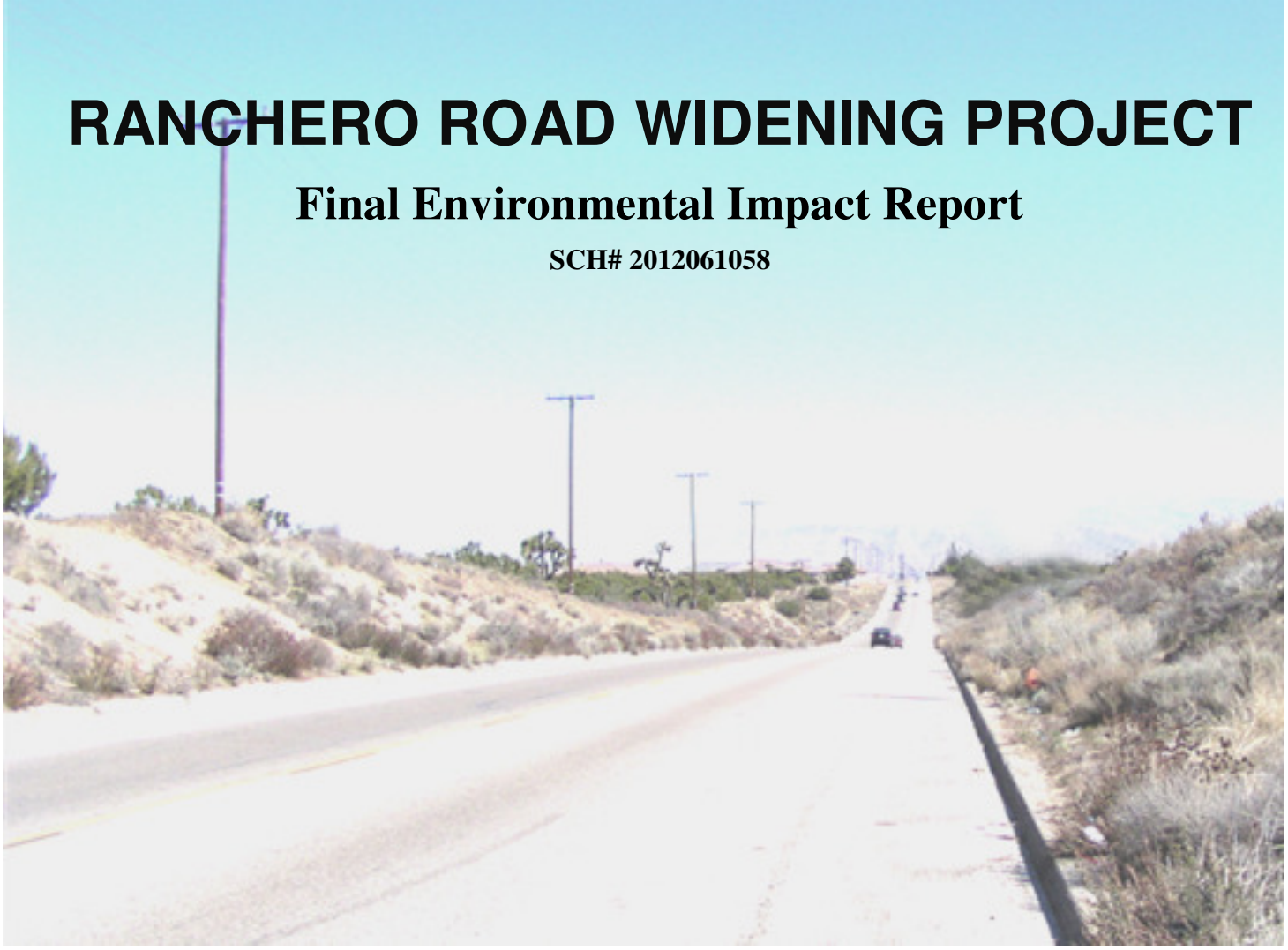
RANCHERO ROAD WIDENING PROJECT

Final Environmental Impact Report

SCH# 2012061058



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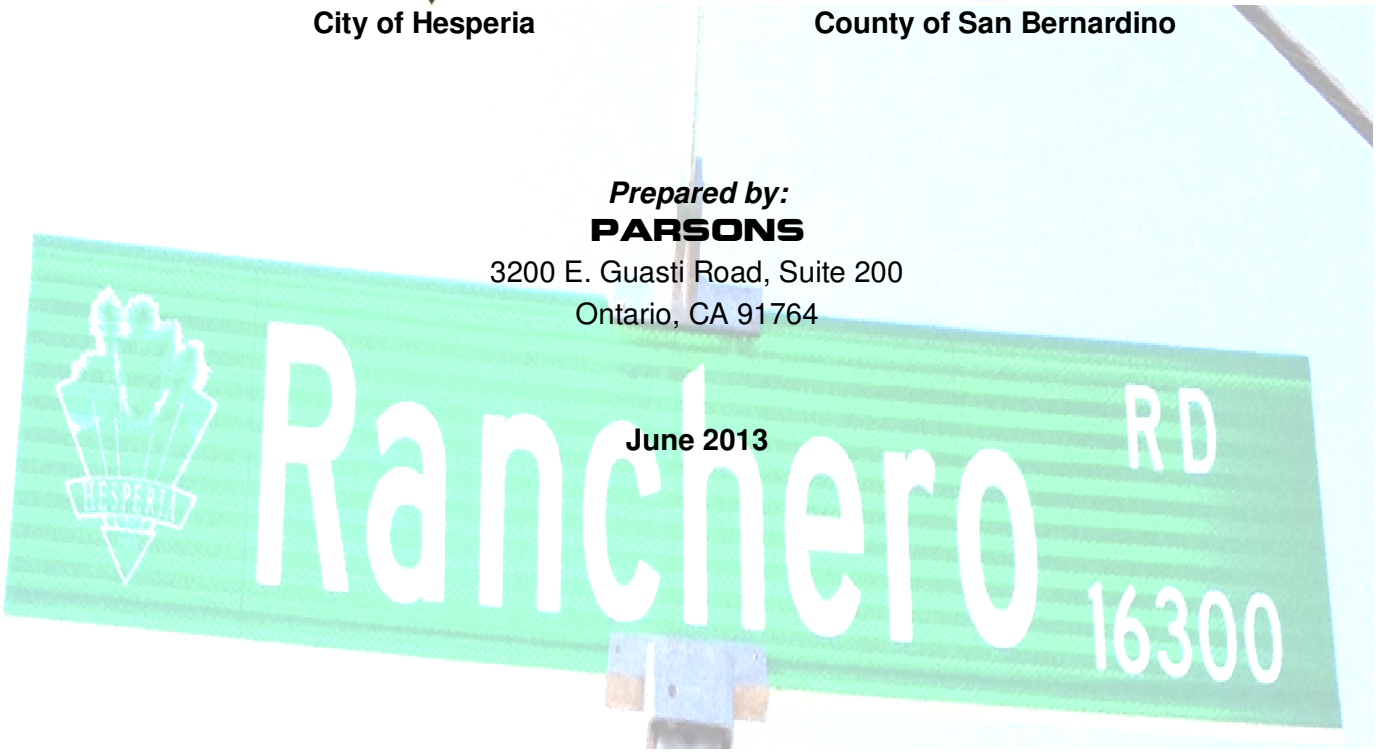

SCH: 2012061058

RANCHERO ROAD
WIDENING PROJECT
FINAL ENVIRONMENTAL IMPACT REPORT

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June 2013

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- Jurisdictional Delineation (October 2011)
- Cultural Resources Study (October 2011)
- Initial Site Assessment (August 2012)
- Noise Technical Report (October 2011)
- Geotechnical Design Report (February 2010)

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List of Abbreviated Terms

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AADT	Average annual daily traffic
AAM	annual arithmetic mean
AB	Assembly Bill
AC	asphalt concrete
ACM	asbestos-containing materials
ADL	aerially deposited lead
ADT	average daily traffic
amsl	above mean sea level
APCD	Air Pollution Control District
APE	Area of Potential Effects
AQMD	Air Quality Management District
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BLM	Bureau of Land Management
BMPs	Best Management Practices
BMS	Brownfield Management System
BNSF	Burlington Northern Santa Fe
BOMMP	Burrowing Owl Mitigation and Monitoring Plan
BTU	British Thermal Units
C&D	Construction and Demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFÉ	Corporate Average Fuel Economy
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDBG	Community Development Block Group
CDFW	California Department of Fish and Wildlife

CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
City	City of Hesperia
CMA	Congestion Management Agency
CMP	corrugated metal pipe
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
County	County of San Bernardino
CPUC	California Public Utilities Commission
CSC	California Species of Concern
CSP	corrugated steel pipe
CWA	Clean Water Act
dB	Decibel
dBA	A-weighted decibel
DE	diesel exhaust
DEOG	diesel exhaust organic gas
DOF	Department of Finance
DOT	United States Department of Transportation
DPM	diesel particulate matter
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EC	Engineering Controls
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration

FIRM	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FONSI	Finding of No Significant Impact
fps	feet per second
ft	foot/feet
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
HAPs	hazardous air pollutants
HMC	Hesperia Municipal Code
HOV	high-occupancy vehicle
HRPD	Hesperia Recreation and Parks Department
HUSD	Hesperia Unified School District
I-15	Interstate Highway 15
IC	Institutional Controls
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
IS	Initial Study
ISA	Initial Site Assessment
ISTEA	Intermodal Surface Transportation Efficiency Act
LBP	lead-based paint
L_{eq}	equivalent sound level
LOS	level of service
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MDD	maximum day demands
mg/m^3	milligrams per cubic meter
MLD	Most Likely Descendent
MND	Mitigated Negative Declaration
mpg	miles per gallon
mph	miles per hour
MPO	Metropolitan Planning Organization
MRF	Materials Recovery Facility
MRZs	Mineral Resources Zones
MS4	Municipal Separate Storm Sewer System

$MTCO_2e$	metric tons of carbon dioxide equivalent
MUTCD	California Manual on Uniform Traffic Control Devices
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAC	noise abatement criteria
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NHTSA	National Highway Traffic and Safety Administration
NO_2	nitrogen dioxide
NOAA Fisheries	National Marine Fisheries Service
NOI	Notice of Intent
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
O_3	Ozone
OGAC	open-graded asphaltic concrete
OHWM	ordinary high water mark
OILR	outdoor-indoor level reduction
OSHA	Occupational Safety and Health Administration
OWTS	onsite treatment system
Pb	Lead
PCBs	polychlorinated biphenyls
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
POAQC	Project of Air Quality Concern
ppb	parts per billion
ppm	parts per million
PPV	peak particle velocity
PRC	California Public Resources Code
PS&E	Plans, Specifications, and Estimate
psf	pounds per square foot
RCEs	Rail Crossings Engineering Section
RCRA	Resource Conservation and Recovery Act of 1976
RECs	Recognized Environmental Conditions

RHNA	Regional Housing Needs Allocation
ROG	reactive organic gas
ROW	right-of-way
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANBAG	San Bernardino Associated Governments
SB	Senate Bill
SBCFD	San Bernardino County Fire Department
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SGC	Southwest Gas Corporation
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act of 1975
SMBRPD	Site Mitigation and Brownfields Reuse Program Database
SMGB	State Mining and Geology Board
SO_2	sulfur dioxide
SOI	Sphere of Influence
SO_X	sulfur oxides
SPOC	California Species of Special Concern
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCEs	temporary construction easements
TCP	Traffic Circulation Plan
TCPs	traditional cultural properties
TMDL	total maximum daily load
TMP	Transportation Management Plan
U.S.C.	United States Code
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture

USDOE	United States Department of Energy
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
V/C	volume to capacity ratio
VCP	Voluntary Cleanup Program
VHT	Vehicle Hours Traveled
VMT	Vehicle Miles Traveled
VOC	volatile organic compound
vpd	vehicles per day
VVWRA	Victor Valley Wastewater Reclamation Authority

Summary

Note: A vertical line in the margin indicates changes to the Draft Environmental Impact Report since circulation began on December 18, 2012.

S.1 Introduction

This document has been prepared pursuant to the requirements of the California Environmental Quality Act (CEQA) of 1970. CEQA requires that the environmental impacts of the proposed action be examined and that consideration of alternatives be documented. This Environmental Impact Report (EIR) addresses potential environmental impacts associated with construction and operation of the proposed Ranchero Road Widening Project.

The City of Hesperia (City) has prepared this EIR to evaluate potential environmental consequences associated with development of the Ranchero Road Widening Project located along Ranchero Road generally, from on the west approximately 2,200 feet (ft) east of Mariposa Road to Seventh Avenue on the east within the City of Hesperia and County of San Bernardino (County). As part of the approval process for the City, the proposed project is required to undergo an environmental review pursuant to CEQA. One of the main objectives of CEQA is to disclose to the public and decision makers the potential environmental effects of the proposed activities. CEQA requires that the lead agency prepare an Initial Study (IS) to determine whether an EIR, Negative Declaration, or Mitigated Negative Declaration (MND) is required. The City is the Lead Agency for the proposed project under CEQA. The County is the Responsible Agency under CEQA. Based on the scope of the project, preparation of an EIR for the Ranchero Road Widening Project will adequately document the potential impacts of the proposed project on environmental resources.

This section of the EIR provides a brief description of the proposed project and its objectives, and summarizes potential environmental impacts. Table S-1 presented at the conclusion of this section, identify these impacts and list the mitigation measures recommended to eliminate or reduce the effects of impacts determined to be potentially significant. A No Build Alternative was also considered. For a full description of the proposed project, its impacts, considered alternative, and mitigation measures, please refer to Chapters 1 and 2.

