitigation measures have been included in order to reduce the potential impacts to less than significant impact.

Mitigation Measure 16.a.b.1: Principal Avenue shall be improved by the project applicant to include striping of a designated left and right turn lane on westbound Principal Avenue between El Camino Real and the westerly project driveway to reduce queuing times and traffic impacts.

Mitigation Measure 16.a.b.2: On-street parking on Principal Avenue shall be restricted to improve sight lines for vehicles exiting the commercial driveway on the south side of Principal Ave. The area of designated no parking shall be approved by the Public Works department. Restricted parking areas may include red curb striping / signage or any other additional devices required to enforce no parking along this segment, and shall be installed by the project applicant.

Mitigation Measure 16.a.b.3: Payment of Circulation System Fee (TIF) shall be made prior to the issuance of building permits for all residential and non-residential uses within the project. Fees shall be based on the Development Impact Fee schedule adopted by City Council.

Mitigation Measure 16.a.b.4: The project is located within the Santa Rosa interchange reimbursement boundary which was adopted by the Atascadero City Council on February 9, 2016. Both the residential and commercial portions of the project shall be required to pay the Santa Rosa / Highway 101 traffic signal reimbursement mitigation fee in accordance with City Council resolution 2016-005.

17. TRIBAL CULTURAL RESOURCES – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe?:	☐	☐	☐	☒
b) Impact a listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as define in Public Resources Code Section 5020.1(k)?	☐	☐	☐	☒
c) Impact a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. the lead agency shall consider the significance of the resource to a California native American Tribe?	☐	☐	☐	☒

EXISTING SETTING: The project is a vacant infill site located along the El Camino Real corridor. The site was previously developed with two residential structures which were demolished last year after it was determined that the structures were not of historical importance.

PROPOSED PROJECT: In accordance with Assembly Bill 52, Tribal Consultation has been initiated by the City of Atascadero. Certified letters were sent on December 12, 2018 to all contacts listed by Native American Heritage Commission for the Atascadero area.

There are no known archeological or tribal cultural resources in the area. The project site does not include any Colony Houses or other known historical resources. The Atascadero Municipal

Code requires developers to stop work and notify interested parties if archeological resources are discovered during construction.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

18. UTILITIES AND SERVICE SYSTEMS – Will the project:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) 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?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) 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?	☐	☐	☒	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

EXISTING SETTING: The subject site is a 5.25 acre vacant infill site located along the El Camino Real corridor. City sewer is available near the project site.

Atascadero Mutual Water Company (AMWC) will provide water. All property within the City limits is entitled to water from AMWC, who pumps water from several portions of Atascadero sub-basin of the largest underground basin in the county, the Paso Robles Formation, using a series of shallow and deep wells. The water company anticipates that it will be able to meet the City's needs through build out and beyond. Water demand at build out is estimated to be at 16,000-20,000 acre-feet per year (AFY). The City is projected to have enough water to meet the demand with the approval of the Nacimiento Water Project, which has allocated the City an additional 3,000 AFY with a flow rate of 3.48 million gallons per day (mgd).

Solid waste from the City is taken to the Chicago Grade Landfill, a 188-acre privately-owned facility. Allos, the new owner of the landfill estimates the landfill has 70 years of projected disposal capacity.

PROPOSED PROJECT: The incremental increase in water demand for the new project will be accounted for by the collection of water meter fees when new service is established. The project is not expected to make a significant quantity of solid waste. There is capacity at the City's wastewater treatment plant to accommodate the new development.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

19. MANDATORY FINDINGS OF SIGNIFICANCE:

	Potentially Significant	Impact Requires Mitigation	Insignificant Impact	Not Applicable
a) Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

EXISTING SETTING: The subject site is a 5.25 acre vacant infill site located along the El Camino Real corridor, with mixed use zoning of commercial retail and residential multi-family.

PROPOSED PROJECT: The project site consists of undeveloped residential and commercial sites which are currently being proposed for a mixed use development, consistent with the General Plan and Zoning Ordinance. The proposed project has been analyzed as required by CEQA and the Atascadero Municipal Code. Project-related impacts have been identified and mitigation measures have been included within the proposal to reduce the effect of the proposed project as described herein.

MITIGATION / CONCLUSION: No significant impacts are expected. No mitigation is required.

For further information on California Environmental Quality Act (CEQA) or the City's environmental review process, please visit the City's website at www.atascadero.org under the Community Development Department or the California Environmental Resources Evaluation System at: http://resources.ca.gov/ceqa/ for additional information on CEQA.

Exhibit A – Initial Study References & Outside Agency Contacts

The Community Development Department of the City of Atascadero has contacted various agencies for their comments on the proposed project. With respect to the proposed project, the following outside agencies have been contacted (marked with a ☒) with a notice of intent to adopt a proposed negative / mitigated negative declaration.

- ☒ Atascadero Mutual Water Company
- ☒ Atascadero Unified School District
- ☒ Atascadero Waste Alternatives
- ☒ AB 52 – Salinan Tribe
- ☒ AB 52 – Northern Chumash Tribe
- ☒ AB 52 – Xolon Salinan Tribe
- ☒ AB 52 – Other
- ☐ California Highway Patrol
- ☒ California Department of Fish and Wildlife (Region 4)
- ☒ California Department of Transportation (District 5)
- ☒ Pacific Gas & Electric
- ☐ San Luis Obispo County Planning & Building
- ☐ San Luis Obispo County Environmental Health Department
- ☐ Upper Salinas – Las Tablas RCD
- ☐ Central Coast Information Center (CA. Historical Resources Information System)
- ☐ CA Department of Food & Agriculture
- ☐ CA Department of Conservation
- ☐ CA Air Resources Board
- ☐ Address Management Service
- ☒ Native American Heritage Commission
- ☒ San Luis Obispo Council of Governments
- ☒ San Luis Obispo Air Pollution Control District
- ☐ San Luis Obispo Integrated Waste Management Board
- ☒ Regional Water Quality Control Board District 3
- ☐ HEAL SLO – Healthy Communities Workgroup
- ☒ US Postal Service
- ☒ Pacific Gas & Electric (PG&E)
- ☒ Southern California Gas Co. (SoCal Gas)
- ☒ San Luis Obispo County Assessor
- ☐ LAFCO
- ☐ Office of Historic Preservation
- ☒ Charter Communications
- ☐ CA Housing & Community Development
- ☐ CA Department of Toxic Substances Control
- ☐ US Army Corp of Engineers
- ☐ Other: AT&T
- ☐ Other:
- ☐ Other:

The following checked ("☒") reference materials have been used in the environmental review for the proposed project and are hereby incorporated by reference into the Initial Study. The following information is available at the Community Development Department and requested copies of information may be viewed by requesting an appointment with the project planner at (805) 461-5000.

- ☒ Project File / Application / Exhibits / Studies
- ☒ Atascadero General Plan 2025 / Final EIR
- ☒ Atascadero Municipal Code
- ☒ Atascadero Appearance Review Manual
- ☐ Atascadero Urban Stormwater Management Plan
- ☐ Atascadero Hillside Grading Guidelines
- ☒ Atascadero Native Tree Ordinance & Guidelines
- ☒ Atascadero Climate Action Plan (CAP)
- ☐ Atascadero Downtown Revitalization Plan
- ☒ Atascadero Bicycle Transportation Plan
- ☒ Atascadero GIS mapping layers
- ☐ Other _____
- ☒ Adopted Atascadero Capital Facilities Fee Ordinance
- ☒ Atascadero Inclusionary Housing Policy
- ☒ SLO APCD Handbook
- ☒ Regional Transportation Plan
- ☒ Flood Hazard Maps
- ☒ CDFW / USFW Mapping
- ☐ CA Natural Species Diversity Data Base
- ☒ Archeological Resources Map
- ☒ Atascadero Mutual Water Company Urban Water Management Plan
- ☐ CalEnvironScreen
- ☐ Other _____
- ☐ Other _____

EXHIBIT B – MITIGATION SUMMARY TABLE

PLN 2014-1519 Amendment
Principal Mixed-Use Amendment, CUP, Tentative Tract Map, Zone Change
Environmental Document No. 2019-0002

Per Public Resources Code § 21081.6, the following measures also constitutes the mitigation monitoring and/or reporting program that will reduce potentially significant impacts to less than significant levels. The measures will become conditions of approval (COAs) should the project be approved. The City of Atascadero, as the Lead Agency, or other responsible agencies, as specified, is responsible to verify compliance with these COAs.

MITIGATION MEASURES

Mitigation Measure 1.c.1: A landscaping plan shall be submitted for all lots adjacent to existing residential development and must identify locations of proposed evergreen trees or similar screening trees with a minimum box size of 24-inches. These trees shall be spaced throughout an individual lot to ensure screening of existing residences and proposed new development.

Mitigation Measure 1.d.1: All lighting shall be designed to eliminate any off site glare. All exterior site lights shall utilize full cut-off, “hooded” lighting fixtures to prevent offsite light spillage and glare. Any luminaire pole height shall not exceed 20-feet in height, limit intensity to 2.0 foot candles at ingress /egress, and otherwise 0.6 foot candle minimum to 1.0 maximum in parking areas. No light shall be permitted to spill off-site. Fixtures shall be shield cut-off type so that no light sources are visible from offsite.

Mitigation Measure 1.d.2: Applicant must submit a landscaping plan, concurrent with building permit submittal, for the proposed carwash use. Landscaping plan shall include tree plantings 30-feet on center along El Camino Real and additional plantings along property boundary perimeter in designated landscaping planters.

Mitigation Measure 1.d.3: At the time of building permit submittal for car-wash portion of the proposed project, building plans shall indicate the use of a non-reflective coating, or other glare reducing applications on all galvanized or corrugated metal surfaces utilized as a part of the proposed car-wash structure. Materials must be noted on construction detail sheets and lead project designer of record must submit a letter certifying application of materials prior to building permit final.

Mitigation Measure 1.d.4: At the time of building permit submittal for car wash portion of the proposed project, applicant must submit a photometric plan showing locations of proposed on-site lighting. All exterior site lights shall utilize full cut-off, “hooded” lighting fixtures to prevent offsite light spillage and glare. Fixtures shall be shield cut-off type. Prior to final occupancy, City Staff and the applicant shall meet on-site and review lights at nighttime condition to ensure that there is no off-site light spillage or glare.

Mitigation Measure 3.b.1: The project shall be conditioned to comply with all applicable District regulations pertaining to the control of fugitive dust (PM-10) as contained in Section 2 of the CEQA Air Quality Handbook “Assessing and Mitigating Construction Impacts.” The applicant and contractors shall manage fugitive dust emissions such that they do not exceed the APCD's 20% opacity limit (APCD Rule 401) or prompt nuisance violations (APCD Rule

402).

a. Reduce the amount of the disturbed area where possible;
b. Use of water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site and from exceeding the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Increased watering frequency would be required whenever wind speeds exceed 15 mph. Reclaimed (non-potable) water should be used whenever possible; Please note that since water use is a concern due to drought conditions, the contractor or builder shall consider the use of an APCD-approved dust suppressant where feasible to reduce the amount of water used for dust control. For a list of suppressants, see Section 4.3 of the CEQA Air Quality Handbook;
c. All dirt stock pile areas should be sprayed daily and covered with tarps or other dust barriers as needed;
d. Permanent dust control measures identified in the approved project revegetation and landscape plans should be implemented as soon as possible, following completion of any soil disturbing activities;
e. Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading should be sown with a fast germinating, non-invasive, grass seed and watered until vegetation is established;
f. All disturbed soil areas not subject to revegetation should be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the APCD;
g. All roadways, driveways, sidewalks, etc. to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used;
h. Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site;
i. All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114;
j. Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site;
k. Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers shall be used with reclaimed water should be used where feasible. Roads shall be pre-wetted prior to sweeping when feasible;
l. All PM10 mitigation measures required should be shown on grading and building plans; and,
m. The contractor or builder shall designate a person or persons to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust complaints, reduce visible emissions below the APCD's limit of 20% opacity for greater than 3 minutes in any 60 minute period. Their duties shall include holidays and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the APCD Compliance Division prior to the start of any grading, earthwork or demolition.

Mitigation Measure 3.b.2: The project shall be conditioned to comply with all applicable APCD regulations pertaining to Naturally Occurring Asbestos (NOA). Prior to any grading activities a geologic evaluation should be conducted to determine if NOA is present within the area that will be disturbed. If NOA is not present, and exemptions request must be filed with the District. If NOA is found at the site, the applicant must comply with all requirements outlined in the Asbestos ATCM. This may include development of an Asbestos Dust Mitigation Plan and an Asbestos Health and Safety program for approval by the APCD.

Technical Appendix 4.4 of the SLO County APCD CEQA Air Quality Handbook includes a map of zones throughout San Luis Obispo County where NOA has been found and geological evaluation is required prior to any grading.

Mitigation Measure 3.b.3: Demolition activities can have potential negative air quality impacts, including issues surrounding proper handling, demolition, and disposal of asbestos containing material (ACM). Asbestos containing materials could be encountered during the demolition or remodeling of existing buildings or the disturbance, demolition, or relocation of above or below ground utility pipes/pipelines (e.g., transite pipes or insulation on pipes). This project includes these activities and therefore it may be subject to various regulatory jurisdictions, including the requirements stipulated in the National Emission Standard for Hazardous Air Pollutants (40CFR61, Subpart M - asbestos NESHAP). These requirements include, but are not limited to: 1) written notification, within at least 10 business days of activities commencing, to the APCD, 2) asbestos survey conducted by a Certified Asbestos Consultant, and, 3) applicable removal and disposal requirements of identified ACM. Applicant shall contact the APCD Enforcement Division at (805) 781-5912 for further information prior to any demolition onsite or relocation of above or below ground utility pipes/pipelines**.**

Mitigation Measure 3.b.4: Effective February 25, 2000, the APCD prohibited developmental burning of vegetative material within San Luis Obispo County. There shall be no developmental burning of vegetative material as part of the proposed project.

Mitigation Measure 3.b.5: Portable equipment, 50 horsepower (hp) or greater, used during construction activities may require California statewide portable equipment registration (issued by the California Air Resources Board) or an APCD permit.
The following list is provided as a guide to equipment and operations that may have permitting requirements, but should not be viewed as exclusive. For a more detailed listing, refer to the Technical Appendices, page 4-4, in the APCD's 2012 CEQA Handbook.

- Power screens, conveyors, diesel engines, and/or crushers;
- Portable generators and equipment with engines that are 50 hp or greater;
- Electrical generation plants or the use of standby generator;
- Internal combustion engines;
- Rock and pavement crushing; and
- Tub grinders.

Prior to the start of the project, the applicant shall contact the APCD Engineering Division at (805) 781-5912 for specific information regarding permitting requirements.

Mitigation Measure 3.b.6: Under APCD Rule 504, only APCD approved wood burning devices can be installed in new dwelling units. These devices include:

- All EPA-Certified Phase II wood burning devices;
- Catalytic wood burning devices which emit less than or equal to 4.1 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Non-catalytic wood burning devices which emit less than or equal to 7.5 grams per hour of particulate matter which are not EPA-Certified but have been verified by a nationally-recognized testing lab;
- Pellet-fueled woodheaters; and
- Dedicated gas-fired fireplaces.

The applicant shall contact the APCD Enforcement Division at 781-5912 with any questions regarding wood burning devices.

Mitigation Measure 4.a.1: A qualified biologist shall conduct a pre-construction survey within 30 days of initial site disturbance to identify whether silvery legless lizards are present. If silvery legless lizards are detected, a biological monitor shall be present during initial ground disturbing and vegetation removal activities to allow for a salvage and relocation effort for the lizard and other ground dwelling common wildlife that may be present.

Mitigation Measure 4.a.2: Conduct a springtime rare plant survey to determine the presence/absence of any special-status plants. Should any be discovered, implement a seed and/or plant salvage program and incorporate the salvaged material into the drainage setback and detention basin landscaped areas.

Mitigation Measure 4.b.c.1: The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the Corps or written documentation from the Corps that no permit would be required for work in the ephemeral drainage. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on riparian/wetland habitat to achieve the goal of a no net loss of wetland values and functions. As such, regulatory compliance would reduce potential impacts on waters of the U.S. to a less than-significant level.

Mitigation Measure 4.b.c.2: The applicant shall obtain compliance with Section 1600 et.seq. of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for work within the ephemeral drainage and riparian habitat (stream zone). Should an agreement be required, the applicant shall implement all the terms and conditions of the agreement to the satisfaction of the CDFW. The CDFW Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFW may require compensatory mitigation for unavoidable impacts on riparian habitat in the form of onsite riparian habitat restoration to the extent feasible. As such, regulatory compliance would reduce potential impacts on waters of the state to a less-than-significant level.

Mitigation Measure 4.d.1: Vegetation removal and initial site disturbance shall be conducted between September 1 and January 31 outside of the nesting season for birds. If vegetation and/or tree removal is planned for the bird nesting season (February 1 to August 31), then preconstruction nesting bird surveys shall be required to determine if any active nests would be impacted by project construction. If no active nests are found, then no further mitigation shall be required.

Mitigation Measure 4.d.2: If any active nests are found that would be impacted by construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected with the non-disturbance buffer zone until the adults and young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.

Mitigation Measure 4.e.1: Grading and excavation work shall be consistent with the City of Atascadero Tree Ordinance. Special precautions when working around native trees include:

1. All existing trees outside of the limits of work shall remain.
2. Earthwork shall not exceed the limits of the project area.
3. Low branches in danger of being torn from trees shall be pruned prior to any heavy equipment work being done.
4. Vehicles and stockpiled material shall be stored outside the drip line of all trees.
5. All trees within twenty feet of construction work shall be fenced for protection with 4-foot chain link, snow or safety fencing placed per the approved tree protection plan. Tree protection fencing shall be in place prior to any site excavation or grading. Fencing shall remain in place until completion of all construction activities.
6. Any roots that are encountered during excavation shall be clean cut by hand and sealed with an approved tree seal.
7. Utilities such as water, gas, power, cable, storm drainage, and sewer should be redirected from under the canopy of any trees that are to remain.
8. Where a building is placed within the canopy of a tree the foundation should be redesigned so that it bridges across any root systems.
9. Any foundation or other structure that encroaches within the drip line of trees to be saved shall be dug by hand.
10. At no time shall tree roots be ripped with construction equipment.

Mitigation Measure 4.e.2: Tree protection fencing shall be installed at the locations called out by the project arborist in a Tree Protection Plan, which shall be submitted with building permits. An inspection of the tree fencing shall be done by City staff prior to issuance of building permits.

Mitigation Measure 4.e.3: The following measure shall be incorporated on-site during the construction process of the proposed project:

1. A minimum height construction protective barrier shall be erected around the drip line of the tree plus 4'. The fence shall be supported with "T" posts at no more than 6' o.c. and tied at least 3 places per post. This fence shall be installed by the General Contractor before any rough grading is allowed on the site. Approval for this stage must be obtained in writing from either the Arborist or the Counties/Cities representative.
2. Earthwork shall not exceed the limits of the project area.
3. Low branches in danger of being torn during construction process shall be pruned prior to any heavy equipment work being undertaken.
4. Once the rough grading is accomplished the fence may be moved closer to the trunk of the tree for finish grading. At no time shall the fence be placed within the Critical Root Zone (CRZ). This location is determined by the diameter of the trunk at Diameter Breast Height (DBH). (4.5' above grade) and is 1' per 1" diameter in the direction of the drip line. At no time shall the fence be moved closer to the trunk than the drip line.
5. Any roots that are encountered over 2" diameter, during the excavation process shall be clean cut perpendicular to the direction of root growth with a handsaw. At no time shall tree seal be applied to any cut. Any roots over 2" diameter the county/city representative shall be notified to determine the preferred course of action.
6. All trenching with CRZ area shall require hand trenching to preserve and

protect roots over 2" in diameter.

7. No grading of trenching is allowed within the CRZ fenced area without written permission from the County/City representative or a certified arborist.
8. Any roots over 4" in diameter are not to be cut or ripped until inspected and approved in writing by the arborist.
9. If, for whatever reason, work must be accomplished inside the drip line 4"-6" of mulch must be applied first to decrease the possibilities of compaction upon written approval from the arborist.
10. There shall be a pre-construction meeting between the Engineering/Planning staff of the County/City, Grading equipment operators, Project Superintendent and the Arborist to review the project conditions and requirements prior to any grubbing or earth work for any portions of the project site. All tree protection fencing shall be installed for inspection prior to this meeting.
11. All trees shall be pruned before any construction takes place that are in the development areas to be saved if they might be damaged by the construction equipment. This must be accomplished by a bonded, licensed, and certified Tree Service Contractor.
12. All debris shall be cleared from the area or chipped and spread on the site or stacked in orderly piles for future use by the Owner, at the Owners request.
13. In locations where paving is to occur within the drip line grub only and do not compact unless authorized in writing. Permeable pavers or other preamble surface must be approved by the Arborist.

Mitigation Measure 4.e.4: Upon project completion and prior to final occupancy a final status report shall be prepared by the project arborist certifying that the tree protection plan was implemented, the trees designated for protection were protected during construction, and the construction-related tree protection measures are no longer required for tree protection.

Mitigation Measure 4.e.5: All utilities shall remain outside the driplines of native trees to the extent feasible. Any utilities that encroach on the critical root zone of protected trees shall be monitored during excavation by an arborist to ensure damage to native tree roots is minimized.

Mitigation 5.d.1: In the event that human remains are discovered on the property, all work on the project shall stop and the Atascadero Police Department and the County Coroner shall be contacted. The Atascadero Community Development Department shall be notified. If the human remains are identified as being Native American, the California Native American Heritage Commission (NAHC) shall be contacted at (916) 653-4082 within 24 hours. A representative from both the Chumash Tribe and the Salinan Tribe shall be notified and present during the excavation of any remains.

Mitigation Measure 6.c.1: The on-site subdivision / grading permit plans shall include erosion control measures to prevent soil, dirt, and debris from entering the storm drain system during and after construction, consistent with mitigation or construction methods outlined in the geotechnical report. Plans shall be approved by the City Engineer prior to issuance.

Mitigation Measure 6.c.2: All cut and fill slopes mitigated with an appropriate erosion control method (erosion control blanket, hydro-mulch, or straw mulch appropriately anchored) immediately after completion of earthwork, as approved by the City Engineer. All disturbed slopes shall have appropriate erosion control methods in place.

Mitigation Measure 6.c.3: The contractor will be responsible for the clean up of any mud or

debris that is tracked onto public streets by construction vehicles. An approved device must be in place prior to commencement of grading activities. This device shall be approved by the City Engineer.

Mitigation Measure 6.c.4: A re-vegetation plan shall be submitted with building permits. All disturbed cut and fill slopes shall be vegetated as specified in a landscaping plan. The landscaping plan must be approved by both the Community Development Department and the Public Works Department.

Mitigation Measure 8.h.1: Construction will comply with section the California Building and Fire Codes. New residences in the City are required to install fire sprinklers. Fire protection measures shall include the use of non-combustible exterior construction and roofs and fire-resistant building materials.

Mitigation Measure 9.d.e.f.1: The project shall be designed to comply with the Regional Water Quality Control Board's Post Construction Stormwater Management requirements for development projects in the Central Coast region. This shall be done through a combination of pervious pavement, landscaped areas, and shallow, unfenced retention ponds and detention basins, or other methods consistent with the Post Construction Stormwater Management requirements.

Mitigation Measure 9.d.e.f.2: The developer is responsible for ensuring that all contractors are aware of all storm water quality measures and that such measures are implemented. Failure to comply with the approved construction Best Management Practices will result in the issuance of correction notices, citations, or stop orders.

Mitigation Measure 12.a.1: In order to reduce the impact of the air blower noise associated with the carwash, blowers shall be placed deeper in the carwash tunnel, as recommended in the August 2014 Acoustic Study.

Mitigation Measure 12.a.2: Acoustical protection shall be added to the facades of the residences within the project that face the car wash site, as recommended in the August 2014 Acoustic Study.

Mitigation Measure 12.a.3: Following completion of the car wash phase of construction, noise levels shall be reassessed to determine the need for a noise barrier wall. If determined to be necessary to comply with City noise ordinance standards, the wall shall be constructed at the side of the exit drive, and shall be designed to be several feet higher than the height of the blower closest to the exit. A wall extending eight feet from the end of the tunnel would reduce sideline noise levels by six decibels.

Mitigation Measure 12.a.4: The Acoustic Study recommends the following design and structural specifications for achieving a 25 decibel noise reduction.

- Installation of an air conditioning or a mechanical ventilation system so that windows in rooms and office spaces facing east can remain closed.
- Exterior doors facing east should be solid core with sweeps and seals that make a positive closure.
- Exterior walls should be constructed of stucco 7/8" three coats over plywood 5/8" on exterior.
- Interior surfacing should be 5/8" for drywall interior. Additional acoustic insulation could be achieved by two layers of drywall or application over resilient furring channels.

- Glass in both windows and doors should not exceed twenty percent (20%) of the floor area in a room. This is for conventional windows. It is reasonable to permit an increased opening size if the window assembly conforms to the specifications providing a greater than 25 decibel NLR. The greatest improvement in the sound insulation of windows can be achieved by using thicker glass and a larger air space between panes in dual glazed windows. STC values may be used in estimating a window's sound blocking qualities by the newer, Outdoor-Indoor Transmission Class or OITC (ASTM E1332) value is preferred and more appropriate for units exposed to transportation noise.
- Voids around windows should be filled with insulation and wood blocking, and the perimeter of windows thoroughly caulked.
- Vents and openings should be minimized on the sides of the buildings exposed to the road and if vents are required, they should be designed with acoustical baffles.

Mitigation Measure 15.a.1: The applicant, prior to final map recordation, shall annex into the City's Community Facilities District (CFD) that will be levied to residents on an annual basis within the proposed project boundary to off-set additional maintenance costs by new residents on existing recreation facilities maintained by the City.

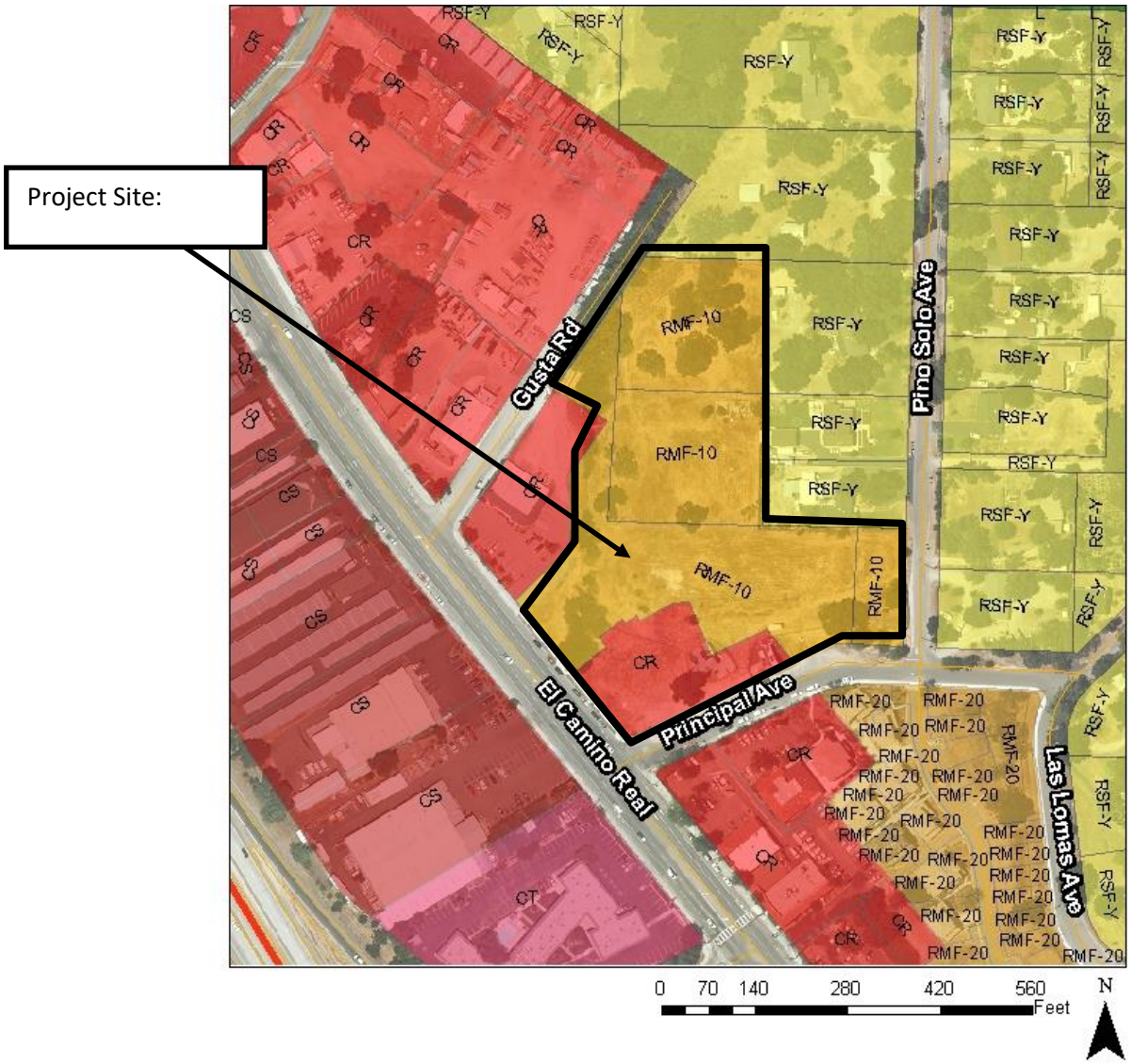
Mitigation Measure 16.a.b.1: Principal Avenue shall be improved by the project applicant to include striping of a designated left and right turn lane on westbound Principal Avenue between El Camino Real and the westerly project driveway to reduce queuing times and traffic impacts.

Mitigation Measure 16.a.b.2: On-street parking on Principal Avenue shall be restricted to improve sight lines for vehicles exiting the commercial driveway on the south side of Principal Ave. The area of designated no parking shall be approved by the Public Works department. Restricted parking areas may include red curb striping / signage or any other additional devices required to enforce no parking along this segment, and shall be installed by the project applicant.

Mitigation Measure 16.a.b.3: Payment of Circulation System Fee (TIF) shall be made prior to the issuance of building permits for all residential and non-residential uses within the project. Fees shall be based on the Development Impact Fee schedule adopted by City Council.

Mitigation Measure 16.a.b.4: The project is located within the Santa Rosa interchange reimbursement boundary which was adopted by the Atascadero City Council on February 9, 2016. Both the residential and commercial portions of the project shall be required to pay the Santa Rosa / Highway 101 traffic signal reimbursement mitigation fee in accordance with City Council resolution 2016-005.