The City and the County propose to widen Ranchero Road from generally, from on the west approximately 2,200 ft east of Mariposa Road to Seventh Avenue on the east. The proposed project would involve widening Ranchero Road from its current two-lane configuration to a four-lane facility within City and County jurisdictions. Most of the existing asphalt pavement sections along Ranchero Road would be removed and replaced with new asphalt pavement. The project would also entail widening the Union Pacific Railroad (UPRR) concrete panel crossing to an ultimate curb-to-curb design width of 92 ft; culvert extensions; and stormwater facilities. Chapter 1 provides a detailed project description.

The purpose of the proposed project is to provide the City with an additional arterial-level east-west access route across Hesperia, consistent with the City's adopted 2010 Circulation Element of the General Plan, which is anticipated to improve future traffic operations along Ranchero Road.

S.2 Background

The proposed Ranchero Road Widening Project would address the need to improve community facilities as described in the currently adopted 2010 General Plan. According to this plan, the City's goal is to "develop a safe, efficient, convenient, and attractive transportation system throughout the community, providing links within the City and with neighboring regions, and accommodating automobile, truck, pedestrian, recreational, equestrian, rail, air, and public transit needs which will meet current and future development requirements within the planning area." Improvement to City streets was identified by City survey as the highest priority for making Hesperia a better place to live (City of Hesperia, 2001a). The County's adopted *General Plan Circulation Element* (2007) identifies the "timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future residents." According to the *Hesperia General Plan Update Transportation Technical Report* (Kimley-Horn & Associates, Inc. 2009), future average daily traffic (ADT) volumes along Ranchero Road are anticipated to exceed 40,000 vehicles, which is more than the existing two-lane operational capacity of 14,500 vehicles per day. Ranchero Road, within the parameters of the proposed project, is anticipated to operate at unacceptable levels of service (LOS) with the current two-lane configuration for future conditions.

The City of Hesperia's Circulation Plan (2010a) designates Ranchero Road within the project limits as a six-lane Super Arterial and the County's Circulation and Transportation Plan (2012) designation as a six-lane Major Highway. The proposed

widening of Ranchero Road from its existing two-lane configuration to a four-lane facility is an interim improvement designed in accordance with local and regional circulation plans to satisfy its respective City and County ultimate roadway designations in the future.

S.3 Project Location

The project site is generally located in the Victor Valley region of the Mojave Desert within the jurisdiction of the City of Hesperia and County of San Bernardino. Hesperia is generally located south of the City of Victorville and southwest of the Town of Apple Valley. The proposed project's western limits along Ranchero Road begin approximately 2,200 ft east of Mariposa Road and extend to Seventh Avenue to the east for approximately 5 miles. Within the project limits, approximately 3 miles are within the County's jurisdiction, from the westerly project limits to Topaz Avenue, and the City's jurisdiction consists of approximately 2 miles of the proposed project from Topaz Avenue to Seventh Avenue. The project vicinity is shown in Figure S-1.

S.4 Project Setting

The topography of the project area is gently sloping from the west to east. Site elevation ranges from 3,416 ft above mean sea level (amsl) at Seventh Avenue to approximately 3,827 ft amsl at the western project terminus. Views from the project site are typical of the Mojave Desert, with views of desert vegetation or the built environment and distant views of surrounding mountains.

The project area consists of undeveloped and developed property throughout the 5-mile Ranchero Road Widening Project footprint. Land uses within the project area are predominantly rural residential, with pockets of medium-density single-family housing, agriculture, and small-scale isolated commercial located along the project alignment. The western half of the project area has a larger percentage of undeveloped land and rural residential homes compared to the mostly developed eastern half of the project area, which consists of low- to high-density residential housing. Within the project limits, the UPRR crosses Ranchero Road at the western portion of the project area, and the California Aqueduct crosses the eastern portion of the project area.

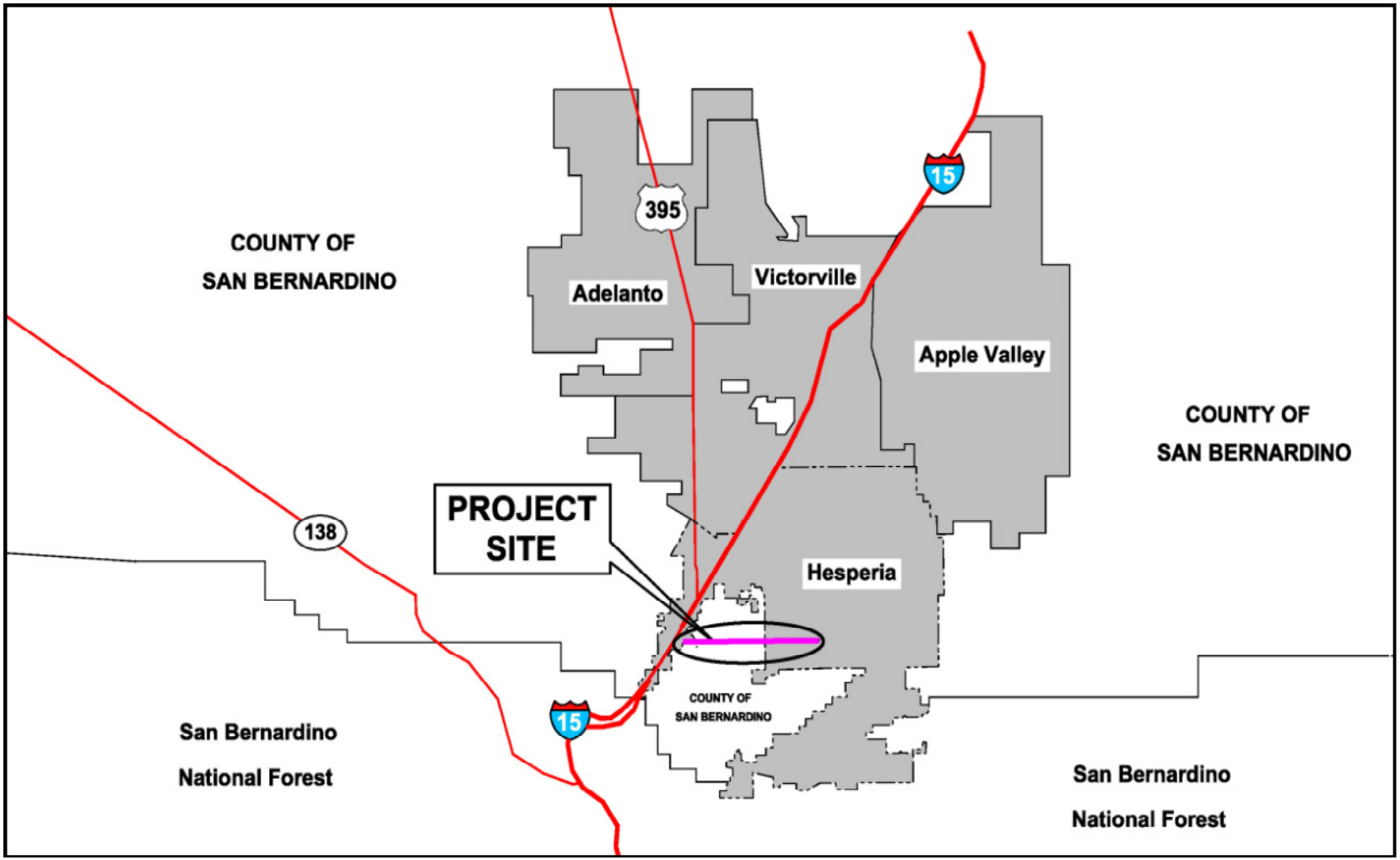

Figure S-1 Project Location and Vicinity Map

Ranchero Road is currently operating as a two-lane undivided roadway within the project limits. Portions of Ranchero Road within the project footprint have already been widened. The road widens to four lanes from just west of the traffic-light-controlled Cataba Road intersection to just east of Kuki Street. Ranchero Road has also been widened east of the stop-sign-controlled Escondido Road intersection. The roadway widens again between Topaz and Primrose avenues, although it is striped at this location for only two lanes. West of Primrose Avenue, the Maple Avenue and Cottonwood Avenue intersections are also stop-sign controlled. The road widens again east of Cottonwood Avenue to the vicinity of Kern Avenue; here, it is also striped for two lanes. From just east of the California Aqueduct crossing, the road stays wider east to the project site terminus.

The existing speed limit along Ranchero Road is generally 50 miles per hour (mph), except areas designated as school zones. Traffic movement in the project study area during the morning peak hours flows heavily westbound. During the evening peak hours, predominant traffic movements flow eastbound.

S.5 Project Objectives

The purpose of the proposed Ranchero Road Widening Project is as follows:

1. Improve east-west accessibility within the City of Hesperia and the City's Sphere of Influence (SOI) (within the jurisdiction of the County of San Bernardino);
2. Improve traffic circulation in the City and SOI by reducing traffic congestion; and
3. Support the mission of the City's Street Improvement Program by providing residents with improved residential streets and infrastructure.

Other projects are planned on Ranchero Road that would improve its significance as an east-west major arterial and promote economic growth in Hesperia. In coordination with the California Department of Transportation (Caltrans), the City is proposing to build a new interchange with I-15 at Ranchero Road. Hence, in addition to providing local traffic relief, the proposed project would relieve congestion at on- and off-ramps further north on I-15 and on other east-west arterials. The City is also planning to construct a new railroad underpass structure to accommodate existing and future BNSF Railway tracks, and realign and widen Ranchero Road to a 4-lane roadway from Seventh Avenue to Danbury Road. These projects would be consistent with the City's adopted 2010 General Plan Circulation Element goals, policies, and implementation measures for improving circulation within the City.

S.6 Project Description and Build Scenarios

The proposed Ranchero Road Widening Project is a circulation improvement to allow planned future growth in the area, as designated in the City's 2010 General Plan. The proposed project would also address projected future traffic congestion along the corridor by constructing two additional lanes along Ranchero Road just east of Mariposa and Seventh Avenue in each direction. The proposed project would support an "ultimate" project buildout that would widen the entire roadway to six lanes in the future, as identified in the City's and County's respective Circulation Plans.

Figure S-2 shows the proposed project alignment, roadway widening, and typical cross section, and it identifies Future Development Project locations. Proposed activities to implement the project include right-of-way (ROW) acquisitions along both sides of Ranchero Road to accommodate the roadway widening, site clearing, demolition and removal of existing roadbed, utility relocations, construction of drainage facilities, and roadway construction. The four-lane roadway would include four 11- or 12-ft-wide travel lanes, a 12-ft-wide center striped lane for turning movements, and two 6-ft-wide outside shoulders.

The proposed project would be constructed in two phases. Phase 1 consists of widening Ranchero Road within the County limits from 2,200 ft east of Mariposa Avenue to Topaz Avenue for a total of approximately 3 miles. It is anticipated that Phase 1 would be constructed by 2014. Phase 2 consists of widening Ranchero Road from Topaz Avenue to Seventh Avenue for a total of 2 miles. Phase 2 would be constructed by 2016.

S.6.1 Proposed Widening

The project proposes to widen Ranchero Road from approximately 2,200 ft east of Mariposa Road on the west to Seventh Avenue on the east. The proposed project would involve widening Ranchero Road from its current two-lane configuration to a four-lane facility within the City and County jurisdictions. As stated earlier, the proposed project supports the ultimate planned development of the project corridor into a six-lane roadway, which is to be constructed as needed to accommodate projected future traffic demand. The proposed project involves securing ROW throughout the project corridor to construct the two additional lanes along Ranchero Road. The California Aqueduct Bridge along Ranchero Road would not be widened as part of this proposed project and would remain a two-lane roadway facility.

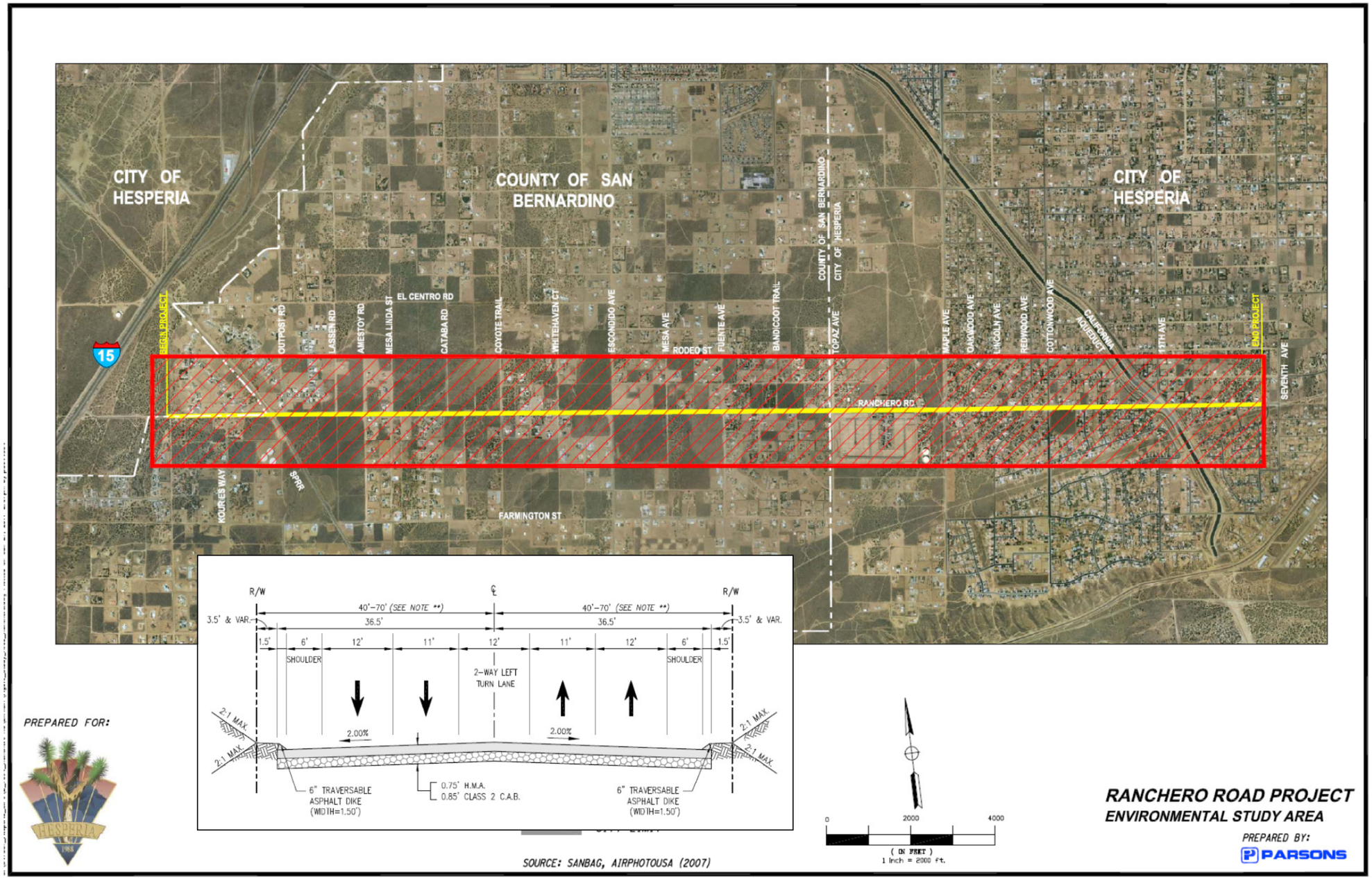

Figure S-2 Project Improvements

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S.6.2 Alternatives Considered

Two alternatives were considered during development of the proposed project, which include the No Build Alternative and Build Alternative. The alternatives analyzed in this EIR are described below.

S.6.3 No Build Alternative

The No Build Alternative would not widen Ranchero Road with construction of an additional lane in each direction or construction of other improvements to the existing roadway facility. The existing two-lane configuration would continue to be utilized by motorists into the future.

Levels of service are projected to be unsatisfactory, and roadway capacity would not increase in accordance with expected demand. This alternative would result in inferior transportation infrastructure in this growing portion of the City and the County. Existing levels of congestion would grow as development progresses, resulting in deteriorating levels of service over time. The No Build Alternative would not adequately support existing and planned levels of development in the project area.

S.6.4 Build Alternative

The Build Alternative would construct an additional eastbound and westbound travel lane along Ranchero Road 2,200 ft east of Mariposa Road on the west to Seventh Avenue on the east. Proposed activities to implement the project include site clearing, demolition and removal of existing roadbed, utility relocations, construction of drainage facilities, and roadway construction. The proposed Ranchero Road within the project area would consist of four lanes, which would include 11- or 12-ft-wide travel lanes, a 12-ft-wide center striped lane for turning movements, and two 6-ft-wide outside shoulders. To construct the project, partial acquisition of property would be required to accommodate the roadway widening.

S.7 Intended Uses of the EIR

CEQA requires all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid significant environmental effects resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the proposed project that could reduce or avoid those environmental effects.

Under CEQA, a Project EIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from that activity or project. The EIR must include the contents required by CEQA and the State CEQA Guidelines and examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

The City and the County will use this EIR in their deliberations concerning approval of the project, and it may be used by other agencies, including resource agencies, for purposes of granting permit authority or other similar approval necessary to implement the project.

S.8 Project Status

The proposed project has an estimated construction cost of approximately $18.2 million (in 2011 dollars). The project will be funded from local sources as identified in the latest 2013 Federal Transportation Improvement Program (FTIP) as Project ID 2008115 and SBD55030. According to the FTIP, Project ID 2008115 is described as "RANCHERO ST. FROM .3 M E/O MARIPOSA TO HESPERIA CL (3 MILES)-WIDEN 2-4 LANES." Similarly, Project ID SBD55030 is described in the FTIP as "RANCHERO RD. FROM I-15 to 7TH ST. - WIDEN FROM 2 TO 4 LANES (5.50 MILES)." The FTIP listing for the proposed project is being revised to combine both City and County listing to a single project. The revised description describes the project as "RANCHERO RD. FROM MARIPOSA RD TO SEVENTH AVE - WIDEN FROM 2 TO 4 LANES (5 MILES) WITH TWO-WAY LEFT-TURN MEDIAN AND SHOULDERS. WIDENING INCLUDES RECONSTRUCTING THE UPRR AT-GRADE CROSSING TO ACCOMODATE ULTIMATE CORRIDOR WIDTH."

S.9 Other Actions Required

The following permits are required to construct the proposed project:

- United States Army Corps of Engineers (USACE), Clean Water Act (CWA) Section 404 Permit;
- Lahontan Regional Water Quality Control Board (RWQCB), CWA Section 401 Water Quality Certification;
- California Department of Fish and Wildlife (CDFW), Fish and Game Code Section 1602 Streambed Alteration Agreement;

- State Water Resources Control Board (SWRCB), National Pollutant Discharge Elimination System (NPDES) Permit for General Construction Activities (Order No. 2009-0009-DWQ);
- SWRCB Statewide General NPDES Permit No. CAS000004 for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s);
- County of San Bernardino, Plan Check;
- San Bernardino County Flood Control District, Flood (Encroachment) Permit;
- California Public Utilities Commission (CPUC), Certificate of Convenience and Necessity;
- UPRR Encroachment Permit
- Department of Water Resources Encroachment Permit;
- City Encroachment Permit; and
- County Tree or Plant Removal Permit (Code 88.01.050).

S.10 Areas of Controversy

The following areas of controversy have arisen concerning the proposed project:

- Operation of the proposed project would have an adverse noise impact on private properties along the Ranchero Road corridor. The configuration of private property access points and topography make it infeasible to construct permanent soundwalls that can effectively abate significant impacts, thereby resulting in significant unavoidable noise impacts to those properties, despite reasonable efforts to mitigate the impacts, including analyzing the use of rubberized asphalt pavement. In certain residential homes, assistance will be provided to select residents to install double-pane windows to aid in reducing traffic-related noise. Noise impacts from construction of the proposed project will be mitigated to the greatest extent possible through construction scheduling and implementation of best management practices (BMPs) and minimization measures as indicated in Appendix H.
- The proposed project would result in an increase in traffic volumes due to the widening of Ranchero Road compared to the no-build scenario. Based on the findings of this EIR, the proposed project has the potential to reduce congestion along the corridor by increasing the capacity of the existing roadway. Without the proposed project, growth along Ranchero Road is still anticipated in the future, and the existing two-lane roadway is anticipated to operate with heavy traffic congestion. The proposed widening of Ranchero Road would address the anticipated traffic congestion in the future by providing additional lanes in each

direction. Some respondents to the Notice of Preparation have commented on existing and future traffic volumes; therefore, this also is considered an area of controversy.

S.11 Issues to be Resolved

Of the areas of controversy noted above, the potential for residual adverse noise impacts on residents remains an unresolved issue. It does not appear that practicable mitigation is available to entirely eliminate or effectively reduce impacts at all locations. As a result, it is likely that unavoidable adverse noise impacts will remain after the application of recommended mitigation. Understanding this, a Statement of Overriding Considerations will be required for the project as part of the CEQA Certification and project approval decision. This remains an unresolved issue at this point in the process.

Of the remaining areas of controversy (i.e., property acquisitions and increasing traffic volumes), neither will be considered unresolved at the completion of the CEQA process. Property acquisitions will be compensated for in accordance with applicable State and County law. Increasing traffic volumes would not be realized until construction of the proposed project is complete and sustained growth within the area continues over time. It is anticipated that the widening of Ranchero Road will increase the roadway capacity and aid in alleviating traffic congestion.

Other unresolved issues remain in the CEQA process.

The project requires the acquisition of permits and approvals from resource agencies, including USACE, RWQCB, and CDFW, pursuant to applicable laws. While it is expected that such permits and approvals will be secured, at this point in the process they have not been obtained; therefore, they are considered unresolved.

S.12 Comments and Coordination

S.12.1 Agency Coordination

Early agency consultation was conducted as part of the CEQA scoping process (see Section S.12.2). A Notice of Preparation (NOP) for the Ranchero Road EIR was prepared by the lead agency which provides a description, location and probable environmental effects of the proposed project. Copies of the NOP were sent to identified responsible and trustee agencies. Comments from several agencies are summarized in Appendix F.

S.12.2 Public Input

An NOP was published on June 15, 2012, beginning a scoping period that concluded on July 16, 2012. A 1/4 page advertisement in the *Daily Press* was acquired to inform the public of the preparation of the Ranchero Road Widening Project Draft EIR. After the end of the scoping period, ten (10) comments regarding preparation of the Draft EIR for the Ranchero Road Widening Project were received; a summary of these is provided in Appendix F.

The 45-day public comment period for the Ranchero Road Draft EIR officially began on December 18, 2012, and concluded on February 2, 2013. A Notice of Availability and Announcement of a Public Meeting for the Draft EIR was published in the *Daily Press.* The Public Information/Open House for the Draft EIR was scheduled on January 10, 2013, at the Hesperia Branch Library between 6:00 p.m. and 7:30 p.m.

Public review of the Draft EIR was made available at the following locations:

Hesperia Branch Library
9565 Seventh Avenue
Hesperia, CA 92345

City of Hesperia
Development Services
9700 Seventh Avenue
Hesperia, CA 92345

County of San Bernardino
Department of Public Works
Environmental Management Division
825 East Third Street, Room 127
San Bernardino, CA 92415

At the end of the public comment period for the Ranchero Road Draft EIR, 11 comments from the general public and resource agencies were received. Responses to public comments were addressed through the revision of this Final EIR and/or a response letter was sent to applicable agencies and individuals. A discussion of the public comment period is provided in Section 4 of this Final EIR. Appendix M summarizes the public and resource agency comments and the lead agencies' respective responses for each comment.

S.13 Summary of Impacts

Table S-1 provides a summary of potential construction (temporary) and operational (permanent) impacts that have been determined for the proposed project. Also provided in the tables is a listing of proposed mitigation/minimization measures

intended to mitigate or reduce impacts where possible. Impacts are characterized as degree (i.e., before mitigation) and residual impact (i.e., after mitigation) so that the effectiveness of the mitigation measures in reducing the impacts may be understood. The term "beneficial effect" means a change producing a beneficial consequence. The term "no effect" means no change from either existing conditions or the No Build Alternative. All listed impacts are associated with the preferred Build Alternative discussed in this EIR.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
Aesthetics (see Sections 2.1.3, 2.1.4, and 2.1.5)		
• No significant construction impacts are expected to scenic vistas or resources.	Less than Significant	• None required.
• Visual character and quality of the project corridor will be temporarily affected by removal of vegetation, heavy equipment use and storage, excavation and the presence of other visible general construction activity. • The corridor is not designated as a scenic highway. Additionally, no notable scenic vistas or scenic resources would be significantly altered. Implementation of the proposed project would not affect the scenic quality of the Ranchero Road corridor.	Less than Significant	• **VIS-1:** Design the project to be consistent with the City's visual enhancement goals. • **VIS-2:** Consistent with the City's 2010 General Plan policy (CN-1.1), use drought-resistant landscaping to minimize the contrast between the project and surrounding areas. Plan landscaping to complement existing natural and man-made features, including the dominant landscaping of surrounding areas. • **BIO-8:** Provide replacement landscaping or vegetation to disturbed areas consistent with the natural surroundings, and in accordance with City Code Section 16.24.150 and County Codes 88.01.050 (Tree or Plant Removal Permits) and 88.01.060 (Desert Native Plant Protection).
• No significant lighting-related construction impacts. • New signage and lighting would be introduced by the proposed project. • Vehicles provide the primary light and glare sources as they drive through the area during nighttime hours or inclement weather. With an additional lane on both sides of the existing road, light and glare from vehicles would be moved closer to existing and planned future residences; however, in most cases, the homes are set back a considerable distance from the road.	Less than Significant	• **VIS-3:** Incorporate design measures to reduce potential glare and night-lighting impacts during facility construction. Where appropriate, this should include provisions for shielding, specifying light intensity (e.g., number of lights, lumens, and wavelengths) in accordance with the City's lighting ordinance.
Agriculture (see Sections 2.2.4, 2.2.5, and 2.2.6)		
• Project construction might result in temporary exposure of farmlands to dust, noise, and stormwater runoff.	Less than Significant	• **AG-1:** Project construction Best Management Practices (BMPs) would be employed to minimize dust and noise, and to manage stormwater runoff. • **AG-2:** Construction staging would not occur on agricultural land, and adjacent agricultural parcels would not be otherwise significantly impacted during project construction.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• Temporary road closures and detours might occur as part of project construction, which could impact access to and from existing agricultural uses along the east end of the corridor.	Less than Significant	• **TRANS-1:** The City will prepare and implement a Transportation Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the City and its contractor will coordinate with local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. Two-way traffic through the construction zone will be maintained throughout the construction period.
• No special-status farmlands are in the project area, and there are no proposed conversions of land to non-agricultural uses as part of the proposed project.	No Effect	• None required.
Air Quality (see Sections 2.3.4, 2.3.5, and 2.3.6)		
• Predicted levels of nitrogen oxides (NO_X), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) localized emissions may temporarily exceed significance levels during construction.	Less than Significant With Mitigation	• **AQ-1:** Periodic watering for short-term stabilization of disturbed surface areas to minimize visible fugitive dust emissions (for purposes of this Rule, use of a water truck to maintain most disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance). • **AQ-2:** Take actions sufficient to prevent project-related track-out onto paved surfaces. • **AQ-3:** Cover loaded haul vehicles while operating on publicly maintained paved surfaces. • **AQ-4:** Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions. • **AQ-5:** Reduce nonessential earth-moving activity under high wind conditions (for purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance). • **AQ-6:** The Contractor shall water exposed surfaces at least twice per day; activities will be scheduled to allow for early paving of road surfaces;