Attachment 1 – Location Map / General Plan & Zoning



Zoning: Residential Multiple Family (10 units / acre) (RMF-10)

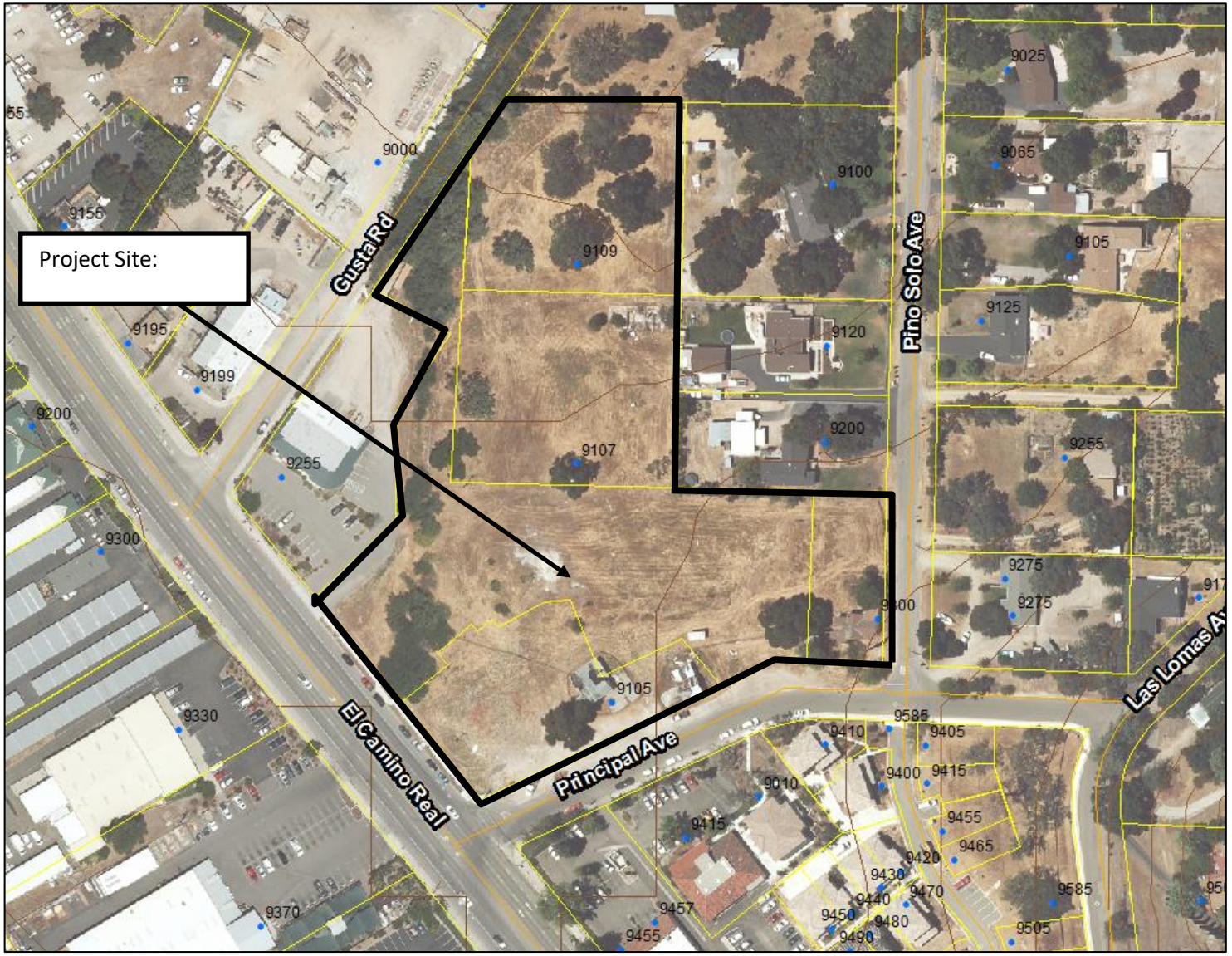
Commercial Retail (CR)

Planned Development #24 overlay

General Plan Designation: Medium Density Residential (MDR)

General Commercial (GC)

Attachment 2 – Aerial Image



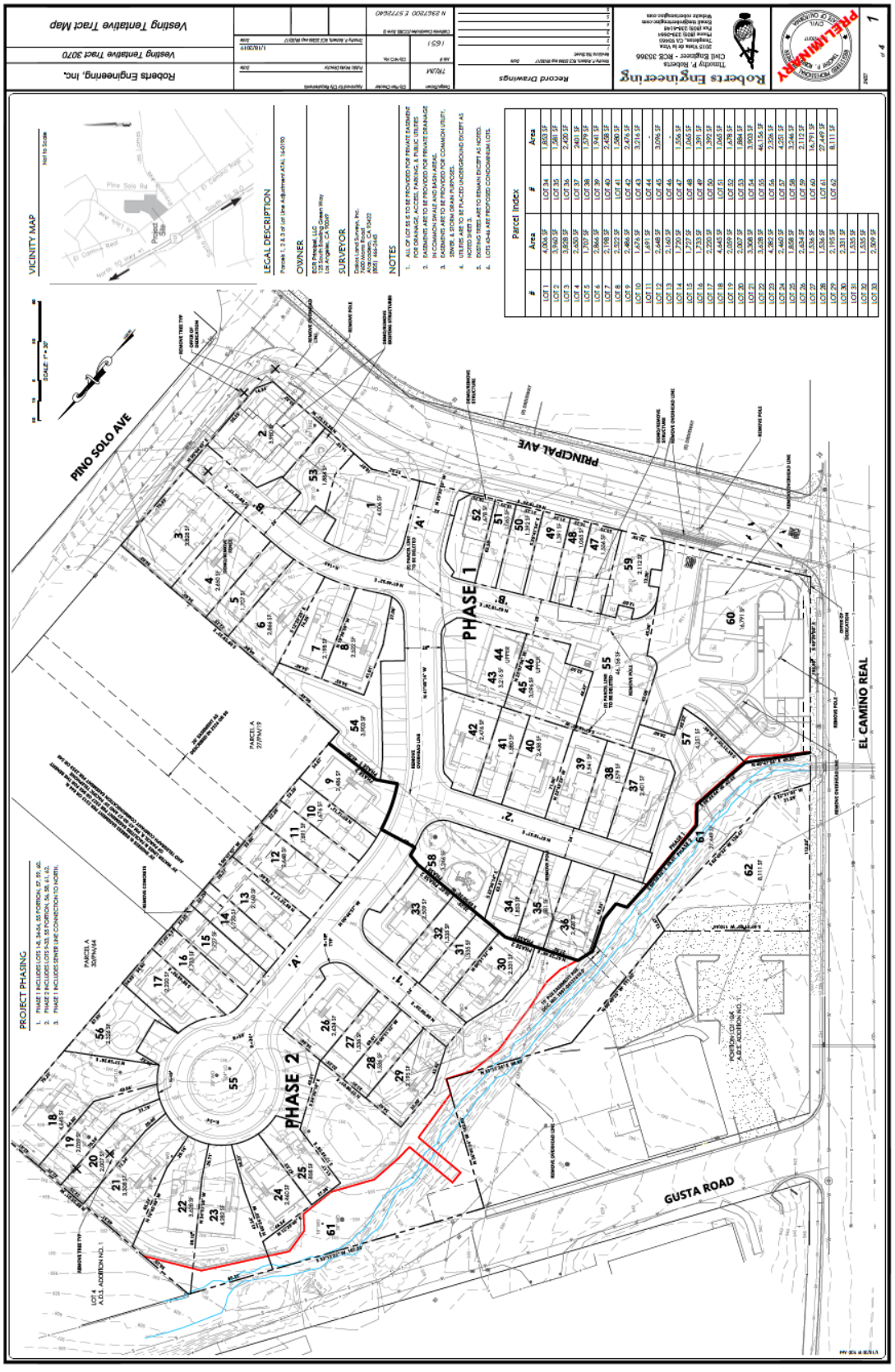
Attachment 3 – Site Photos

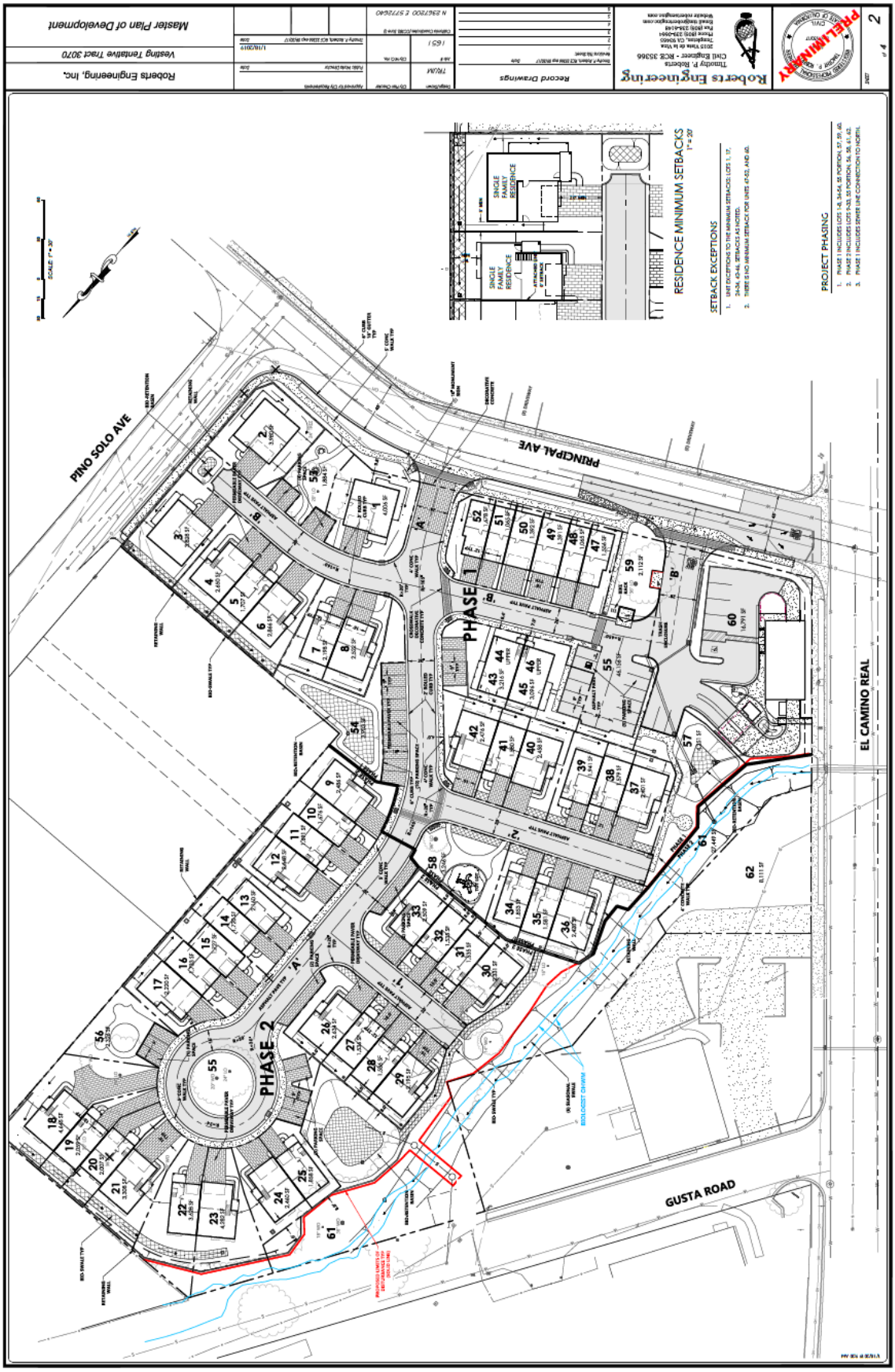
Attachment 4 – Proposed Landscape and Site Plan

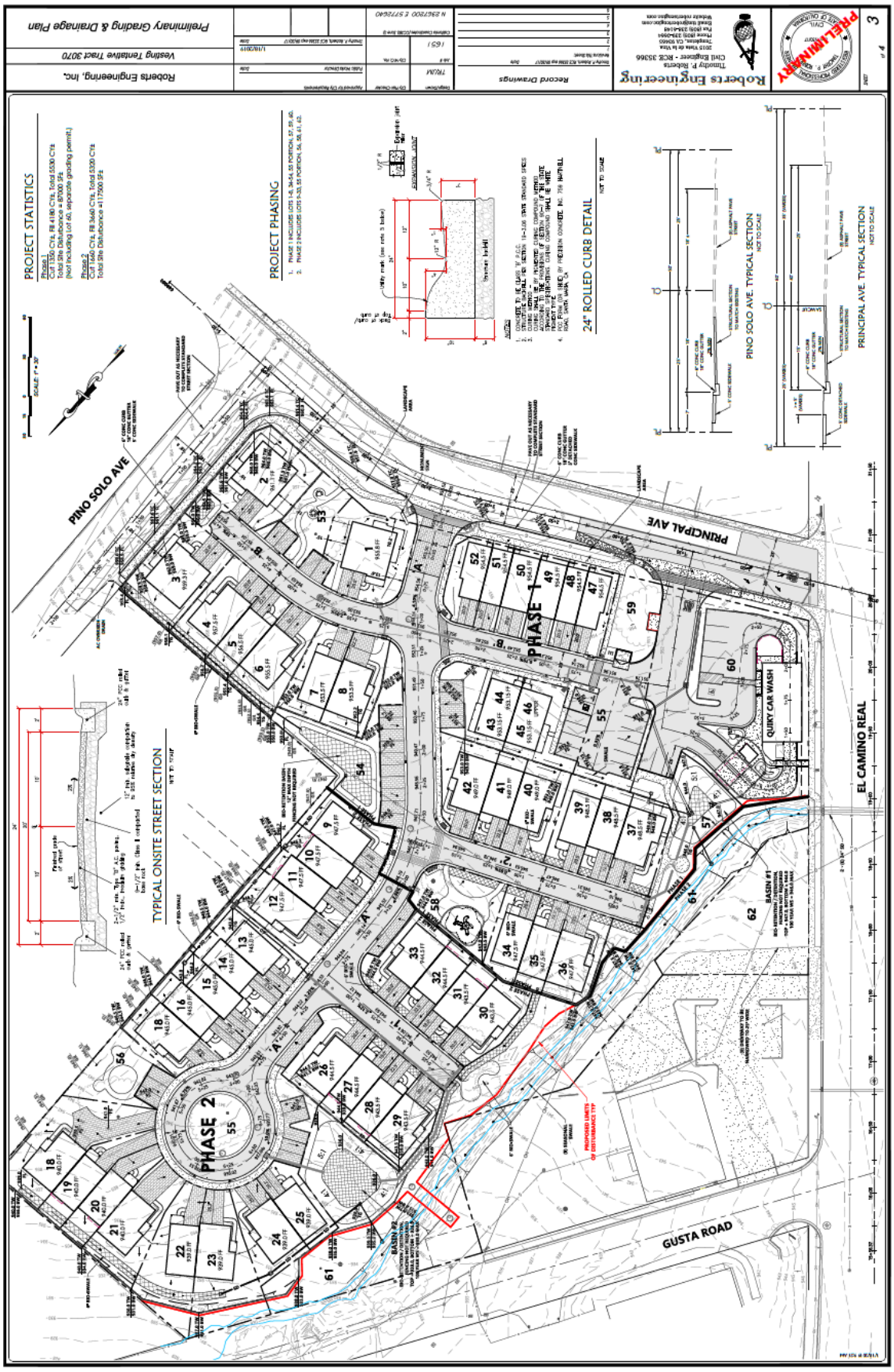
Attachment 5 – Site Section & Perspective Drawings Exhibits

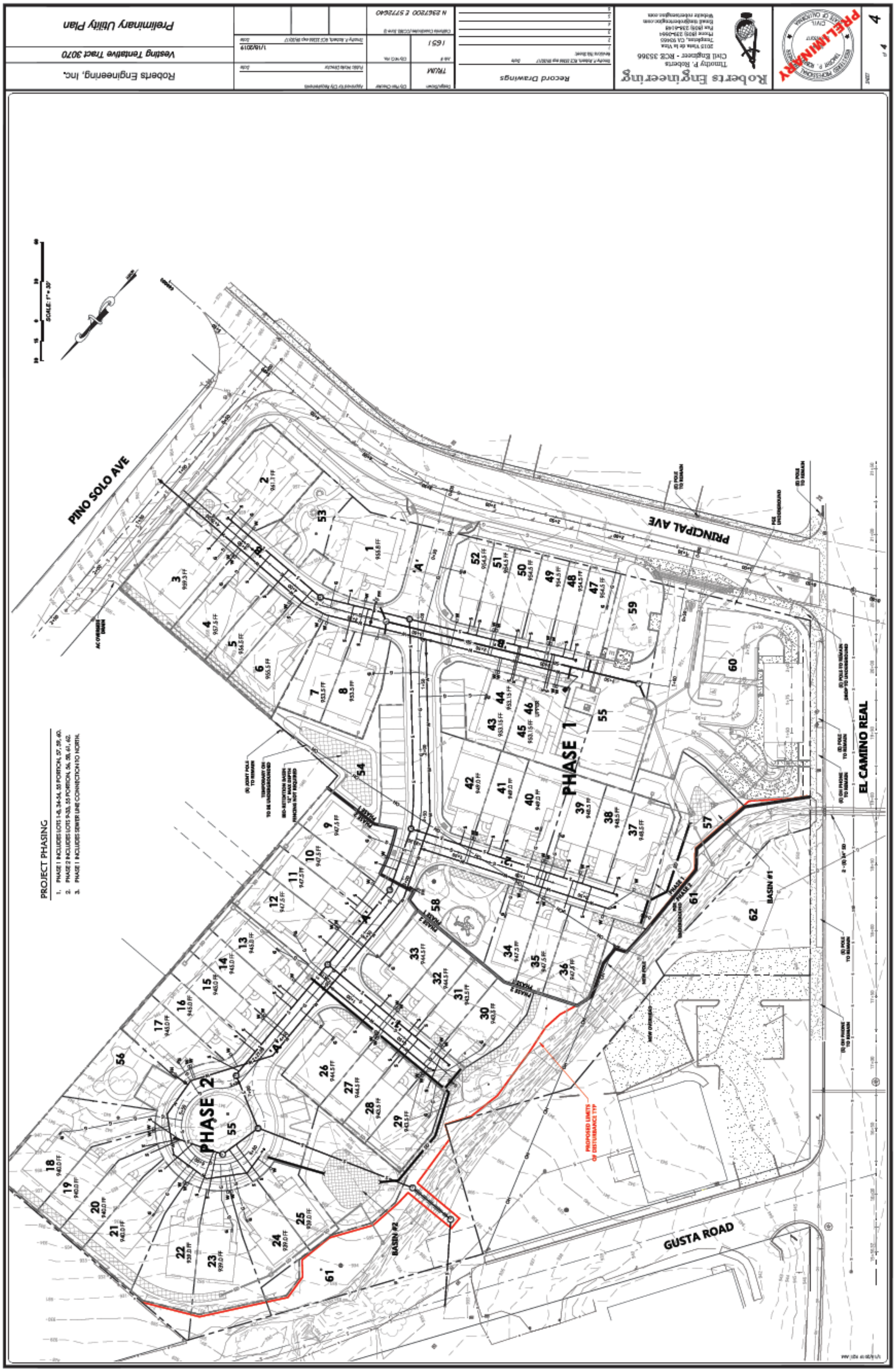

Principal

Attachment 6 – Tentative Tract Map

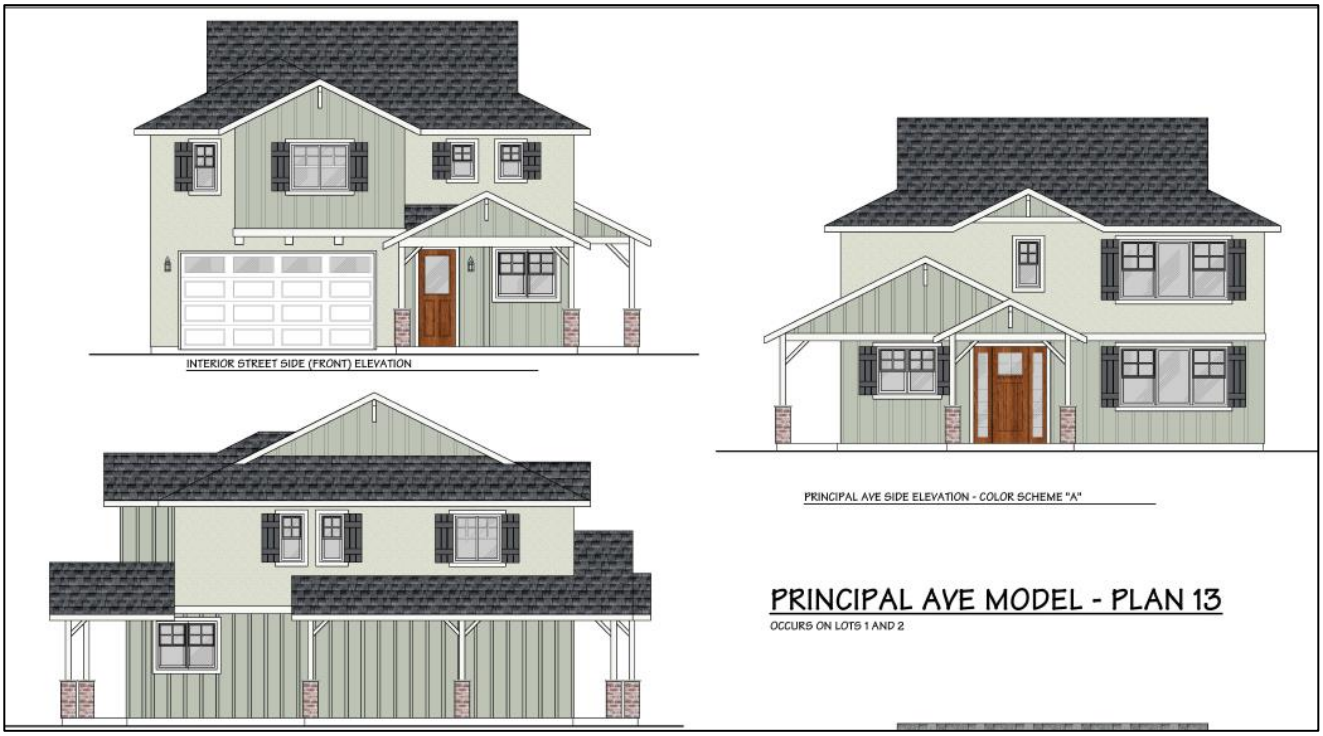



Master Plan of Development
Vesting Tentative Tract 3070
Roberts Engineering, Inc.
Record Drawings
Roberts Engineering
Timothy P. Roberts
Civil Engineer - RCE 35566
PRELIMINARY
PINO SOLO AVE
PRINCIPAL AVE
EL CAMINO REAL
GUSTA ROAD
PHASE 1
PHASE 2
RESIDENCE MINIMUM SETBACKS
SETBACK EXCEPTIONS
PROJECT PHASING
SINGLE FAMILY RESIDENCE
SCALE 1" = 30'


Preliminary Grading & Drainage Plan
Vesting Tentative Tract 3070
Roberts Engineering, Inc.
Roberts Engineering
Timothy P. Roberts
Civil Engineer - RCE 35566
PRELIMINARY
Record Drawings
PROJECT STATISTICS
PROJECT PHASING
24" ROLLED CURB DETAIL
PINO SOLO AVE. TYPICAL SECTION
PRINCIPAL AVE. TYPICAL SECTION
TYPICAL ONSITE STREET SECTION
PINO SOLO AVE
PRINCIPAL AVE
EL CAMINO REAL
GUSTA ROAD
PHASE 1
PHASE 2
QUIRK CAR WASH
BASIN #1
BASIN #2
PROPOSED LIMITS OF DISTURBANCE TYP


Preliminary Utility Plan
Vesting Tentative Tract 3070
Roberts Engineering, Inc.
Record Drawings
Roberts Engineering
Timothy P. Roberts
Civil Engineer - RCE 35366
PRELIMINARY
PINO SOLO AVE
PRINCIPAL AVE
EL CAMINO REAL
GUSTA ROAD
PHASE 1
PHASE 2
BASIN #1
BASIN #2
PROPOSED LIMITS OF DISTURBANCE TYP
PROJECT PHASING
1. PHASE 1 INCLUDES LOTS 1-8, 34-54, 55 PORTION, 57, 59, 60.
2. PHASE 2 INCLUDES LOTS 9-33, 55 PORTION, 56, 58, 61, 62.
3. PHASE 1 INCLUDES SEWER LINE CONNECTION TO NORTH.

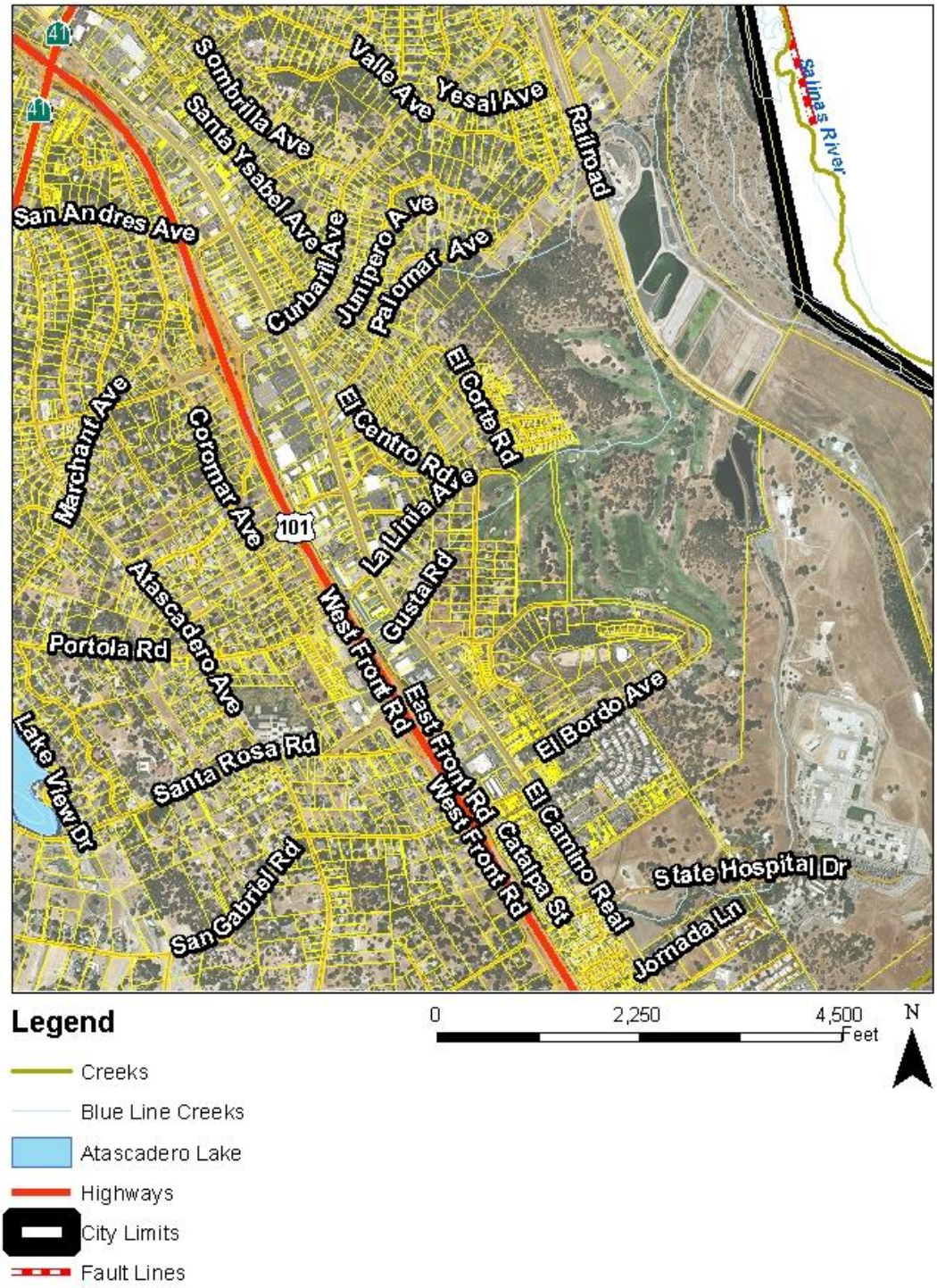
Attachment 7 – Residential Elevations



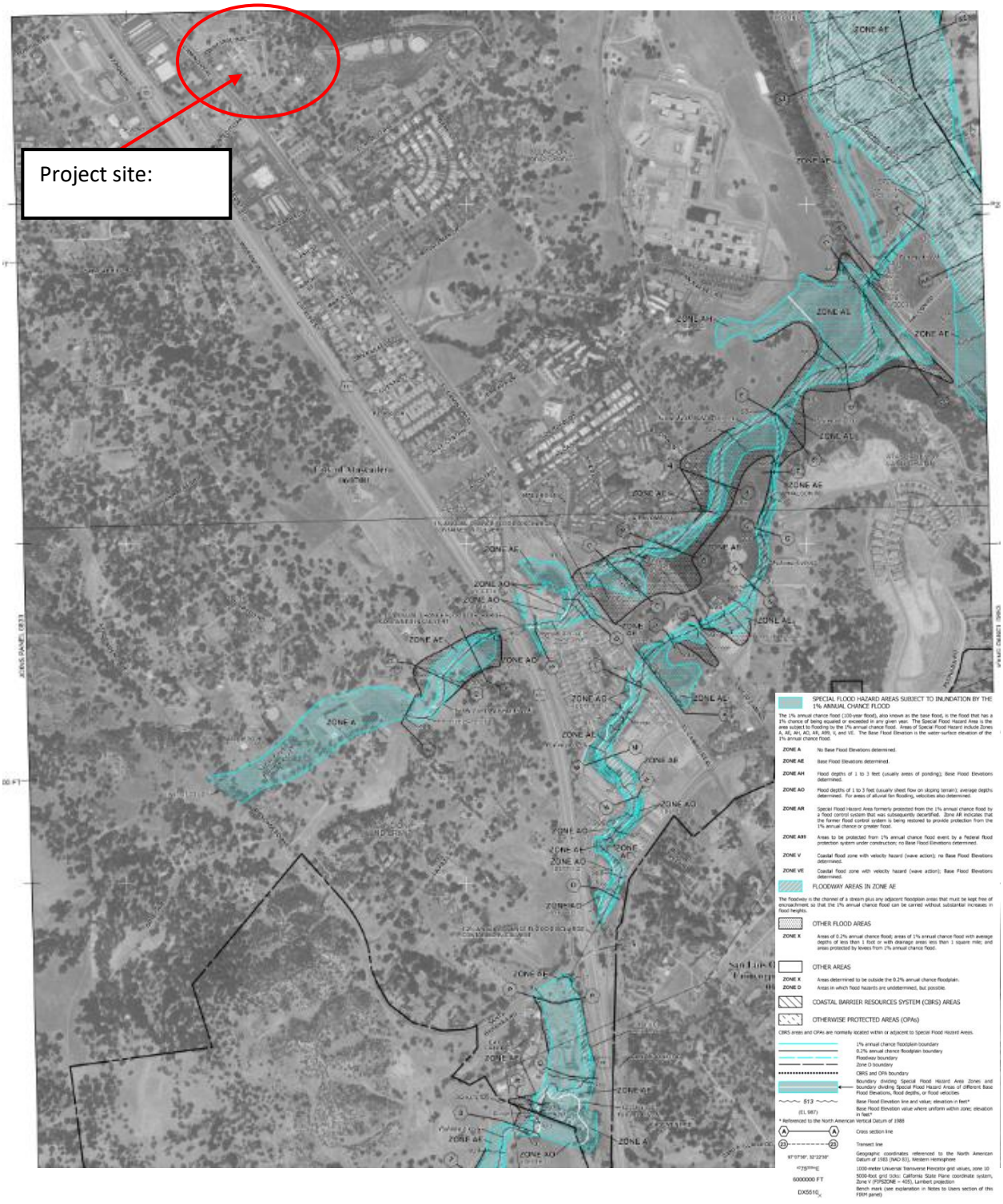
Attachment 8 – Mixed-use, Live-work Elevations

Attachment 9 – Elevations / Sections –Car Wash

Attachment 10 – Fault Map



Attachment 11 – FIRM Map



Attachment 12 – National Wetlands Inventory Map

Attachment 13 – Acoustic Study

Acoustic Study

For the

Quiky Car Wash, Atascadero

Prepared by:

David Dubbink Associates
864 Osos Street, Ste D
San Luis Obispo, CA 93401

August 20, 2014

Acoustic Study – Quiky Carwash, Atascadero

Project Description

This report examines noise issues related to the construction of a car wash facility at the intersection of El Camino Real and Principal Avenue in Atascadero. Figure 1 shows the project site plan superimposed on an areal photo. The blue area at the corner of El Camino Real and Principal Avenue is the location of the car wash. The yellow area shows individual residences. The tan color indicates an area of mixed uses with office space below residences.

Figure 1: Aerial View of the Project Site

The Acoustic Setting

The car wash fronts onto El Camino Real which is the major commercial thorough of the City of Atascadero. Street traffic is the most significant source of noise. Traffic on Highway 101 is audible, but the freeway lanes are screened by topography and by the commercial buildings on the other side of El Camino Real. Measurements of the present sound level at location indicated by the red dot showed a Leq of 47 decibels at 11:10 AM, August 21, 2014[1][2].

The Regulatory Setting

The city sets standards for single event and hourly levels[3]. The standards are more stringent for nighttime noise (9 PM to 7 AM) than for daytime noise. The standards are:

Hourly Average (Leq)	50/45	Day/Night
Maximum	70/65	Day/Night

The ordinance specifies that 5 decibels are to be subtracted from the standard in the case of noise with voice or music content. The tightening of the standard for such sounds is typical for community noise regulations. The Noise Ordinance specifies that noise readings are to be taken at the property line, ideally, at 3-5 feet above the ground level.

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[1] The Leq metric represents the average noise energy of a source measured over an interval of time.
[2] Noise readings were made using a Brüel & Kjaer Integrating Sound Level Meter, Model 2230. The meter was calibrated before and after the survey using a B&K Acoustic Calibrator Model 4231 and the meter readings were determined to be accurate.
[3] City of Atascadero, Noise Ordinance, 1992.

The noise ordinance applies to "residential development and other specified noise-sensitive land uses"[4]. The other specified uses include schools, hospitals, churches, or libraries[5].

Presently there are no noise sensitive uses in the immediate vicinity of the project. The developments facing the project across El Camino Real and at either side are commercial uses that are not considered to be noise sensitive. The closest noise sensitive land uses will be the residences that are to be constructed within the Principal Avenue Mixed Use Development as shown on Figure 2. The blue rectangle shows the car wash tunnel. The yellow area shows the residential and mixed use areas. Cars enter the car wash from Principal Avenue and drive past the structure to the pay kiosk. They then loop back through the wash tunnel, in the direction of Principal Avenue. On leaving, cars turn into a vacuum and polishing area at the side of the building adjacent to the entry drive.

Figure 2: The Car Wash and the Closest Residences

Analysis

The car wash operation includes several noise sources. Of these, the most significant is the drying blower at the exit of the wash tunnel. The vacuum units provided for customers are a secondary noise source.

Figure 3 illustrates the directionality of sound from the drying units at the end of a carwash tunnel. The darker gray rectangle at the center of the diagram represents the tunnel exit. The concentric circles represent sound levels at 20 decibel intervals. The lighter gray circle shows the 70 decibel level. The irregular outlines show the measured pattern of sound radiation at times the blowers were in operation[6]. All sound levels are measured 50 feet from the source. Two different brands of blowers have been tested in San Luis Obispo. The red line shows the pattern from a Proto-Vest blower and the blue line shows operation of Air-One blowers which are slightly louder.

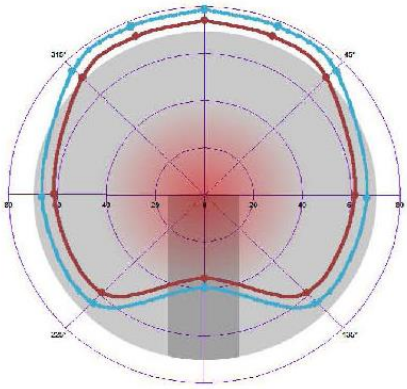

Figure 3: Sound Directionality

The sound from the louder Air-One blowers was measured at 77 decibels directly in alignment with the outlet, this reduced to 69 decibels at a 90 degree angle from center

[4] Atascadero, Noise Ordinance, Exhibit A, page 1.
[5] Ibid. page 4
[6] The data for this diagram is based on measurements made at the Quiky Broad Street facility. Measurements were made at 45 degree steps fifty feet from the end of the tunnel.

line of the wash tunnel. The 90 degree angle represents the direction of the closest residence. The difference, due to directionality is an 8 decibel reduction.

In estimating the sound level that would be experienced at the closest residence, two further adjustments are required; one for distance and the other for the hourly averaging.

Sound, traveling over a paved surface, attenuates at around six decibels with each doubling of distance. The residential property line is about 140 feet from the tunnel exit. At this distance and at this angle, sound from the dryer blowers would be attenuated to 61 decibels for the operation of the noisier blowers.

The Leq metric, the basis for the City's noise standard, is based on the acoustical average of sound energy over time. The blowers operate only when a vehicle is present. Based on operations in San Luis Obispo, it is estimated that, during a busy hour, the blowers would be in operation only half the clock time[7]. The resulting "averaged" hourly Leq values are two to three decibels less than the measurement when the blowers are in operation. The hourly averaging would reduce the sound of the blowers to 58 decibels, as measured by the Leq metric.

The facility will make use of a central vacuum producing unit located adjacent to the car wash tunnel with the individual car-servicing units activated by the customers. The central unit produces sound levels of 45 dB heard 50 feet away[8]. The speed of the 40 hp unit varies depending on the number of users. It will only run at peak speed when multiple cars are being serviced.

The vacuum system intake nozzles are an additional source of noise and potentially significant because they will be closest to neighboring homes. The intakes produce sound at a 36 decibel level measured 100 feet from the inlet nozzle. (This approximates the distance from the vacuum units to the closest residences). However, this is just the inlet sound and does not include the occasional sounds made by objects being pulled into the vacuum nozzles. These random clicks and intake sounds will exceed this background level but, by the sound averaging Leq metric used in the City's standard, these momentary events will add marginally to the overall level.

Applying the City's Noise Standard and Other Standards

The City applies two different metric standards in determining acceptable noise exposure. As noted, the Leq is based on the acoustical average of sound energy over time. The city's daytime limit for Leq exposure is 50 decibels and the maximum level permitted is 70 decibels.

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[7] During an average day, 300 vehicles go through the carwash. With eleven hours of operation, the hourly average is 28 vehicles. The dryer is activated at the end of the wash cycle and the blowers run for about 1.15 minutes which equates to 31 minutes of operation during an hour.

[8] Communication from Vacutech

The City's ordinance further provides that, in cases where existing ambient noise levels exceed standards, the standard is to be adjusted to equal the ambient level[9]. This is the case in this situation. The distance from the centerline of El Camino Real to the point where the ambient levels of 47 decibels was is 340 feet. The distance to the closest residential structure is 190 feet. At this distance the noise from roadway traffic increases to 50 decibels.[10] An additional adjustment is required. Peak hour traffic activity is conventionally used to characterize roadway noise sources, The monitoring was done at 11 AM while the peak typically occurs in the late afternoon, around 4 to 5 PM. Traffic flow data indicated that sound levels during that period would be two decibels greater. This suggests that ambient noise levels, measured at the boundary of the residential area during a peak traffic hour are at the 52 dB level.

The project which would produce a Leq level of 58 decibels, without special mitigation, generates noise at levels that are in excess of the City's adjusted noise standard of 52 Leq, at the property line of noise sensitive uses. The most impacted residences are the units in the mixed use area of the Principal Mixed Use Project. The single family units further back from Principal Avenue as close to the car wash facility but quite out of alignment with the exit tunnel. The directionality of the sound and the bulk of the carwash equipment room paralleling the wash tunnel will further block some of the noise exposure. Noise levels in this portion of the Mixed Use Project will not exceed City standards.

A noise level mitigation of 6 decibels is needed to bring the project into conformance with City standards. Appendix A, lists actions that can be taken to reduce exterior to interior noise transmission.