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		reduced travel speeds (15 mph) on unpaved surfaces shall be enforced; simultaneous disturbance areas will be limited to the smallest area as practical; and all stockpiles will be covered with tarps. • **AQ-7:** Measures contained in the MDAQMD Rule 403 would be followed, as applicable, during project construction. The City of Hesperia would be responsible for selecting appropriate applicable Rule 403 measures to be followed during project construction and for overseeing compliance with the measures by the construction contractors. The construction contractors would be required to obtain construction permits from the City, and the permits would state the required Rule 403 measures that must be followed by the contractors.
• Project would not likely result in net operational emissions increase; project would likely relieve traffic congestion along corridor, delays due to traffic congestion would be likely be reduced, and average vehicle travel speed would increase, which would decrease pollutant emissions.	No Effect	• None required.
Biological Resources (see Sections 2.4.4, 2.4.5, and 2.4.6)		
• Areas immediately adjacent to Ranchero Road (and within a 300-foot [ft]-wide buffer on either side of the road) will likely be temporarily impacted by construction activities, including vehicle and equipment staging areas, access roads, and other construction-related activities. • Project would likely result in temporary impacts to: California Juniper Woodland, Mojave Desert Scrub, Joshua Tree Woodland, Atriplex Scrub, and other sensitive habitat types. • The project contains many occurrences of Joshua tree and California juniper, which are protected pursuant to Section 16.24.150 of	Less than Significant	• **BIO-8:** Provide replacement landscaping or vegetation to disturbed areas consistent with the natural surroundings, and in accordance with City Code Section 16.24.150 and County Codes 88.01.050 (Tree or Plant Removal Permits) and 88.01.060 (Desert Native Plant Protection).

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
Hesperia's Protected Plant Ordinance, and Section 88.01.060 of the County's Plant Protection and Management Code.		
• Project has the potential to indirectly impact adjacent biological resources. • Project has the potential to affect land within the jurisdictional areas of U.S. Army Corps of Engineers (USACE), CDFW, RWQCB, and the U.S. Fish and Wildlife Service (USFWS). • Project would result in permanent impacts to: Mojave Desert Scrub, California Juniper Woodland, Atriplex Scrub, and Joshua Tree Woodland. • Although no special-status species were observed in the project area during the project field investigation, the project is expected to result in permanent loss of habitat for nine special-status wildlife species. Those species include desert tortoise, San Diego coast horned lizard, coastal western whiptail, Cooper's hawk, burrowing owl, Le Conte's thrasher, gray vireo, Mojave ground squirrel, and American badger. However, the suitability of the habitat found on the site for these species is considered marginal due to several disturbances, such as urban development, foot traffic, trash dumping, and vehicle traffic. • The proposed project is expected to have typical temporary construction impacts to vegetation and water in the project area.	Less than Significant With Mitigation	• **BIO-1:** Necessary permits from USACE, CDFW, and RWQCB will be obtained prior to construction within jurisdictional areas. Potential impacts to listed species will be mitigated through conservation of core populations in conservation areas. • **BIO-2:** The following measures will be incorporated into a Stormwater Pollution Prevention Plan (SWPPP) to be prepared for the proposed project in accordance with the General Construction Stormwater Permit: – Areas proposed to be used for equipment access (e.g., temporary construction roads) within streambed habitats will be protected from soil compaction and erosion to the extent feasible through the use of BMPs such as geomats or rubber-tired equipment. – To eliminate the release of pollutants within sensitive habitats, the project will locate staging areas outside of streambeds and other jurisdictional features. – Equipment used in and around waters of the U.S. should be in good working order and free of dripping or leaking engine fluids. – All vehicle maintenance, staging, and materials storage will occur at least 300 ft from all waters of the U.S. – Any necessary equipment washing will occur where the water cannot flow into the stream channel. • **BIO-3:** Orange construction fencing and/or brightly colored staking will be used where recommended by the biologist and to delineate environmentally sensitive areas. • **BIO-4:** A biological monitor will be present during work in the vicinity of environmentally sensitive areas to ensure that direct or indirect impacts to these areas are avoided during construction. • **BIO-5:** Construction activities, such as clearing and grubbing, will occur outside the bird breeding season (approximately September to February) to minimize impacts to nesting birds. If construction is required to occur during the bird nesting season (March 1 to August 31), then a preclearance nesting bird survey will be conducted by a qualified biologist,

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		and buffer zones around active nests will be established as appropriate. If the preconstruction survey identifies occupation of nesting birds within the project area, then a 250-foot buffer around the nest shall be maintained until a qualified biologist has determined that the nest is no longer occupied. • **BIO-6:** A preconstruction survey for burrowing owl shall be conducted by a qualified biologist no more than thirty (30) days prior to ground-disturbing activities to determine the presence or absence of burrowing owls on the site. If there are resident owls found during the preconstruction survey, then the City of Hesperia will develop a Burrowing Owl Mitigation and Monitoring Plan (BOMMP) and work with CDFW to determine and implement measures to minimize impacts. • **BIO-7:** To the extent feasible, impacted desert trees (i.e., Joshua trees) or plants more than 6 ft in height or with stems more than 2 inches in diameter would be transplanted or stockpiled for future transplanting within the area directly impacted by project construction and site clearance. • **BIO-8:** Provide replacement landscaping or vegetation to disturbed areas consistent with the natural surroundings, and in accordance with City Code Section 16.24.150 and County Codes 88.01.050 (Tree or Plant Removal Permits) and 88.01.060 (Desert Native Plant Protection).
Cultural Resources (see Sections 2.5.4, 2.5.5, and 2.5.6)		
• The project's cultural resources survey did not indicate the presence of known historical, archaeological, paleontological or other cultural resources; however, construction monitoring will be utilized to minimize potential impacts to buried cultural resources in the unlikely event they are encountered during construction activities. • No expected impacts to archaeological, built-environment, or paleontological resources during operation of the proposed project.	Less than Significant	• **CR-1:** If any archaeological materials are encountered during ground-disturbing construction activities, all activities must be suspended in the vicinity of the find until the deposits or features are recorded and evaluated by a qualified archaeologist. If determined eligible for the California Register of Historical Resources (CRHR) by the City (based on the evaluation by the archaeologist), ground-disturbing construction activities cannot recommence until mitigation measures have been implemented. • **CR-2:** If human remains of any kind are found during construction, the requirements of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code (PRC), and Assembly Bill (AB) 2641 shall be followed. According to these requirements, all construction activities must cease immediately, and the

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		San Bernardino County Coroner and a qualified archaeologist must be notified. The Coroner will examine the remains and determine the next appropriate action based on his/her findings. If the Coroner determines the remains to be of Native American origin, he/she will notify the Native American Heritage Commission (NAHC). The NAHC will then identify the most likely descendants (MLD) to be consulted regarding treatment and/or reburial of the remains. If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, the project proponent shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. • **PALEO-1:** Prior to the start of any project-related construction, the City shall ensure that a designated paleontological resource specialist is available for field activities and prepared to implement the mitigation monitoring and reporting plan (MMRP) conditions. The designated paleontological resource specialist will be responsible for implementing all paleontological mitigation and for using qualified personnel to assist in this work. • **PALEO-2:** Prior to the start of construction, a Paleontological Resource Monitoring and Mitigation Plan drafted by the designated paleontological resource specialist will be submitted to the City for approval. The plan will identify general and specific measures to minimize potential impacts to sensitive paleontological resources. The project paleontological resource specialist will implement the Paleontological Resource Monitoring and Mitigation Plan as needed. The Paleontological Resource Monitoring and Mitigation Plan will include, but not be limited to, the following components: – A discussion of the sequence of project-related tasks, such as any preconstruction surveys, fieldwork, flagging or staking, construction monitoring, mapping and data recovery, fossil preparation and recovery, identification and inventory, preparation of final report, and transmittal for curation; – Identification of the person(s) expected to assist with each of the tasks identified within this condition, and a discussion of the mitigation team

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		leadership and organizational structure, and the interrelationship of tasks and responsibilities; – Where monitoring of project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring; – An explanation that the designated paleontological resource specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined; – A discussion of the equipment and supplies necessary for the recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits; – Inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum that meets the Society for Vertebrate Paleontology standards and requirements for the curation of paleontological resources; – Identification of the institution (expected to be the San Bernardino County Museum) that has agreed to receive any data and fossil materials recovered during project-related monitoring and mitigation work, discussion of any requirements of specifications for materials delivered for curation and how they will be met, and the name and phone number of the contact person at the institution. • **PALEO-3:** Prior to the start of construction, the designated paleontological resource specialist will prepare a staff training program for review and approval by the City and/or County. The paleontological resource specialist will conduct a training session for the project owner, project managers, construction supervisors, equipment operators, and all new employees as appropriate. The training program will address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. • **PALEO-4:** During construction, the designated paleontological resource specialist or paleontological monitor will be present at all times he/she

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		deems appropriate to monitor construction-related grading, excavation, trenching, and/or augering in areas with a high potential for paleontological resources to occur. Paleontological monitoring will include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. Upon the advice of the paleontological monitor, the Construction Manager will have the authority to temporarily divert excavations or drilling away from exposed fossils to efficiently and professionally recover the fossil specimens and collect associated data. • **PALEO-5:** The City and/or County, through the designated paleontological resource specialist, will ensure recovery, preparation for analysis, analysis, identification and inventory, preparation for curation, and delivery for curation of all significant paleontological resource materials collected during the monitoring, data recovery, mapping, and mitigation activities related to the project. • **PALEO-6:** The City will ensure preparation of a Paleontological Resources Report by the designated paleontological resource specialist following the analysis of any recovered fossil materials and related information. The Paleontological Resources Report will be submitted to the City for approval. The report will include a description and inventory list of recovered fossil materials, a confidential map showing the location of paleontological resources found in the field, determinations of sensitivity and significance, and a statement by the paleontological resource specialist that project impacts to paleontological resources have been mitigated.
Geology and Soils (see Sections 2.6.4, 2.6.5, and 2.6.6)		
• The proposed project would involve clearing and grubbing and grading, which might have minor temporary impacts. Construction activities could result in increased wind and soil erosion.	Less than Significant	• **GEO-1:** In accordance with the statewide General Permit for Storm Water Discharges Associated with Construction, the project would incorporate all applicable construction site BMPs to minimize potential loss of top-soil and/or soil erosion. • **GEO-2:** Implementation of construction BMPs overseen by a State-licensed professional, in compliance with aforementioned County standards, would reduce potential soil erosion impacts to a less than significant level.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• No structures are proposed; therefore, no risk of liquefaction, settlement, or expansion is expected.	No Effect	• None required.
• The project is not expected to result in potential slope stability hazards.	Less than Significant	• None required.
Greenhouse Gas Emissions (see Sections 2.7.4, 2.7.5, and 2.7.6)		
• Construction greenhouse gas (GHG) emissions include emissions produced as a result of emissions generated by onsite construction equipment, emissions arising from traffic delays that may result from construction, and through vehicle trips generated from construction workers traveling to and from the project site.	Less than Significant	• The frequency and occurrence of the temporary impacts for the Build Alternative will be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. • In addition, with innovations such as longer pavement lives and improved transportation management plans, the GHG emissions produced during construction of the proposed project would be mitigated to some degree by longer intervals between maintenance and rehabilitation events.
• Operational GHG emissions are associated with vehicle traffic along the roadway within the project corridor. The proposed project is a transportation facility; therefore, the GHG emissions would include the direct GHG emissions from the vehicles traffic along the proposed project corridor.	Less than Significant	• None required. One of the main strategies in the City's Climate Action Program (CAP) to reduce GHG emissions is to make Hesperia's transportation and land use systems more efficient. As indicated by Figure 2.7-2, GHGs created by transportation are by far the greatest opportunity for emissions reductions.
Hazards and Hazardous Materials (see Sections 2.8.4, 2.8.5, and 2.8.6)		
• Trace concentrations of pesticide and herbicide may be encountered during construction activities.	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Rail ties and power poles treated with creosote may be present within the project footprint.	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Pole-mounted transformers with polychlorinated biphenyl (PCB)-containing	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
liquids may be present along the project location. The electric utility would be notified of the proposed project, and it is the utility's responsibility to properly manage the pole-mounted transformers if they are to be removed or relocated.		and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Construction activities may involve the use of hazardous materials.	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Potential for encountering hazardous materials or waste at project's ground disturbance locations. • Aerially deposited lead (ADL) may be present along the shoulders of the project alignment. • Herbicides, pesticides, and metals may be present along the railroad right-of-way (ROW). Herbicides and pesticides may also be present at the Oak Hills Nursery (located at 13874 Ranchero Road) and at a peach orchard (located around 13124 Ranchero Road).	Less than Significant	• **HAZ-2:** Any soils with aerially deposited lead (ADL) contamination shall be managed properly and disposed. During project construction, soil in the project limits may be reused within the ROW. Soil export will be minimized, and excess soil generated during project construction, if any, will be disposed of at a hazardous waste disposal facility.
• Paint used on existing bridges, yellow traffic striping, and pavement marking materials may contain lead-based paint (LBP) or other hazardous materials and may exceed hazardous waste criteria under California Code of Regulations (CCR) Title 22 and require disposal in a Class I disposal site. LBP may also be present in structures identified for acquisition.	Less than Significant	• **HAZ-3:** Paint used for lane striping shall be tested for lead-based paint (LBP) prior to demolition/removal to determine proper handling and disposal requirements.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• Asbestos-containing materials (ACM) are suspected to be present in bridge joint compound materials along the project alignment. ACMs may also be present in structures identified for acquisition.	Less than Significant	• **HAZ-4:** Conduct asbestos-containing materials (ACM) and LBP surveys, if appropriate, before demolition of any structures constructed before 1979 to determine the level of risk posed to construction workers and the public and to identify appropriate protection measures.
• Trucks hauling hazardous materials or wastes along the alignment could result in incident or spill. Trucks hauling these hazardous materials would continue to be operated in compliance with local, State, and federal regulations regarding hazardous substance transport. Furthermore, the proposed project would result in improved visual sight distances along Ranchero Road, which are expected to reduce the possible instances of collisions and disruption of vehicles that transport hazardous substances along Ranchero Road.	No Effect	• None required.
• No recognized sites exist within the vicinity. It is concluded that the proposed project would not create a significant hazard to the public or the environment through the routine use or disposal of hazardous waste.	No Effect	• None required.
• The proposed project would not create a significant hazard to the public or environment or otherwise increase the risk of releasing hazardous material into the environment. No sites within a 0.5-mile radius of the project area were identified in the database search of U.S. Environmental Protection Agency (EPA)-investigated sites.	No Effect	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• Construction of the project may involve hazardous materials use, such as paints, thinners, cleaning solvents, oil, and grease	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Despite the proximity of schools to the proposed project corridor, the proposed project is not likely to result in increased exposure of school properties to hazardous emissions or hazardous materials incidents beyond the less than significant impacts that might result from the construction phase of project implementation.	Less than Significant	• **HAZ-1:** The construction contractor will be required to prepare and implement a Worker Health and Safety Plan to be approved by the City and the California Department of Toxic Substances Control (DTSC) before the onset of construction activities.
• Construction and operations of the project would be consistent with the City's Emergency Response Plan.	No Effect	• None required.
Hydrology and Water Quality (see Sections 2.9.4, 2.9.5, and 2.9.6)		
• Grading, vegetation removal, and truck activity may increase erosion and siltation during construction. • Sediments from typical construction activities may enter local watersheds. • Dewatering discharge could adversely affect surface water quality if effluent is rich in sediment or contaminated with chemicals.	Less than Significant With Mitigation	• **HWQ-1:** Concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms) will be designed to ensure that flows to drainage channels will not result in increased erosion, sedimentation, or any contaminant conveyance to the extent feasible. Slope/surface protection systems that utilize hard surfaces, such as concrete or equivalent materials, will be designed to minimize erosion to the extent feasible. • **HWQ-2:** During construction, waste management BMPs will be implemented. These BMPs consist of procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project. • **HWQ-3:** During construction, soil stabilization BMPs will be incorporated. These BMPs consist of preparing the soil surface and applying soil stabilizing media, such as straw mulch, soil binders, and geotextile mats. • **HWQ-4:** During construction, non-stormwater BMPs, such as vehicle and equipment maintenance, will be implemented to limit the potential for pollutants to impact surface waters. • **HWQ-5:** In an effort to uphold water quality standards, the proposed