The City's Noise Ordinance also includes specification of noise levels within interior spaces. Levels are not to exceed a Leq of 40 decibels. Conventional construction reduces exterior to interior noise transmission by around 20 decibels. If the exterior standard of 50 decibels is met, the interior standard would also be met. Or in this case, even without mitigating an exterior noise level of 58 decibels, a 20 decibel reduction would lower the interior level to 38 decibels, meeting the City's interior noise standard.

It might be noted that mitigations will not make the sounds from carwash operations undetectable. When sounds are of a dissimilar nature, people can perceive the added sound even if the overall level is not changed. People will be able to hear the carwash equipment turn on and off and such things as the car doors closing or radios playing. There is no easy way to minimize these sources since they are, for the most part, random events that are outside of the control of the project management.

Noise will also be generated during the time the facility is under construction. Noise from construction activities is exempted by the Noise Ordinance as long as it occurs between the hours of 7 Am and 9 PM.[11]

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[9] Ibid, page 5.
[10] This is based on computation using a "line source".
[11] Ibid. page 3.

Recommendations

Some level of acoustical mitigation is required. The most effective mitigations take place at the source. One means of reducing the impact of blower noise is to place them deeper in the tunnel. Alternately, a noise barrier wall could be constructed at the side of the exit drive. It would be most effective if it were several feet higher than the height of the blower closest to the exit. A wall extending eight feet from the end of the tunnel would reduce sideline noise levels by the required six decibels.

Since the project is integrated into a larger mixed use development, it would also be workable to add additional levels of acoustical protection to the facades of the residences that face the car wash site. This has the additional benefit of reducing exposure to traffic noise from El Camino Real.

Appendix A, lists some actions that can be taken to reduce exterior to interior noise transmission from the typical 20 decibel Noise Level Reduction (NLR) to a 25 decibel reduction. There are alternate building techniques that can achieve this objective and alternative strategies can be applied that achieve the same objective.

CEQA Determinations

The following four paragraphs address the relevant noise related questions on the Environmental Checklist in Appendix G of the CEQA Guidelines. In all cases, it is concluded that if the project includes the recommended design features and conditions, it will not have significant negative environmental effects with regard to noise or vibration issues.

1) With the recommended mitigations, the project will not result in significant 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 sound levels are reduced to less than significant levels by either the addition of a wing wall to the exit from the blower area or by increasing the level of acoustical isolation for the several residential units that are impacted.

2) People will not be exposed to excessive ground borne vibration or ground borne noise levels. The car wash will not produce vibrations at levels that would be detectable at the closest sensitive uses.

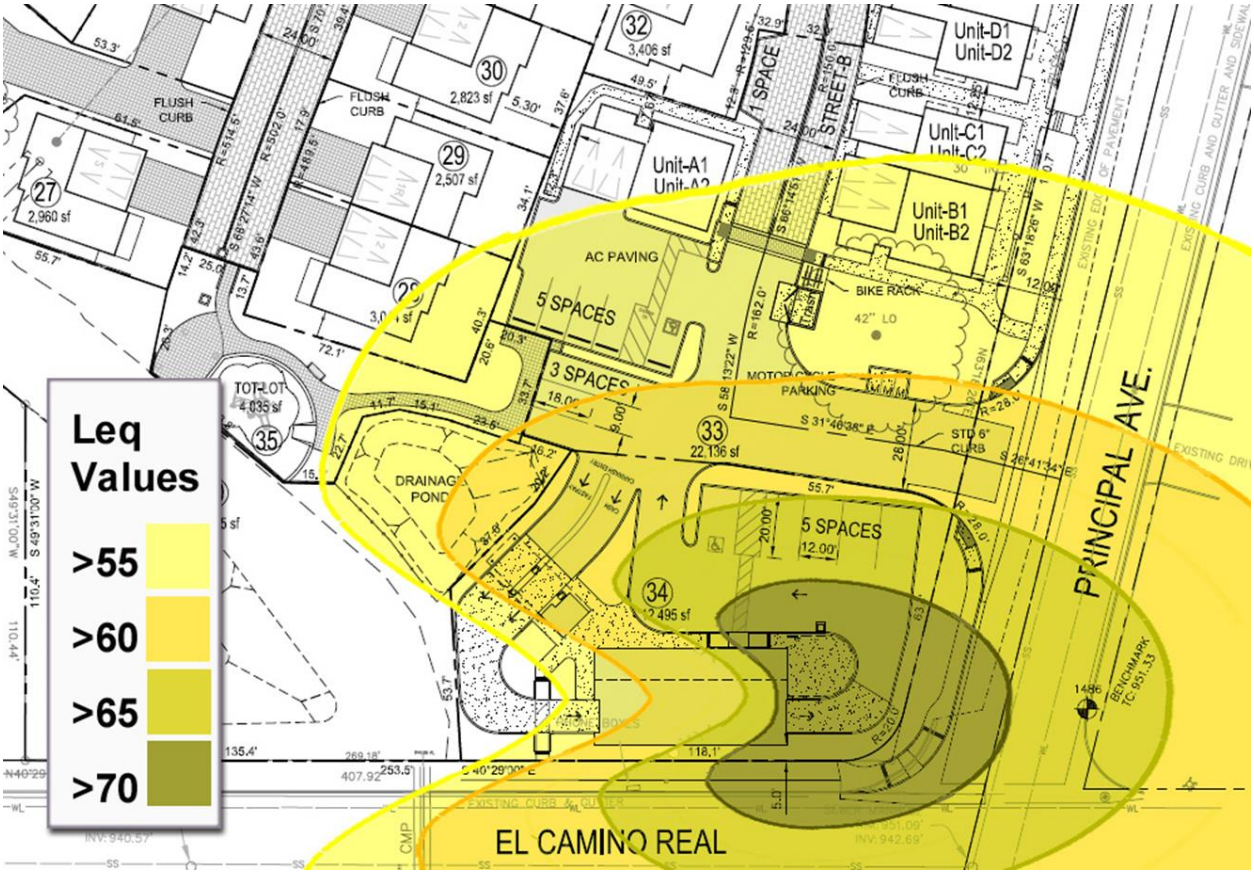
3) The project will not create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The area presently is exposed to noise from traffic on El Camino Real that is in excess of the limits permitted by City code. While the project will add to the noise levels the increment will not substantially change the present environment.

4) During the construction phase of the project, there will be a temporary increase in ambient noise levels in the project vicinity above levels existing without the project. However the city allows construction activities that temporarily exceed standards if the work conforms to guidelines for construction activities. Project conditions should reflect the city's policies regarding the timing and nature of construction work.

There are several additional questions on the checklist related to noise produced by airports. Atascadero is not proximate to an airport or in a major flight path. There are no significant impacts.

Appendix A: Design and Structural specifications for achieving a 25 decibel Noise Reduction

- Installation of an air conditioning or a mechanical ventilation system so that windows in rooms and office spaces facing east can remain closed.
- Exterior doors facing east should be solid core with sweeps and seals that make a positive closure.
- Exterior walls should be constructed of stucco 7/8" three coats over plywood 5/8" on exterior.
- Interior surfacing should be 5/8" for drywall interior. Additional acoustic insulation could be achieved by two layers of drywall or application over resilient furring channels.
- Glass in both windows and doors should not exceed 20% of the floor area in a room. This is for conventional windows. It is reasonable to permit an increased opening size if the window assembly conforms to the specifications providing a greater than 25 decibel NLR. The greatest improvement in the sound insulation of windows can be achieved by using thicker glass and a larger air space between panes in dual glazed windows. STC values may be used in estimating a window's sound blocking qualities but the newer, Outdoor-Indoor Transmission Class or OITC (ASTM E1332) value is preferred and more appropriate for units exposed to transportation noise.
- Voids around windows should be filled with insulation and wood blocking, and the perimeter of windows thoroughly caulked.
- Vents and openings should be minimized on the sides of the buildings exposed to the road and if vents are required, they should be designed with acoustical baffles.


Leq Values
>55
>60
>65
>70
PRINCIPAL AVE.
EL CAMINO REAL
Unit-D1
Unit-D2
Unit-C1
Unit-C2
Unit-B1
Unit-B2
Unit-A1
AC PAVING
5 SPACES
3 SPACES
BIKE RACK
MOTORCYCLE PARKING
TOT-LOT
DRAINAGE POND
STREET-B
1 SPACE
FLUSH CURB
STD 6" CURB
BENCHMARK TC:951.33

Attachment 14 – Arborist Report

Native Tree Protection Plan

Tract 3070 at El Camino Real and Principle Ave

Prepared By

Chip Tamagni
Certified Arborist #WE 6436-A
Certified Hazard Risk Assessor #1209

Steven Alvarez
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A & T ARBORISTS
P.O. BOX 1311 TEMPLETON, CA 93465 (805) 434-0131

As consulting arborists, we have been hired to inform and educate how to protect trees both during the design phase and construction. Different species can adapt to more impacts than others just as young trees can sustain more root disturbance that older trees. All individuals and firms involved in the planning stages should be made completely aware of the limitations regarding setbacks from drip lines that are recommended to protect the trees. When we are given a plan, it should show **all** possible disturbances within the drip line areas. This includes all cuts, fills, over-excavation limits, building clearances, and all utilities. We will suggest changes if we feel the impacts are too great and it is up to the owner to follow our recommendations. If the plan we receive is not complete with potential impacts, we will fairly assume any additions will fall completely out of the drip line areas. It is the burden of the property owner to inform us of any changes, omissions, or deletions that may impact the drip line area of the trees in any way.

It is the responsibility of the **owner** to provide a copy of this tree protection plan to any and all contractors and subs that work within the drip line of any native tree. We recommend making it mandatory that the grading/trenching operator have all of his/her employees sign that they have read these plans. It is highly recommended that all other contractors sign and acknowledge this tree protection plan. In addition, each their respective employees shall be made aware of this tree plan.

This tree evaluation and protection plan is in regard to the development of the property located at the confluence of El Camino Real and Principle Avenue in Atascadero into housing units. There are 20 native trees on site consisting of blue oaks (*Quercus douglasii*), coast live oaks (*Quercus agrifolia*), and valley oaks (*Quercus lobata*). Six trees are being proposed for removal. They consist of four live oaks 32, 24, 38, and 10 inches in diameter along with two blue oaks with diameters of 19 and 26 inches respectively. The 24" coast live oak is dead already. Most all the saved trees will require trimming for not only clearance from roads and driveways but also from buildings in a couple of instances. The trimming shall be done before any grading occurs. Post trimming, tree fencing shall be installed. At times during the course of the project, fencing may need to be adjusted to accommodate walkways and driveways at the direction of the project arborist. At no time shall any areas under the drip lines be for parking construction vehicles or for storage of any kind including porta potties. All trenching within any drip line shall be monitored during the digging phase. The owner shall be prepared to add supplemental irrigation both during and post construction for a period of one year to trees #6, 8, and 9 at a minimum. Trees #8 and 9 are in the middle of the roundabout. Irrigation shall be made available to these two trees before the road is paved. Required irrigation shall be placed at the inner edge of the roundabout with two gallon per hour emitters spaced three feet on center. They will need to be operated once per week for an hour throughout the summer months for the entire summer following project completion. Tree #7 is about 1.5 feet higher in elevation than the street and the building pad. In order to effectively place the driveway, a maximum of 8 inches of soil

can be removed under the drip line of this tree. The project arborist shall be present for any grading within the drip line. The utilities for this lot shall be routed outside the drip line and into the open space of lot #59 then travel along the property line north west to the home. The utilities for lot #20 shall be routed right at the edge of the drip line of tree 37. Tree #14 on lot #31 shall have the utilities travel along the north side of the driveway. All other utilities shall be routed outside any drip line unless approved by the project arborist.

Projects usually require an on-site pre-construction meeting with the city, owner, grading contractor and the arborist. Topics will include fencing, monitoring and requirements for a positive final occupancy letter. It is the owner's responsibility to adequately inform us prior to any meetings where we need to be present.

All trees potentially impacted by this project are numbered and identified on both the grading plan and the spreadsheet. Trees whose drip line edges are greater than 50 feet from site disturbance will generally not be tagged and inventoried. Trees that are inherently protected by other saved trees will also not be tagged. Trees are numbered on the grading plans and in the field with an aluminum tag. Tree protection fencing is shown on the grading plan. In the field, trees to be removed have red tape attached to the tag.

Tree Rating System

A rating system of 1-10 was used for visually establishing the overall condition of each tree on the spreadsheet.

Determining factors include:

- Previous impacts to tree root zone
- Observation of cavities, conks or other structurally limiting factors
- Pest, fungal, or bacterial disorders
- Past failures
- Current growth habit

The rating system is defined as follows:

Rating	Condition
0	Deceased
1	Evidence of massive past failures, extreme disease and is in severe decline.
2	May be saved with attention to class 4 pruning, insect/pest eradication and future monitoring.
3	Some past failures, some pests or structural defects that may be mitigated by class IV pruning.
4	May have had minor past failures, excessive deadwood or minor structural defects that can be mitigated with pruning.

5	Relatively healthy tree with little visual structural and or pest defects.
6	Healthy tree that probably can be left in its natural state. Future pruning may be required.
7-9	The tree has had proper arboricultural pruning and attention or have no apparent structural defects.
10	Specimen tree with perfect shape, structure and foliage in a protected setting (i.e. park, arboretum).

The following mitigation measures/methods must be fully understood and followed by anyone working within the drip line of any native tree. Any necessary clarification will be provided by us (the arborists) upon request.

Fencing: The proposed fencing shall be shown in orange ink on the grading plan. It must be a minimum of 4' high chain link, snow or safety fence staked at the edge of the drip line or line of encroachment for each tree or group of trees. The fence shall be up before any construction or earth moving begins. The owner or their designee shall be responsible for maintaining an erect fence throughout the construction period. The arborist(s), upon notification, will inspect the fence placement once it is erected. After this time, fencing shall not be moved without arborist inspection/approval. If the orange plastic fencing is used, a minimum of four zip ties shall be used on each stake to secure the fence. All efforts shall be made to maximize the distance from each saved tree. The fencing must be constructed prior to the city pre-construction meeting for inspection by the city and the arborists. Fence maintenance is an issue with many job sites. Windy conditions and other issues can cause the fence to sage and fall. Keeping it erect should be a part of any general contractor's bid for a project. Down fencing is one of the causes for a stop work notice to be placed on a project.

Soil Aeration Methods: Soils within the drip line that have been compacted by heavy equipment and/or construction activities must be returned to their original state before all work is completed. Methods include adding specialized soil conditioners, water jetting, adding organic matter, and boring small holes with an auger (18" deep, 2-3' apart with a 2-4" auger) and the application of moderate amounts of nitrogen fertilizer. The arborist(s) shall advise.

Chip Mulch: All areas within the drip line of the trees that cannot be fenced shall receive a 4-6" layer of chip mulch to retain moisture, soil structure and reduce the effects of soil compaction.

Trenching Within Drip Line: All trenching/excavation for foundations within the drip line of native trees shall be **hand dug**. All major roots shall be avoided whenever possible. All exposed roots larger than 1" in diameter shall be clean cut with sharp pruning tools and not left ragged. A **Mandatory** meeting between the arborists and grading/trenching contractor(s) shall take place prior to work start. This activity shall be monitored by the arborist(s) to insure proper root pruning is talking place. Any landscape architects and contractors involved shall not design any irrigation or other features within any drip line unless previously approved by the project arborist.

Grading Within The Drip Line: Grading shall not encroach within the drip line unless approved by the project arborist. Grading should not disrupt the normal

drainage pattern around the trees. Fills should not create a ponding condition and excavations should not leave the tree on a rapidly draining mound.

Exposed Roots: Any exposed roots shall be re-covered the same day they were exposed. If they cannot, they must be covered with burlap or another suitable material and wetted down 2x per day until re-buried.

Paving Within The Drip Line: The preferred method on paving within the drip line consists of placing base material on existing grade. Any grade lowering removes important surface roots. Pavers can be used with limitations. The base material must be above natural grade and the curbing to retain the pavers shall not be trenched any deeper than six inches into the natural grade.

Equipment Operation: Vehicles and all heavy equipment shall not be driven under the trees, as this will contribute to soil compaction. Also there is to be no parking of equipment or personal vehicles in these areas. All areas behind fencing are off limits unless pre-approved by the arborist. All soil compaction within drip line areas shall be mitigated as described previously.

Existing Surfaces: The existing ground surface within the drip line of all native trees shall not be cut, filled, compacted or pared, unless shown on the grading plans **and** approved by the arborist.

Construction Materials And Waste: No liquid or solid construction waste shall be dumped on the ground within the drip line of any native tree. The drip line areas are not for storage of materials either. Any violations shall be remedied through proper cleanup approved by the project arborist at the expense of the owner.

Arborist Monitoring: An arborist shall be present for selected activities (trees identified on spreadsheet and items bulleted below). The monitoring does not necessarily have to be continuous but observational at times during these activities. It is the responsibility of the owner(s) or their designee to inform us prior to these events so we can make arrangements to be present. It is the responsibility of the owner to contract (prior to construction) a locally licensed and insured arborist that will document all monitoring activities.

- pre-construction fence placement
- any utility or drainage trenching within any drip line
- All grading and trenching near trees requiring monitoring on the spreadsheet

Pre-Construction Meeting: An on-site pre-construction meeting with the Arborist(s), Owner(s), Planning Staff, and all contractors and subs is highly recommended prior to the start of any work. At a minimum, the grading contractor shall be present. It is the sole responsibility of the owner that all topics covered during the preconstruction meeting are appropriately passed on to non-present contractors. Prior to final occupancy, a letter from the arborist(s) shall be required verifying the health and condition of all impacted trees and providing any recommendations for any additional mitigation. The letter shall verify that the arborist(s) were on site for all grading and/or

trenching activity that encroached into the drip line of the selected native trees, and that all work done in these areas was completed to the standards set forth above.

Pruning: All native tree pruning shall be completed by a licensed and insured D49 tree trimming contractor that has a valid city business license. Class 4 pruning includes: Crown reduction pruning consisting of reduction of tops, sides or individual limbs. A trained arborist shall perform all pruning. No pruning shall take more than 25% of the live crown of any native tree. Any trees that may need pruning for road/home clearance shall be pruned **prior** to any grading activities to avoid any branch tearing.

Landscape: All landscape under the drip-line shall be drought tolerant or native varieties. Lawns shall be avoided. All irrigation trenching shall be routed around drip lines; otherwise above ground drip-irrigation shall be used. It is the owner's responsibility to notify the landscape architect and contractor regarding this mitigation.

Utility Placement: All utilities and sewer/storm drains shall be placed down the roads/driveways and when possible outside of the drip lines. If roads exist between two trees, the utilities shall be routed down the middle of the road or completely hand dug. The arborist shall supervise trenching within the drip line. **All trenches in these areas shall be exposed by air spade or hand dug with utilities routed under/over the roots**. Roots greater than 2 inches in diameter shall **not** be cut.

Fertilization and Cultural Practices: As the project moves toward completion, the arborist(s) may suggest fertilization, insecticide, fungicide, soil amendments, and/or mycorrhiza applications that will benefit tree health.

The included spreadsheet includes trees listed by number, species and multiple stems if applicable, diameter and breast height (4.5'), condition (scale from poor to excellent), status (avoided, impacted, removed, exempt), percent of drip line impacted, mitigation required (fencing, root pruning, monitoring), construction impact (trenching, grading), recommended pruning and individual tree notes.

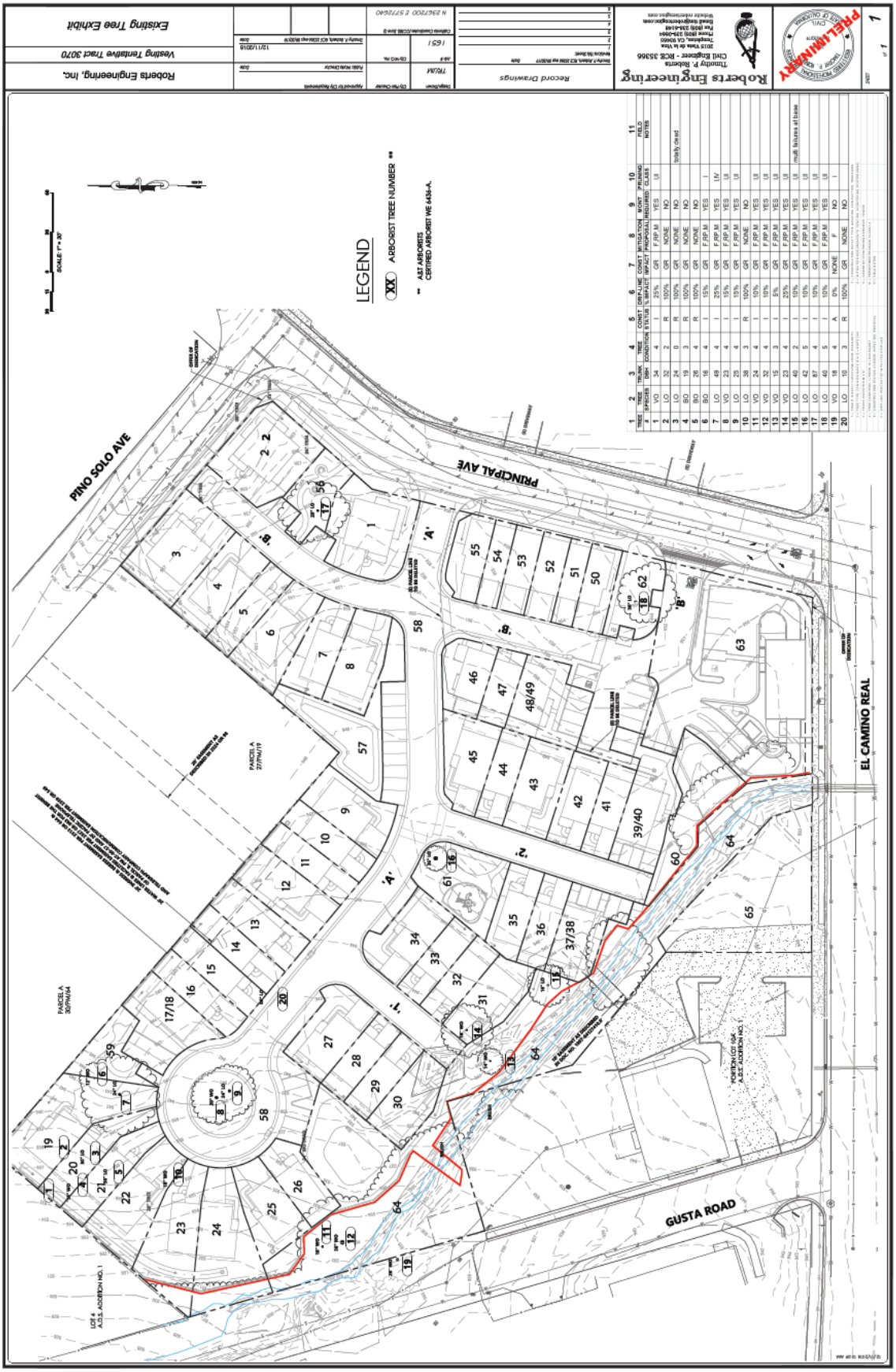
If **all** the above mitigation measures are followed, we feel there will be no additional long-term significant impacts to the remaining native trees.

A & T Arborists strongly suggests that the responsible party (owner of their designee) make copies of this report. Any reproduction by A & T Arborists or changes to this original report will require an additional charge.

Please let us know if we can be of any future assistance to you for this project.

Steven G. Alvarez
Certified Arborist #WC 0511

Chip Tamagni
Certified Arborist #WE 6436-A



1 TREE	2 TREE SPECIES	3 TRUNK DIAM	4 TREE CONDITION	5 CONST 1 YR	6 DRIP-LINE RADIUS	7 CONST IMPACT	8 MITIGATION APPROVAL	9 MONT REQ'D	10 PRUNING CLASS	11 FIELD NOTES
1	VO	34	4	I	25%	GR	F,RP,M	YES	I,II	
2	LO	32	2	R	100%	GR	NONE	NO		
3	LO	24	0	R	100%	GR	NONE	NO		brushy cleared
4	BO	19	3	R	100%	GR	NONE	NO		
5	BO	26	4	R	100%	GR	NONE	NO		
6	BO	16	4	I	15%	GR	F,RP,M	YES	I	
7	LO	49	4	I	25%	GR	F,RP,M	YES	I,IV	
8	VO	23	4	I	15%	GR	F,RP,M	YES	I,II	
9	LO	28	4	I	15%	GR	F,RP,M	YES	I,II	
10	LO	38	3	R	100%	GR	NONE	NO		
11	VO	24	4	I	15%	GR	F,RP,M	YES	I,II	
12	VO	32	4	I	15%	GR	F,RP,M	YES	I,II	
13	VO	15	3	I	5%	GR	F,RP,M	YES	I,II	
14	VO	23	4	I	25%	GR	F,RP,M	YES	I,II	
15	LO	40	2	I	10%	GR	F,RP,M	YES	I,II	multi features all base
16	LO	42	5	I	10%	GR	F,RP,M	YES	I,II	
17	LO	87	4	I	10%	GR	F,RP,M	YES	I,II	
18	LO	40	5	I	10%	GR	F,RP,M	YES	I,II	
19	VO	18	4	A	0%	NONE	F	NO	I	
20	LO	110	3	R	100%	GR	NONE	NO		

TREE PROTECTION SPREAD SHEET

1	2	3	4	5	6	7	8	9	10	11
TREE #	TREE SPECIES	TRUNK DBH	TREE CONDITION	CONST STATUS	DRIP-LINE % IMPACT	CONST IMPACT	MITIGATION PROPOSAL	MONT REQUIRED	PRUNING CLASS	FIELD NOTES
1	VO	34	4	I	25%	GR	F,RP,M	YES	I,II	
2	LO	32	2	R	100%	GR	NONE	NO		
3	LO	24	0	R	100%	GR	NONE	NO		totally dead
4	BO	19	3	R	100%	GR	NONE	NO		
5	BO	26	4	R	100%	GR	NONE	NO		
6	BO	16	4	I	15%	GR	F,RP,M	YES	I	
7	LO	49	4	I	25%	GR	F,RP,M	YES	I,IV	
8	VO	23	4	I	15%	GR	F,RP,M	YES	I,II	
9	LO	25	4	I	15%	GR	F,RP,M	YES	I,II	
10	LO	38	3	R	100%	GR	NONE	NO		
11	VO	24	4	I	10%	GR	F,RP,M	YES	I,II	
12	VO	32	4	I	10%	GR	F,RP,M	YES	I,II	
13	VO	15	3	I	5%	GR	F,RP,M	YES	I,II	
14	VO	23	4	I	35%	GR	F,RP,M	YES	I,II	
15	LO	40	2	I	10%	GR	F,RP,M	YES	I,II	multi failures at base
16	LO	42	5	I	10%	GR	F,RP,M	YES	I,II	
17	LO	87	4	I	10%	GR	F,RP,M	YES	I,II	
18	LO	40	5	I	10%	GR	F,RP,M	YES	I,II	
19	VO	18	4	A	0%	NONE	F	NO	I	
20	LO	10	3	R	100%	GR	NONE	NO		

1 = TREE #: MOSTLY CLOCKWISE FROM DUE NORTH
2 = TREE TYPE: COMMON NAME IE.W.O.= WHITE OAK
3 = TRUNK DIAMETER @ 4'6"
4 = TREE CONDITION: 1 = POOR, 10 = EXCELLENT
5 = CONSTRUCTION STATUS: AVOIDED, IMPACTED, REMOVAL
6 = DRIP-LINE: PERCENT OF IMPACTED DRIP-LINE
7 = CONSTRUCTION IMPACT TYPE: GRADING, COMPACTION, TRENCHING
8 = MITIGATION REQUIREMENTS: FENCING, MONITORING, ROOTPRUNING,
9 = ARBORIST MONITORING REQUIRED: YES/NO
10 = PERSCRIBED PRUNING: CLASS 1-4
11 = FIELD NOTES

12/12/2018

Attachment 15 – Biological Report

See Attached

TRACT 3070
MASTER PLAN OF DEVELOPMENT PROJECT

BIOLOGICAL AND WETLAND RESOURCES ASSESSMENT

Revised
February 10, 2015

Prepared for:

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TABLE OF CONTENTS

APPENDIX A – FIGURES

APPENDIX B – TABLES

TRACT 3070 MASTER PLAN OF DEVELOPMENT PROJECT
BIOLOGICAL AND WETLAND RESOURCES ASSESSMENT

1.0 INTRODUCTION AND PURPOSE

Sage Institute, Inc. (SII) has completed this biological and wetland resources assessment to describe and map the existing conditions within the approximately five-acre mostly undeveloped project site. The Tract 3070 proposed project includes development of four parcels for mix uses including site access from Principal Avenue.

- APN: 030-491-001: 0.30 acre
- APN: 030-491-013: 2.99 acre
- APN: 030-491-019: 1.01 acre
- APN: 030-491-020: 1.02 acre

The proposed project is located at 9105 Principal Avenue at the intersection with El Camino Real on the eastside of U.S. Highway 101 in the City of Atascadero, San Luis Obispo County. The property is directly surrounded on all sides by residential and commercial/industrial/urban development. Open space lands are to the northwest through the Chalk Mountain Golf Course that abuts the railroad tracks, with the wastewater treatment plant and the Salinas River corridor across the tracks approximately one mile to the east of the proposed project site.

The purpose of this biological assessment is to document existing conditions of the proposed project site and to evaluate the potential for any direct or indirect potentially significant impacts on biological or wetland resources or adverse effects on any rare, threatened, or endangered plant or wildlife species (special-status species). This report is intended to support the environmental review documentation process for the City of Atascadero. A Regional Location Map and Vicinity Aerial Photograph Map are provided as Figure 1 and Figure 2 in Appendix A.

2.0 EXISTING CONDITIONS

The Tract 3070 project site supports predominantly a disturbed non-native annual grassland habitat with scattered oaks, coyote brush shrubs, and non-native trees. The grassland habitat is dominated by mostly non-native annual grasses and herbaceous broadleaf species (forbs) with a few widely scattered native forbs. Native forbs may be more prevalent but were not observable during the late season field survey conducted for this study. There are nine coast live oaks, five valley oaks, and five blue oaks currently existing around and on the project site. (For more information on trees see Arborist Report, Solid Oak Tree Management, October 27, 2014.) There is one ephemeral drainage that runs along the western site boundary that supports a willow and cottonwood riparian habitat that appears to essentially flow into a City mapped blue line drainage. There are three remaining residential structures along Principal Avenue and a remnant foundation in the middle of the eastern project boundary. Review of aerial photography dating back to 1994 suggests the site is mostly unchanged over that time and does not appear to have been subject to intensive grazing or cultivation.

The USDA Natural Resources Conservation Service (NRCS) has identified two soil series with two mapping units on the study area. Onsite soils are mapped as San Andreas-Arujo complex and Botella

series. The following briefly describes the soil series and mapping units within the study area that are shown on Figure 3 of Appendix A. The surface layer and formation descriptions of soil types can be helpful in predicting suitability for certain plants, plant communities, and certain wildlife use.

San Andreas-Arujo complex (9 to 15 percent slopes) – The San Andreas-Arujo complex (9 to 15 percent slopes), mapping unit 193, consists of 30 percent San Andreas sandy loam and 25 percent Arujo sandy loam. Areas of these are too intricately mixed for separate mapping.

The San Andreas series consists of well drained soils with moderately rapid permeability formed over weathered sandstone. The San Andreas series representative profile is a dark gray sandy loam surface layer to about 12 inches, a light brownish gray and light gray sandy loam about 17 inches thick, and weathered sandstone to a depth of 29 inches or more.

The Arujo series consists of a well-drained soil with moderately slow permeability that formed in material weathered from sandstone. The Arujo series representative profile is a dark gray sandy loam surface layer to about 10 inches, a grayish brown and light grayish brown sandy clay loam about 21 inches thick, a light gray sandy loam substratum at a depth of 47 inches or more. Depth to the white weathered sandstone ranges from 40 to 60 inches.

Botella sandy loam (2 to 9 percent slopes) – The Botella series consists of very deep well drained soil with moderately slow permeability that forms in alluvial fans from sedimentary-derived rocks. The Botella series consists of a dark gray sandy loam surface layer to about 16 inches, a dark gray sandy loam about five inches thick, a dark grayish brown sandy clay loam about 25 inches thick, a light brownish gray sandy clay loam about 14 inches thick, and a light brownish gray sandy clay loam to a depth of about 60 inches.

3.0 METHODOLOGY

SII biologists conducted a review of the available background information including project plan maps, U.S. Geological Survey (USGS) Atascadero 7.5-minute topographic quadrangle map, several years of available aerial photography of the study area from Bing and Google Earth, the NRCS soil survey, and query results from the California Natural Diversity Data Base (CNDDB) for information on special-status species recorded occurrences within an approximately five mile radius of the proposed project site. The five mile search radius was used as an alternative to the typical 10-mile CNDDB search radius because it would have included other areas generally not relevant to this urbanized study area. The CNDDB provided a list and mapped locations of special-status plants and wildlife species that have been recorded in the region of the project site. The CNDDB records help to focus the field survey efforts and evaluation of potential project effects on specific species or habitats. It is noted that the CNDDB does not necessarily include all potential special-status species occurring in the region, but rather only those that have been recorded by the CNDDB.

SII Principal Ecologist David Wolff and SII Biologist Noel Fie conducted a field reconnaissance survey of the proposed project site on October 23, 2014, with Ms. Fie and Mr. Wolff conducting additional site surveys on October 28 and December 24, 2014 respectively. Field reconnaissance included walking the entirety of the proposed project site recording plant and wildlife species observed. The site survey was conducted between 1300 and 1600 hours under 75°F on October 23, 2014. The site was surveyed a second time on October 28th 2014 between 0900 and 1400 hours under clear skies and 71°F

temperatures and briefly a third time on December 24th between 1220 and 1330 hours under partly cloudy skies and 66°F. The purpose of the field surveys was to document existing conditions in terms of habitat for plant and wildlife species, suitability to support special-status species, and the potential to support wetland and/or riparian habitats. Plant and wildlife species observed in the field were recorded. The onsite habitat types were described by the aggregation of plants and wildlife based on the composition and structure of the dominant vegetation observed at the time field reconnaissance was conducted. SII Principal Ecologist David Wolff conducted a field survey and acted as primary editor and principal in charge of report preparation. The survey data collected on plant and wildlife species and conclusions presented in this biological assessment are based on the methods and field reconnaissance conducted over the project site as described above.

4.0 RESULTS

4.1 HABITAT TYPES AND PLANT COMMUNITIES

The plant communities within the study area are generally described by the assemblages of observed plant species that occur together in the same area forming habitat types. Plant community descriptions are generally based on *A Manual of California Vegetation, 2nd Edition* (Sawyer et al. 2009). Plant names used in this report follow *The Jepson Manual, Vascular Plants of California, Second Edition Thoroughly Revised and Expanded* (Baldwin et al. 2012). The following describes the plant communities and habitat characteristics observed within the project site. The project site supports the following distinct plant communities: 1) disturbed non-native annual grassland with scattered coyote brush shrubs; 2) remnant valley/live oak woodland alliance; and 3) arroyo willow riparian alliance associated with the drainage that runs along the western side of the site. Table B-1 in Appendix B provides a list of plant species observed during the SII field survey. Figure 4 in Appendix A provides a habitat map for the project site, and Figure 7 provides a set of representative photographs.