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		project will require Section 404, 401, and 1602 permits. Construction will not commence within jurisdictional areas until these permits are issued by the respective resource agencies. The conditions of these permits will be incorporated into the project. • **HWQ-6:** A SWPPP shall be prepared by the Contractor and reviewed by the City for approval prior to commencement of any soil-disturbing activities. The SWPPP shall address all State and federal stormwater control requirements and regulations. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to impact water quality. The SWPPP shall include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. • **HWQ-7:** The City shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) at least thirty (30) days prior to any soil-disturbing activities. • **HWQ-8:** All work will conform to National Pollutant Discharge Elimination System (NPDES) requirements as described in *NPDES Permit for General Construction Activities* (Order No. 2009-0009-DWQ, NPDES No. CAS000002). These include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs. • **HWQ-9:** Construction activities will give special attention to stormwater pollution control during the rainy season, defined as August 1 through October 1, and from November 1 through May 1. No work should be conducted whenever rain is predicted. Water Pollution Control BMPs will be used to minimize impacts to receiving waters. Measures will be incorporated to contain all vehicle loads and avoid any tracking of materials. • **HWQ-10:** As described by the Mojave Watershed Storm Water Management Plan, the Lahontan Regional Water Quality Control Board (RWQCB) requires implementation of soil stabilization and sediment control BMPs to protect the Mojave River and its tributaries during thunder and flash flood storms during the rainy season. Soil stabilization and sediment controls will be implemented to protect the Mojave River and, if applicable, all equipment will be removed from waterways prior to flash floods.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		• **HWQ-11:** Post-construction maintenance BMPs, including routine maintenance work to keep the project site free of debris, such as litter pickup, toxics control, street sweeping, drainage, and channel cleaning, will be incorporated into the project. Permanent soil stabilization BMPs will be incorporated into project design, such as preservation of existing vegetation, concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms, swales), and slope/surface protection systems that use vegetation. Appropriate BMPs will be selected during final design.
• The project will not place housing or other structures within a 100-year flood hazard area, or otherwise expose people or structures to a significant risk of loss.	Less than Significant	• **HWQ-12:** The proposed project would be designed to prevent the flooding of Ranchero Road, cross streets, and adjacent lands. • **HWQ-13:** The Ranchero Road drainage facilities would be designed to accommodate a 10-year return frequency storm per local guidelines. • **HWQ-14:** The City shall continue enforcing the City's Municipal Code provisions for flood hazard reduction (Title 8: Safety, Chapter 8.28: Flood Hazard Protection and Regulations). This code, which applies to new construction and existing projects undergoing substantial improvements, provides construction standards that address the major causes of flood damage, and includes provisions for anchoring, placement of utilities, raising floor elevations, using flood-resistant construction materials, and other methods to reduce flood damage.
• An additional 40 percent of impervious surface would be added to the existing roadway. Increases in stormwater runoff are anticipated.	Less than Significant With Mitigation	• **HWQ-1:** Concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms) will be designed to ensure that flows to drainage channels will not result in increased erosion, sedimentation, or any contaminant conveyance to the extent feasible. Slope/surface protection systems that utilize hard surfaces, such as concrete or equivalent materials, will be designed to minimize erosion to the extent feasible. • **HWQ-11:** Post-construction maintenance BMPs, including routine maintenance work to keep the project site free of debris, such as litter pickup, toxics control, street sweeping, drainage, and channel cleaning will be incorporated into the project. Permanent soil stabilization BMPs will be incorporated into project design, such as preservation of existing vegetation, concentrated flow conveyance systems (e.g., drainage ditches, dikes, berms, swales), and slope/surface protection systems that use vegetation. Appropriate BMPs will be selected during final design.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		• **HWQ-13:** The Ranchero Road drainage facilities would be designed to accommodate a 10-year return frequency storm per local guidelines.
• The proposed project may result in increased motor-vehicle-related pollutants and have the potential to affect surface water quality.	Less than Significant With Mitigation	• No additional mitigation measures are necessary other than mitigation measures HWQ-1 and HWQ-11.
Land Use and Planning (see Sections 2.10.4, 2.10.5, and 2.10.6)		
• The proposed project would not convert land uses in the project area, nor would it conflict with any land use plans, policies, or regulations.	No Effect	• None required.
• The proposed project would accommodate planned future development and is consistent with planned land uses.	No Effect	• None required.
• The project would not require closing any streets to create cul-de-sacs. Because Ranchero Road already exists, the proposed project would not physically divide any community along the 5-mile corridor.	No Effect	• None required.
Mineral Resources (see Sections 2.11.4, 2.11.5, and 2.11.6)		
• The proposed project is not expected to have adverse impacts to mineral resources. There are no designated or known mineral resources or recovery sites within the project area.	No Effect	• None required.
• There are no designated or known mineral resources or recovery sites within the project area; therefore, the proposed project would not affect operation or capacity of existing mining activities.	No Effect	• None required.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• The proposed project would not deplete any mineral resources or otherwise conflict with established mineral resource protection policies.	No Effect	• None required.
Noise (see Sections 2.12.9, 2.12.10, and 2.12.11)		
• The proposed project will have typical construction noise impacts to sensitive receptors along the project alignment.	Less than Significant With Mitigation	• **NOI-1:** Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine enclosures, and engine vibration isolators, intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding). • **NOI-2:** To the extent feasible, the Contractor will turn off construction idling equipment. The Contractor will strive to keep noise levels from construction equipment relatively uniform and avoid impulsive noises. • **NOI-3:** Between 7:00 p.m. and 10:00 p.m. on all days and between 7:00 a.m. and 7:00 p.m. on Sundays and federal holidays, any construction activities occurring within 700 ft of noise-sensitive areas must be accompanied by noise monitoring to assure compliance with the applicable noise thresholds and must immediately be modified to achieve compliance if necessary or ceased when/if compliance cannot be achieved. Between the hours of 10:00 p.m. and 7:00 a.m., the same provision applies when construction occurs within 1,150 ft of noise-sensitive areas. • **NOI-4:** Where vibratory rollers are used within 30 ft of existing building structures during exempted hours, rollers shall be selected based on compaction force to assure that the 0.2-inch per second PPV threshold is not exceeded at the structure. Whenever vibratory rollers are used within 30 ft of such building structures, continuous vibration monitoring shall be performed and a plan shall be in place to allow immediate modification or cessation of any vibratory roller activity that generates vibrations exceeding the applicable threshold. Outside of exempted hours, activity constraints will need to be applied for perceptibility thresholds so that the corresponding distance will be more than 200 ft. As a practical matter, this

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
		will prevent the use of vibratory rollers on the project outside of the exempted hours. When other vibration-generating construction equipment is used outside of exempted hours, it shall only be done when compliance with the perceptibility threshold can be verified through conservative vibration propagation modeling and/or continuous onsite vibration monitoring. • **NOI-5:** To ensure that the surrounding community is aware of potential noise impacts during construction, the City and County will provide adequate public notification in advance of proposed construction activities. • **NOI-6:** When possible, the use of construction equipment that creates high vibration levels will be limited, such as vibratory rollers and hammers operating in the proximity of residential structures or other sensitive land uses. • **NOI-7:** The hours of vibration-intensive equipment use, such as vibratory rollers, will be restricted to daytime hours so that impacts to residents are minimal.
• A significant project operational noise impact would be deemed to occur if the predicted outdoor noise levels at noise-sensitive receivers under future build conditions that are at least 5 decibels (dB) higher than predicted noise levels under future no-build conditions and equal or exceed a community noise equivalent level (CNEL) of 60 A-weighted decibels (dBA). The proposed project is anticipated to raise traffic noise levels along the project corridor relative to the future no-build condition. The proposed project is anticipated to increase operational traffic noise up to 3.3 dBA. Although traffic noise is anticipated to increase, the proposed project would not exceed the 5 dBA with project noise impact threshold criteria. Noise increase within the project	Potentially Significant	• **NOI-8:** Provide double–pane windows to affected residential homes adjacent to Ranchero Road within the project area. Double-pane windows would only be provided at specific areas of the residential home where they would provide a reduction in traffic noise. The backyard or other areas of the property that would not provide traffic noise reduction would not be eligible for double-pane windows. Residential homes qualified for this mitigation measure must meet all of the following criterion: – Residential property must be identified as a noise-impacted dwelling. Noise impact is defined as: Design Year with Project CNEL equal to or exceeds 65 dBA or Project Increase of 5 dB or more resulting in CNEL of 60 dBA or more. – Residential property driveway access is located and directly provides access to Ranchero Road. – Residential property currently does not have double-pane windows installed. Residences qualifying for double-pane windows are those residential homes that are located adjacent to and directly accessing Ranchero Road. These homes are identified as:

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
area is primarily attributed to projected future traffic growth, which is anticipated to increase within the project area and exceed the 60-dBA community noise threshold at certain locations. Because of future growth and the increase of noise with the project, unavoidable significant impacts are anticipated.		– 0409-214-12 – 0409-222-48 – 0409-222-44 – 0409-222-38 – 0409-222-58 – 0405-241-03 – 0405-241-04 Of the seven residential homes identified above, only one residence currently does not have double-pane windows. This residential home, identified as APN 409-214-12, would be provided with double-pane windows by the City, if double-pane windows are not already installed. The City will contact the property owner during final design of the proposed project regarding the option to provide the resident with double-pane windows for the property; installation of these windows would only include areas that are facing Ranchero Road and, if the home is located adjacent to a minor cross-street, then double-pane windows would be installed at the residential home facing the minor street.
• The subject project corridor along Ranchero Road is not within the approach or transitional surfaces of the airport. The project is considered an acceptable use within any of the airport hazard zones (San Bernardino County, 2010); hence, the proposed project would not expose people traveling or working in the project area to excessive noise levels associated with aircraft operations.	No Effect	• None required.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
Population and Housing (see Sections 2.13.4, 2.13.5, and 2.13.6)		
• During the construction period, local circulation and residents would likely be impacted by potential construction detours, temporarily altered driveway access, and movement of construction equipment/ vehicles within the project area.	Less than Significant With Mitigation	• **TRANS-1:** The City will prepare and implement a Transportation Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the City and its contractor will coordinate with local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. Two-way traffic through the construction zone will be maintained throughout the construction period.
• Improvements to Ranchero Road are not anticipated to impact community character, cohesion, population, or housing. In addition, the project is not anticipated to adversely impact public services or facilities permanently.	Less than Significant	• None required.
• The proposed project would not induce substantial population growth in the project area; therefore, there would not be operation-related impacts associated with population and housing.	Less than Significant	• None required.
• The proposed project would require acquisition of ROW; however, the land required to construct the project is currently vacant. The proposed project would not displace any people or housing.	No Effect	• None required.
Acquisitions (see Sections 2.14.3, 2.14.4, and 2.14.5)		
• At this time, all construction activities are expected to occur within the proposed ROW footprint. No temporary construction easements would be required, and no temporary ROW impacts would occur.	No Effect	• None required. Because no displacements are required to accommodate construction of the proposed project, there are no construction-related impacts associated with acquisitions.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• 25 partial acquisitions are required for the proposed project.	Less than Significant With Mitigation	• **ACQ-1:** Provisions of the Uniform Relocation Assistance and Real Property Act will be followed to provide compensation for partial acquisitions.
Recreation (see Sections 2.15.4, 2.15.5, and 2.15.6)		
• No existing parks are near the project area; no absorption of dedicated parklands and no construction or expansion of recreational facilities is expected with the proposed project.	No Effect	• None required.
• The proposed project would not affect the use of existing neighborhood or regional parks or other recreational facilities. In addition, it would not involve construction or expansion of any recreational facilities or increased recreational demand.	No Effect	• None required.
Transportation and Traffic (see Sections 2.16.3, 2.16.4, and 2.16.5)		
• Construction would require the closure of some lanes of traffic and may impact traffic operations; short-term inconveniences would be experienced by roadway users at different stages and locations.	Less than Significant With Mitigation	• **TRANS-1:** The City will prepare and implement a Transportation Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the City and its contractor will coordinate with local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. Two-way traffic through the construction zone will be maintained throughout the construction period.
• The project would widen the existing roadway, provide safety features and signage, and improve the LOS on both the mainline and at identified intersections; the project would improve traffic conditions in the study area.	Beneficial Effect	• None required.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• Project design matches current design standards and is consistent with the General Plan.	No Effect	• None required.
Utilities and Service Systems (see Sections 2.17.4, 2.17.5, and 2.17.6)		
• Proposed project construction would result in temporary impacts to utilities, involving the relocation of some utilities to accommodate post-project conditions.	Less than Significant With Mitigation	• **UTIL-1:** The City will develop and implement a Construction Management Plan and coordinate with utility providers before and during construction. Interruptions of service, if any, would be done in consultation with individual providers, and follow guidelines and schedules set in place by the City and San Bernardino County, including notification to impacted residences and businesses.
• Construction activities would generate a large amount of solid waste.	Less than Significant	• **UTIL-2:** A professional waste hauler will be utilized to remove waste from construction activities from the site. The hauler will comply with all local, State, and federal requirements for waste diversion, including the provisions of AB 939.
• Operation of the proposed project would not result in an increase in demand on any utilities or disruptions to existing services.	Less than Significant	• None required.
Energy (see Sections 2.18.4, 2.18.5, and 2.18.6)		
• The proposed project would not affect traffic mix and diesel truck percentage along the project corridor. Currently, the project corridor traffic is significantly affected by traffic congestion, particularly during peak-hour traffic. As a result of the excessive queues, traffic flow would continue deteriorating in the future with the no-build condition. The proposed addition of a new traffic lane on each side of Ranchero Road, within the proposed limits, would relieve traffic congestion along the project corridor.	Beneficial Effect	• None required. These effects would translate into more efficient energy consumption for the Build Alternative compared to the No Build Alternative. Furthermore, it should be noted that while the No Build Alternative does not require immediate consumption of energy for construction activities, it may use larger quantities of energy in the future as traffic worsens, as such, the savings in operational energy requirements would more than offset construction energy requirements, and thus, in the long term, would result in a net savings in energy usage.

Table S-1 Summary of Impacts

Potential Environmental Impacts	Impact Significance	Minimization/Mitigation Measures
• Construction activities would generate a large amount of solid waste.	Less than Significant	• **UTIL-2:** A professional waste hauler will be utilized to remove waste from construction activities from the site. The hauler will comply with all local, State, and federal requirements for waste diversion, including the provisions of AB 939.
• Operation of the proposed project would not result in an increase in demand on any utilities or disruptions to existing services.	Less than Significant	• None required.

Chapter 1 Project Description

The City of Hesperia (City) and the County of San Bernardino (County) propose to widen Ranchero Road from approximately 2,200 feet (ft) east of Mariposa Road on the west to Seventh Avenue on the east. The existing facility within the project limits traverses land within the jurisdiction of both the City and the County. Currently, Ranchero Road generally consists of a two-lane asphalt paved roadway. The proposed project would involve widening Ranchero Road from its current two-lane configuration to a four-lane facility within the City and its Sphere of Influence (SOI). Most of the existing asphalt pavement sections along Ranchero Road would be removed and replaced with new asphalt pavement. The project would also entail widening the Union Pacific Railroad (UPRR) concrete panel crossing to an ultimate curb-to-curb design width of 92 ft; culvert extensions; and stormwater facilities. There would be no construction activities along Ranchero Road Bridge No. 54C-0049 (over the California Aqueduct). The City and County are actively coordinating with the Department of Water Resources (DWR) to widen the Ranchero Road Bridge structure. Should the City and/or County propose to widen the bridge in the future, additional environmental analysis and documentation will be conducted at that time. Ultimately, DWR will make the final determination whether to widen the California Aqueduct Bridge.

The purpose of the proposed project is to provide the City and the County with an additional arterial-level east-west access route across the southern limits of Hesperia, consistent with the City's adopted 2010 Circulation Element of the General Plan and the County's 2007 General Plan. The proposed project is an "interim" improvement that would provide for near-term expected growth in traffic volumes. The roadway widening is anticipated to alleviate future traffic congestion and improve traffic operations along Ranchero Road.

This chapter provides additional information regarding the project purpose and objective, location, environmental setting, project design, construction process, and operation.

1.1 Project Background

The City has prepared this Environmental Impact Report (EIR) to evaluate potential environmental consequences associated with construction of the proposed Ranchero Road Widening Project located along Ranchero Road between east of Mariposa Road

and Seventh Avenue within the City of Hesperia and San Bernardino County. As part of the approval process for the City, the proposed project is required to undergo an environmental review pursuant to the California Environmental Quality Act (CEQA). One of the main objectives of CEQA is to disclose to the public and decision makers the potential environmental effects of the proposed activities. CEQA requires that the lead agency prepare an Initial Study (IS) to determine whether an EIR, Negative Declaration, or Mitigated Negative Declaration (MND) is required. The City is the Lead Agency for the proposed project under CEQA. The County is the Responsible Agency under CEQA. Based on the scope of the project, the preparation of an EIR for the Ranchero Road Widening Project will adequately document the potential impacts of the proposed project on environmental resources.

The proposed project would address the need to improve community facilities as described in the currently adopted 2010 General Plan. According to this plan, the City's goal is to "develop a safe, efficient, convenient, and attractive transportation system throughout the community, providing links within the City and with neighboring regions, and accommodating automobile, truck, pedestrian, recreational, equestrian, rail, air, and public transit needs which will meet current and future development requirements within the planning area." Improvement to City streets was identified by City survey as the highest priority for making Hesperia a better place to live (City of Hesperia, 2001a). The County's adopted *General Plan Circulation Element* (2007) identifies the "timely development of public facilities and the maintenance of adequate service levels for these facilities to meet the needs of current and future residents." According to the *Hesperia General Plan Update Transportation Technical Report* (Kimley-Horn & Associates, Inc., 2009), future average daily traffic (ADT) volumes along Ranchero Road are anticipated to exceed 40,000 vehicles, which is over the existing two-lane operational capacity of 14,500 vehicles per day. Ranchero Road, within the parameters of the proposed project, is anticipated to operate at unacceptable levels of service with the current two-lane configuration for future conditions.

The City of Hesperia's Circulation Plan (2010a) designates Ranchero Road within the project limits as a six-lane Super Arterial and the County's Circulation and Transportation Plan (2012) designation as a six-lane Major Highway. The proposed widening of Ranchero Road from its existing two-lane configuration to a four-lane facility is an interim improvement designed in accordance with local and regional circulation plans to satisfy its respective City and County ultimate roadway designations in the future.

1.2 Project Location

Hesperia is located in the Victor Valley region of the Mojave Desert, 15 miles north of San Bernardino, San Bernardino County, California. Hesperia is located in an area that is regionally referred to as the High Desert due to its elevation of between 3,200 and 4,000 ft above mean sea level (amsl). Hesperia is generally located south of the City of Victorville and southwest of the town of Apple Valley.

As shown in Figure 1-1, the proposed project extends along Ranchero Road from approximately 2,200 ft east of Mariposa Road on the west to the Seventh Avenue on the east. The project corridor is located along the section line separating Sections 1, 2, 3, and 4, T3N R5W from Sections 33, 34, 35, and 36 of T4N R5W, and along the section line separating Sections 5 and 6 of T3N R4W from Sections 31 and 32 of T4N R4W, San Bernardino Base and Meridian, as depicted on the Baldy Mesa and Hesperia, California United States Geological Survey (USGS) 7.5' topographic quadrangles (USGS, 1992).

Figure 1-1 shows the location of the environmental study area for the proposed project. The proposed project site traverses land within the jurisdiction of both the City and the County. Approximately 50 percent of the 5-mile project length is located outside City limits.

1.3 Project Setting

The topography of the project area is gently sloping from the west to east. Site elevation ranges from 3,416 ft amsl at Seventh Avenue to approximately 3,827 ft amsl at the western project terminus. Views from the project site are typical of the Mojave Desert, with near views of desert vegetation or the built environment and distant views of surrounding mountains. Regionally, the Mojave River flows south to north along the eastern edge of Hesperia. The river mainly flows underground before surfacing in Victorville. As is typical with desert water courses, the riverbed is usually dry, but it fills during occasional flash-flood storm events. On the west side of Hesperia, the Mojave Freeway (Interstate Highway 15 [I-15]) traverses Hesperia in a southwest to northeast direction.

As shown in Figure 1-1, the Ranchero Road project area consists of a 5-mile segment of the east-west roadway located at the southern side of Hesperia and adjacent to unincorporated land. The project area consists of undeveloped and developed property throughout the Ranchero Road Widening Project footprint. Within the City's jurisdiction, land uses in the project area are predominantly rural residential, with

pockets of medium-density single-family housing, agriculture, and small-scale isolated commercial located along the project alignment. The project area within the County is currently zoned for various rural residential uses. The western half of the project area has a larger percentage of undeveloped land and rural residential homes compared to the mostly developed eastern half of the project area, which consists of low- to high-density residential housing. Most of the improved land on both sides of the roadway within the corridor reflects these zoning and land use designations.

There is a residential subdivision across Ranchero Road to the south of the high school. A new mini-mall with a gas station is operating at the northeast corner of the Ranchero Road/Escondido Road intersection. Lots have also been subdivided for housing south of the roadway on both sides of the Tropicana Rose Avenue intersection. High-voltage power lines traverse the roadway in a northerly-southerly direction between Primrose and Maple avenues. Another high-voltage power line corridor traverses westerly-easterly near the proposed project terminus at Seventh Avenue.

The California Aqueduct splits Hesperia down the center from north to south, where it then heads underground on its way to Silverwood Lake. The aqueduct crosses the eastern portion of the project area, just east of Kern Avenue. The Union Pacific Railroad (UPRR) crosses Ranchero Road at the western portion of the project area; overhead signals and gates for traffic control cross Ranchero Road just west of the Outpost Road intersection. Oak Hills High School is located north of Ranchero Road between the Cataba Road and Coyote Trail intersections. There are three existing culverts within the project site that convey water from desert washes. These are located to the west of Mesa Vista Avenue; at Whitehaven Court; and west of Cataba Road.

Ranchero Road is generally operating as a two-lane undivided roadway within the project limits; however, portions of Ranchero Road within the project footprint have already been widened. The road widens to four lanes from just west of the traffic-light-controlled Cataba Road intersection to just east of Kuki Street. Ranchero Road has also been widened east of the stop-sign-controlled Escondido Road intersection. The roadway widens again between Topaz and Primrose avenues, although it is striped at this location for only two lanes. West of Primrose Avenue, the Maple Avenue and Cottonwood Avenue intersections are also stop-sign controlled. The road widens again east of Cottonwood Avenue to the vicinity of Kern Avenue; here, it is also striped for two lanes. From just east of the California Aqueduct crossing, the road stays wider east to the project site terminus.