4.1.1 DISTURBED NON-NATIVE ANNUAL GRASSLAND

The non-native annual grassland habitat, or semi-natural annual brome grassland alliance, is typically dominated by non-native annual grasses and herbaceous broadleaf plant species, along with native forbs and wildflowers. Annual grassland habitat occurs as the dominant habitat type within the proposed project site and occurs as the understory to the oak woodland. The non-native annual grassland within the project was observed to be relatively low in species diversity and dominated by grasses that are typical of areas that have been subject to previous disturbance. Dominant plant species observed in the non-native annual grassland habitat include oats (*Avena sativa),* rip gut brome (*Bromus diandrus*), fiddleneck (*Amsinckia menziesii*), red brome (*Bromus madritensis* ssp. *rubens*), yellow-star thistle (*Centaurea solstitialis*), foxtail barley (*Hordeum murinum* ssp. *leporinum*), and cheeseweed (*Malva parviflora)*. Native species observed in low abundance include Salinas River tarweed (*Deinandra pentactis),* vinegarweed (*Trichostema lanceolatum),* and a few scattered purple needle grass (*Stipa pulchra*), soap plant (C*hlorogalum* sp.), and deer grass (*Muhlenbergia rigens*).

4.1.2 COAST LIVE OAK WOODLAND

The project site supports a remnant coast live oak woodland that can be described by scattered coast live oaks (*Quercus agrifolia)*, along with several valley oaks (*Quercus lobata)* and blue oaks (*Quercus douglassi)*. The oak woodland onsite consists of nine coast live oaks, five valley oaks, and five blue oaks widely spaced throughout the site (See Figure 4). (For more information on trees see Arborist Report, Solid Oak Tree Management, October 27, 2014.) The understory was dominated by the non-native annual grassland habitat described above.

4.1.3 ARROYO WILLOW RIPARIAN HABITAT

The arroyo willow riparian habitat occurs within and along the ephemeral drainage that runs approximately 630 feet along the northwest border of the project site (Figure 4). The riparian habitat is dominated by arroyo willow (*Salix lasiolepis)* with one large thicket occurring at the southwest corner of the study area. The riparian habitat along the drainage includes scattered Fremont cottonwood (*Populus fremontii),* red willow *(Salix laevigata),* non-native elm trees (*Ulmus parviflora),* oaks, and a small patch (25 sq. ft.) of red fescue (*Festuca rubra)* in the center of the drainage. The understory was dominated by the non-native annual grassland habitat described above.

4.2 WILDLIFE

The annual grassland, oak woodland, and riparian habitat types on the proposed project site may provide habitat for common resident and migratory wildlife species typical in the region adapted to the urban environment. The grassland and trees can provide food, cover, and nesting habitat for birds. Wildlife species observed during the limited field reconnaissance included the scrub jay and California black-tailed deer. Additional resident, locally nomadic, and migratory, bird, mammal, reptile and amphibian species could occur on the project site that were not observed during the field visits. The site is connected at the north end to the open space of the golf course and the Salinas River corridor to the east. However, given that the site is surrounded by urban development, Highway 101 and El Camino Real, wildlife use is likely limited given it is essentially a "dead end" for the habitat area against the urbanization. Additionally, the small remnant of habitat on the project area does not support a significant amount of grassland and oak woodland habitat in the context of the great expanse of the interconnected and diverse habitat mosaic available to wildlife in the undeveloped areas in this region of San Luis Obispo County.

4.3 WATERS OF THE U.S., WATERS OF THE STATE & WETLANDS

The study area is traversed by one ephemeral drainage which enters the property from the south through a pipe under El Camino Real and may capture runoff from the west side of the freeway. This drainage runs for 630 feet along the western property line and has a defined bed, bank, and channel supporting varied riparian, wetland, and upland plant species. As discussed above, the riparian habitat is dominated by arroyo willows stands with elm trees, red willows, valley oaks, and several Fremont cottonwoods. According to the City of Atascadero's General Plan Land Use, Open Space and Conservation Element Figure II-8, the onsite ephemeral drainage leads to the start of a mapped blue line creek approximately 790 feet downstream of the project site. The City's mapped blue line creek runs approximately 1.08 miles to the northeast where it appears to hit a culvert crossing of the railroad tracks near the Salinas River corridor (see Figure 5). Given the defined channel characteristics that continue as tributary to a mapped blue line creek, this drainage is likely considered waters of the U.S. and waters of the State subject to U.S. Army Corps of Engineers (Corps) and California Department of Fish and Wildlife (CDFW) jurisdiction respectively. In addition, the City's General Plan requires a 20-foot setback from mapped blue line creeks in the General Plan and as shown on USGS maps.

4.4 SPECIAL-STATUS SPECIES AND NATURAL COMMUNITIES OF SPECIAL CONCERN

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (FESA); those considered "species of concern" by the USFWS; those listed or

candidates for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern" by the CDFW; and plants occurring on lists 1B, 2, and 4 of the CNPS *Inventory of Rare and Endangered Vascular Plants of California.* Natural Communities of Special Concern are habitat types considered rare and worthy of tracking in the CNDDB by the CDFG because of their limited distribution or historic loss over time. Special-status species typically require specific soil or habitat types such as serpentine soils or aquatic resources.

The search and review of the CNDDB revealed 12 special-status plant species and 13 special-status wildlife species with recorded occurrences in the five-mile search radius of the project site. The following briefly describes or summarizes the special-status species issues and potential for occurrence within the study area. While none of these species, or remnants thereof, were observed during the SII field survey, appropriately timed surveys for rare plants were not conducted as a part of this study. Table B-2 in Appendix B provides a list of special-status species recorded in the CNDDB and includes scientific and common names, listing status, habitat requirements, and likelihood for occurrence within the project area.

4.4.1 SPECIAL STATUS BOTANICAL RESOURCES

The CNDDB revealed the recorded occurrences of 12 special-status plant species within a five mile radius of the project site. The special-status plant species occurrences recorded in the CNDDB are commonly associated with a specific soil type, moisture regime, habitat, and/or elevation range that dictates the range or microhabitat of the species. No vernal pools or other seasonal wetlands were observed within the study area, and while the surveys were conducted late in the growing season, no rare, threatened, or endangered plant species or remnants thereof were observed within the project area. But these observations are based on fall plant growth with most of the site mowed leaving little identifiable herbaceous species plant material. While there is a low probability for these species, a chance remains for special-status plants associated with sandy soils given the site does not appear to have been subject to intensive grazing or cultivation dating back to 1994. As such, onsite a springtime floristic survey would be needed to confirm definitive negative findings for grassland and sandy soil associated annual plant species. The following provides a suitability analysis for special-status plant species with CNDDB recorded occurrences in the region.

The special-status plant species associated with the grassland habitats occurring in the region associated with heavy clay soils are the Mile's milk vetch (*Astragalus didymocarpus* var. *milesianus*) and the round-leaved filaree (*California macrophylla).* These species are typically restricted to semi-shaded areas along the margins and/or adjacent to cismontane woodland and chaparral and prefer soil types that contain a high content of clay. The existing soil types within the project area are mapped and observed with a sandy loam surface layer and therefore would not represent suitable habitat for these species. No remnants of these grassland species were observed during SII field reconnaissance of the project site.

The perennial woody species Santa Margarita manzanita *Arctostaphylos pilosula* and mesa horkelia (*Horkelia cuneata* var. *puberula*) would have been noticeable even during the late season survey. Neither species was observed during SII field reconnaissance of the project site. The special-status plant species known from vernal pool wetland habitat occurring in the region is the shining navarretia (*Navarretia nigeliformis)*. The proposed project site does not support seasonal wetland areas or vernal pools and, therefore, does not represent suitable habitat for this plant species.

Special-status plants associated with serpentine soils include Eastwood's larkspur (*Delphinium parryi* ssp. *eastwoodiae),* the most beautiful jewelflower (*Streptanthus albidus* ssp. *peramoenus),* Brewer's spineflower (*Chorizanthe breweri*), and Palmer's monardella (*Mondardella palmeri*). No serpentine soils are mapped or observed within the project area, therefore, the site does not represent suitable habitat for these plant species.

The special-status annual plant species associated with sandy soils in chaparral and oak woodland habitats are the La Panza mariposa lily (*Calochortus simulans),* yellow flowered eriastrum (*Eriastrum luteum),* and straight-awned spineflower (*Chorizanthe rectispina)*. The existing soil type on the study area contains a high percentage of sand content with a sandy loam surface layer and could represent suitable habitat for these species. None of these species are formally listed under FESA or CESA but are CNPS List 1B species. While there is a low probability for these species within the project area, a springtime floristic survey would be needed to confirm definitive negative findings.

4.4.2 SPECIAL STATUS WILDLIFE

The CNDDB search revealed the recorded occurrences of 13 special-status wildlife species within the five-mile search radius of the project site. Special-status wildlife species known from the region evaluated for this study are discussed by groups based upon habitat preferences, specific habitat use requirements (i.e. terrestrial or aquatic), mobility, and migratory patterns.

Aquatic Species – The CNDDB has recorded occurrences within the five-mile search range for the western pond turtle (*Emys marmorata*), Coast Range newt *(Taricha torosa*), California red-legged frog (*Rana draytonii)*, and foothill yellow-legged frog (*Rana boylii)*. These species are closely associated with perennial aquatic habitats of streams and ponds for most of their life cycle with the Coast Range newt seeking aquatic habitat for breeding from dense woodlands of upland habitats. California red-legged frogs were observed approximately 5.2 miles north of the study area in 2003 in a ponded area of Paso Robles Creek just upstream of the confluence with the Salinas River. The foothill yellow-legged frog is recorded from Santa Margarita well south of the project site. The Coast Range newt is recorded from western Atascadero in the Graves Creek area woodlands approximately 3.25 miles to the west. Occurrence data for the western pond turtle is suppressed by the CNDDB to minimize capturing for pets or sale. Based on the review of aerial imagery back to 1994, the drainage that runs through the project area appears to have become more distinct from a swale to a defined channel over time with increased urbanization. Given the onsite drainage starts from a culvert at El Camino Real, does not represent an established historic creek with perennial or long term seasonal flows, and there is not a hydrologic connection to a perennial aquatic habitat, the project site drainage does not represent suitable habitat for any of these species.

The California linderiella (*LInderiella occidentalis*) a species of fairy shrimp, and western spadefoot (toad) (*Spea hammondii*) are closely associated with vernal poola or temporary pond/puddle habitats that are not subject to flowing water. No evidence of vernal pool or seasonal pond habitats were observed during SII field surveys. As such, the project site does not support suitable seasonal aquatic habitat for these species.

Birds – The CNDDB includes occurrences for wide-ranging resident and migratory bird species known from the region of the project site. The golden eagle (*Aquila chrysaetos)* is known for using open grassland areas for foraging and large oaks or cliffs for nesting habitat. The ferruginous hawk (*Buteo regalis*) is a winter visitor known for using open expanses of grassland for foraging. The small project site in an urban setting is not suitable nesting habitat for the golden eagle or foraging habitat for either raptor species.

The grasshopper sparrow (*Ammodramus savannarum)* is typically found within grassland habitats, preferring drier sparse sites in tall grass prairies, with open or bare ground for feeding. The grassland and oak canopy on the project site represents suitable habitat for the grasshopper sparrow, however, the surrounding urbanization suggests this is a very low probability for occurrence.

The purple martin (*Progne subis*) is a cliff nesting species (or bridges and overpasses) preferably in open areas situated close to a water source including creeks, rivers, wetlands, swamps, and wet meadows. The nearest known purple martin CNDDB occurrence is approximately 1.45 miles to the west in the Graves Creek area. The project site does not represent suitable habitat for the purple martin.

Reptiles – The silvery legless lizard is mostly associated with sandy soils in grassland, coastal scrub, oak woodland, or chaparral habitats. The sandy loam soils within the grassland and oak woodland on the project site represents suitable habitat for the silvery legless lizard.

Mammals – The Townsend's big-eared bat (*Corynorhinus townsendii)* habitat is strongly correlated with the availability of caves and crevices. No such habitat occurs within the study area.

5.0 IMPACT ASSESSMENT AND MITIGATION RECOMMENDATIONS

5.1 SUFFICIENCY OF BIOLOGICAL DATA

The SII field surveys on October 23 and 28, 2014 were sufficient to adequately document existing conditions of the project area for habitat types and generalized wildlife use. However, the surveys were not sufficient enough or conducted at the proper time of year to detect sandy soil grassland special-status plant species, the grasshopper sparrow use, or presence of the silvery legless lizard. Definitive surveys for annual grassland special-status species would need to be conducted in the springtime. Otherwise, the data collected as articulated in this report provide sufficient biological data to adequately address the potential significance of impacts on biological resources.

5.2 IMPACTS

The proposed project would convert the approximately five acres of grassland and oak woodland habitats to urban development while retaining some oak trees, and the drainage and most of the associated riparian tree habitat. Project plans show the removal of two live oaks, three valley oaks, two blue oaks, one non-native pine tree, and on none-native elm tree. The rest of the oaks would be retained within the development. The proposed project includes 30 replacement oak trees (11 live oaks, 13 valley oaks, 7 blue oaks) to be planted onsite with minimum 15-gallon size trees. For specific tree removal, retention, and replacement information see Oasis Associates, Inc. 10/29/2014 Sheet L-1 Conceptual Landscape Plan. Project plans illustrated on the Figure 4 habitat map show encroachment of project elements into the riparian canopy and 20-foot setback of the ephemeral drainage with retaining walls, building envelopes, and backyards. The project site supporting a mostly non-native annual grassland habitat with scattered oaks and an ephemeral drainage with patchy riparian habitat provides habitat for locally common wildlife accustomed to the urban environment. The project site is essentially an infill location and a “dead end” for habitat abutted against the urban development. As such, the conversion of the small plot of habitat may be considered a less than significant impact.

Construction of the proposed project and conversion to urban development could result in the loss of mortality and/or displacement of locally common wildlife, and potentially the silvery legless lizard and grasshopper sparrow should they occur. Further, three special-status plants, the La Panza mariposa lily,

yellow flowered eriastrum, and straight-awned spineflower, could occur and be lost to development. Given the small project size, urban surroundings, and none of the potentially occurring special-status plant or wildlife species are formally listed under FESA or CESA, impacts on biological resources could be considered to be less than significant. Vegetation, tree removal, and encroachment into the riparian canoyp during the nesting season for birds could result in the destruction of active bird's nests and/or loss of nesting success. Destruction of active nests is prohibited by the Fish and Game Code of California Sections 3503 and 3503.1 (raptors specifically) and impacts on riparian habitat are subject to Fish and Game Code Section 1600 *et. seq*. As such, this could be considered a significant impacts. The following mitigation measures would avoid take or destruction of active nests and loss of riparian habitat thereby reducing this potentially significant impact to a less than significant level.

5.3 MITIGATION MEASURES

To reduce any potentially significant impact on nesting birds from vegetation and tree removals, the following mitigation measures are recommended.

- *Vegetation removal and initial site disturbance shall be conducted between September 1 and January 31 outside of the nesting season for birds. If vegetation and/or tree removal is planned for the bird nesting season (February 1 to August 31), then preconstruction nesting bird surveys shall be conducted by a qualified biologist to determine if any active nests would be impacted by project construction. If no active nests are found, then no further mitigation shall be required.*
- *If any active nests are found that would be impacted by construction, then the nest sites shall be avoided with the establishment of a non-disturbance buffer zone around active nests as determined by a qualified biologist. Nest sites shall be avoided and protected with the non-disturbance buffer zone until the adults and young of the year are no longer reliant on the nest site for survival as determined by a qualified biologist. As such, avoiding disturbance or take of an active nest would reduce potential impacts on nesting birds to a less-than-significant level.*

To reduce any potentially significant impacts on waters of the U.S., waters of the State and riparian habitat, the following mitigation measures are recommended.

- The applicant shall obtain Clean Water Act (CWA) regulatory compliance in the form of a permit from the Corps or written documentation from the Corps that no permit would be required for work in the ephemeral drainage. Should a permit be required, the applicant shall implement all the terms and conditions of the permit to the satisfaction of the Corps. Corps permits and authorizations require applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts on aquatic resources. Compliance with Corps permitting would also include obtaining and CWA 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). In addition, the Corps and RWQCB may require compensatory mitigation for unavoidable permanent impacts on riparian/wetland habitat to achieve the goal of a no net loss of wetland values and functions. As such, regulatory compliance would reduce potential impacts on waters of the U.S. to a less-than-significant level.

- The applicant shall obtain compliance with Section 1600 *et.seq.* of the California Fish and Game Code (Streambed Alteration Agreements) in the form of a completed Streambed Alteration Agreement or written documentation from the CDFW that no agreement would be required for

work within the ephemeral drainage and riparian habitat (stream zone). Should an agreement be required, the applicant shall implement all the terms and conditions of the agreement to the satisfaction of the CDFW. The CDFW Streambed Alteration Agreement process encourages applicants to demonstrate that the proposed project has been designed and will be implemented in a manner that avoids and minimizes impacts in the stream zone. In addition, CDFW may require compensatory mitigation for unavoidable impacts on riparian habitat in the form of onsite riparian habitat restoration to the extent feasible. As such, regulatory compliance would reduce potential impacts on waters of the state to a less-than-significant level.

To further reduce the less than significant impacts on non-listed special-status plants and wildlife potentially occurring on the site, the following mitigation measures are recommended if feasible.

- *Conduct a springtime rare plant survey to determine the presence/absence of any special-status plants. Should any be discovered, implement a seed and/or plant salvage program and incorporate the salvaged material into the drainage setback and detention basin landscaped areas.*
- *A qualified biologist shall conduct a pre-construction survey within 30 days of initial site disturbance to identify whether silvery legless lizards are present. If silvery legless lizards are detected, a biological monitor shall be present during initial ground disturbing and vegetation removal activities to allow for a salvage and relocation effort for the lizard and other ground dwelling common wildlife that may be present.*

6.0 CONCLUSIONS

In conclusion, based on the findings described above establishing the existing conditions of biological resources within the study area, and incorporation of the recommended mitigation measures, implementation of the proposed project would not result in any substantial adverse effects or significant impacts to biological, botanical, wetland, or riparian habitat resources. Therefore, with mitigation measures incorporated into the project, direct and indirect (temporary) project impacts on biological resources would be considered to be at a less than significant level.

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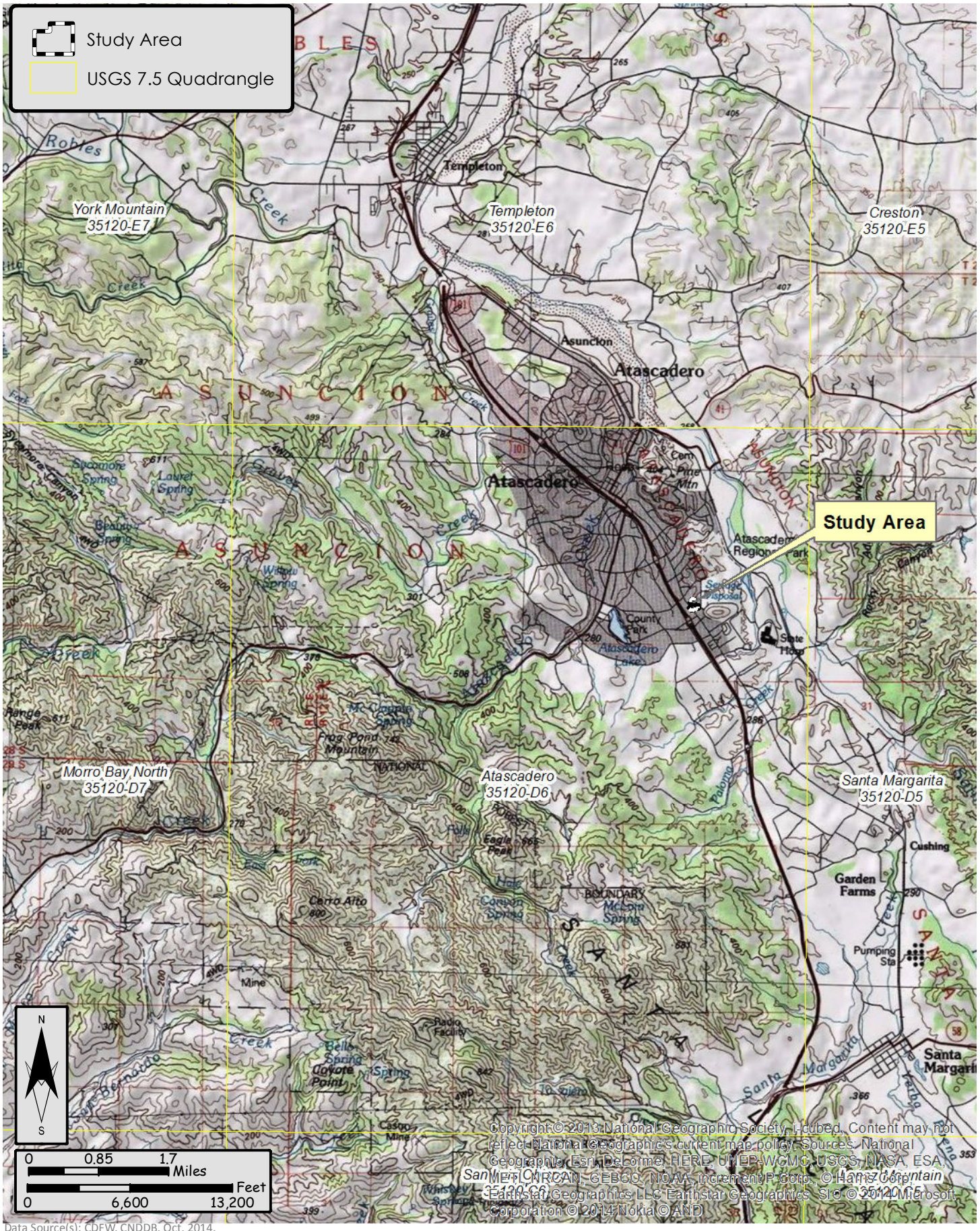
APPENDIX A

FIGURES

APPENDIX B

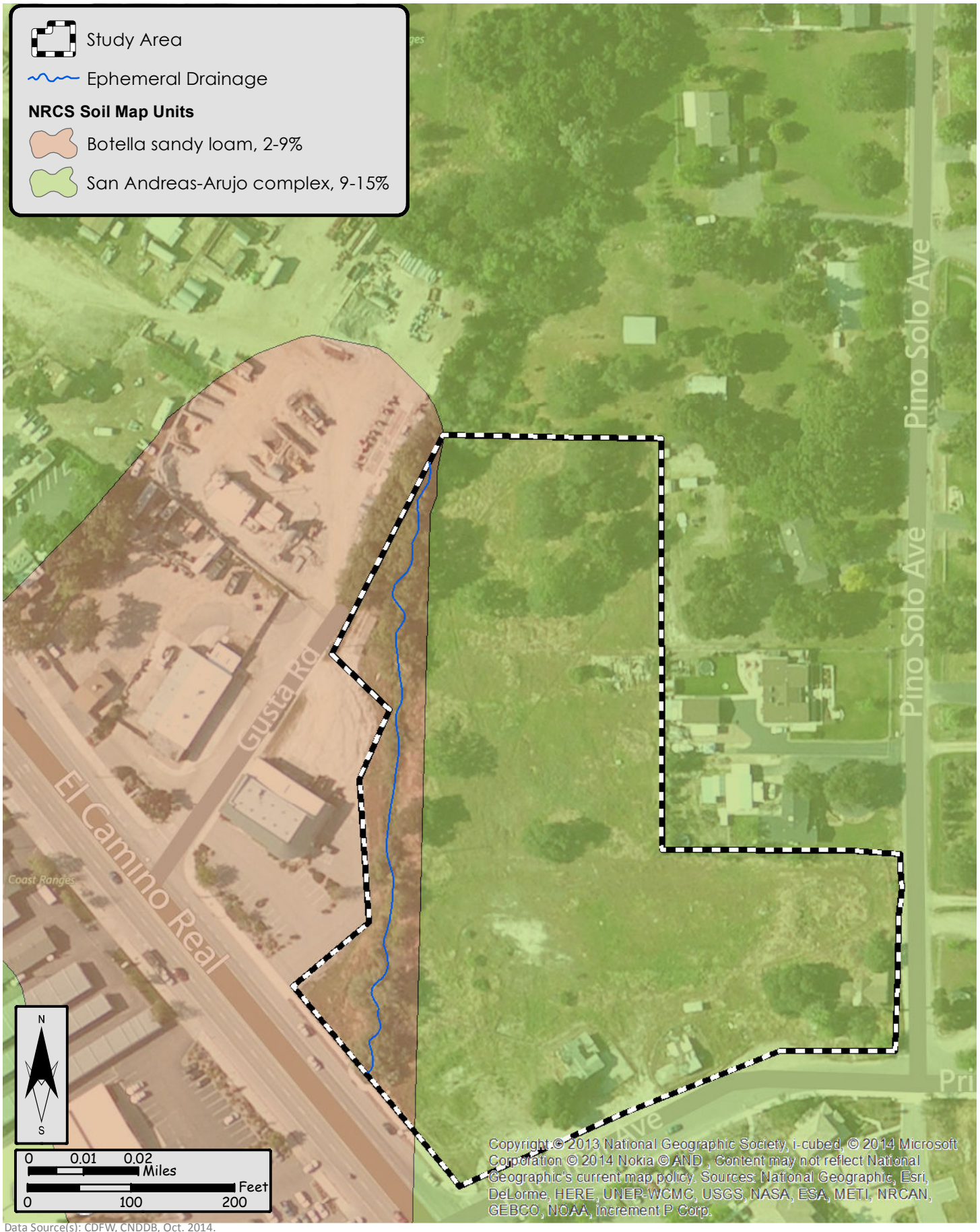
TABLES



sage institute	**Tract 3070 Master Plan of Development Project**	**Figure 1**
	Biological and Wetland Resources Assessment	**Regional Location Map**

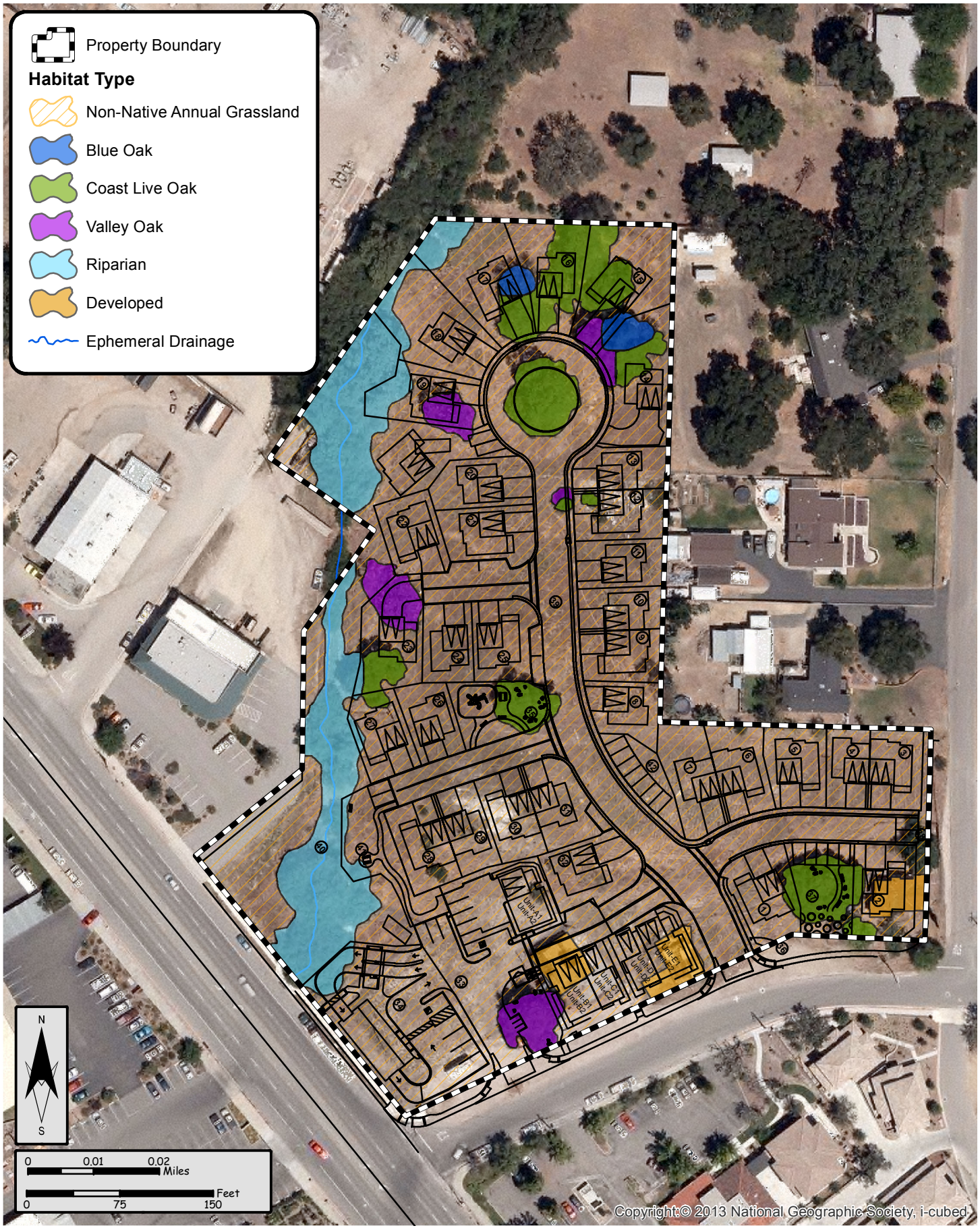
Data Source(s): CDFW, CNDDB, Oct. 2014.

sage institute inc	**Tract 3070 Master Plan of Development Project**	**Figure 2**
	Biological and Wetland Resources Assessment	**Vicinity Aerial Overview**



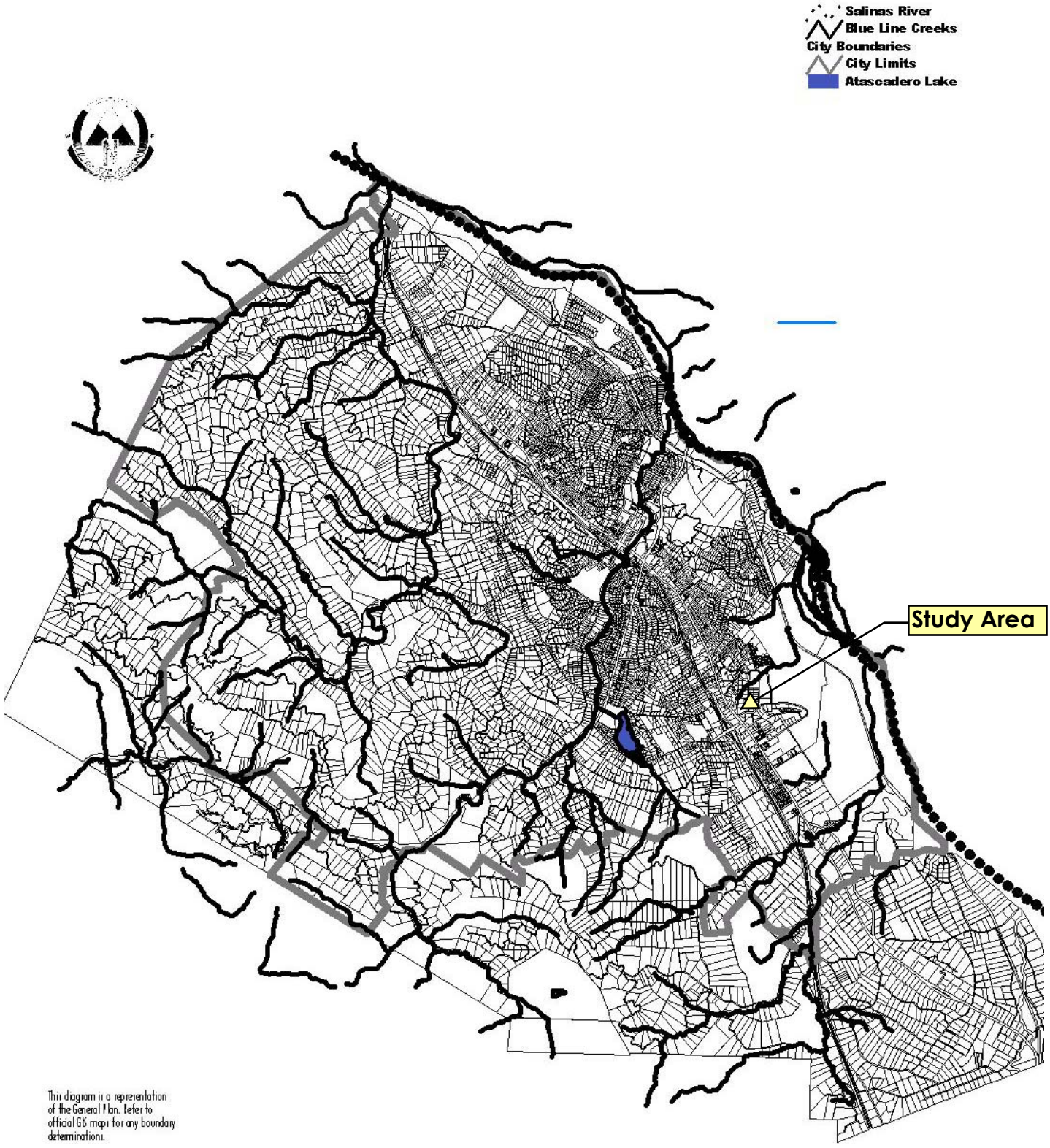
Data Source(s): CDFW, CNDDB, Oct. 2014.

sage institute inc	**Tract 3070 Master Plan of Development Project**	**Figure 3**
	Biological and Wetland Resources Assessment	**Soils Map**



sage institute inc	**Tract 3070 Master Plan of Development Project**	**Figure 4**
	Biological and Wetland Resources Assessment	**Habitat Map**

Figure II-8: Blue Line Creek Diagram



Tract 3070 Master Plan of Development Project Biological and Wetland Resources Assessment	Figure 5 Blue Line Creek

Study Area

Search Radius (5-mi.)