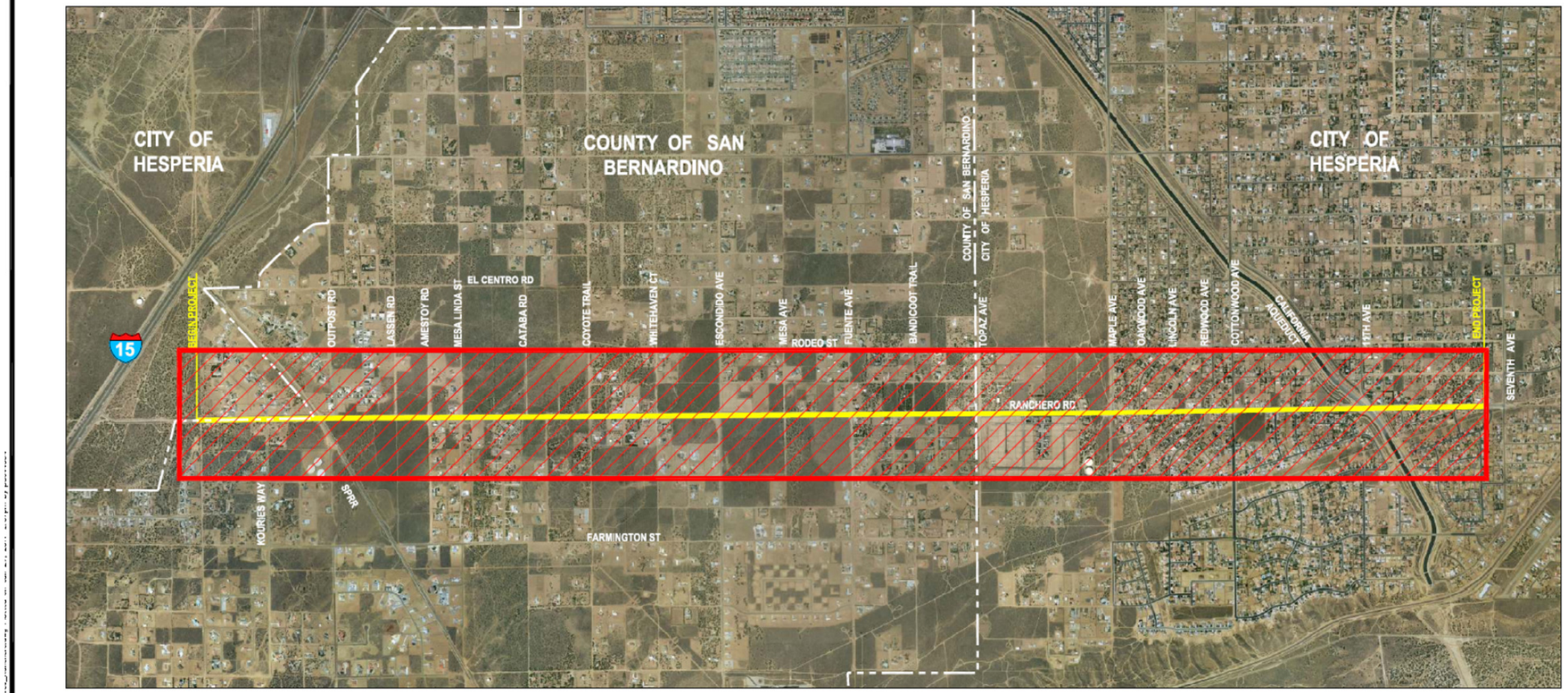

Figure 1-1 Study Area

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The existing speed limit along Ranchero Road is generally 50 miles per hour (mph), except for areas identified as school zones. Traffic movement in the project study area in the morning peak hours flows westbound, and congestion increases in closer proximity towards I-15. During the evening peak hours, traffic movements are reversed.

1.4 Project Objectives

The purpose of the proposed Ranchero Road Widening Project is as follows:

1. Improve east-west accessibility within the City of Hesperia and the City's SOI;
2. Improve traffic circulation in the City by reducing traffic congestion; and
3. Support the mission of the City's Street Improvement Program by providing residents with improved residential streets and infrastructure.

Other projects are planned on Ranchero Road that would improve its significance as an east-west major arterial and promote economic growth in Hesperia. In coordination with the California Department of Transportation (Caltrans), the City is proposing to build a new interchange with I-15 at Ranchero Road. Hence, in addition to providing local traffic relief, the proposed project would relieve congestion at on- and off-ramps farther north on I-15 and on other east-west arterials. The City is also constructing a new railroad underpass structure to accommodate existing and future BNSF Railway tracks, and realign and widen Ranchero Road to a 4-lane roadway from Seventh Avenue to Danbury Road. These projects would be consistent with the City's adopted 2010 General Plan Circulation Element goals, policies, and implementation measures for improving circulation within the City.

1.4.1 Project Description and Build Scenarios

The proposed Ranchero Road Widening Project is a circulation improvement to allow for planned future growth in the area, as designated in the City's 2010 General Plan. The proposed project would also address projected future traffic congestion along the corridor by constructing two additional lanes in each direction along Ranchero Road between 2,200 ft east of Mariposa Road and Seventh Avenue. The Ranchero Road Bridge spanning over the California Aqueduct (located approximately 2,700 ft east of Seventh Avenue) would not be widened and would remain a two-lane facility. The proposed project would support an "ultimate" project buildout that would widen the entire roadway to six lanes in the future, as identified in the City's and County's respective Circulation Plans.

Figure 1-2 shows the typical cross section for the proposed project. Proposed activities to implement the project include right-of-way (ROW) acquisitions to accommodate the roadway widening, site clearing, demolition and removal of existing roadbed, utility relocations, construction of drainage facilities, and roadway construction. The four-lane roadway would include four 11- or 12-ft-wide travel lanes, a 12-ft-wide center striped lane for turning movements, and two 6-ft-wide outside shoulders.

The proposed project would generally require the acquisition of ROW along both sides of the existing roadway and would require temporary construction easements (TCEs) where roadway construction would be necessary.

The proposed project would be constructed in two phases. Phase 1 consists of widening Ranchero Road within the County limits from 2,200 ft east of Mariposa Avenue to Topaz Avenue for a total of approximately 3 miles. It is anticipated that Phase 1 would be constructed by 2014. Phase 2 consists of widening Ranchero Road from Topaz Avenue to Seventh Avenue for a total of 2 miles. Phase 2 would be constructed by 2016.

1.4.2 Proposed Widening

The project is proposing to widen Ranchero Road from approximately 2,200 ft east of Mariposa Road on the west to Seventh Avenue on the east. The California Aqueduct Bridge along Ranchero Road would not be widened as part of this proposed project and would remain a two-lane roadway facility. The City anticipates widening the Ranchero Road Bridge spanning over the California Aqueduct as a separate future project that would be widened concurrently with the implementation of Phase 2 of the Ranchero Road Widening Project. The proposed project would involve widening Ranchero Road from its current two-lane configuration to a four-lane facility within the City and County jurisdictions. As stated earlier, the proposed project supports the ultimate planned development of the project corridor into a six-lane roadway, which is to be constructed as needed to accommodate projected future traffic demand. The proposed project involves securing ROW throughout the project corridor to construct the two additional lanes along Ranchero Road.

The proposed project is considered an “interim” improvement that is intended to operate until the “ultimate” six-lane roadway is required, based on traffic demand. It is expected that such demand may occur closer to the buildout of the City. Planning for the “ultimate” project will include a separate future CEQA review process.

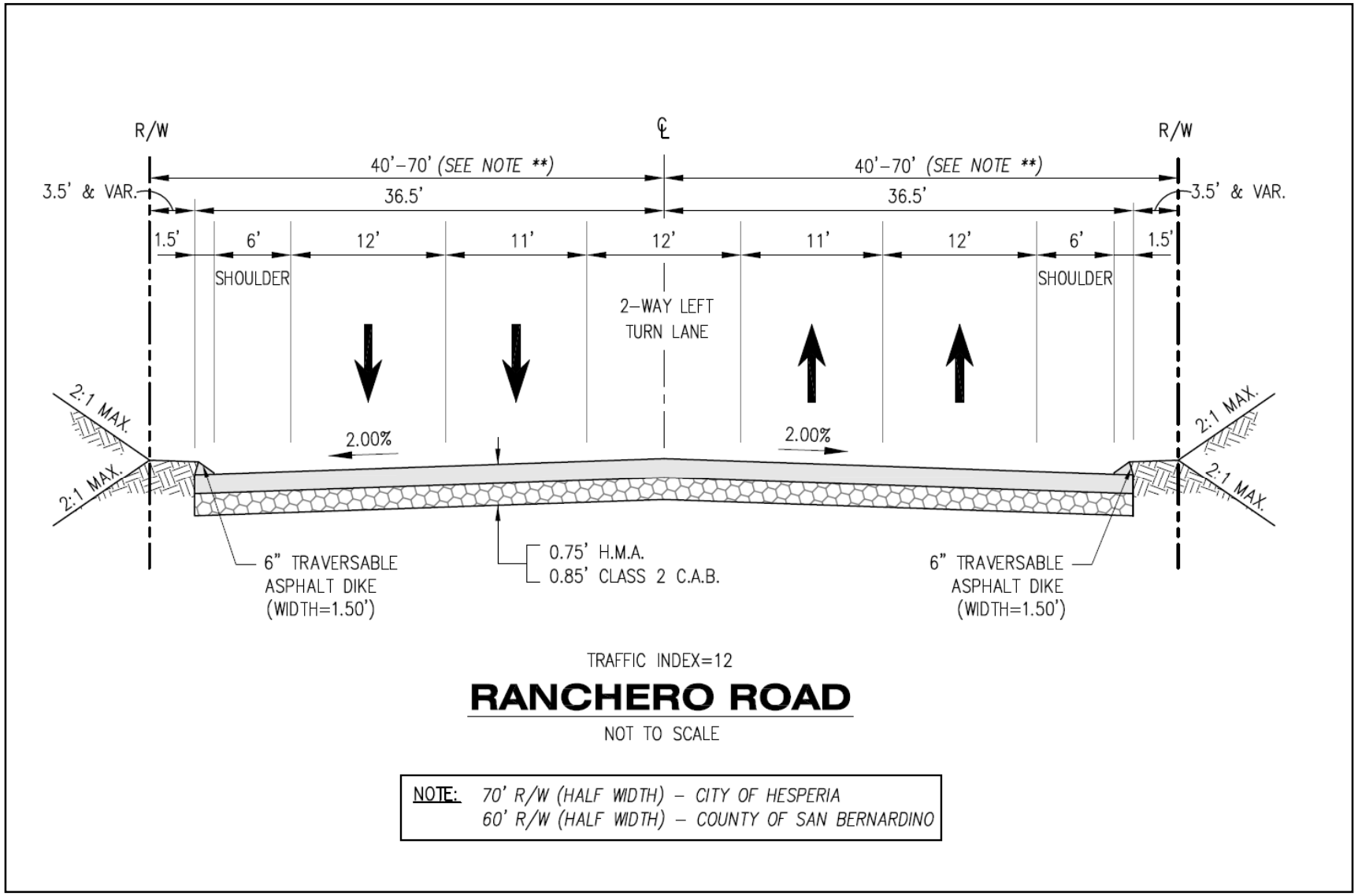


Figure 1-2 Proposed Ranchero Road Cross Sections

1.5 Alternatives Considered

Two alternatives were considered during development of the proposed project, which include the No Build Alternative and Build Alternative.

1.5.1 No Build Alternative

The No Build Alternative would not widen Ranchero Road with construction of an additional lane in each direction. The existing lane configuration would continue to be utilized by motorists into the future.

The No Build Alternative would not achieve the project objectives. Levels of service are projected to be unsatisfactory, and roadway capacity would not increase in accordance with the expected traffic demand. This alternative would result in inferior transportation infrastructure in this growing portion of the City and the County. Existing levels of congestion would grow as development progresses, resulting in deteriorating levels of service over time. The No Build Alternative would not adequately support existing and planned levels of development in the project area.

1.5.2 Build Alternative

The Build Alternative would construct an additional eastbound and westbound travel lane along Ranchero Road 2,200 ft east of Mariposa Road on the west to Seventh Avenue on the east. The proposed project would involve widening the existing two-lane segments of Ranchero Road to four lanes with a 12-ft-wide painted two-way left-turn median and 6-ft-wide shoulders in both directions. On-street parking would not be allowed after construction of the proposed project. Shoulder width and other dimensions would vary, depending on whether the subject roadway segment is located in City or County jurisdiction. The total estimated roadway ROW width is generally anticipated to range between 120 and 140 ft. The at-grade UPRR concrete panel crossing would be designed for its ultimate curb-to-curb width of 92 ft.

The roadway along Ranchero Road Bridge No. 54C-0049 (over the California Aqueduct) would not be widened as part of this project; there would be no construction activities on the bridge structure. The proposed Ranchero Road widening would gradually taper from four to two lanes at each end of the bridge prior to approaching the Ranchero Road Bridge roadway segment.

In addition to widening the existing two-lane roadway road segments to four lanes, the project includes asphalt concrete (AC) pavement overlay in some areas, culvert

extensions, and stormwater facilities. The proposed project would require AC removal and replacement along existing sections of Ranchero Road that have not already been widened to four lanes.

Several utilities present in the proposed project area would require relocation, including water, gas, power poles, and phone lines. The utility owners of gas, power poles, and phone lines would be responsible for relocation of their respective facility prior to project construction. The project also includes extensions of four existing corrugated metal pipe (CMP) drainage culverts under Ranchero Road. The diameter of CMP ranges from 48 to 96 inches. The proposed pavement width is generally 70 ft and varies as needed to avoid existing utilities. Asphalt concrete (AC) dikes will be constructed on both sides of roadway pavement to convey stormwater runoff.

A component of the project would involve additional ROW acquisition, TCEs, and roadway easement. Based on the preliminary alignment and design of the proposed project, full property acquisitions are not anticipated; however, partial property acquisition may be required for the parcels listed below. When project design is finalized, additional ROW may be required beyond those identified in the list below.