CNDDB Occurrences (Sept. 2014)

- Atascadero June beetle
- Brewer's spineflower
- California linderiella
- California red-legged frog
- Coast Range newt
- Eastwood's larkspur
- La Panza mariposa-lily
- Miles' milk-vetch
- Palmer's monardella
- Santa Margarita manzanita
- Townsend's big-eared bat
- ferruginous hawk
- foothill yellow-legged frog
- golden eagle
- grasshopper sparrow
- mesa horkelia
- most beautiful jewelflower
- purple martin
- round-leaved filaree
- shining navarretia
- silvery legless lizard
- straight-awned spineflower
- western pond turtle
- western spadefoot
- yellow-flowered eriastrum

Study Area

Creston

Santa Margarita

sage institute inc

map updated 06/25/14

0 550 1,100 2,200 3,300 4,400 Meters

0 1,875 3,750 7,500 11,250 15,000 Feet

Source(s): Orthophoto, PCEC, 2010; CAD data Cannon, 2013

Tract 3070 Master Plan of Development Project

Biological and Wetland Resources Assessment

Figure 6

CNDDB Special-Status Species

Photo 1 – View northwest of the ephemeral drainage culvert outfall along the west property line adjacent to El Camino Real. **10/23/2014**

Photo 2 – View northeast of the incised channel with a willow tree thicket along the lower reach of the ephemeral drainage. **10/28/2014**

Photo 3 – View north of the upper reach of the ephemeral drainage along west property line showing willow trees and herbaceous understory. **10/28/2014**

Photo 4 – View west along north property line showing non-native annual grassland habitat. **10/28/2014**

FIGURE 7 – REPRESENTATIVE PHOTOGRAPHS

Photo 5 –View south along east property line showing oak trees, non-native annual grassland, and sandy loam soils. **10/28/2014**

Photo 6 – View south along east property line showing developed building (red arrow), pile of debris, and non-native annual grassland. **10/28/2014**

Photo 7 – View west along south property line showing non-native annual grassland habitat with scattered oak trees. **10/28/2014**

Photo 8 – View west along east property boundary. **10/28/2014**

FIGURE 7 – REPRESENTATIVE PHOTOGRAPHS

TABLE B-1: PLANT SPECIES OBSERVED (10/24, 10/28, 12/24, 2014)	
COMMON NAME	**SCIENTIFIC NAME(S)**
Blow-wives*	*Achyranchaena mollis*
Fiddleneck*	*Amsinkia* sp.
Oats	*Avena sativa*
Coyote brush*	*Baccharis pilularis*
Rip gut brome*	*Bromus diandrus*
Red brome	*Bromus madritensis* ssp. *rubens*
Yellow-star thistle	*Centaurea solstitialis*
Soap plant*	*Chlorogalum* sp.
Redstem filaree	*Erodium cicutarium*
Red fescue	*Festuca rubra*
Foxtail barley	*Hordeum murinum* ssp. *leporinum*
Deer grass*	*Muhlenbergia rigens*
Coast live oak*	*Quercus agrifolia*
Valley oak*	*Quercus lobata*
Fremont cottonwood	*Populus fremontii*
Wild radish	*Raphanus sativus*
Red willow*	*Salix laevigata*
Arroyo willow*	*Salix lasiolepis*
Purple needle grass*	*Stipa pulchra*
Wheat	*Triticum* sp.
Chinese elm	*Ulmus parvifolia*
Vetch	*Vicia* sp.
Cocklebur*	*Xanthium strumarium*
*=native species	

TABLE B-2 CNDDB RECORDED OCCURRENCES (FIVE-MILE SEARCH RADIUS)				
Common Name Scientific Name(s)	**Listing Status USFWS/CDFW/ CNPS**	**General Habitat Description**	**Period of Identification**	**Potential Occurrence**
Plants				
Santa Margarita manzanita *Arctostaphylos pilosula*	--/--/1B.2	Closed-cone coniferous forest and chaparral communities on decomposed granite and sandstone shale outcrops and slopes. 170-1100m.	Flowering: December - March	Not observed
Miles' milk-vetch *Astragalus didymocarpus* var. *milesianus*	--/--/1B.2	Grassy areas and coastal scrub typically on clay soils near coast, <400m. Central Coast.	Flowering: March - May	Not suitable soils
La Panza mariposa-lily *Calochortus simulans*	--/--/1B.3	Chaparral, valley grassland, foothill woodland. Sand (often granitic), < 1100 m. se Outer South Coast Ranges (c San Luis Obispo Co.).	Flowering: May - July	Very low
Brewer's spineflower *Chorizanthe breweri*	--/--/1B.3	Chaparral, foothill woodland, coastal sage scrub, closed-cone pine forest. Serpentine gravel or rocks; 60–800 m. Outer South Coast Ranges (SW SLO Co).	Flowering: March - July	Not suitable soils
Straight-awned spineflower *Chorizanthe rectispina*	--/--/1B.3	Chaparral, foothill woodland, northern coastal scrub, coastal sage scrub. Sand or gravel; 200-600 m. Outer south coast ranges.	Flowering: May-July	Very low
Eastwood's larkspur *Delphinium parryi ssp. eastwoodiae*	--/--/1B.2	Coastal chaparral, grassland, on serpentine; 100–500 m. s Central Coast, Outer South Coast Ranges (San Luis Obispo Co.).	Flowering March - May	Not suitable soils
Yellow-flowered eriastrum *Eriastrum luteum*	--/--/1B.2	Chaparral, foothill woodland, mixed evergreen forest. Drying slopes in sandy gravelly soils; <1000 m. south coast ranges (Monterey, San Luis Obispo cos.).	Flowering: May - July	Very low
round-leaved filaree *(Erodium macrophyllum* var. *californicum)*	--/--/1B.1	Cismontane woodland, scrubland, valley and foothill grassland with clay soils. 15-1200m.	Flowering: March - July	Not suitable soils
Mesa horkelia *Horkelia cuneata* var. *puberula*	--/--/1B.1	Dry, sandy, coastal chaparral, outer south coast ranges.	Flowering: March - July	Not observed
Palmer's monardella *Mondardella palmeri*	--/--/1B.2	Chaparral, foothill woodland on serpentine; 200-800 m. north outer south coast ranges (Santa Lucia range).	Flowering: June - August	Not suitable soils
shining navarretia *Navarretia nigelliformis* ssp. *radians*	--/--/1B.2	Valley grassland, foothill woodland, usually occurs in vernal pool and wetlands, but occasionally found in non-wetlands.	Flowering: April - July	No suitable wetland habitat

TABLE B-2 CNDDB RECORDED OCCURRENCES (FIVE-MILE SEARCH RADIUS)				
Common Name Scientific Name(s)	**Listing Status USFWS/CDFW/ CNPS**	**General Habitat Description**	**Period of Identification**	**Potential Occurrence**
Most beautiful jewelflower *Streptanthus albidus* ssp. *peramoenus*	--/--/1B.2	Chaparral, valley grassland, foothill woodland on serpentine.	Flowering: April - September	Not suitable soils
Invertebrates				
California linderiella *Linderiella occidentalis*	--/ST/--	Prefers geologic formations and soil types supporting vernal pools in California, at altitudes as high as 1,150 meters (3,770 ft) above sea level.	Breeding: December - May	No suitable wetland habitat onsite
Amphibians				
California red-legged frog *Rana draytonii*	FT/SSC/--	Frequents perennial rocky streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools.	Breeding: April - June	No suitable habitat onsite
Foothill yellow-legged frog *Rana boylii*	--/SSC/--	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams.	Breeding: November - April	No suitable habitat onsite
Western spadefoot *Spea hammondii*	--/SSC/--	Largely terrestrial; enters seasonal ponds only to breed. Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, foothills, and mountains.	Breeding: January to May, depending on development of seasonal ponds.	No suitable wetland breeding habitat onsite
Coast range newt *Taricha torosa*	--/SSC/--	Found in wet forests, oak forests, chaparral, and rolling grasslands and aquatic habitats for breeding (creeks, ponds).	Breeding: Fall through late spring.	No suitable habitat onsite
Reptiles				
silvery legless lizard *Anniella pulchra pulchra*	--/SSC/--	Shows a preference for areas of leaf litter and loose sandy soil along washes, beach sand dunes, open scrub and woodland, and sandy benches along alluvial fans.	Observable year round.	Low
Western pond turtle *Emys marmorata*	--/SSC/--	Requires perennial aquatic habitat and constructs nests along edge of streams and ponds.	Observable year round.	No suitable aquatic habitat onsite

TABLE B-2 CNDDB RECORDED OCCURRENCES (FIVE-MILE SEARCH RADIUS)				
Common Name Scientific Name(s)	**Listing Status USFWS/CDFW/ CNPS**	**General Habitat Description**	**Period of Identification**	**Potential Occurrence**
Birds				
grasshopper sparrow *Ammdramus savannarum*	--/SSC/--	typically found within intermediate grassland habitats, preferring drier sparse sites in tall grass prairies, with open or bare ground for feeding	Observable year round.	Low
golden eagle *Aquila chrysaetos*	MBTA, BGEPA/SSC,CFP/--	Breeds on cliffs, in large trees, or atop electrical towers; forages in open habitats.	Nesting: January - June. Year round resident.	No suitable habitat onsite
Ferruginous hawk *Buteo regalis*	--/--/--	Open country, primarily prairies, plain and badlands, breeding in trees near streams or on steep slopes, sometimes on mounds in open desert.	Observable year round.	No suitable habitat onsite
Purple martin *Progne subis*	--/SSC/--	Distributed in forest and woodland areas at low to intermediate elevations throughout much of California. Prefer open spaces that are situated close to any water source including wetlands, swamps, and wet meadows.	March - September	No suitable habitat onsite
Mammals				
Townsend's big-eared bat *Corynorthinus townsendii*	--/SSC/--	Sea level to 3,300 meters: coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types. Distribution is strongly correlated with the availability of caves and cave-like roosting habitat.	Breeding: November - February	No suitable habitat onsite

Status Codes

Federal
FE = Federally Endangered
FT = Federally Threatened
FC= Federal Candidate
CH = Federal Critical Habitat
BGEPA= Bald and Golden Eagle Protection Act
MBTA = Protected by Federal Migratory Bird Treaty Act

State
SE = State Endangered
ST = State Threatened
SR= State Rare
CFP = California Fully Protected
SSC = State Species of Special Concern
SA = Not formally listed but included in CDFG "Special Animal" list.

California Native Plant Society
List 1 = Plants of Highest Priority (2 sub lists):
1A = Plants Presumed Extinct in California
1B = Plants Rare and Endangered in California and Elsewhere
List 2 = Plants Rare or Endangered in California, but More Common Elsewhere
List 3 = Plants about which More Information is needed
List 4 = Plants of Limited Distribution (A Watch List)

Attachment 16 – Biological Report Addendum

sage institute

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June 28, 2016

Carol Florence, AICP
Principal Planner, Oasis Associates
3427 Miguelito Court
San Luis Obispo, CA 93401

SUBJECT: **Biological and Wetland Resources Assessment Addendum, Floristic Inventory and Rare Plant Survey Report for the Tract 3070 Master Plan of Development Project, City of Atascadero, CA**

Dear Carol:

Sage Institute, Inc. (SII) is pleased to submit this Biological and Wetland Resources Assessment Addendum (BA Addendum) to the SII revised final February 10, 2015 *Biological & Wetland Resources Assessment* (2015 BA), prepared for the Tract 3070 Master Plan of Development Project in the City of Atascadero. This BA Addendum has been prepared to detail the methods and results of the 2016 floristic inventory and rare plant survey conducted over the project site.

METHODS

SII botanist Melinda Elster conducted walking field surveys of the entire project area on April 18 and May 3, 2016. SII Principal Ecologist David Wolff conducted a walking field survey of the entire project site on June 6, 2016. All plant species observed were identified and recorded during each field survey. To ensure adequacy of the floristic inventory and rare plant survey, it was conducted in accordance with the guidelines recommended by the California Native Plant Society (CNPS), the California Department of Fish and Wildlife (CDFW), and U.S. Fish and Wildlife Service (USFWS) that includes:

- Conducting the survey at the proper time of year when rare plants are both evident and identifiable. The survey was conducted throughout the peak 2016 springtime flowering and growing season including the late season survey in June.
- Surveys that are floristic in nature. All plant species noted in the field were identified to the level necessary to determine if it is rare, threatened, or endangered.
- Field surveys were conducting using systematic field techniques in all habitats of the project site that ensured a thorough visual coverage. The entire site was surveyed using meandering transects affording complete survey coverage for all plant species present.
- Multiple site visits were conducted to ensure that seasonal variations in the flowering period of the target species documented at a reference site are adequately covered. Surveys were conducted from April to June 2016.

RESULTS

The 2015 BA query of the California Natural Diversity Data Base (CNDDB) revealed the recorded occurrences of 12 special-status plant species within a five-mile radius of the project site. The special-status plant species occurrences recorded in the CNDDB are commonly associated with a specific soil type, moisture regime, habitat, and/or elevation range that dictates the range or microhabitat of the species. As documented in the 2015 BA, grassland plant species associated with sandy soils had the potential to occur on the site. None of the CNDDB rare plant occurrences are on or in close proximity to the project area, and most are in varied undisturbed habitat areas outside the city.

The springtime floristic inventory and rare plant survey conducted on the Tract 3070 project area confirmed the findings in the 2015 BA that the dominate habitat type of the project area was disturbed non-native annual grassland habitat. The site supports native and non-native grasses and broadleaf herbaceous species amidst the scattered oaks onsite, and willow riparian corridor along the drainage. All plant species observed were identifiable during the three field surveys conducted over the project area so there were no limitation in completing the rare plant survey for 2016 in accordance with accepted agency and industry standards. The winter rains along with the warm and mostly dry February and March 2016 manifested substantial grassland species growth to further support the adequacy of the survey.

No rare, threatened, or endangered plant species were observed within the project area during the SII field surveys. Table A-1 below provides a list of all plant species observed during the SII 2016 floristic inventory and rare plant survey documenting the negative findings. The attached Figure A-1 provides a set of representative photographs taken during the rare plant survey.

TABLE A-1
TRACT 3070 FLORISTIC INVENTORY AND RARE PLANT SURVEY
PLANT SPECIES OBSERVED APRIL 18, MAY 3, AND JUNE 6, 2016
(*= NATIVE SPECIES)

SCIENTIFIC NAME	COMMON NAME
Achyrachaena mollis	Blow wives *
Acmispon americanus (Lotus purshianus)	Spanish lotus *
Amsinckia menziesii	Fiddleneck *
Anagallis arvensis	Scarlet pimpernel
Andostoma fasciculatum	Chamise *
Asclepius fasciculatus	Slender milkweed *
Avena barbata	Slender wild oats
Baccharis pilularis	Coyote brush *
Brassica nigra	Black mstard
Bromus diandrus	Ripgut grass
Bromus hordeaceous	Soft chess brome
Bromus madritensis ssp. rubens	Red brome
Calandrinia ciliata	Redmaids *
Capsella bursa-pastoris	Shepard's purse
Carduus pycnocephalus	Italian thistle
Carex sp.	Sedge*
Centaurea melitensis	Star thistle
Centaurea solstitialis	Yellow star thistle

TABLE A-1
TRACT 3070 FLORISTIC INVENTORY AND RARE PLANT SURVEY
PLANT SPECIES OBSERVED APRIL 18, MAY 3, AND JUNE 6, 2016
(*= NATIVE SPECIES)

SCIENTIFIC NAME	COMMON NAME
Centromadia pungens ssp. pungens	Common spikeweed*
Chenopodium album	Lamb's quarters
Chlorogalum sp NIF	Soap plant *
Cirsium vulgare	Bull thistle
Clarkia sp.	Clarkia sp. *
Claytonia perfoliata	Miner's lettuce *
Convolvulus arvensis	Field bindweed
Cotoneaster sp.	Cotoneaster
Crassula tillaea	Pygmy weed
Cupressus sempervirens	Mediterranean cypress
Cynodon dactylon	Bermuda grass
Erodium botrys	Storksbill
Erodium cicutarium	Redstem filaree
Festuca arundinacea	Tall fescue
Festuca myuros	Rattail fescue
Festuca perennis (Lolium multiflorum)	Italian rye grass
Galium aparine	Common bedstraw*
Geranium dissectum	Cut-leaved geranium
Hirshfeldia incana	Short podded mustard
Hordeum murinum ssp. leporinum	Foxtail barley
Hordeum vulgare	Barley
Hypochaeris glabra	Smooth cat's ear
Juncus bufonius	Common toad rush *
Juncus xiphioides	Iris leaved juncus *
Lactuca serriola	Prickly lettuce
Lamium amplexicaule	Henbit
Lathyrus odoratus	Garden sweet pea
Lepidium nitidum	Shiny pepper-grass *
Logfia gallica (Filago gallica)	Narrowleaf cottonrose
Lupinus bicolor	Miniature lupine *
Lupinus nanus	Sky lupine *
Malva parviflora	Cheeseweed
Matricaria discoidea	Pineapple weed
Medicago polymorpha	Bur clover
Melilotus indicus	Sweetclover
Muhlenbergia rigens	Deer grass *
Opuntia ficus-indica	Prickly pear
Pinus sp.	Pine tree

TABLE A-1
TRACT 3070 FLORISTIC INVENTORY AND RARE PLANT SURVEY
PLANT SPECIES OBSERVED APRIL 18, MAY 3, AND JUNE 6, 2016
(*= NATIVE SPECIES)

SCIENTIFIC NAME	COMMON NAME
Plantago coronopsus	Plantain
Plantago lanceolata	English plantain
Poa annua	Annual bluegrass *
Polygonum sp.	Knotweed
Polypogon monspeliensis	Rabbitsfoot grass
Populus fremontii	Fremont's cottonwood *
Quercus agrifolia	Coast live oak *
Quercus douglasii	Blue oak *
Quercus lobata	Valley oak *
Raphanus sativus	Wild radish
Rubus armeniacus	Himalayan blackberry
Rumex crispus	Curly dock
Salix laevigata	Red willow *
Salix lasiolepis	Arroyo willow *
Senecio vulgaris	Common groundsel
Sidalcea malviflora	Checker mallow *
Silybum marianum	Milk thistle
Sisymbrium irio	London rocket
Sonchus asper	Prickly sowthistle
Sonchus oleraceus	Common sowthistle
Spergularia rubra	Rosey sand spurry
Stellaria media	Common chickweed
Stipa pulchra	Purple needlegrass *
Tricostema lanceolatum	Vinegar weed *
Ulmus parvifolia	Chinese elm
Vicia villosa	Winter vetch
Yucca sp.	Yucca (cultivar)

Thank you very much for continuing with SII for environmental consulting services. Please contact me directly if you have any questions or need any additional information.

Very truly yours,

David K. Wolff

David K. Wolff, Principal Ecologist

Attachment: **Figure A-1 Representative Floristic Inventory and Rare Plant Survey Photographs**

Photo 1 – View north from Principal Avenue showing dense growth of the annual grassland habitat and willow riparian habitat. **4/18/2016**

Photo 2 – View north from center of site showing dense growth of the annual grassland habitat and scattered oak trees. **4/18/2016**

Photo 3 – View south from center of site showing dense growth of the annual grassland habitat and scattered non-native trees around buildings. **4/18/2016**

Photo 4 – View of northern area of the site showing dense growth of the annual grassland habitat and scattered oak trees. **4/18/2016**

FIGURE A-1 – REPRESENTATIVE FLORISTIC INVENTORY AND RARE PLANT SURVEY PHOTOGRAPHS

Attachment 17 – Traffic Impact Report

See Attached

Principal Mixed Use Atascadero

Transportation Impact Study

Central Coast Transportation Consulting

895 Napa Avenue, Suite A-3

Morro Bay, CA 93442

(805) 316-0101

November 2014

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Executive Summary

This study evaluates the potential transportation impacts of the Principal Mixed Use project located on the northeast corner of El Camino Real and Principal Avenue in the City of Atascadero.

The project consists of 37 residential units, 3,215 square feet (s.f.) of office uses, and a single bay automated car wash. Project access would be provided via two driveways on Principal Avenue. The project would generate 633 new daily trips, 60 new AM peak hour trips, and 66 new PM peak hour trips.

The following intersections are analyzed during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

1. Principal Avenue/El Camino Real
2. Santa Rosa Road/US 101 Southbound Ramps
3. Santa Rosa Road/US 101 Northbound Ramps
4. Santa Rosa Road/El Camino Real

The study intersections are evaluated under these scenarios:

1. **Existing Conditions** reflect 2014 traffic counts and the existing transportation network.
2. **Existing Plus Project Conditions** add project generated traffic to Existing Conditions volumes.
3. **Cumulative Conditions** represent future traffic conditions reflective of buildout of land uses in the area.
4. **Cumulative Plus Project Conditions** add project traffic to Cumulative Conditions volumes.

All of the study intersections would operate acceptably at LOS B or better under all analysis scenarios.

On-site circulation is adequate as proposed. Site access would be improved by delineating a left and right turn lane for westbound Principal Avenue at El Camino Real. This may require the restriction of parking on the south side of Principal Avenue, eliminating three on-street parking spaces and improving sight lines for vehicles exiting the commercial driveway on the south side of Principal Avenue.

Contents

Introduction

This study evaluates the potential transportation impacts of the Principal Mixed Use project located on the northeast corner of El Camino Real and Principal Avenue in the City of Atascadero.

The project consists of 37 residential units, 3,215 square feet (s.f.) of office uses, and a single bay automated car wash. Project access would be provided via two driveways on Principal Avenue.

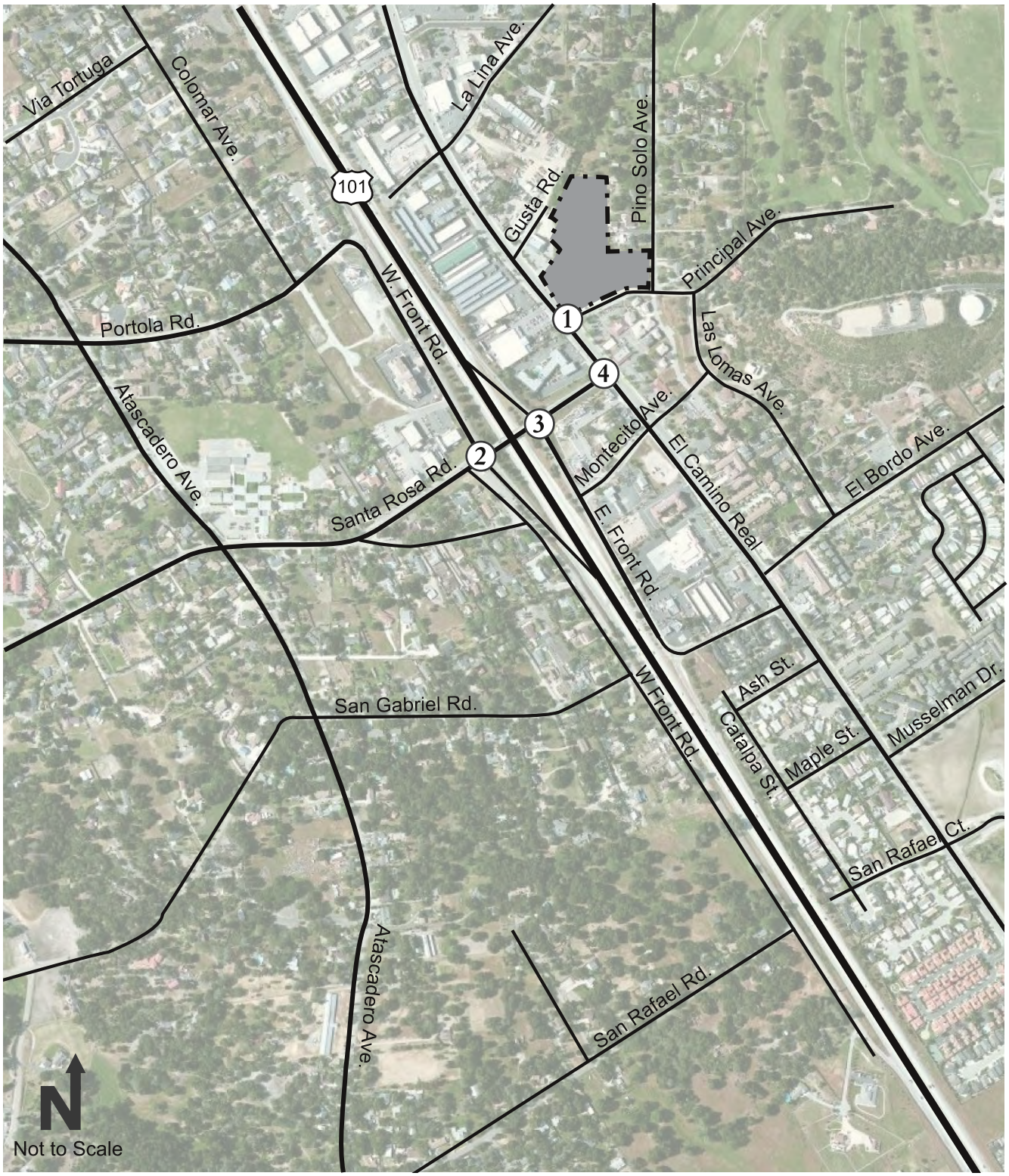
The project's location and study intersections are shown on **Figure 1**, while **Figure 2** shows the site plan. The following intersections are analyzed during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

5. Principal Avenue/El Camino Real
6. Santa Rosa Road/US 101 Southbound Ramps
7. Santa Rosa Road/US 101 Northbound Ramps
8. Santa Rosa Road/El Camino Real

The study intersections are evaluated under these scenarios:

5. **Existing Conditions** reflect 2014 traffic counts and the existing transportation network.
6. **Existing Plus Project Conditions** add project generated traffic to Existing Conditions volumes.
7. **Cumulative Conditions** represent future traffic conditions reflective of buildout of land uses in the area.
8. **Cumulative Plus Project Conditions** add project traffic to Cumulative Conditions volumes.

Figure 1: Project and Study Locations



Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

Legend:

- Project Site
- (7) - Study Intersection

November 2014

Principal Mixed Use Atascadero

Figure 2: Site Plan

Source: Oasis Associates

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

November 2014

Principal Mixed Use Atascadero

Analysis Methods

The analysis approach was developed based on the City of Atascadero and Caltrans standards.

City of Atascadero Facilities

The Circulation Element of the City of Atascadero's General Plan includes a policy to maintain LOS C or better as the standard at all intersections and on all arterial and collector roads. LOS D is acceptable upon City Council approval where residences are not directly affected and improvements to meet the LOS C standard are not feasible.

Caltrans Facilities

Caltrans operates the US 101 mainline and ramps. Caltrans strives to maintain operations at the LOS C/D threshold on state-operated facilities, where LOS C is acceptable but LOS D is not. If an existing State Highway facility is operating at LOS D, E, or F the existing service level should be maintained.

Level of Service Thresholds

The level of service thresholds for intersections based on the 2010 Highway Capacity Manual (HCM) are presented in Table 1.

Table 1: Intersection Level of Service Thresholds

Signalized Intersections[1]		Stop Sign Controlled Intersections[2]	
Control Delay (seconds/vehicle)	**Level of Service**	**Control Delay (seconds/vehicle)**	**Level of Service**
≤ 10	A	≤ 10	A
> 10 - 20	B	> 10 - 15	B
> 20 - 35	C	> 15 - 25	C
> 35 - 55	D	> 25 - 35	D
> 55 - 80	E	> 35 - 50	E
> 80	F	> 50	F

1. Source: Exhibit 18-4 of the 2010 *Highway Capacity Manual.*
2. Source: Exhibits 19-1 and 20-2 of the 2010 *Highway Capacity Manual.*

The study intersections are analyzed with the Synchro 8 software package applying the 2010 HCM methods.

The 95th percentile queues represent the queue length that would not be exceeded 95 percent of the time. Queue lengths are discussed under each scenario, and are reported on the calculation sheets in Appendix B.

Existing Conditions

This section describes the existing transportation system and current operating conditions in the study area.

EXISTING ROADWAY NETWORK

US Highway 101 is a north-south facility connecting Los Angeles to San Francisco. In the vicinity of the project it is a four-lane freeway with a grade separated full access interchange at Santa Rosa Road.

El Camino Real is a north-south major arterial with a varying cross-section of two to four lanes, with four lanes and a center two-way left-turn lane in the study area. It parallels US 101 through the City.

Santa Rosa Road is an east-west minor arterial with two travel lanes connecting State Route 41 to US 101 and El Camino Real.

Principal Avenue is an east-west roadway with two travel lanes. It is classified as a local road, serving nearby residential and commercial areas.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities include sidewalks, crosswalks, multi-use paths, and pedestrian signals at signalized intersections. Sidewalks are provided along the development frontage on El Camino Real, on El Camino Real toward Santa Rosa Road, and along the south side of the Santa Rosa Road overcrossing of US 101.

Bicycle facilities in the study area consist of multi-use paths separate from the roadway (Class I), on-street striped bike lanes (Class II), and signed bike routes (Class III). The City's Bike Plan identifies existing Class II bike lanes on Santa Rosa Road from US 101 to El Camino Real and on El Camino Real from Santa Rosa Road to the northern area of the City.

EXISTING TRANSIT SERVICE

The Regional Transit Authority (RTA) provides fixed route transit service to the study area. Route 9 serves San Luis Obispo, Santa Margarita, Atascadero, Templeton, Paso Robles, and San Miguel with 20-60 minute headways on weekdays and 2-3 hour headways on weekends. There is a Route 9 bus stop on the project's frontage on El Camino Real near the Principal Avenue intersection. Atascadero Dial-A-Ride provides door-to-door service within the City limits on weekdays.

EXISTING TRAFFIC CONDITIONS

Traffic counts for weekday AM and PM peak hour conditions were collected at the study intersections in 2014 while schools were in session. Traffic count sheets are provided in Appendix A.

Figure 3 shows the existing peak hour traffic volumes. Table 2 presents the LOS for the study intersections based on the thresholds shown in Table 1, with detailed calculation sheets included in Appendix B.

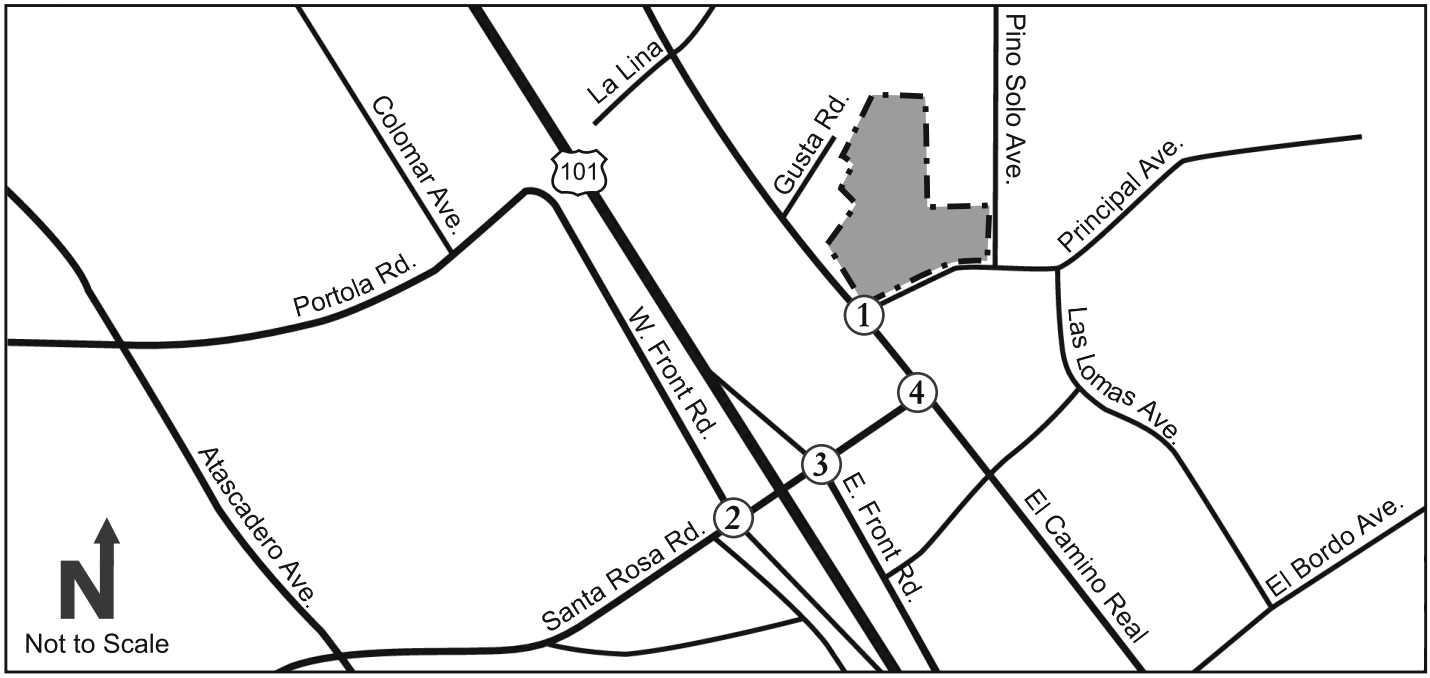
Table 2: Existing Intersection Levels of Service				
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Queues Exceed Storage?
1. Principal Ave/	AM	1.0 (11.7)	A (B)	No
El Camino Real	PM	0.7 (13.6)	A (B)	No
2. Santa Rosa Rd/	AM	9.8	A	No
US 101 SB Ramps	PM	7.2	A	No
3. Santa Rosa Rd/	AM	7.1	A	No
US 101 NB	PM	9.3	A	**Yes**
4. Santa Rosa Rd/	AM	15.3	B	No
El Camino Real	PM	14.3	B	No

1. HCM 2010 average control delay in seconds per vehide.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

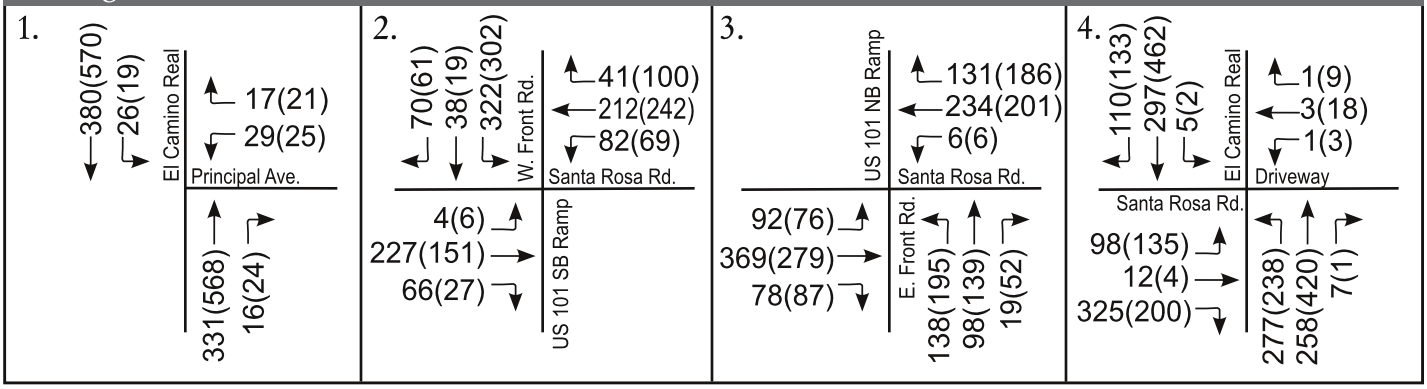
The study intersections operate acceptably at LOS B or better. Queue spillback on the eastbound approaches to the Santa Rosa Road/US 101 NB Ramps and Santa Rosa Road/El Camino Real intersection was noted during field observations. These queues generally cleared within one signal cycle and did not result in a breakdown of flow at adjacent intersections.

The northbound left turn movement at Santa Rosa Road/El Camino Real experiences long queues during peak hours, at times spilling out of the designated left-turn pocket into the two-way left-turn lane. They were not observed to reach Montecito Avenue. These observations are consistent with the analysis results.

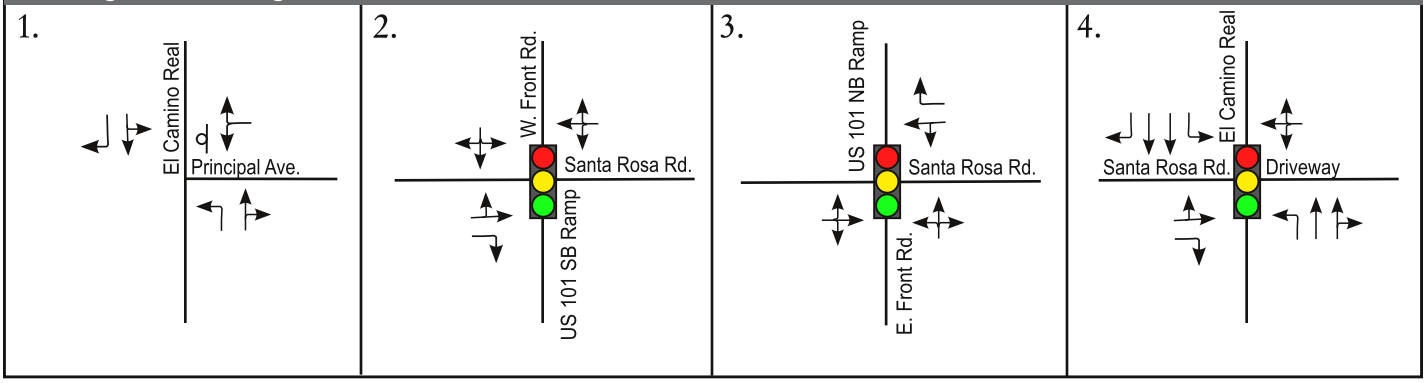
Figure 3: Existing Peak Hour Volumes and Lane Configurations



Existing Peak Hour Volumes



Existing Lane Configuration



Legend:

- Traffic Signal
- Project Site
- (7) - Study Area Intersection
- Stop Sign
- xx(yy) - AM(PM) Peak Hour Traffic Volumes

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Existing Plus Project Conditions

This section evaluates the impacts of the proposed project on the surrounding transportation network. Existing Plus Project conditions reflect existing traffic levels plus the estimated traffic generated by the proposed project.

PROJECT TRAFFIC ESTIMATES

The amount of project traffic affecting the study intersections is estimated in three steps: trip generation, trip distribution, and trip assignment. Trip generation refers to the total number of trips generated by the site. Trip distribution identifies the general origins and destination of these trips, and trip assignment specifies the routes taken to reach these origins and destinations.

Trip Generation

The project's trip generation estimate, shown in Table 3, was developed using data provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual.*

Table 3: Project Trip Generation

		Number of Trips						
			AM			PM		
Land Use	**Size**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Single Family Residential[1]	20 units	190	4	11	15	13	7	20
Residential Condo/Townhouse[2]	17 units	138	2	11	13	9	5	14
General Office[3]	3215 sq ft	35	4	1	5	1	4	5
Automated Car Wash[4]	1945 sq ft	270	14	13	27	14	13	27
	Total Trips	**633**	**24**	**36**	**60**	**37**	**29**	**66**

1. ITE Land Use Code 210, Single-Family Detached Housing. Average rates used.
2. ITE Land Use Code 230, Single-Family Detached Housing. Average rates used.
3. ITE Land Use Code 710, General Office Building. Average rates used.
4. ITE Land Use Code 948, Automated Car Wash. Average rate used, with daily taken as ten times the PM peak hour, due to limited data. AM data taken to be equal to PM data.

Source: Trip Generation, 9th Edition, ITE (2012) and CCTC, 2014

The project trip generation estimate shows 633 new daily trips, 60 new AM peak hour trips, and 66 new PM peak hour trips.

Trip Distribution and Assignment

The directions of approach and departure for project trips were estimated based on existing trip patterns and the locations of complementary land uses. Project trips were assigned to individual intersections based on the trip distribution percentages, and were then added to the existing traffic volumes for Existing Plus Project Conditions. **Figure 4** shows the trip distribution percentages, project trip assignment, and Existing Plus Project volumes.

EXISTING PLUS PROJECT IMPACT ANALYSIS

Table 4 summarizes the operating conditions under Existing and Existing Plus Project conditions. All study intersections would operate acceptably at LOS B or better with the addition of project trips. No queuing issues are reported.

Table 4: Existing & Existing Plus Project Intersection Levels of Service						
		Existing		Existing Plus Project		
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]	Queues Exceed Storage?
1. Principal Ave/	AM	1.0 (11.7)	A (B)	1.6 (12.4)	A (B)	No
El Camino Real	PM	0.7 (13.6)	A (B)	1.2 (15.0)	A (C)	No
2. Santa Rosa Rd/	AM	9.8	A	17.0	B	No
US 101 SB Ramps	PM	7.2	A	12.9	B	No
3. Santa Rosa Rd/	AM	7.1	A	7.2	A	No
US 101 NB	PM	9.3	A	15.2	B	**Yes**
4. Santa Rosa Rd/	AM	15.3	B	15.4	B	No
El Camino Real	PM	14.3	B	14.5	B	No

1. HCM 2010 average control delay in seconds per vehide.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

Site Access and On-Site Circulation

On-site circulation deficiencies would occur if project designs fail to meet appropriate standards, fail to provide adequate truck access, or would result in hazardous conditions.

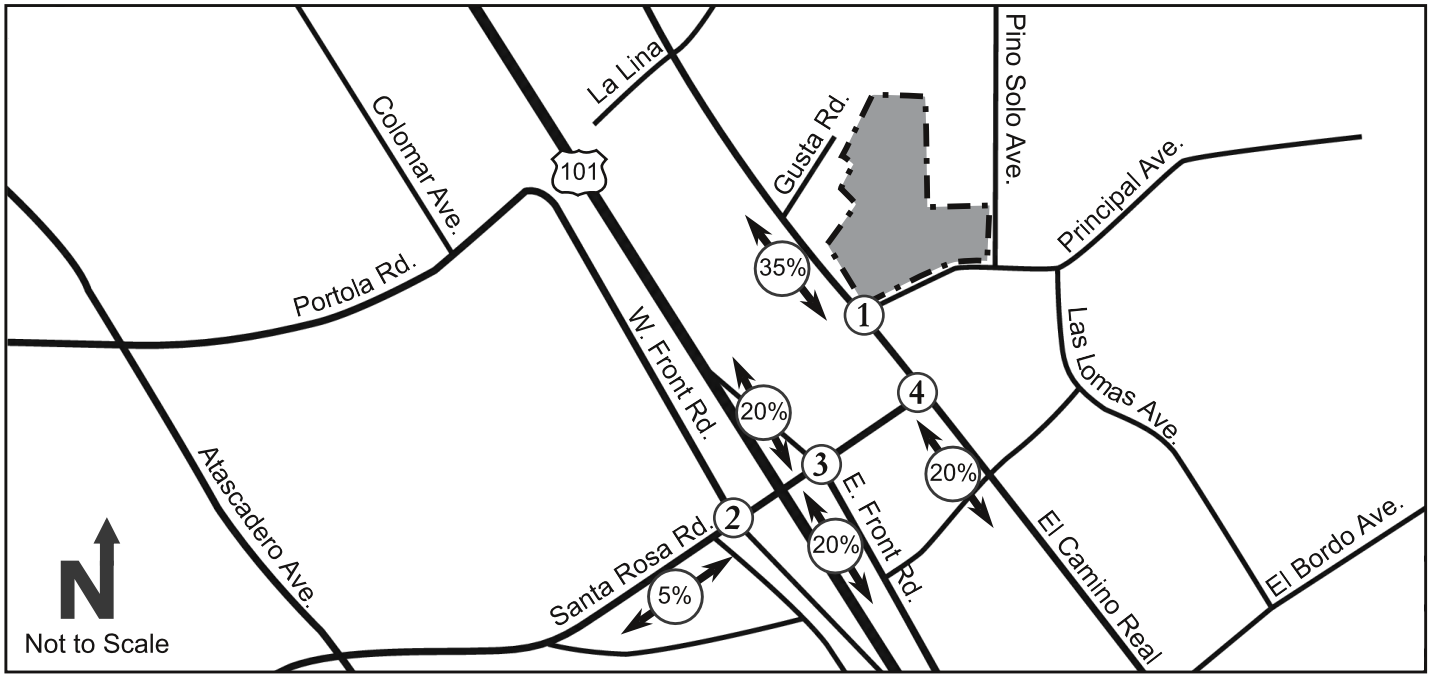
The proposed site plan is shown on **Figure 2**. Two driveways on Principal Avenue provide access to the project. Curb ramps and sidewalks are proposed along the project frontages. On-site circulation is adequate as proposed.

Principal Avenue is currently stop controlled at El Camino Real, which has a center two-way left-turn lane to separate turning traffic from through vehicles. The Principal Avenue approach was evaluated with a single shared left/right turn lane. The Principal Avenue/El Camino Real intersection is projected to operate acceptably under all studied scenarios with this configuration, and would not meet the peak hour signal warrant under any scenario.

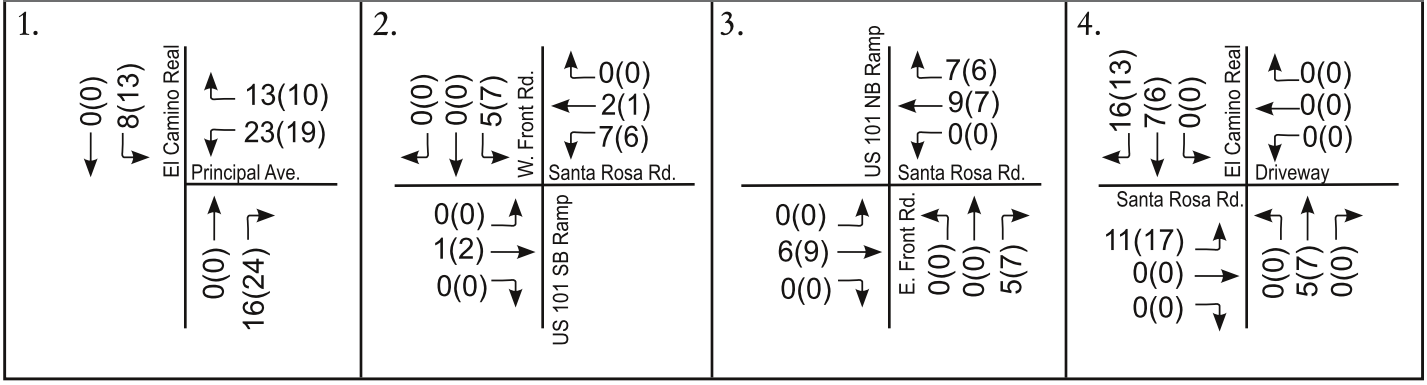
The curb-to-curb width of Principal Avenue is proposed to be 40 feet near El Camino Real. Adding delineated right and left turn lanes to Principal Avenue would minimize the potential for confusion for drivers exiting the driveways on the west side of El Camino Real.

Striping Principal Avenue to provide a designated left and right turn lane between El Camino Real and the westerly project driveway is recommended. This may require on-street parking restrictions on the south side of Principal Avenue, resulting in the loss of approximately three parking spaces. Restricting parking would improve sight lines for vehicles exiting the commercial driveway on the south side of Principal Avenue.

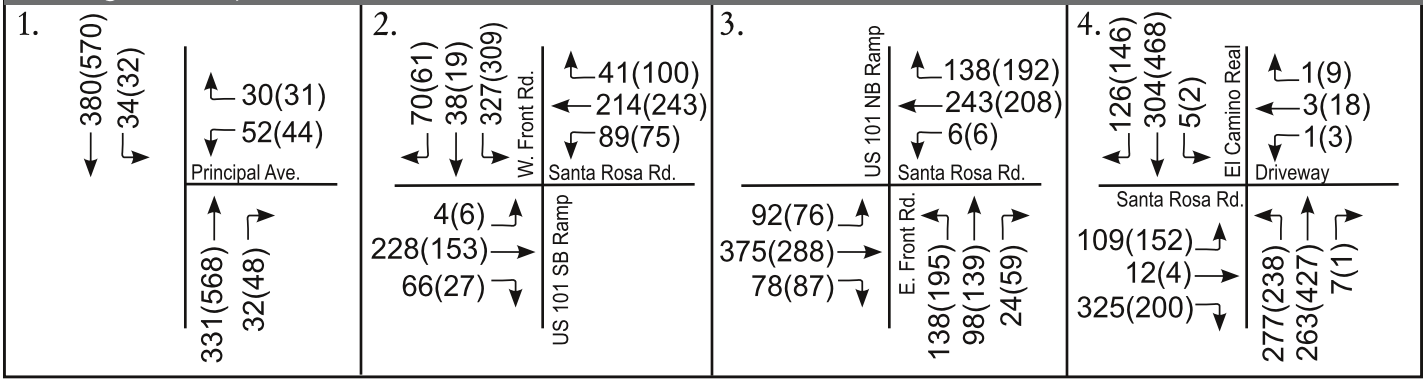
Figure 4: Project Trip Distribution, Assignment, and Existing Plus Project Volumes



Project Trip Assignment



Existing Plus Project Peak Hour Volumes



Legend:

- Project Site
- 3% - Project Trip Distribution Percentage
- (7) - Study Area Intersection
- xx(yy) - AM(PM) Peak Hour Traffic Volumes

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Cumulative Conditions

Cumulative conditions represent build-out of the land uses in the region.

CUMULATIVE ROADWAY NETWORK

The Cumulative roadway network was assumed to stay the same as the Existing conditions network. Various planning documents show the reconstruction of the Santa Rosa Road interchange, with roundabout traffic control at the ramp junctions. These improvements are not currently funded, so they were not assumed to be in place under Cumulative conditions.

CUMULATIVE VOLUME FORECASTS

Cumulative traffic forecasts were developed using the most recent version of the SLOCOG Transportation Demand Model, which projects traffic growth throughout the region. The forecasts were compared to those developed as a part of the 2014 US 101 Corridor Mobility Study and were found to be consistent. Cumulative and Cumulative Plus Project volumes are shown on **Figure 5**.

CUMULATIVE TRAFFIC CONDITIONS

Table 5 summarizes Cumulative traffic conditions with and without the project.

Table 5: Cumulative & Cumulative Plus Project Intersection Levels of Service

		Cumulative		Cumulative Plus Project		
Intersection	Peak Hour	Delay[1] (sec/veh)	LOS[2]	Delay[1] (sec/veh)	LOS[2]	Queues Exceed Storage?
1. Principal Ave/	AM	1.0 (12.2)	A (B)	1.5 (13.2)	A (B)	No
El Camino Real	PM	0.9 (15.0)	A (C)	1.3 (16.9)	A (C)	No
2. Santa Rosa Rd/	AM	17.6	B	17.8	B	No
US 101 SB Ramps	PM	14.9	B	15.1	B	No
3. Santa Rosa Rd/	AM	7.5	A	7.7	A	No
US 101 NB	PM	15.2	B	15.5	B	**Yes**
4. Santa Rosa Rd/	AM	17.5	B	17.8	B	No
El Camino Real	PM	16.3	B	16.5	B	No

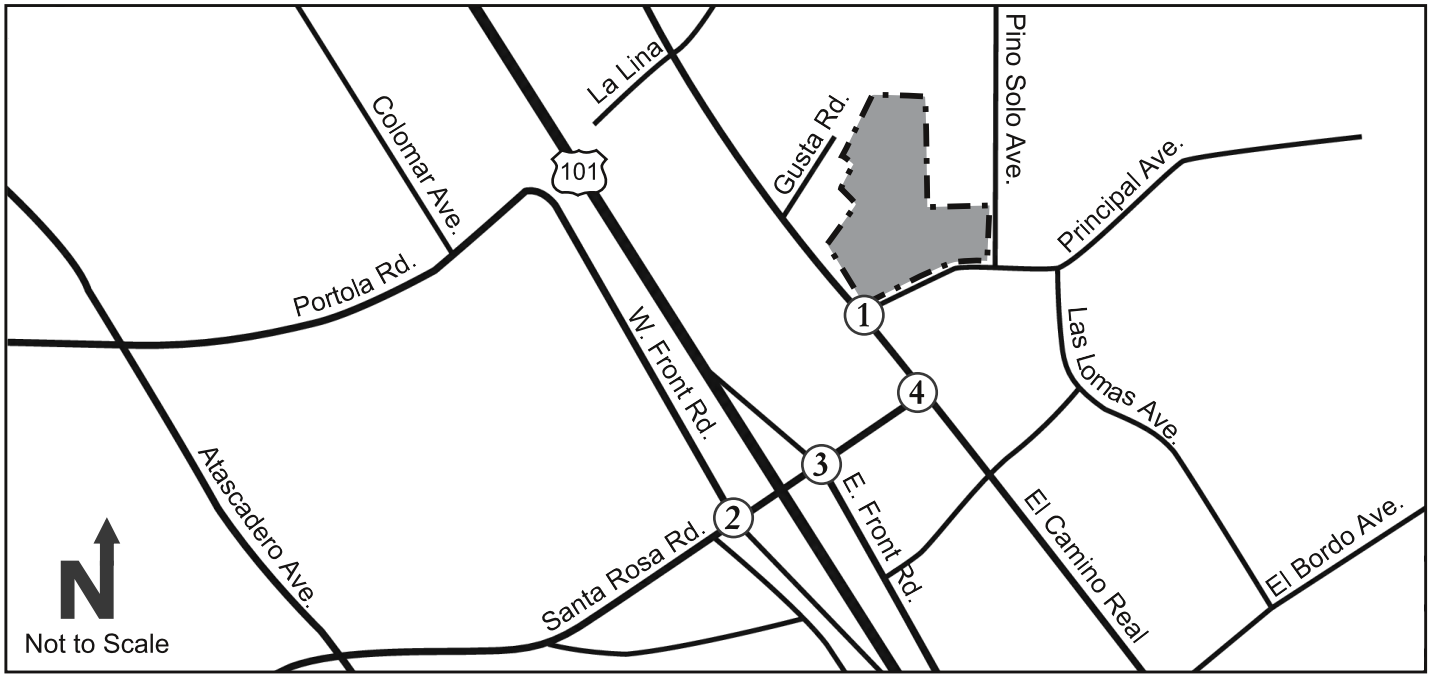
1. HCM 2010 average control delay in seconds per vehide.
2. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay.

Under Cumulative and Cumulative Plus Project conditions all study intersections would operate acceptably at LOS B or better.

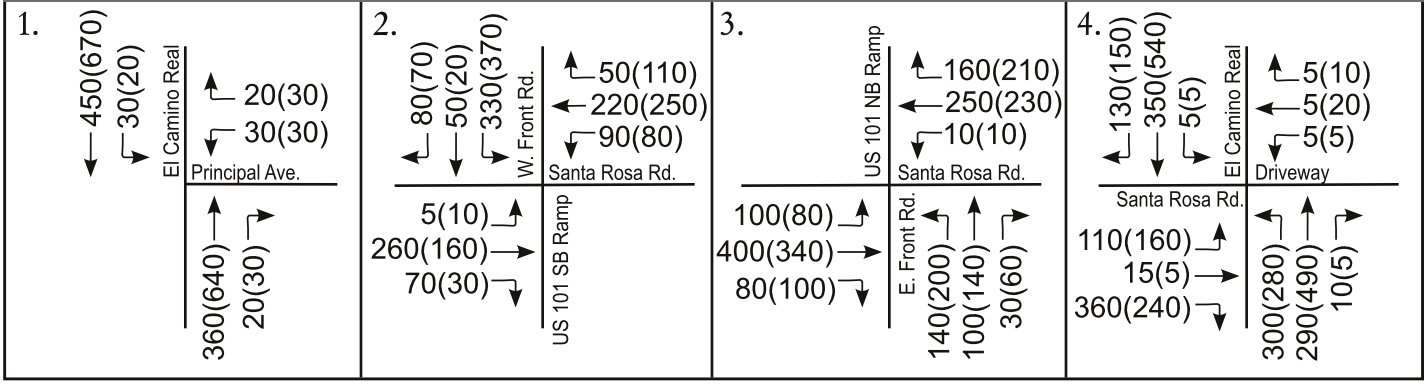
The eastbound 95th percentile queues at Santa Rosa Road/US 101 NB Ramps would continue to spill back across the overcrossing. These queues are projected to increase from 274 feet under Existing PM conditions to 317 feet under Cumulative PM conditions. Under Cumulative Plus Project PM conditions the queues are projected to be 322 feet. The project extends these queues by an insignificant amount.

The northbound left turn at Santa Rosa Road/El Camino Real spills out of the marked turn pocket and into the two-way left-turn lane under Existing conditions. Cumulative growth will extend the queues at this location, but not to the extent that they would block Montecito Avenue. Installation of a second left turn lane would reduce this queuing but would require a second receiving lane on Santa Rosa Road. The proposed project does not add traffic to this movement. The project's payment of traffic impact fees would constitute its fair share contribution to future improvements in the area.

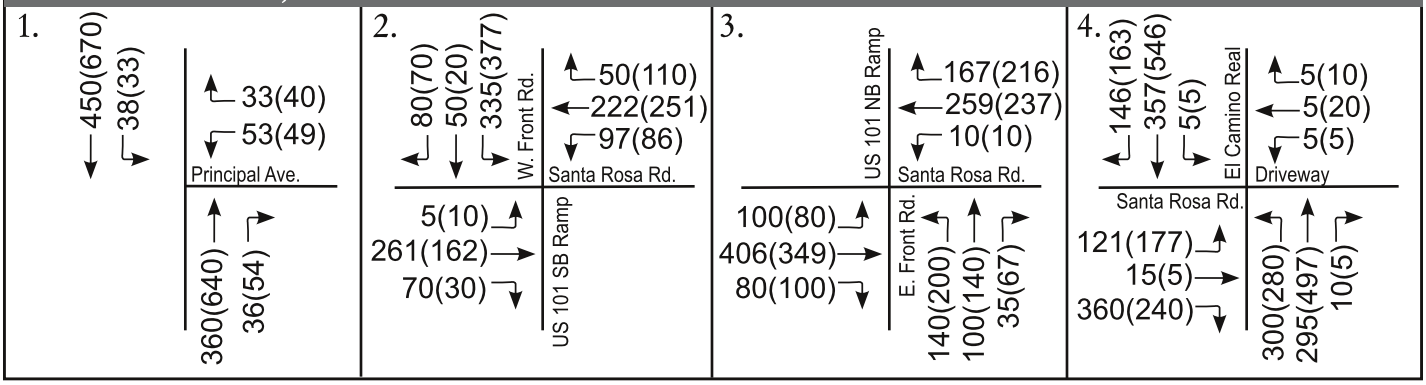
Figure 5: Cumulative and Cumulative Plus Project Peak Hour Volumes



Cumulative Peak Hour Volumes



Cumulative Plus Project Peak Hour Volumes



Legend:

- Project Site
- (7) - Study Area Intersection
- xx(yy) - AM(PM) Peak Hour Traffic Volumes

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November 2014

Principal Mixed Use Atascadero

References

California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies.

_____. 2012. Highway Design Manual.

City of Atascadero. 2010. Bicycle Transportation Plan.

_____. 2004. General Plan 2025.

SLOCOG. 2014. US 101 Corridor Mobility Master Plan.

Transportation Research Board. 2010. Highway Capacity Manual.

W-Trans. 2008. Interchange Operational Improvement Study.

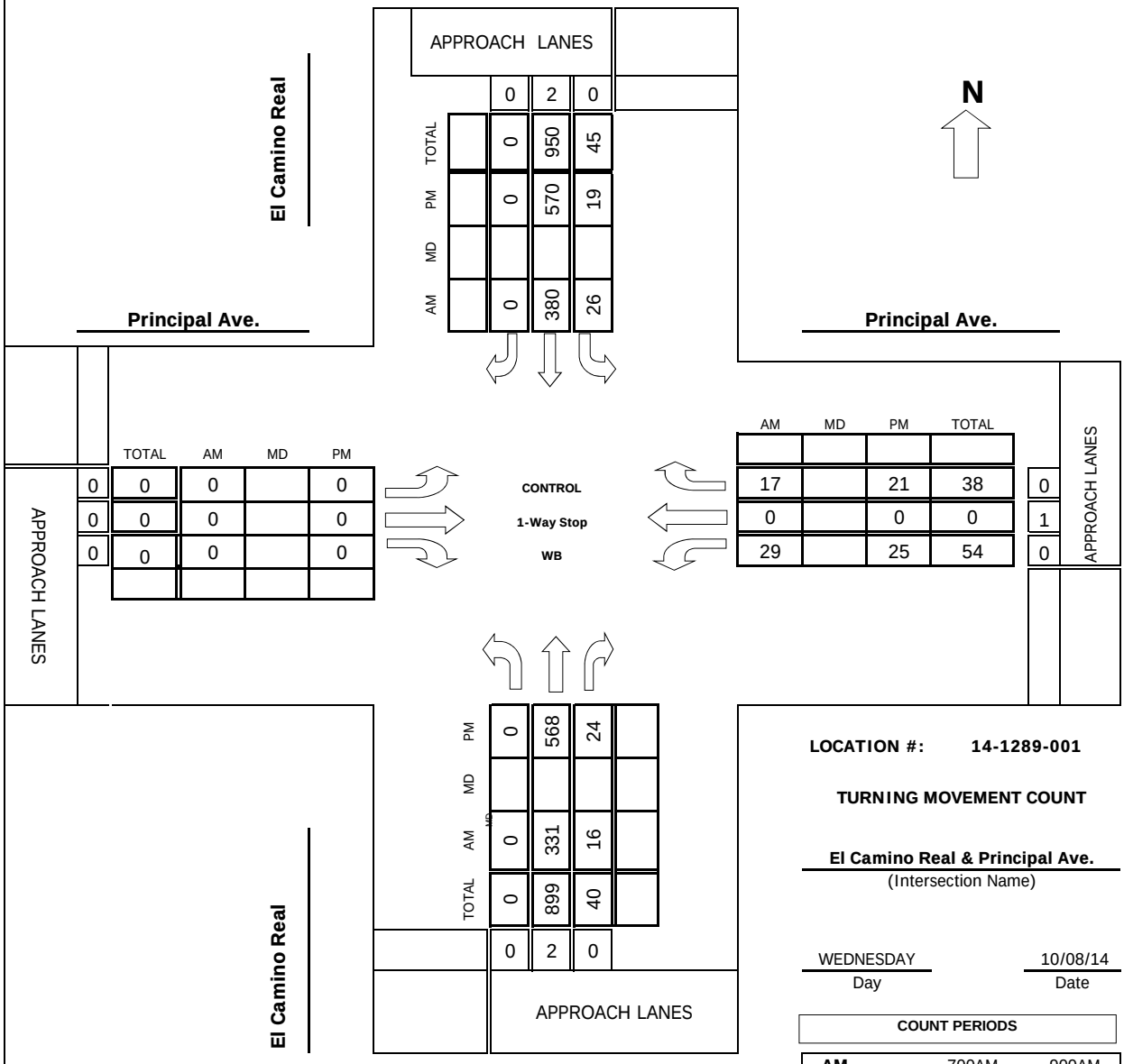
Appendix A: Traffic Count Sheets

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1289-001

TMC SUMMARY OF El Camino Real & Principal Ave.



LOCATION #: 14-1289-001

TURNING MOVEMENT COUNT

El Camino Real & Principal Ave.
(Intersection Name)

WEDNESDAY — Day
10/08/14 — Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

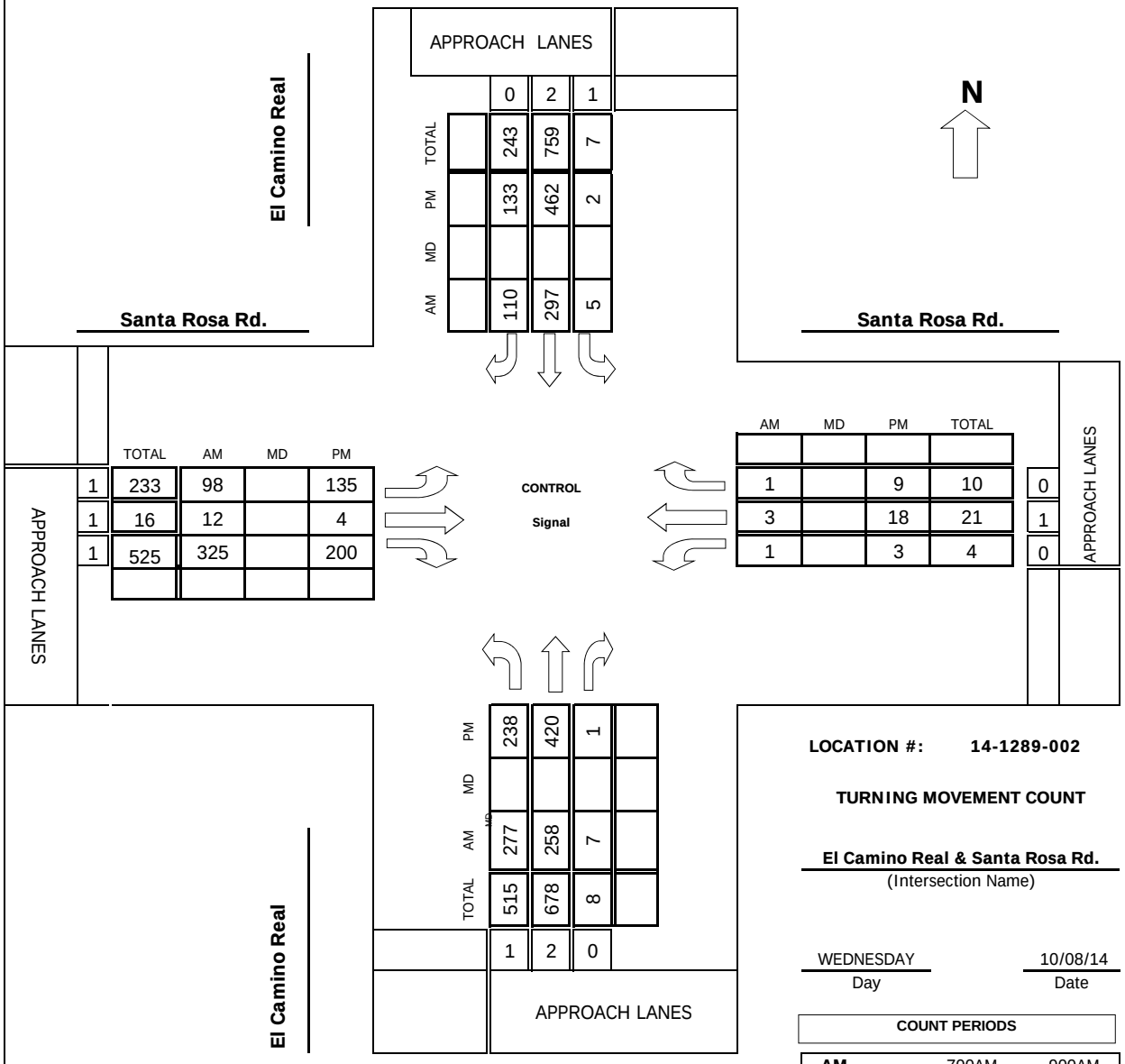
PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1289-002

TMC SUMMARY OF El Camino Real & Santa Rosa Rd.



LOCATION #: 14-1289-002

TURNING MOVEMENT COUNT

El Camino Real & Santa Rosa Rd.
(Intersection Name)

WEDNESDAY — Day
10/08/14 — Date

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

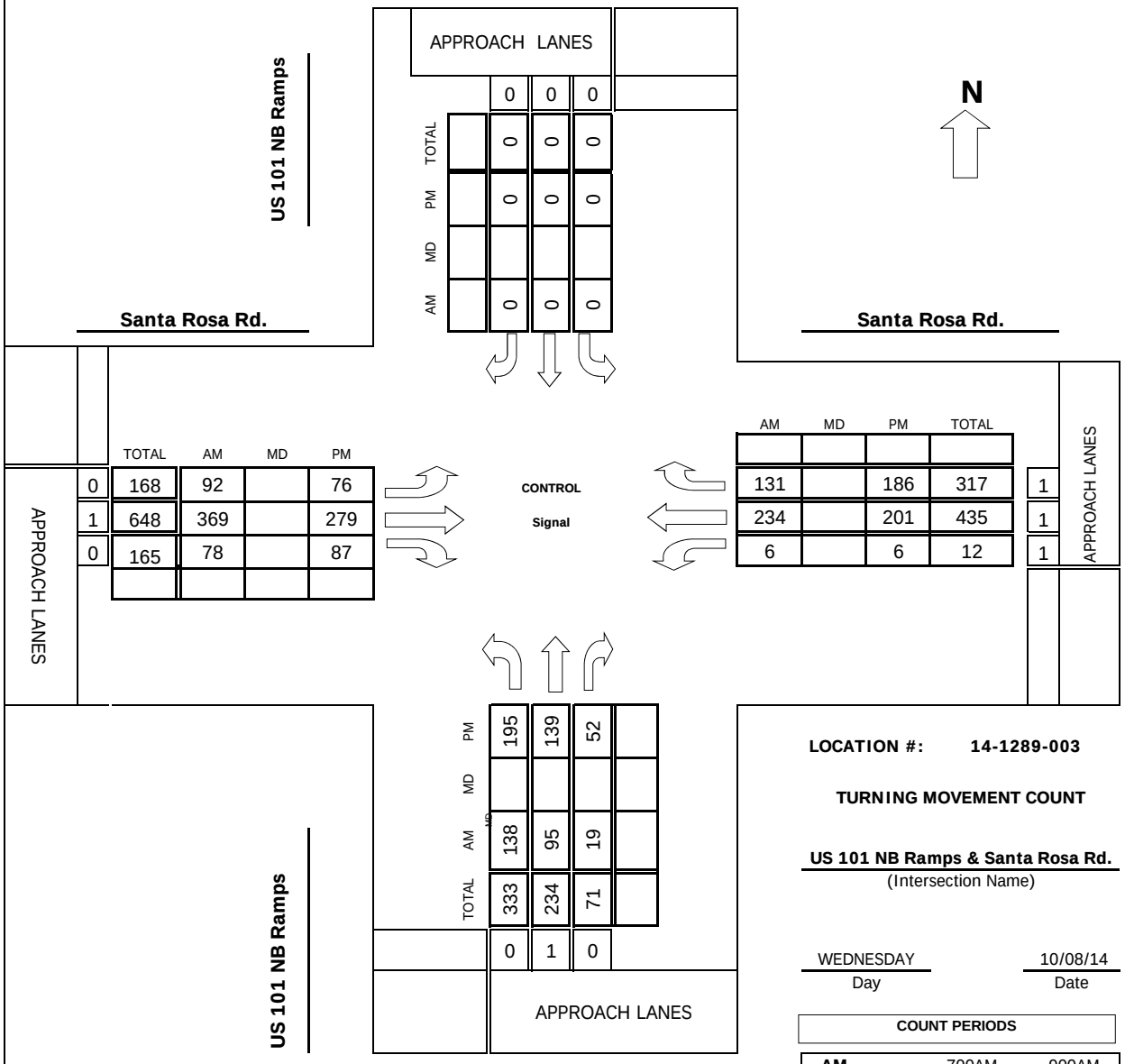
PM PEAK HOUR 430 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1289-003

TMC SUMMARY OF US 101 NB Ramps & Santa Rosa Rd.



LOCATION #: 14-1289-003

TURNING MOVEMENT COUNT

US 101 NB Ramps & Santa Rosa Rd.
(Intersection Name)

WEDNESDAY (Day) 10/08/14 (Date)

COUNT PERIODS			
AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

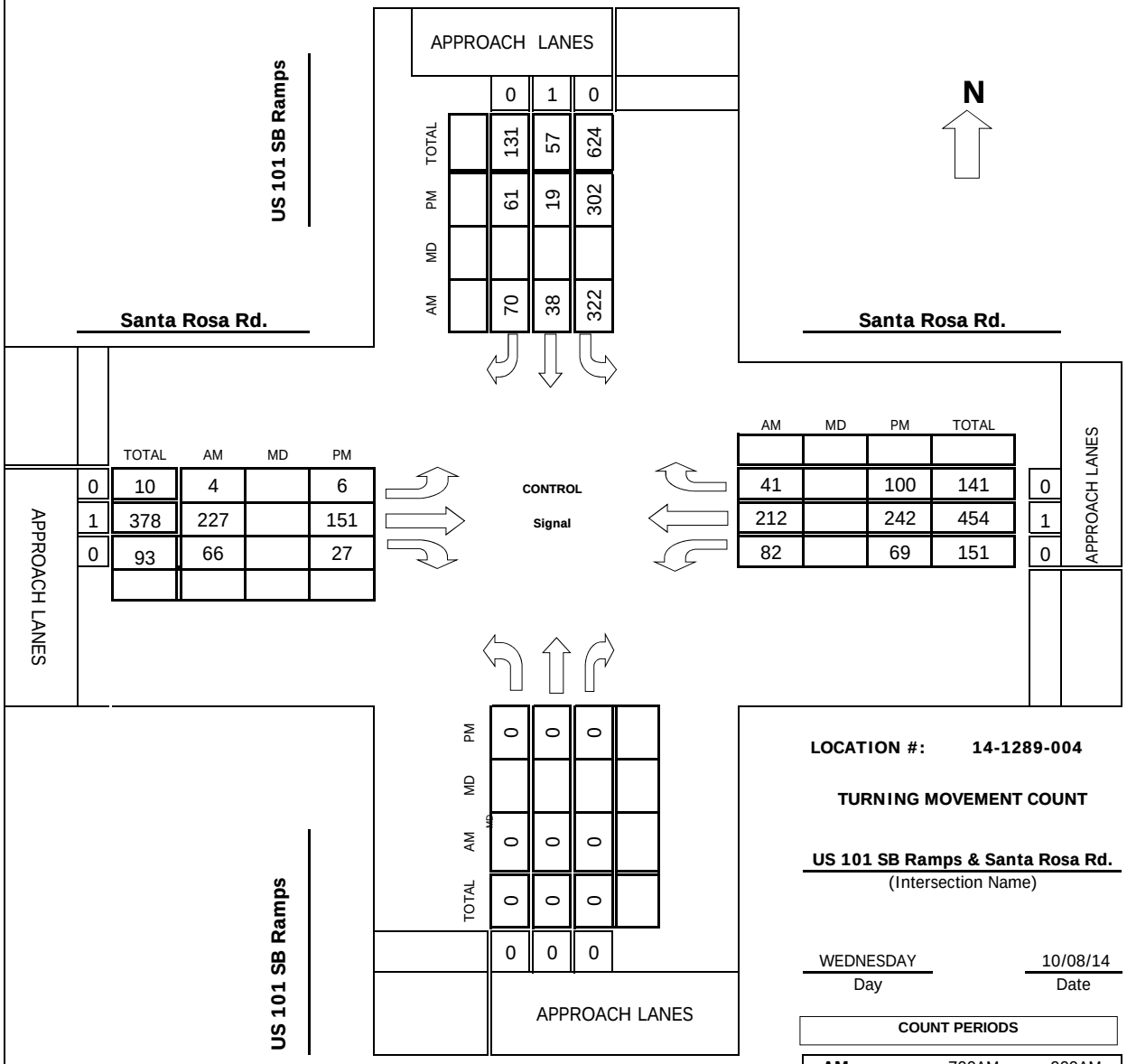
PM PEAK HOUR 445 PM

Intersection Turning Movement
Prepared by:

FIELD DATA SERVICES OF ARIZONA, INC.
520.316.6745

Project #: 14-1289-004

TMC SUMMARY OF US 101 SB Ramps & Santa Rosa Rd.



		TOTAL	AM	MD	PM
	0	10	4		6
	1	378	227		151
	0	93	66		27

	TOTAL	AM	MD	PM
0	624	322		302
1	57	38		19
0	131	70		61

	AM	MD	PM	TOTAL
0	141		100	141
1	454		242	454
0	151		69	151

	TOTAL	AM	MD	PM
0	0	0		0
0	0	0		0
0	0	0		0

LOCATION #: 14-1289-004

TURNING MOVEMENT COUNT

US 101 SB Ramps & Santa Rosa Rd.
(Intersection Name)

WEDNESDAY (Day) 10/08/14 (Date)

COUNT PERIODS

AM	700AM	-	900AM
NOON		-	
PM	400PM	-	600PM

AM PEAK HOUR 730 AM

NOON PEAK HOUR

PM PEAK HOUR 445 PM

Appendix B: LOS/Queue Calculation Sheets

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	29	17	331	16	26	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	18	356	17	28	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	625	187	0	0	373	0
Stage 1	365	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	417	823	-	-	1182	-
Stage 1	673	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	404	823	-	-	1182	-
Mov Cap-2 Maneuver	504	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.7	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	588	1182	-
HCM Lane V/C Ratio	-	-	0.084	0.024	-
HCM Control Delay (s)	-	-	11.7	8.1	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	263	75	381	489
v/c Ratio	0.27	0.09	0.45	0.78
Control Delay	10.8	3.4	12.8	27.1
Queue Delay	0.0	0.0	0.7	0.0
Total Delay	10.8	3.4	13.5	27.1
Queue Length 50th (ft)	53	0	83	162
Queue Length 95th (ft)	111	19	172	220
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	983	875	848	771
Starvation Cap Reductn	0	0	209	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.09	0.60	0.63

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	227	66	82	212	41	0	0	0	322	38	70
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	5	258	75	93	241	47				366	43	80
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	134	720	618	260	455	78				426	50	93
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39				0.33	0.33	0.33
Sat Flow, veh/h	9	1847	1583	258	1167	200				1308	154	286
Grp Volume(v), veh/h	263	0	75	381	0	0				489	0	0
Grp Sat Flow(s),veh/h/ln	1856	0	1583	1625	0	0				1747	0	0
Q Serve(g_s), s	0.0	0.0	0.9	1.4	0.0	0.0				7.4	0.0	0.0
Cycle Q Clear(g_c), s	2.8	0.0	0.9	4.8	0.0	0.0				7.4	0.0	0.0
Prop In Lane	0.02		1.00	0.24		0.12				0.75		0.16
Lane Grp Cap(c), veh/h	854	0	618	793	0	0				569	0	0
V/C Ratio(X)	0.31	0.00	0.12	0.48	0.00	0.00				0.86	0.00	0.00
Avail Cap(c_a), veh/h	2031	0	1631	1775	0	0				1737	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	6.1	0.0	5.5	6.6	0.0	0.0				8.9	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.4	2.0	0.0	0.0				3.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.4	2.7	0.0	0.0				4.0	0.0	0.0
LnGrp Delay(d),s/veh	7.0	0.0	5.9	8.7	0.0	0.0				12.8	0.0	0.0
LnGrp LOS	A		A	A						B		
Approach Vol, veh/h		338			381						489	
Approach Delay, s/veh		6.8			8.7						12.8	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				51.8		13.2		51.8
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				29.0		28.0		29.0
Max Q Clear Time (g_c+I1), s				4.8		9.4		6.8
Green Ext Time (p_c), s				4.3		0.0		4.2

Intersection Summary	
HCM 2010 Ctrl Delay	9.8
HCM 2010 LOS	A

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	592	264	144	281
v/c Ratio	0.66	0.27	0.16	0.57
Control Delay	11.5	6.6	1.8	19.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.5	6.6	1.8	19.5
Queue Length 50th (ft)	80	28	0	50
Queue Length 95th (ft)	204	73	18	147
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	1492	1662	1445	736
Starvation Cap Reductn	71	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.16	0.10	0.38

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	369	78	6	234	131	138	98	19	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	101	405	86	7	257	144	152	108	21			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	237	662	129	131	982	846	190	135	26			
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.20	0.20	0.20			
Sat Flow, veh/h	178	1240	241	11	1840	1583	969	688	134			
Grp Volume(v), veh/h	592	0	0	264	0	144	281	0	0			
Grp Sat Flow(s),veh/h/ln	1660	0	0	1851	0	1583	1791	0	0			
Q Serve(g_s), s	1.6	0.0	0.0	0.0	0.0	1.4	4.4	0.0	0.0			
Cycle Q Clear(g_c), s	7.0	0.0	0.0	2.3	0.0	1.4	4.4	0.0	0.0			
Prop In Lane	0.17		0.15	0.03		1.00	0.54		0.07			
Lane Grp Cap(c), veh/h	1029	0	0	1113	0	846	350	0	0			
V/C Ratio(X)	0.58	0.00	0.00	0.24	0.00	0.17	0.80	0.00	0.00			
Avail Cap(c_a), veh/h	2319	0	0	2593	0	2139	1028	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	4.8	0.0	0.0	3.7	0.0	3.5	11.4	0.0	0.0			
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.1	4.3	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.1	0.0	0.6	2.6	0.0	0.0			
LnGrp Delay(d),s/veh	5.3	0.0	0.0	3.9	0.0	3.6	15.6	0.0	0.0			
LnGrp LOS	A			A		A	B					
Approach Vol, veh/h		592			408			281				
Approach Delay, s/veh		5.3			3.8			15.6				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		9.8		19.8				19.8
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		17.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		6.4		9.0				4.3
Green Ext Time (p_c), s		0.0		6.8				7.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	132	392	6	334	319	6	358	133
v/c Ratio	0.36	0.38	0.03	0.56	0.13	0.04	0.41	0.27
Control Delay	26.2	1.8	28.2	20.9	5.8	32.2	21.0	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	1.8	28.2	20.9	5.8	32.2	21.0	6.7
Queue Length 50th (ft)	32	0	1	77	14	2	45	0
Queue Length 95th (ft)	105	17	13	201	60	14	115	34
Internal Link Dist (ft)	398		252		434		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	563	1362	1061	1084	3003	159	1678	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.29	0.01	0.31	0.11	0.04	0.21	0.16

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	98	12	325	1	3	1	277	258	7	5	297	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	118	14	392	1	4	1	334	311	8	6	358	133
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	44	736	2	8	2	414	1530	39	11	731	327
Arrive On Green	0.23	0.23	0.23	0.01	0.01	0.01	0.23	0.43	0.43	0.01	0.21	0.21
Sat Flow, veh/h	1594	189	1583	299	1197	299	1774	3526	91	1774	3539	1583
Grp Volume(v), veh/h	132	0	392	6	0	0	334	156	163	6	358	133
Grp Sat Flow(s),veh/h/ln	1783	0	1583	1795	0	0	1774	1770	1847	1774	1770	1583
Q Serve(g_s), s	3.1	0.0	8.7	0.2	0.0	0.0	8.8	2.7	2.7	0.2	4.4	3.6
Cycle Q Clear(g_c), s	3.1	0.0	8.7	0.2	0.0	0.0	8.8	2.7	2.7	0.2	4.4	3.6
Prop In Lane	0.89		1.00	0.17		0.17	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	412	0	736	11	0	0	414	768	801	11	731	327
V/C Ratio(X)	0.32	0.00	0.53	0.52	0.00	0.00	0.81	0.20	0.20	0.53	0.49	0.41
Avail Cap(c_a), veh/h	503	0	817	940	0	0	1001	1605	1675	143	1498	670
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	9.5	24.6	0.0	0.0	18.0	8.7	8.7	24.6	17.4	17.1
Incr Delay (d2), s/veh	0.4	0.0	0.6	32.2	0.0	0.0	3.7	0.1	0.1	33.2	0.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	3.9	0.2	0.0	0.0	4.7	1.3	1.4	0.2	2.2	1.6
LnGrp Delay(d),s/veh	16.3	0.0	10.1	56.8	0.0	0.0	21.7	8.9	8.8	57.8	17.9	17.9
LnGrp LOS	B		B	E			C	A	A	E	B	B
Approach Vol, veh/h		524			6			653			497	
Approach Delay, s/veh		11.6			56.8			15.4			18.4	
Approach LOS		B			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	25.5		15.5	15.6	14.3		4.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	45.0		14.0	28.0	21.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	4.7		10.7	10.8	6.4		2.2
Green Ext Time (p_c), s	0.0	4.9		0.7	0.9	3.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	25	21	568	24	19	570
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	22	604	26	20	606

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	961	315	0	0	630	0
Stage 1	617	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	254	681	-	-	948	-
Stage 1	501	-	-	-	-	-
Stage 2	689	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	246	681	-	-	948	-
Mov Cap-2 Maneuver	370	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	667	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.6	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	467	948	-
HCM Lane V/C Ratio	-	-	0.105	0.021	-
HCM Control Delay (s)	-	-	13.6	8.9	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	160	28	419	389
v/c Ratio	0.15	0.03	0.42	0.74
Control Delay	8.1	3.8	8.2	27.9
Queue Delay	0.0	0.0	0.5	0.0
Total Delay	8.1	3.8	8.6	27.9
Queue Length 50th (ft)	26	0	94	131
Queue Length 95th (ft)	65	11	151	186
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	1077	938	995	689
Starvation Cap Reductn	0	0	232	0
Spillback Cap Reductn	165	0	0	1
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.03	0.55	0.57

Intersection Summary

Principal MU
2: US 101 SB Ramp/W Front Rd & Santa Rosa Rd
Existing PM
11/3/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	151	27	69	242	100	0	0	0	302	19	61
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	6	154	28	70	247	102				308	19	62
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	175	676	587	253	409	153				375	23	76
Arrive On Green	0.37	0.37	0.37	0.74	0.74	0.74				0.27	0.27	0.27
Sat Flow, veh/h	22	1823	1583	175	1105	412				1381	85	278
Grp Volume(v), veh/h	160	0	28	419	0	0				389	0	0
Grp Sat Flow(s),veh/h/ln	1845	0	1583	1692	0	0				1745	0	0
Q Serve(g_s), s	0.0	0.0	0.3	0.0	0.0	0.0				4.7	0.0	0.0
Cycle Q Clear(g_c), s	1.3	0.0	0.3	2.6	0.0	0.0				4.7	0.0	0.0
Prop In Lane	0.04		1.00	0.17		0.24				0.79		0.16
Lane Grp Cap(c), veh/h	851	0	587	815	0	0				474	0	0
V/C Ratio(X)	0.19	0.00	0.05	0.51	0.00	0.00				0.82	0.00	0.00
Avail Cap(c_a), veh/h	2767	0	2265	2554	0	0				1950	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.99	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	0.0	4.5	2.2	0.0	0.0				7.6	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.2	2.3	0.0	0.0				3.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.1	1.4	0.0	0.0				2.6	0.0	0.0
LnGrp Delay(d),s/veh	5.3	0.0	4.7	4.4	0.0	0.0				11.2	0.0	0.0
LnGrp LOS	A		A	A						B		
Approach Vol, veh/h		188			419						389	
Approach Delay, s/veh		5.2			4.4						11.2	
Approach LOS		A			A						B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				54.9		10.1		54.9
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				32.0		25.0		32.0
Max Q Clear Time (g_c+I1), s				3.3		6.7		4.6
Green Ext Time (p_c), s				3.8		0.0		3.7

Intersection Summary		
HCM 2010 Ctrl Delay		7.2
HCM 2010 LOS		A

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	476	222	200	415
v/c Ratio	0.49	0.21	0.20	0.77
Control Delay	19.0	8.3	2.1	29.7
Queue Delay	1.1	0.0	0.0	0.0
Total Delay	20.1	8.3	2.1	29.7
Queue Length 50th (ft)	169	38	0	142
Queue Length 95th (ft)	274	84	28	210
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	978	1076	1007	648
Starvation Cap Reductn	276	0	0	0
Spillback Cap Reductn	0	12	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.68	0.21	0.20	0.64

Intersection Summary

Principal MU
3: US 101 NB Ramp/E Front St & Santa Rosa Rd
Existing PM
11/3/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	76	279	87	6	201	186	195	139	52	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	82	300	94	6	216	200	210	149	56			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	220	520	147	130	832	716	250	177	67			
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.28	0.28	0.28			
Sat Flow, veh/h	171	1150	325	12	1840	1583	898	637	240			
Grp Volume(v), veh/h	476	0	0	222	0	200	415	0	0			
Grp Sat Flow(s),veh/h/ln	1646	0	0	1852	0	1583	1776	0	0			
Q Serve(g_s), s	1.2	0.0	0.0	0.0	0.0	2.4	6.5	0.0	0.0			
Cycle Q Clear(g_c), s	6.1	0.0	0.0	2.2	0.0	2.4	6.5	0.0	0.0			
Prop In Lane	0.17		0.20	0.03		1.00	0.51		0.13			
Lane Grp Cap(c), veh/h	887	0	0	962	0	716	494	0	0			
V/C Ratio(X)	0.54	0.00	0.00	0.23	0.00	0.28	0.84	0.00	0.00			
Avail Cap(c_a), veh/h	1967	0	0	2222	0	1813	1375	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.92	0.00	0.92	1.00	0.00	0.00			
Uniform Delay (d), s/veh	6.1	0.0	0.0	5.1	0.0	5.1	10.1	0.0	0.0			
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.5	0.0	0.9	3.9	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	1.2	0.0	1.2	3.7	0.0	0.0			
LnGrp Delay(d),s/veh	8.4	0.0	0.0	5.6	0.0	6.0	14.0	0.0	0.0			
LnGrp LOS	A			A		A	B					
Approach Vol, veh/h		476			422			415				
Approach Delay, s/veh		8.4			5.8			14.0				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		12.3		52.7				52.7
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		8.5		8.1				4.4
Green Ext Time (p_c), s		0.0		5.4				5.5

Intersection Summary		
HCM 2010 Ctrl Delay		9.3
HCM 2010 LOS		A

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	148	213	32	253	448	2	491	141
v/c Ratio	0.40	0.25	0.13	0.52	0.19	0.01	0.49	0.26
Control Delay	29.2	2.0	26.5	25.8	7.8	36.0	22.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	2.0	26.5	25.8	7.8	36.0	22.0	6.4
Queue Length 50th (ft)	42	0	7	68	24	1	67	0
Queue Length 95th (ft)	128	21	37	191	103	8	168	43
Internal Link Dist (ft)	398		252		434		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	602	1197	975	937	2737	150	1649	813
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.18	0.03	0.27	0.16	0.01	0.30	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	135	4	200	3	18	9	238	420	1	2	462	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	144	4	213	3	19	10	253	447	1	2	491	141
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	285	8	554	5	30	16	328	1657	4	4	972	435
Arrive On Green	0.16	0.16	0.16	0.03	0.03	0.03	0.18	0.46	0.46	0.00	0.27	0.27
Sat Flow, veh/h	1728	48	1583	165	1044	549	1774	3623	8	1774	3539	1583
Grp Volume(v), veh/h	148	0	213	32	0	0	253	218	230	2	491	141
Grp Sat Flow(s),veh/h/ln	1776	0	1583	1758	0	0	1774	1770	1861	1774	1770	1583
Q Serve(g_s), s	3.5	0.0	4.7	0.8	0.0	0.0	6.3	3.5	3.5	0.1	5.4	3.3
Cycle Q Clear(g_c), s	3.5	0.0	4.7	0.8	0.0	0.0	6.3	3.5	3.5	0.1	5.4	3.3
Prop In Lane	0.97		1.00	0.09		0.31	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	0	554	51	0	0	328	810	851	4	972	435
V/C Ratio(X)	0.51	0.00	0.38	0.62	0.00	0.00	0.77	0.27	0.27	0.51	0.51	0.32
Avail Cap(c_a), veh/h	615	0	841	989	0	0	960	1647	1733	154	1686	754
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	11.3	22.2	0.0	0.0	17.9	7.8	7.8	23.0	14.1	13.3
Incr Delay (d2), s/veh	1.3	0.0	0.4	11.8	0.0	0.0	3.8	0.2	0.2	77.9	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	2.1	0.6	0.0	0.0	3.4	1.7	1.8	0.1	2.6	1.5
LnGrp Delay(d),s/veh	18.9	0.0	11.7	34.0	0.0	0.0	21.7	7.9	7.9	100.9	14.5	13.8
LnGrp LOS	B		B	C			C	A	A	F	B	B
Approach Vol, veh/h		361			32			701			634	
Approach Delay, s/veh		14.7			34.0			12.9			14.6	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	25.1		11.6	12.5	16.7		5.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		16.0	25.0	22.0		26.0
Max Q Clear Time (g_c+I1), s	2.1	5.5		6.7	8.3	7.4		2.8
Green Ext Time (p_c), s	0.0	7.1		1.0	0.6	5.3		0.1

Intersection Summary			
HCM 2010 Ctrl Delay		14.3	
HCM 2010 LOS		B	

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	52	30	331	32	34	380
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	32	356	34	37	409

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	650	195	0	0	390	0
Stage 1	373	-	-	-	-	-
Stage 2	277	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	402	814	-	-	1165	-
Stage 1	666	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	386	814	-	-	1165	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	714	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.4	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	574	1165	-
HCM Lane V/C Ratio	-	-	0.154	0.031	-
HCM Control Delay (s)	-	-	12.4	8.2	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	264	75	391	495
v/c Ratio	0.27	0.09	0.47	0.79
Control Delay	10.7	3.3	13.0	27.7
Queue Delay	0.0	0.0	0.8	0.0
Total Delay	10.7	3.3	13.7	27.7
Queue Length 50th (ft)	54	0	87	164
Queue Length 95th (ft)	109	19	175	227
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	979	872	835	767
Starvation Cap Reductn	0	0	199	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.09	0.61	0.65

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	228	66	89	214	41	0	0	0	327	38	70
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	5	259	75	101	243	47				372	43	80
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	60	1017	870	251	578	104				430	50	92
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55				0.33	0.33	0.33
Sat Flow, veh/h	7	1851	1583	330	1051	189				1313	152	282
Grp Volume(v), veh/h	264	0	75	391	0	0				495	0	0
Grp Sat Flow(s),veh/h/ln	1858	0	1583	1569	0	0				1747	0	0
Q Serve(g_s), s	0.0	0.0	1.5	2.9	0.0	0.0				17.3	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	1.5	8.6	0.0	0.0				17.3	0.0	0.0
Prop In Lane	0.02		1.00	0.26		0.12				0.75		0.16
Lane Grp Cap(c), veh/h	1077	0	870	932	0	0				572	0	0
V/C Ratio(X)	0.25	0.00	0.09	0.42	0.00	0.00				0.87	0.00	0.00
Avail Cap(c_a), veh/h	1077	0	870	932	0	0				753	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.97	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	0.0	6.9	8.4	0.0	0.0				20.5	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.2	1.3	0.0	0.0				8.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.6	0.0	0.7	4.4	0.0	0.0				9.6	0.0	0.0
LnGrp Delay(d),s/veh	8.2	0.0	7.1	9.8	0.0	0.0				28.8	0.0	0.0
LnGrp LOS	A		A	A						C		
Approach Vol, veh/h		339			391						495	
Approach Delay, s/veh		8.0			9.8						28.8	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				39.7		25.3		39.7
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				29.0		28.0		29.0
Max Q Clear Time (g_c+I1), s				6.8		19.3		10.6
Green Ext Time (p_c), s				4.3		2.0		4.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	599	274	152	286
v/c Ratio	0.67	0.28	0.17	0.58
Control Delay	11.7	6.7	1.8	19.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.7	6.7	1.8	19.8
Queue Length 50th (ft)	83	30	0	51
Queue Length 95th (ft)	207	76	18	151
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	1488	1656	1440	733
Starvation Cap Reductn	82	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.43	0.17	0.11	0.39

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	92	375	78	6	243	138	138	98	24	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	101	412	86	7	267	152	152	108	26			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	225	653	125	120	970	834	213	152	36			
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53	0.22	0.22	0.22			
Sat Flow, veh/h	178	1239	238	11	1840	1583	950	675	162			
Grp Volume(v), veh/h	599	0	0	274	0	152	286	0	0			
Grp Sat Flow(s),veh/h/ln	1654	0	0	1851	0	1583	1787	0	0			
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	1.6	4.8	0.0	0.0			
Cycle Q Clear(g_c), s	8.0	0.0	0.0	2.6	0.0	1.6	4.8	0.0	0.0			
Prop In Lane	0.17		0.14	0.03		1.00	0.53		0.09			
Lane Grp Cap(c), veh/h	1002	0	0	1090	0	834	401	0	0			
V/C Ratio(X)	0.60	0.00	0.00	0.25	0.00	0.18	0.71	0.00	0.00			
Avail Cap(c_a), veh/h	2130	0	0	2387	0	1967	943	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.4	0.0	0.0	4.2	0.0	4.0	11.5	0.0	0.0			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	0.1	2.4	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	3.8	0.0	0.0	1.3	0.0	0.7	2.6	0.0	0.0			
LnGrp Delay(d),s/veh	6.0	0.0	0.0	4.3	0.0	4.1	13.9	0.0	0.0			
LnGrp LOS	A			A		A	B					
Approach Vol, veh/h		599			426			286				
Approach Delay, s/veh		6.0			4.3			13.9				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		11.2		21.0				21.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		17.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		6.8		10.0				4.6
Green Ext Time (p_c), s		1.1		7.0				7.2

Intersection Summary	
HCM 2010 Ctrl Delay	7.1
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	145	392	6	334	325	6	366	152
v/c Ratio	0.39	0.38	0.03	0.57	0.14	0.04	0.42	0.30
Control Delay	26.6	1.8	28.4	21.2	5.9	32.4	21.2	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	1.8	28.4	21.2	5.9	32.4	21.2	6.7
Queue Length 50th (ft)	36	0	1	79	15	2	47	0
Queue Length 95th (ft)	115	17	13	201	61	14	117	37
Internal Link Dist (ft)	398		252		434		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	556	1359	1051	1073	2979	157	1657	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.29	0.01	0.31	0.11	0.04	0.22	0.18

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	109	12	325	1	3	1	277	263	7	5	304	126
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	131	14	392	1	4	1	334	317	8	6	366	152
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	40	735	2	8	2	414	1541	39	11	743	332
Arrive On Green	0.23	0.23	0.23	0.01	0.01	0.01	0.23	0.44	0.44	0.01	0.21	0.21
Sat Flow, veh/h	1610	172	1583	299	1197	299	1774	3528	89	1774	3539	1583
Grp Volume(v), veh/h	145	0	392	6	0	0	334	159	166	6	366	152
Grp Sat Flow(s),veh/h/ln	1782	0	1583	1795	0	0	1774	1770	1847	1774	1770	1583
Q Serve(g_s), s	3.4	0.0	8.8	0.2	0.0	0.0	8.9	2.8	2.8	0.2	4.6	4.2
Cycle Q Clear(g_c), s	3.4	0.0	8.8	0.2	0.0	0.0	8.9	2.8	2.8	0.2	4.6	4.2
Prop In Lane	0.90		1.00	0.17		0.17	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	411	0	735	11	0	0	414	773	807	11	743	332
V/C Ratio(X)	0.35	0.00	0.53	0.52	0.00	0.00	0.81	0.21	0.21	0.53	0.49	0.46
Avail Cap(c_a), veh/h	498	0	812	932	0	0	992	1591	1660	142	1485	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	0.0	9.6	24.8	0.0	0.0	18.1	8.7	8.7	24.8	17.4	17.3
Incr Delay (d2), s/veh	0.5	0.0	0.6	32.2	0.0	0.0	3.8	0.1	0.1	33.2	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.7	0.0	3.9	0.2	0.0	0.0	4.8	1.4	1.4	0.2	2.3	1.9
LnGrp Delay(d),s/veh	16.6	0.0	10.2	57.0	0.0	0.0	21.9	8.9	8.9	58.0	17.9	18.3
LnGrp LOS	B		B	E			C	A	A	E	B	B
Approach Vol, veh/h		537			6			659			524	
Approach Delay, s/veh		11.9			57.0			15.5			18.5	
Approach LOS		B			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	25.9		15.6	15.7	14.5		4.3
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	45.0		14.0	28.0	21.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	4.8		10.8	10.9	6.6		2.2
Green Ext Time (p_c), s	0.0	5.1		0.7	0.9	3.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	44	31	568	48	32	570
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	47	33	604	51	34	606

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1001	328	0	0	655	0
Stage 1	630	-	-	-	-	-
Stage 2	371	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	239	668	-	-	928	-
Stage 1	493	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	226	668	-	-	928	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	631	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	438	928	-
HCM Lane V/C Ratio	-	-	0.182	0.037	-
HCM Control Delay (s)	-	-	15	9	0.2
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	162	28	427	396
v/c Ratio	0.15	0.03	0.44	0.74
Control Delay	8.2	3.8	8.5	27.8
Queue Delay	0.0	0.0	0.5	0.0
Total Delay	8.2	3.8	9.0	27.8
Queue Length 50th (ft)	26	0	95	133
Queue Length 95th (ft)	66	11	152	189
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	1071	933	982	691
Starvation Cap Reductn	0	0	214	0
Spillback Cap Reductn	156	0	0	1
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.03	0.56	0.57

Intersection Summary

Principal MU
2: US 101 SB Ramp/W Front Rd & Santa Rosa Rd
Ex+P PM
11/4/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	6	153	27	75	243	100	0	0	0	309	19	61
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	6	156	28	77	248	102				315	19	62
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	70	1110	963	204	632	242				373	23	73
Arrive On Green	0.61	0.61	0.61	1.00	1.00	1.00				0.27	0.27	0.27
Sat Flow, veh/h	21	1825	1583	228	1040	398				1388	84	273
Grp Volume(v), veh/h	162	0	28	427	0	0				396	0	0
Grp Sat Flow(s),veh/h/ln	1846	0	1583	1665	0	0				1745	0	0
Q Serve(g_s), s	0.0	0.0	0.5	0.0	0.0	0.0				13.9	0.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	0.5	0.0	0.0	0.0				13.9	0.0	0.0
Prop In Lane	0.04		1.00	0.18		0.24				0.80		0.16
Lane Grp Cap(c), veh/h	1180	0	963	1078	0	0				469	0	0
V/C Ratio(X)	0.14	0.00	0.03	0.40	0.00	0.00				0.84	0.00	0.00
Avail Cap(c_a), veh/h	1180	0	963	1078	0	0				671	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.99	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	0.0	5.1	0.0	0.0	0.0				22.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.1	1.1	0.0	0.0				6.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.3	0.0	0.2	0.3	0.0	0.0				7.6	0.0	0.0
LnGrp Delay(d),s/veh	5.7	0.0	5.1	1.1	0.0	0.0				29.2	0.0	0.0
LnGrp LOS	A		A	A						C		
Approach Vol, veh/h		190			427						396	
Approach Delay, s/veh		5.6			1.1						29.2	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				43.5		21.5		43.5
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				32.0		25.0		32.0
Max Q Clear Time (g_c+I1), s				4.4		15.9		2.0
Green Ext Time (p_c), s				3.8		1.5		3.9

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	486	230	206	422
v/c Ratio	0.50	0.22	0.21	0.78
Control Delay	19.0	8.3	2.1	30.0
Queue Delay	1.1	0.0	0.0	0.0
Total Delay	20.1	8.3	2.1	30.0
Queue Length 50th (ft)	179	40	0	144
Queue Length 95th (ft)	277	86	28	215
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	975	1073	1007	647
Starvation Cap Reductn	270	0	0	0
Spillback Cap Reductn	0	25	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.69	0.22	0.20	0.65

Intersection Summary

Principal MU
3: US 101 NB Ramp/E Front St & Santa Rosa Rd
Ex+P PM
11/4/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	76	288	87	6	208	192	195	139	59	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	82	310	94	6	224	206	210	149	63			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	184	664	188	63	1106	950	244	173	73			
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28	0.28			
Sat Flow, veh/h	198	1107	313	11	1842	1583	882	626	265			
Grp Volume(v), veh/h	486	0	0	230	0	206	422	0	0			
Grp Sat Flow(s),veh/h/ln	1619	0	0	1853	0	1583	1772	0	0			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	3.9	14.7	0.0	0.0			
Cycle Q Clear(g_c), s	9.6	0.0	0.0	3.7	0.0	3.9	14.7	0.0	0.0			
Prop In Lane	0.17		0.19	0.03		1.00	0.50		0.15			
Lane Grp Cap(c), veh/h	1036	0	0	1169	0	950	490	0	0			
V/C Ratio(X)	0.47	0.00	0.00	0.20	0.00	0.22	0.86	0.00	0.00			
Avail Cap(c_a), veh/h	1036	0	0	1169	0	950	627	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.90	0.00	0.90	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.1	0.0	0.0	5.9	0.0	6.0	22.3	0.0	0.0			
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.3	0.0	0.5	9.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	5.2	0.0	0.0	2.0	0.0	1.8	8.5	0.0	0.0			
LnGrp Delay(d),s/veh	8.6	0.0	0.0	6.3	0.0	6.4	31.9	0.0	0.0			
LnGrp LOS	A			A		A	C					
Approach Vol, veh/h		486			436			422				
Approach Delay, s/veh		8.6			6.3			31.9				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		43.0				43.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		16.7		11.6				5.9
Green Ext Time (p_c), s		1.3		5.3				5.6

Intersection Summary		
HCM 2010 Ctrl Delay		15.2
HCM 2010 LOS		B

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	166	213	32	253	455	2	498	155
v/c Ratio	0.47	0.23	0.15	0.56	0.22	0.02	0.53	0.29
Control Delay	30.5	1.9	27.2	27.7	8.3	36.5	23.3	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	1.9	27.2	27.7	8.3	36.5	23.3	6.4
Queue Length 50th (ft)	48	0	7	70	26	1	71	0
Queue Length 95th (ft)	143	21	37	191	105	8	171	44
Internal Link Dist (ft)	398		252		434		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	523	1190	818	816	2687	130	1435	734
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.18	0.04	0.31	0.17	0.02	0.35	0.21

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	152	4	200	3	18	9	238	427	1	2	468	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	162	4	213	3	19	10	253	454	1	2	498	155
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	288	7	555	5	30	16	328	1665	4	4	980	438
Arrive On Green	0.17	0.17	0.17	0.03	0.03	0.03	0.18	0.46	0.46	0.00	0.28	0.28
Sat Flow, veh/h	1733	43	1583	165	1044	549	1774	3623	8	1774	3539	1583
Grp Volume(v), veh/h	166	0	213	32	0	0	253	222	233	2	498	155
Grp Sat Flow(s),veh/h/ln	1776	0	1583	1758	0	0	1774	1770	1861	1774	1770	1583
Q Serve(g_s), s	4.0	0.0	4.7	0.8	0.0	0.0	6.3	3.6	3.6	0.1	5.5	3.7
Cycle Q Clear(g_c), s	4.0	0.0	4.7	0.8	0.0	0.0	6.3	3.6	3.6	0.1	5.5	3.7
Prop In Lane	0.98		1.00	0.09		0.31	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	0	555	51	0	0	328	813	855	4	980	438
V/C Ratio(X)	0.56	0.00	0.38	0.63	0.00	0.00	0.77	0.27	0.27	0.51	0.51	0.35
Avail Cap(c_a), veh/h	610	0	836	980	0	0	951	1632	1717	152	1670	747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	11.4	22.4	0.0	0.0	18.1	7.8	7.8	23.2	14.2	13.5
Incr Delay (d2), s/veh	1.7	0.0	0.4	11.9	0.0	0.0	3.9	0.2	0.2	77.9	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	0.0	2.1	0.6	0.0	0.0	3.4	1.8	1.9	0.1	2.8	1.7
LnGrp Delay(d),s/veh	19.6	0.0	11.8	34.2	0.0	0.0	21.9	8.0	8.0	101.1	14.6	14.0
LnGrp LOS	B		B	C			C	A	A	F	B	B
Approach Vol, veh/h		379			32			708			655	
Approach Delay, s/veh		15.2			34.2			13.0			14.7	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.1	25.4		11.7	12.6	16.9		5.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		16.0	25.0	22.0		26.0
Max Q Clear Time (g_c+I1), s	2.1	5.6		6.7	8.3	7.5		2.8
Green Ext Time (p_c), s	0.0	7.2		1.1	0.6	5.4		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		14.5
HCM 2010 LOS		B

Intersection	
Int Delay, s/veh	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	30	20	380	20	30	450
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	22	409	22	32	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	725	215	0	0	430	0
Stage 1	419	-	-	-	-	-
Stage 2	306	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	360	790	-	-	1126	-
Stage 1	632	-	-	-	-	-
Stage 2	720	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	346	790	-	-	1126	-
Mov Cap-2 Maneuver	459	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	692	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	551	1126	-
HCM Lane V/C Ratio	-	-	0.098	0.029	-
HCM Control Delay (s)	-	-	12.2	8.3	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	301	80	443	523
v/c Ratio	0.31	0.09	0.54	0.81
Control Delay	11.4	3.3	14.5	28.4
Queue Delay	0.0	0.0	1.1	0.0
Total Delay	11.4	3.3	15.7	28.4
Queue Length 50th (ft)	65	0	108	172
Queue Length 95th (ft)	124	19	206	247
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	957	857	821	767
Starvation Cap Reductn	0	0	181	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.09	0.69	0.68

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	260	70	90	250	50	0	0	0	330	50	80
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	6	295	80	102	284	57				375	57	91
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	61	988	847	220	585	109				429	65	104
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53				0.34	0.34	0.34
Sat Flow, veh/h	8	1848	1583	285	1095	204				1252	190	304
Grp Volume(v), veh/h	301	0	80	443	0	0				523	0	0
Grp Sat Flow(s),veh/h/ln	1856	0	1583	1583	0	0				1747	0	0
Q Serve(g_s), s	0.0	0.0	1.6	3.9	0.0	0.0				18.3	0.0	0.0
Cycle Q Clear(g_c), s	5.8	0.0	1.6	10.6	0.0	0.0				18.3	0.0	0.0
Prop In Lane	0.02		1.00	0.23		0.13				0.72		0.17
Lane Grp Cap(c), veh/h	1049	0	847	915	0	0				598	0	0
V/C Ratio(X)	0.29	0.00	0.09	0.48	0.00	0.00				0.87	0.00	0.00
Avail Cap(c_a), veh/h	1049	0	847	915	0	0				752	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.96	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	8.4	0.0	7.4	9.4	0.0	0.0				20.1	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.2	1.8	0.0	0.0				9.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.1	0.0	0.7	5.4	0.0	0.0				10.3	0.0	0.0
LnGrp Delay(d),s/veh	9.1	0.0	7.6	11.1	0.0	0.0				29.5	0.0	0.0
LnGrp LOS	A		A	B						C		
Approach Vol, veh/h		381			443						523	
Approach Delay, s/veh		8.8			11.1						29.5	
Approach LOS		A			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.8		26.2		38.8
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				29.0		28.0		29.0
Max Q Clear Time (g_c+I1), s				7.8		20.3		12.6
Green Ext Time (p_c), s				4.9		2.0		4.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.6
HCM 2010 LOS	B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	638	319	176	297
v/c Ratio	0.70	0.32	0.18	0.62
Control Delay	12.6	6.8	1.6	22.1
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	12.7	6.8	1.6	22.1
Queue Length 50th (ft)	97	38	0	58
Queue Length 95th (ft)	230	87	19	171
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	1410	1580	1394	695
Starvation Cap Reductn	111	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.49	0.20	0.13	0.43

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	400	80	10	280	160	140	100	30	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	110	440	88	11	308	176	154	110	33			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	220	666	123	114	1000	867	211	151	45			
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.23	0.23	0.23			
Sat Flow, veh/h	186	1217	224	17	1827	1583	924	660	198			
Grp Volume(v), veh/h	638	0	0	319	0	176	297	0	0			
Grp Sat Flow(s),veh/h/ln	1627	0	0	1844	0	1583	1782	0	0			
Q Serve(g_s), s	3.7	0.0	0.0	0.0	0.0	2.0	5.5	0.0	0.0			
Cycle Q Clear(g_c), s	9.6	0.0	0.0	3.3	0.0	2.0	5.5	0.0	0.0			
Prop In Lane	0.17		0.14	0.03		1.00	0.52		0.11			
Lane Grp Cap(c), veh/h	1009	0	0	1114	0	867	407	0	0			
V/C Ratio(X)	0.63	0.00	0.00	0.29	0.00	0.20	0.73	0.00	0.00			
Avail Cap(c_a), veh/h	1897	0	0	2144	0	1777	850	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.7	0.0	0.0	4.4	0.0	4.1	12.7	0.0	0.0			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.1	2.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	4.6	0.0	0.0	1.7	0.0	0.9	2.9	0.0	0.0			
LnGrp Delay(d),s/veh	6.4	0.0	0.0	4.5	0.0	4.2	15.3	0.0	0.0			
LnGrp LOS	A			A		A	B					
Approach Vol, veh/h		638			495			297				
Approach Delay, s/veh		6.4			4.4			15.3				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		12.1		23.5				23.5
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		17.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		7.5		11.6				5.3
Green Ext Time (p_c), s		1.1		7.9				8.3

Intersection Summary	
HCM 2010 Ctrl Delay	7.5
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	151	434	18	398	385	6	422	157
v/c Ratio	0.48	0.40	0.09	0.67	0.18	0.05	0.52	0.33
Control Delay	33.7	1.9	29.5	26.6	7.0	38.0	26.4	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.7	1.9	29.5	26.6	7.0	38.0	26.4	7.3
Queue Length 50th (ft)	48	0	4	111	20	2	67	0
Queue Length 95th (ft)	124	19	24	258	74	15	136	37
Internal Link Dist (ft)	398		252		771		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	427	1244	795	848	2677	121	1272	669
Starvation Cap Reductn	0	34	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.36	0.02	0.47	0.14	0.05	0.33	0.23

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	110	15	360	5	5	5	330	310	10	5	350	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	133	18	434	6	6	6	398	373	12	6	422	157
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	49	782	10	10	10	469	1654	53	11	760	340
Arrive On Green	0.23	0.23	0.23	0.02	0.02	0.02	0.26	0.47	0.47	0.01	0.21	0.21
Sat Flow, veh/h	1571	213	1583	577	577	577	1774	3500	112	1774	3539	1583
Grp Volume(v), veh/h	151	0	434	18	0	0	398	188	197	6	422	157
Grp Sat Flow(s),veh/h/ln	1784	0	1583	1732	0	0	1774	1770	1843	1774	1770	1583
Q Serve(g_s), s	4.2	0.0	11.2	0.6	0.0	0.0	12.4	3.7	3.7	0.2	6.2	5.0
Cycle Q Clear(g_c), s	4.2	0.0	11.2	0.6	0.0	0.0	12.4	3.7	3.7	0.2	6.2	5.0
Prop In Lane	0.88		1.00	0.33		0.33	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	410	0	782	30	0	0	469	836	871	11	760	340
V/C Ratio(X)	0.37	0.00	0.56	0.60	0.00	0.00	0.85	0.23	0.23	0.53	0.56	0.46
Avail Cap(c_a), veh/h	428	0	798	771	0	0	851	1364	1420	122	1273	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	0.0	10.3	28.5	0.0	0.0	20.4	9.1	9.1	28.9	20.4	20.0
Incr Delay (d2), s/veh	0.6	0.0	0.8	17.6	0.0	0.0	4.4	0.1	0.1	33.8	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.1	0.0	4.9	0.4	0.0	0.0	6.7	1.8	1.9	0.2	3.1	2.3
LnGrp Delay(d),s/veh	19.5	0.0	11.1	46.1	0.0	0.0	24.8	9.2	9.2	62.8	21.1	21.0
LnGrp LOS	B		B	D			C	A	A	E	C	C
Approach Vol, veh/h		585			18			783			585	
Approach Delay, s/veh		13.3			46.1			17.1			21.5	
Approach LOS		B			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	31.6		17.4	19.4	16.5		5.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	45.0		14.0	28.0	21.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	5.7		13.2	14.4	8.2		2.6
Green Ext Time (p_c), s	0.0	6.0		0.2	1.0	4.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	30	30	660	30	20	670
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	32	702	32	21	713

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1117	367	0	0	734	0
Stage 1	718	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	201	630	-	-	867	-
Stage 1	444	-	-	-	-	-
Stage 2	647	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	193	630	-	-	867	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	444	-	-	-	-	-
Stage 2	621	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15	0	0.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	425	867	-
HCM Lane V/C Ratio	-	-	0.15	0.025	-
HCM Control Delay (s)	-	-	15	9.3	0.2
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.5	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	173	31	449	469
v/c Ratio	0.17	0.04	0.49	0.80
Control Delay	9.2	4.0	10.1	29.2
Queue Delay	0.1	0.0	0.5	0.3
Total Delay	9.3	4.0	10.6	29.5
Queue Length 50th (ft)	32	0	101	158
Queue Length 95th (ft)	71	12	150	233
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	1003	887	926	693
Starvation Cap Reductn	0	0	172	0
Spillback Cap Reductn	158	0	0	26
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.20	0.03	0.60	0.70

Intersection Summary

Principal MU
2: US 101 SB Ramp/W Front Rd & Santa Rosa Rd
Cumulative PM
11/6/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	160	30	80	250	110	0	0	0	370	20	70
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	10	163	31	82	255	112				378	20	71
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	83	1015	900	194	580	235				434	23	81
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00				0.31	0.31	0.31
Sat Flow, veh/h	42	1785	1583	226	1020	414				1407	74	264
Grp Volume(v), veh/h	173	0	31	449	0	0				469	0	0
Grp Sat Flow(s),veh/h/ln	1827	0	1583	1660	0	0				1746	0	0
Q Serve(g_s), s	0.0	0.0	0.6	0.0	0.0	0.0				16.5	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.6	0.0	0.0	0.0				16.5	0.0	0.0
Prop In Lane	0.06		1.00	0.18		0.25				0.81		0.15
Lane Grp Cap(c), veh/h	1098	0	900	1009	0	0				538	0	0
V/C Ratio(X)	0.16	0.00	0.03	0.44	0.00	0.00				0.87	0.00	0.00
Avail Cap(c_a), veh/h	1098	0	900	1009	0	0				671	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	6.7	0.0	6.2	0.0	0.0	0.0				21.3	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	1.4	0.0	0.0				10.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.5	0.0	0.3	0.4	0.0	0.0				9.5	0.0	0.0
LnGrp Delay(d),s/veh	7.0	0.0	6.2	1.4	0.0	0.0				31.4	0.0	0.0
LnGrp LOS	A		A	A						C		
Approach Vol, veh/h		204			449						469	
Approach Delay, s/veh		6.9			1.4						31.4	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				41.0		24.0		41.0
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				32.0		25.0		32.0
Max Q Clear Time (g_c+I1), s				4.9		18.5		2.0
Green Ext Time (p_c), s				4.1		1.5		4.2

Intersection Summary		
HCM 2010 Ctrl Delay		14.9
HCM 2010 LOS		B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	560	258	247	431
v/c Ratio	0.58	0.25	0.24	0.80
Control Delay	20.2	8.4	2.0	31.4
Queue Delay	2.1	0.0	0.0	0.0
Total Delay	22.3	8.4	2.0	31.4
Queue Length 50th (ft)	217	47	0	147
Queue Length 95th (ft)	317	92	28	230
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	970	1053	1019	640
Starvation Cap Reductn	266	0	0	0
Spillback Cap Reductn	0	52	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.80	0.26	0.24	0.67

Intersection Summary

Principal MU
3: US 101 NB Ramp/E Front St & Santa Rosa Rd
Cumulative PM
11/6/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	340	100	10	230	230	200	140	60	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	86	366	108	11	247	247	215	151	65			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	168	675	186	73	1078	943	249	175	75			
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.28	0.28	0.28			
Sat Flow, veh/h	174	1134	313	26	1810	1583	884	621	267			
Grp Volume(v), veh/h	560	0	0	258	0	247	431	0	0			
Grp Sat Flow(s),veh/h/ln	1621	0	0	1836	0	1583	1771	0	0			
Q Serve(g_s), s	1.8	0.0	0.0	0.0	0.0	4.9	15.0	0.0	0.0			
Cycle Q Clear(g_c), s	12.2	0.0	0.0	4.2	0.0	4.9	15.0	0.0	0.0			
Prop In Lane	0.15		0.19	0.04		1.00	0.50		0.15			
Lane Grp Cap(c), veh/h	1029	0	0	1151	0	943	499	0	0			
V/C Ratio(X)	0.54	0.00	0.00	0.22	0.00	0.26	0.86	0.00	0.00			
Avail Cap(c_a), veh/h	1029	0	0	1151	0	943	627	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.85	0.00	0.85	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.7	0.0	0.0	6.2	0.0	6.3	22.2	0.0	0.0			
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.4	0.0	0.6	10.1	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	6.3	0.0	0.0	2.3	0.0	2.2	8.7	0.0	0.0			
LnGrp Delay(d),s/veh	9.8	0.0	0.0	6.6	0.0	6.9	32.3	0.0	0.0			
LnGrp LOS	A			A		A	C					
Approach Vol, veh/h		560			505			431				
Approach Delay, s/veh		9.8			6.7			32.3				
Approach LOS		A			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.3		42.7				42.7
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		17.0		14.2				6.9
Green Ext Time (p_c), s		1.3		6.1				6.8

Intersection Summary		
HCM 2010 Ctrl Delay		15.2
HCM 2010 LOS		B

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	175	255	37	319	548	5	574	160
v/c Ratio	0.53	0.28	0.20	0.66	0.27	0.04	0.62	0.30
Control Delay	36.0	1.9	30.3	32.1	9.1	39.8	27.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	1.9	30.3	32.1	9.1	39.8	27.5	6.6
Queue Length 50th (ft)	76	0	12	135	61	2	124	0
Queue Length 95th (ft)	154	23	43	243	127	14	206	46
Internal Link Dist (ft)	398		252		780		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	457	1082	694	712	2471	114	1254	664
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.24	0.05	0.45	0.22	0.04	0.46	0.24

Intersection Summary

Principal MU
4: El Camino Real & Santa Rosa Rd/Driveway
Cumulative PM
11/6/2014

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	5	240	5	20	10	300	510	5	5	540	150
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	170	5	255	5	21	11	319	543	5	5	574	160
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	9	623	7	31	16	391	1784	16	9	997	446
Arrive On Green	0.17	0.17	0.17	0.03	0.03	0.03	0.22	0.50	0.50	0.01	0.28	0.28
Sat Flow, veh/h	1726	51	1583	238	998	523	1774	3593	33	1774	3539	1583
Grp Volume(v), veh/h	175	0	255	37	0	0	319	267	281	5	574	160
Grp Sat Flow(s),veh/h/ln	1776	0	1583	1759	0	0	1774	1770	1857	1774	1770	1583
Q Serve(g_s), s	4.9	0.0	6.4	1.1	0.0	0.0	9.3	4.9	4.9	0.2	7.6	4.4
Cycle Q Clear(g_c), s	4.9	0.0	6.4	1.1	0.0	0.0	9.3	4.9	4.9	0.2	7.6	4.4
Prop In Lane	0.97		1.00	0.14		0.30	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	308	0	623	55	0	0	391	879	922	9	997	446
V/C Ratio(X)	0.57	0.00	0.41	0.67	0.00	0.00	0.82	0.30	0.30	0.53	0.58	0.36
Avail Cap(c_a), veh/h	521	0	813	838	0	0	813	1395	1463	130	1427	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	12.0	26.1	0.0	0.0	20.2	8.1	8.1	27.1	16.8	15.7
Incr Delay (d2), s/veh	1.6	0.0	0.4	13.0	0.0	0.0	4.2	0.2	0.2	38.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.6	0.0	2.8	0.7	0.0	0.0	5.0	2.4	2.5	0.2	3.7	2.0
LnGrp Delay(d),s/veh	22.3	0.0	12.4	39.2	0.0	0.0	24.5	8.3	8.3	65.7	17.3	16.1
LnGrp LOS	C		B	D			C	A	A	E	B	B
Approach Vol, veh/h		430			37			867			739	
Approach Delay, s/veh		16.4			39.2			14.3			17.4	
Approach LOS		B			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	31.1		13.5	16.0	19.4		5.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		16.0	25.0	22.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	6.9		8.4	11.3	9.6		3.1
Green Ext Time (p_c), s	0.0	8.8		1.1	0.8	5.8		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		16.3
HCM 2010 LOS		B

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	53	33	380	36	38	450
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	57	35	409	39	41	484

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	752	224	0	0	447	0
Stage 1	428	-	-	-	-	-
Stage 2	324	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	346	779	-	-	1110	-
Stage 1	625	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	328	779	-	-	1110	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	669	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	532	1110	-
HCM Lane V/C Ratio	-	-	0.174	0.037	-
HCM Control Delay (s)	-	-	13.2	8.4	0.2
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.6	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	303	80	453	529
v/c Ratio	0.32	0.09	0.56	0.81
Control Delay	11.6	3.3	15.2	28.2
Queue Delay	0.0	0.0	1.1	0.0
Total Delay	11.6	3.3	16.4	28.2
Queue Length 50th (ft)	68	0	116	171
Queue Length 95th (ft)	126	19	214	251
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	949	851	805	767
Starvation Cap Reductn	0	0	164	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.09	0.71	0.69

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	261	70	97	252	50	0	0	0	335	50	80
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	6	297	80	110	286	57				381	57	91
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	61	983	842	229	569	105				434	65	104
Arrive On Green	0.53	0.53	0.53	0.53	0.53	0.53				0.35	0.35	0.35
Sat Flow, veh/h	8	1848	1583	302	1070	197				1258	188	300
Grp Volume(v), veh/h	303	0	80	453	0	0				529	0	0
Grp Sat Flow(s),veh/h/ln	1856	0	1583	1569	0	0				1747	0	0
Q Serve(g_s), s	0.0	0.0	1.6	5.0	0.0	0.0				18.5	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	1.6	11.2	0.0	0.0				18.5	0.0	0.0
Prop In Lane	0.02		1.00	0.24		0.13				0.72		0.17
Lane Grp Cap(c), veh/h	1043	0	842	903	0	0				603	0	0
V/C Ratio(X)	0.29	0.00	0.10	0.50	0.00	0.00				0.88	0.00	0.00
Avail Cap(c_a), veh/h	1043	0	842	903	0	0				752	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.95	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	8.5	0.0	7.5	9.6	0.0	0.0				20.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.2	1.9	0.0	0.0				9.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	3.2	0.0	0.8	5.6	0.0	0.0				10.4	0.0	0.0
LnGrp Delay(d),s/veh	9.2	0.0	7.7	11.5	0.0	0.0				29.7	0.0	0.0
LnGrp LOS	A		A	B						C		
Approach Vol, veh/h		383			453						529	
Approach Delay, s/veh		8.9			11.5						29.7	
Approach LOS		A			B						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.6		26.4		38.6
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				29.0		28.0		29.0
Max Q Clear Time (g_c+I1), s				7.9		20.5		13.2
Green Ext Time (p_c), s				5.0		2.0		4.5

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	644	329	184	302
v/c Ratio	0.71	0.33	0.19	0.63
Control Delay	12.7	6.9	1.6	22.5
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	12.8	6.9	1.6	22.5
Queue Length 50th (ft)	100	40	0	60
Queue Length 95th (ft)	233	90	19	178
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	1399	1569	1386	690
Starvation Cap Reductn	117	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.50	0.21	0.13	0.44

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	406	80	10	289	167	140	100	35	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	110	446	88	11	318	184	154	110	38			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	217	669	122	111	1005	870	209	150	52			
Arrive On Green	0.55	0.55	0.55	0.55	0.55	0.55	0.23	0.23	0.23			
Sat Flow, veh/h	185	1217	222	16	1828	1583	907	648	224			
Grp Volume(v), veh/h	644	0	0	329	0	184	302	0	0			
Grp Sat Flow(s),veh/h/ln	1623	0	0	1844	0	1583	1778	0	0			
Q Serve(g_s), s	4.0	0.0	0.0	0.0	0.0	2.2	5.7	0.0	0.0			
Cycle Q Clear(g_c), s	9.9	0.0	0.0	3.5	0.0	2.2	5.7	0.0	0.0			
Prop In Lane	0.17		0.14	0.03		1.00	0.51		0.13			
Lane Grp Cap(c), veh/h	1008	0	0	1116	0	870	411	0	0			
V/C Ratio(X)	0.64	0.00	0.00	0.29	0.00	0.21	0.74	0.00	0.00			
Avail Cap(c_a), veh/h	1850	0	0	2097	0	1737	829	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	5.8	0.0	0.0	4.5	0.0	4.2	13.0	0.0	0.0			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.1	0.0	0.1	2.6	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	4.7	0.0	0.0	1.8	0.0	0.9	3.1	0.0	0.0			
LnGrp Delay(d),s/veh	6.5	0.0	0.0	4.6	0.0	4.3	15.6	0.0	0.0			
LnGrp LOS	A			A		A	B					
Approach Vol, veh/h		644			513			302				
Approach Delay, s/veh		6.5			4.5			15.6				
Approach LOS		A			A			B				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		12.4		24.0				24.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		17.0		40.0				40.0
Max Q Clear Time (g_c+I1), s		7.7		11.9				5.5
Green Ext Time (p_c), s		1.1		8.1				8.5

Intersection Summary	
HCM 2010 Ctrl Delay	7.7
HCM 2010 LOS	A

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	164	434	18	398	367	6	430	176
v/c Ratio	0.50	0.40	0.10	0.67	0.17	0.05	0.53	0.35
Control Delay	34.2	1.9	29.7	27.0	7.1	38.2	26.6	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.2	1.9	29.7	27.0	7.1	38.2	26.6	7.1
Queue Length 50th (ft)	53	0	4	115	20	2	71	0
Queue Length 95th (ft)	134	19	24	259	70	15	138	38
Internal Link Dist (ft)	398		252		771		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	419	1240	781	833	2648	119	1249	672
Starvation Cap Reductn	0	46	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.36	0.02	0.48	0.14	0.05	0.34	0.26

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	15	360	5	5	5	330	295	10	5	357	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	146	18	434	6	6	6	398	355	12	6	430	176
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	364	45	781	10	10	10	468	1656	56	11	765	342
Arrive On Green	0.23	0.23	0.23	0.02	0.02	0.02	0.26	0.47	0.47	0.01	0.22	0.22
Sat Flow, veh/h	1588	196	1583	577	577	577	1774	3494	118	1774	3539	1583
Grp Volume(v), veh/h	164	0	434	18	0	0	398	179	188	6	430	176
Grp Sat Flow(s),veh/h/ln	1783	0	1583	1732	0	0	1774	1770	1842	1774	1770	1583
Q Serve(g_s), s	4.6	0.0	11.2	0.6	0.0	0.0	12.5	3.5	3.5	0.2	6.4	5.7
Cycle Q Clear(g_c), s	4.6	0.0	11.2	0.6	0.0	0.0	12.5	3.5	3.5	0.2	6.4	5.7
Prop In Lane	0.89		1.00	0.33		0.33	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	781	30	0	0	468	839	873	11	765	342
V/C Ratio(X)	0.40	0.00	0.56	0.60	0.00	0.00	0.85	0.21	0.21	0.53	0.56	0.51
Avail Cap(c_a), veh/h	426	0	796	768	0	0	847	1358	1414	121	1268	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	10.4	28.6	0.0	0.0	20.5	9.0	9.0	29.0	20.5	20.3
Incr Delay (d2), s/veh	0.6	0.0	0.8	17.7	0.0	0.0	4.4	0.1	0.1	33.9	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.3	0.0	5.0	0.4	0.0	0.0	6.7	1.7	1.8	0.2	3.2	2.6
LnGrp Delay(d),s/veh	19.8	0.0	11.2	46.3	0.0	0.0	24.9	9.2	9.2	62.9	21.1	21.5
LnGrp LOS	B		B	D			C	A	A	E	C	C
Approach Vol, veh/h		598			18			765			612	
Approach Delay, s/veh		13.5			46.3			17.3			21.6	
Approach LOS		B			D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.4	31.8		17.5	19.5	16.7		5.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	45.0		14.0	28.0	21.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	5.5		13.2	14.5	8.4		2.6
Green Ext Time (p_c), s	0.0	6.0		0.2	1.0	4.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	49	40	660	54	33	670
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	43	702	57	35	713

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1158	380	0	0	760	0
Stage 1	731	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	189	618	-	-	848	-
Stage 1	437	-	-	-	-	-
Stage 2	626	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	176	618	-	-	848	-
Mov Cap-2 Maneuver	306	-	-	-	-	-
Stage 1	437	-	-	-	-	-
Stage 2	583	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	396	848	-
HCM Lane V/C Ratio	-	-	0.239	0.041	-
HCM Control Delay (s)	-	-	16.9	9.4	0.3
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.9	0.1	-

Lane Group	EBT	EBR	WBT	SBT
Lane Group Flow (vph)	175	31	456	476
v/c Ratio	0.18	0.04	0.50	0.80
Control Delay	9.3	3.9	10.1	29.7
Queue Delay	0.1	0.0	0.5	0.3
Total Delay	9.3	3.9	10.6	30.0
Queue Length 50th (ft)	33	0	101	160
Queue Length 95th (ft)	71	12	149	241
Internal Link Dist (ft)	445		235	842
Turn Bay Length (ft)		100		
Base Capacity (vph)	999	884	918	692
Starvation Cap Reductn	0	0	162	0
Spillback Cap Reductn	222	0	0	24
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.04	0.60	0.71

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	162	30	86	251	110	0	0	0	377	20	70
Number	7	4	14	3	8	18				1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900				1900	1863	1900
Adj Flow Rate, veh/h	10	165	31	88	256	112				385	20	71
Adj No. of Lanes	0	1	1	0	1	0				0	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2				0	2	0
Cap, veh/h	82	1010	895	203	567	229				440	23	81
Arrive On Green	0.57	0.57	0.57	1.00	1.00	1.00				0.31	0.31	0.31
Sat Flow, veh/h	41	1787	1583	242	1004	406				1412	73	260
Grp Volume(v), veh/h	175	0	31	456	0	0				476	0	0
Grp Sat Flow(s),veh/h/ln	1828	0	1583	1652	0	0				1746	0	0
Q Serve(g_s), s	0.0	0.0	0.6	0.0	0.0	0.0				16.8	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.6	0.0	0.0	0.0				16.8	0.0	0.0
Prop In Lane	0.06		1.00	0.19		0.25				0.81		0.15
Lane Grp Cap(c), veh/h	1091	0	895	999	0	0				545	0	0
V/C Ratio(X)	0.16	0.00	0.03	0.46	0.00	0.00				0.87	0.00	0.00
Avail Cap(c_a), veh/h	1091	0	895	999	0	0				672	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.00	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	6.8	0.0	6.3	0.0	0.0	0.0				21.2	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.1	1.5	0.0	0.0				10.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	1.6	0.0	0.3	0.4	0.0	0.0				9.7	0.0	0.0
LnGrp Delay(d),s/veh	7.1	0.0	6.3	1.5	0.0	0.0				31.7	0.0	0.0
LnGrp LOS	A		A	A						C		
Approach Vol, veh/h		206			456						476	
Approach Delay, s/veh		7.0			1.5						31.7	
Approach LOS		A			A						C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.7		24.3		40.7
Change Period (Y+Rc), s				4.0		4.0		4.0
Max Green Setting (Gmax), s				32.0		25.0		32.0
Max Q Clear Time (g_c+I1), s				4.9		18.8		2.0
Green Ext Time (p_c), s				4.2		1.5		4.2

Intersection Summary		
HCM 2010 Ctrl Delay		15.1
HCM 2010 LOS		B

Lane Group	EBT	WBT	WBR	NBT
Lane Group Flow (vph)	569	266	254	438
v/c Ratio	0.59	0.25	0.25	0.80
Control Delay	20.6	8.5	2.0	31.4
Queue Delay	2.3	0.0	0.0	0.0
Total Delay	22.9	8.6	2.0	31.4
Queue Length 50th (ft)	222	49	0	148
Queue Length 95th (ft)	322	94	29	234
Internal Link Dist (ft)	235	398		686
Turn Bay Length (ft)				
Base Capacity (vph)	967	1051	1020	641
Starvation Cap Reductn	262	0	0	0
Spillback Cap Reductn	0	52	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.81	0.27	0.25	0.68

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	80	349	100	10	237	236	200	140	67	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1863	1900	1863	1900			
Adj Flow Rate, veh/h	86	375	108	11	255	254	215	151	72			
Adj No. of Lanes	0	1	0	0	1	1	0	1	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	2	2	2	2	2	2	0	2	0			
Cap, veh/h	165	675	182	72	1072	937	248	174	83			
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.29	0.29	0.29			
Sat Flow, veh/h	171	1141	307	24	1813	1583	868	610	291			
Grp Volume(v), veh/h	569	0	0	266	0	254	438	0	0			
Grp Sat Flow(s),veh/h/ln	1620	0	0	1837	0	1583	1768	0	0			
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	5.1	15.3	0.0	0.0			
Cycle Q Clear(g_c), s	12.7	0.0	0.0	4.4	0.0	5.1	15.3	0.0	0.0			
Prop In Lane	0.15		0.19	0.04		1.00	0.49		0.16			
Lane Grp Cap(c), veh/h	1022	0	0	1144	0	937	505	0	0			
V/C Ratio(X)	0.56	0.00	0.00	0.23	0.00	0.27	0.87	0.00	0.00			
Avail Cap(c_a), veh/h	1022	0	0	1144	0	937	626	0	0			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.99	0.00	0.00	0.84	0.00	0.84	1.00	0.00	0.00			
Uniform Delay (d), s/veh	7.9	0.0	0.0	6.3	0.0	6.5	22.1	0.0	0.0			
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.4	0.0	0.6	10.5	0.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(-26165%),veh/ln	6.6	0.0	0.0	2.3	0.0	2.3	8.9	0.0	0.0			
LnGrp Delay(d),s/veh	10.1	0.0	0.0	6.7	0.0	7.1	32.6	0.0	0.0			
LnGrp LOS	B			A		A	C					
Approach Vol, veh/h		569			520			438				
Approach Delay, s/veh		10.1			6.9			32.6				
Approach LOS		B			A			C				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.6		42.4				42.4
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		23.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		17.3		14.7				7.1
Green Ext Time (p_c), s		1.3		6.2				7.0

Intersection Summary		
HCM 2010 Ctrl Delay		15.5
HCM 2010 LOS		B

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	193	255	37	319	555	5	581	173
v/c Ratio	0.56	0.28	0.21	0.67	0.27	0.05	0.62	0.32
Control Delay	36.5	1.9	30.5	32.7	9.3	40.2	28.0	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	1.9	30.5	32.7	9.3	40.2	28.0	6.5
Queue Length 50th (ft)	86	0	12	140	65	2	130	0
Queue Length 95th (ft)	169	23	43	243	129	14	209	48
Internal Link Dist (ft)	398		252		780		267	
Turn Bay Length (ft)				140		105		183
Base Capacity (vph)	448	1080	677	698	2445	111	1228	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.24	0.05	0.46	0.23	0.05	0.47	0.26

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	177	5	240	5	20	10	300	517	5	5	546	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, 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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	188	5	255	5	21	11	319	550	5	5	581	173
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	8	624	7	31	16	390	1790	16	9	1003	449
Arrive On Green	0.17	0.17	0.17	0.03	0.03	0.03	0.22	0.50	0.50	0.01	0.28	0.28
Sat Flow, veh/h	1730	46	1583	238	998	523	1774	3594	33	1774	3539	1583
Grp Volume(v), veh/h	193	0	255	37	0	0	319	271	284	5	581	173
Grp Sat Flow(s),veh/h/ln	1776	0	1583	1759	0	0	1774	1770	1857	1774	1770	1583
Q Serve(g_s), s	5.5	0.0	6.4	1.1	0.0	0.0	9.4	5.0	5.0	0.2	7.7	4.8
Cycle Q Clear(g_c), s	5.5	0.0	6.4	1.1	0.0	0.0	9.4	5.0	5.0	0.2	7.7	4.8
Prop In Lane	0.97		1.00	0.14		0.30	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	309	0	624	55	0	0	390	881	925	9	1003	449
V/C Ratio(X)	0.62	0.00	0.41	0.67	0.00	0.00	0.82	0.31	0.31	0.53	0.58	0.39
Avail Cap(c_a), veh/h	517	0	809	832	0	0	807	1384	1453	129	1417	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	12.0	26.3	0.0	0.0	20.4	8.2	8.2	27.3	16.9	15.8
Incr Delay (d2), s/veh	2.1	0.0	0.4	13.1	0.0	0.0	4.3	0.2	0.2	38.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(-26165%),veh/ln	2.9	0.0	2.9	0.8	0.0	0.0	5.1	2.5	2.6	0.2	3.8	2.2
LnGrp Delay(d),s/veh	23.1	0.0	12.5	39.5	0.0	0.0	24.7	8.4	8.4	65.9	17.4	16.4
LnGrp LOS	C		B	D			C	A	A	E	B	B
Approach Vol, veh/h		448			37			874			759	
Approach Delay, s/veh		17.0			39.5			14.3			17.5	
Approach LOS		B			D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.3	31.4		13.6	16.1	19.6		5.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	43.0		16.0	25.0	22.0		26.0
Max Q Clear Time (g_c+I1), s	2.2	7.0		8.4	11.4	9.7		3.1
Green Ext Time (p_c), s	0.0	9.1		1.2	0.8	5.8		0.1

Intersection Summary		
HCM 2010 Ctrl Delay		16.5
HCM 2010 LOS		B

Attachment 18 – Traffic Impact Report Addendum

Central Coast Transportation Consulting
Traffic Engineering & Transportation Planning

May 30, 2017

Barry Ephraim
ECR Principal, LLC
125 South Bowling Green Way
Los Angeles, CA 90049

Re: Atascadero Principal Project Description Update

Mr. Ephraim:

Central Coast Transportation Consulting (CCTC) prepared a Transportation Impact Study (TIS) in 2014 for the Principal Mixed Use project in the City of Atascadero. At the time, the project included 37 residential units, 3,215 square feet of office uses, and an automated car wash. The project description has changed to provide an additional five residential units by converting some units to triplex units. No other substantive changes are proposed.

Table 1 shows the effects of the project description change on the trips generated by the project.

Table 1: Project Trip Generation

Land Use	Size		Number of Trips: Daily	AM In	AM Out	AM Total	PM In	PM Out	PM Total
Single Family Residential[1]	20	units	190	4	11	15	13	7	20
Residential Condo/Townhouse[2]	22	units	172	3	12	15	11	6	17
General Office[3]	3,215	ft^2	35	4	1	5	1	4	5
Automated Car Wash[4]	1,945	ft^2	270	14	13	27	14	13	27
Total Trips			667	25	37	62	39	30	69
Previous Project Description			633	24	36	60	37	29	66
Change			34	1	1	2	2	1	3

1. ITE Land Use Code 210, Single-Family Detached Housing. Average rates used.
2. ITE Land Use Code 230, Residential Condominium/Townhouse. Fitted curve equation used.
3. ITE Land Use Code 710, General Office Building. Average rates used.
4. ITE Land Use Code 948, Automated Car Wash. Average rate used, with daily taken as ten times the PM peak hour, due to limited data. AM data taken to be equal to PM data.

Source: Trip Generation, 9th Edition, ITE (2012) and CCTC, 2017

The additional five residential units would add 34 daily trips, two AM peak hour trips, and three PM peak hour trips. This insubstantial increase in traffic would not degrade the level of service (LOS) of any of the 2014 TIS study intersections.

The site plan circulation has not changed significantly since the 2014 TIS.

The findings and recommendations in the 2014 TIS are adequate for the current project description. No additional recommendations are warranted.

Sincerely,

Central Coast Transportation Consulting

Joe Fernandez, PE, AICP
Principal

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895 Napa Ave, Suite A-6, Morro Bay, CA 93442