- APN 0357-272-03
- APN 0357-272-04
- APN 0357-272-07
- APN 0357-272-08
- APN 0357-272-09
- APN 0357-361-01
- APN 0357-361-17
- APN 0357-381-01
- APN 0357-401-01
- APN 0357-401-02
- APN 0357-421-02
- APN 0357-561-06
- APN 0357-561-09
- APN 0405-241-02
- APN 0405-241-03
- APN 0405-241-04
- APN 0405-241-05
- APN 0405-382-24
- APN 0405-471-24
- APN 0405-471-25
- APN 0405-471-35
- APN 3039-511-03
- APN 3039-511-04
- APN 3039-541-06
- 1 Unknown Parcel

The proposed project has an estimated construction cost of approximately $18.2 million (in 2011 dollars), which will be funded from local sources as identified in the latest SCAG 2013 FTIP as Project ID 2008115 and SBD55030. According to the FTIP, Project ID 2008115 is described as "RANCHERO ST. FROM .3 M E/O MARIPOSA TO HESPERIA CL (3 MILES)-WIDEN 2-4 LANES." Similarly,

Project ID SBD55030 is described in the FTIP as "RANCHERO RD. FROM I-15 to 7TH ST. - WIDEN FROM 2 TO 4 LANES (5.50 MILES)." The FTIP listing for the proposed project is being revised to combine both City and County listing to a single project, which describes the project as "RANCHERO RD. FROM MARIPOSA RD TO SEVENTH AVE - WIDEN FROM 2 TO 4 LANES (5 MILES) WITH TWO-WAY LEFT-TURN MEDIAN AND SHOULDERS. WIDENING INCLUDES RECONSTRUCTING THE UPRR AT-GRADE CROSSING TO ACCOMMODATE ULTIMATE CORRIDOR WIDTH."

A conceptual construction scenario is provided in the following paragraphs. This scenario is considered conceptual; the actual construction process would be governed by the provisions and procedures of the construction contract. It is not known at this time if the construction contract would identify construction stages or leave those decisions to the Contractor.

The proposed project would be constructed in two phases. Phase 1 consists of widening Ranchero Road within the County limits from 2,200 ft east of Mariposa Avenue to Topaz Avenue for a total of approximately 3 miles. It is anticipated that Phase 1 would be constructed by 2014. Phase 2 consists of widening Ranchero Road from Topaz Avenue to Seventh Avenue (except for the roadway segment of the Ranchero Road Bridge spanning over the California Aqueduct) for a total of approximately 2 miles. Phase 2 would be constructed by 2016.

As shown in Table 1-1, project construction is anticipated to occur over an approximate 18-month timeframe for each phase of the proposed project. The proposed project would be designed to minimize traffic congestion during construction. Partial road closures may be necessary during construction; however, traffic flow and access to homes and businesses would be maintained throughout the construction period. The contractor would require temporary laydown and staging area(s) for field trailers, storage of equipment, and construction-related activities within the vicinity of the project.

Table 1-1 Conceptual Construction Schedule

Step	Activity	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Mobilization and Staging																		
2	Site Clearing and Demolition																		
3	Utility Relocation																		
4	Roadway Construction (includes paving and surfacing and traffic control systems installation)																		
5	Landscaping and Finish Work																		

Soil utilized for construction of the proposed project is anticipated to be imported from two borrow site locations within the City of Hesperia. These locations may also be used as stockpile of excess soil from the project site. Stockpile No.1 is identified as APN 0357-431-02 and APN 0357-431-03 and is located approximately 0.25-mile south of Ranchero Road and east of Escondido Avenue. The approximate stockpile at this borrow site is estimated to contain 200,000 cubic yards of soil, which originated from the excavation and grading from the Oak Hills High School site located on Ranchero Road. Soil stabilization techniques, such as watering and implementation of dust palliatives, were employed when the soil stockpile was developed. A Mitigated Negative Declaration (MND) in compliance with CEQA was completed by the City of Hesperia for the site in March 2009. As part of the MND, an Initial Study checklist was completed for evaluation of all environmental resources, including potential hazardous waste and contaminants for soils excavated in the Oak Hills High School area.

The soil stockpile is located on the Lead Track Project site located just east of "G" Avenue and north of Mauna Loa Street, within the City of Hesperia. This borrow site is located approximately 6 miles north from the center of the project area. The site is comprised of a temporary stockpile of approximately 45,000 cubic yards of soil on a 4.1-acre vacant parcel identified as APN 0410-021-28. The soil stockpile originated from the excavation of a drainage channel for the Lead Track Project. Soil stabilization techniques, such as watering and implementation of dust palliatives, were employed when the soil stockpile was developed. An MND was approved in April 2009 by the City of Hesperia for the "G" Avenue Industrial Lead Track Project. The area for Stockpile No. 2 was included in the environmental evaluation of the MND. As part of the MND, an Initial Study checklist was completed for evaluation of all environmental resources, including potential hazardous waste and contaminants for soils excavated within the Lead Track Project area.

I. Step 1: Mobilization and Staging

This first step in the construction process would require an estimated 2 months and involves contractor preparation for construction activities. Mobilization includes, but is not limited to, the following principal items:

1. Move all plant and equipment required for operations onto the site.
2. Install temporary construction power, lighting, and other temporary facilities.
3. Develop construction water supply.
4. Provide and maintain a field office for the Contractor and Engineer.

5. Provide onsite sanitary facilities and potable water facilities.
6. Arrange for and erect Contractor's work and storage yard.
7. Obtain and maintain all required permits, insurances, and bonds.
8. Post all Occupational Safety and Health Administration (OSHA) required notices and establishment of safety programs.
9. Photographically document the site and assess conditions before start of and at the completion of construction.
10. Install and maintain protective fence around the limits of work, where appropriate, and/or environmentally sensitive areas.

Construction staging and storage areas, field offices, and other required construction-related facilities would be located in previously disturbed areas and away from sensitive environmental areas. The tentative location of staging and storage areas are provided in Appendix K.

II. Step 2: Site Clearing and Demolition

This step involves clearing the corridor and preparing it for construction of the project. Site clearing and demolition would take approximately 1-month to complete once the ROW acquisition process is completed. The corridor would be cleared of any conflicting aboveground structures and improvements. In the case of ROW that was formerly private property, the construction contractor would remove the improvements. In the case of former lease property, the tenants would be required in most instances to remove their improvements, with some remainder to be removed by the construction contractor. Hazardous materials within any structures would be removed prior to demolition. Where necessary, the construction site would be fenced at this point for public safety.

III. Step 3: Utility Relocation

This process is expected to occur over approximately 9 months. Existing utilities that would interfere with construction of the corridor improvements would be removed and relocated for continuing service. In addition, utilities crossing the alignment may need to be removed and relocated to either temporary (i.e., requiring final relocation at an appropriate point later in the construction process) or permanent locations at the outset; the latter is more likely. Some aboveground utility poles along the project alignment would have to be relocated to make room for the roadway widening. The project would be coordinated with the following utility companies during the design and construction phases of the proposed project: Hesperia Water District (water),

Verizon (telecommunications), Southern California Edison (electric), Charter Communications (cable), and Southwest Gas Corporation (gas).

This work would be conducted in accordance with contract specifications, including the following requirements: obtain authorization from owner before initiating work; contact Underground Service Alert in advance of excavation work to mark-out underground utilities; conduct investigations, including exploratory borings, to confirm the location and type of underground utilities and service connections; prepare a support plan for each utility crossing detailing the intended support method; take appropriate precautions for the protection of unforeseen utility lines; and restore or replace each utility as close as possible to its former location and as good or better condition than found prior to removal.

IV. Step 4: Roadway Construction

This fourth step in the construction process would require an estimated 12 months and would prepare the alignment for roadway paving and subsequent elements. Construction activities involved with this step are described below.

Excavation: Shallow excavation (estimated to a depth of approximately 1.75 ft) is anticipated because roadway widening would be an essentially at-grade facility. In some cases, deeper excavation may be required per the Geotechnical Engineer's recommendation to place and compact subgrade materials under the roadbed. Excavated material would be collected in haul trucks and carried away from the construction area to either become fill material for this project or for some other project or, if either is not desired or the soil contains high levels of contaminants, it would be hauled for disposal at an approved disposal site. Specific haul routes have not been specified at the present time; these would be determined in consultation with the City and County. To the greatest extent feasible, haul routes would remain on main arterial roadways and avoid residential streets. While the amount of contaminated soil encountered is not expected to be substantial, the actual amount cannot be determined until pre-testing is conducted prior to the initiation of excavation activities. If hazardous waste is found, then characterization, handling, and disposal would be conducted in accordance with applicable regulations.

Drainage Facilities: It would be necessary to install subsurface drainage facilities, including catch basins, drainage pipe, and connections, to the local storm drain system. The extent of this necessity and such specifications as size, length, and connection points would be determined during project design. It would also be

necessary to manage drainage during the construction period such that project-related drainage does not overflow onto adjacent properties or public streets. To comply with the federal National Pollutant Discharge Elimination System (NPDES) requirements in accordance with the Clean Water Act (CWA), the use of best management practices (BMPs) to control and treat runoff, as necessary, would be required.

Compaction of Subgrade: Once the excavation process has been completed, the areas of improvements can be compacted to appropriate geotechnical recommendations, thereby providing the subgrade needed for installation of the structural roadway section. It may be necessary to over-excavate and recompact the subgrade to ensure a sufficient base for the project or widened roadway facility.

Install Base Material: Following the installation of utilities, including conduits, for communications and lighting, the subgrade would be compacted to a sufficient density and graded appropriately for drainage. Base material, consisting of aggregate, would then be brought to the site in trucks and placed on top of the subgrade. The material would be graded and compacted to a prescribed density.

Construct AC Dike: One of the next steps needed to complete the roadway work would consist of constructing an AC dike where needed. Runoff from the roadway would be channeled into existing culverts via overside drains or similar type.

Place Asphalt: The entire corridor would be paved with new asphalt. It would likely occur in intermittent paving for several days in a row in various sections of the corridor and would likely occur several times in each segment as multiple layers of pavement are applied.

V. Step 5: Landscaping and Finish Work

This construction step would require approximately 4 months. The following approach would occur.

Landscaping: By contract, the construction contractor would be required to replace in-kind all areas disturbed by construction activities. This may require the installation of temporary irrigation in some areas until plants become established. The City and County require all Joshua trees removed to be replaced in-kind and/or relocated. Planting materials, including groundcover, shrubs, and trees, would be brought to each planting location by truck and planted.

Complete Finish Work: A variety of finish work tasks would need to be completed. The project would require striping of the entire project alignment when the roadway is complete. New signage would be needed along the corridor for motorists, pedestrians, and bicyclists. Prior to conducting final cleanup along the corridor, the Contractor would be required to remove temporary fencing, signage, and BMPs, as well as construction equipment and materials from staging area(s). Soundwalls would not be constructed as part of this project.

1.6 Intended Uses of the EIR

CEQA requires all state and local government agencies to consider the environmental consequences of projects over which they have discretionary authority. CEQA also requires each public agency to mitigate or avoid significant environmental effects resulting from proposed projects, when feasible, and to identify a range of feasible alternatives to the proposed project that could reduce or avoid those environmental effects.

Under CEQA, a Project EIR analyzes the impacts of an individual activity or specific project and focuses primarily on changes in the environment that would result from that activity or project. The EIR must include the contents required by CEQA and the State CEQA Guidelines and examine all phases of the project, including planning, construction, operation, and any reasonably foreseeable future phases.

The City and the County will use this EIR in their deliberations concerning approval of the project, and it may be used by other agencies, including resource agencies, for purposes of granting permit authority or other similar approval necessary to implement the proposed project.

Chapter 2 Environmental Setting, Impacts, and Mitigation Measures

2.1 Aesthetics

This section addresses potential impacts to aesthetics and visual resources within the project area that could result from implementation of the proposed project.

Aesthetics and visual resources are generally defined as the natural and built features of the landscape visible from public views that contribute to an area's visual quality. This section describes the existing visual environment and changes that may result from the proposed project.

According to the City of Hesperia's 2010 General Plan, "protecting the City's scenic vistas is necessary to preserve the identity and visual character of the City" (OS-13). Consistent with this goal of maintaining the scenic resources and natural beauty of Hesperia, this section will explore the existing visual setting, related regulations, and criteria for determining significance of impacts to determine the level to which local scenic and aesthetic resources may be impacted by the proposed project.

2.1.1 Environmental Setting

The regional landscape of the project corridor is largely characterized by a rapidly urbanizing setting consisting of residential, commercial, and vacant parcels. The proposed project would be located predominantly within publicly owned ROW, which is currently a paved, two- to four-lane east-west roadway utilized for travel within Hesperia and I-15 to the west.

The project is situated in the high desert environment within the rapidly urbanizing area around Hesperia. The unincorporated area within the project site is mostly characterized by vacant parcels interspersed with single-family homes, with some of the land being subdivided. East of Maple Avenue, the views are primarily of large-lot residential developments. Vacant parcels typically contain Mojave creosote bush habitat, vegetated with mostly low-lying shrubs and a few Joshua trees. The topography of the project area is relatively flat, which is indicative of the Mojave Desert, with distant views of the surrounding San Bernardino and San Gabriel mountain ranges.

Existing high-voltage power lines disrupt the desert viewshed along Ranchero Road at certain segments along the existing alignment, which further diminishes the aesthetic quality of views along Ranchero Road. Additionally, certain segments of the existing roadway have already been widened to accommodate four lanes. In these areas, there would be only minor modifications to the existing setting. City and County general plan land use designations reflect each jurisdiction's intent to predominantly develop the project area for residential land uses. Because of the residential land use designations, residential homes align both sides of Ranchero Road at varying intensity. Development along Ranchero Road is generally described as sparsely developed along the western portion and gradually more developed to the eastern portion of the project site.

At the western portion of Ranchero Road, the roadway is already paved, flanked by low-lying sage scrub and non-native vegetation. Some rural residential homes align both sides of Ranchero Road. Power poles and signage also exist along the corridor, impairing partial views of the San Gabriel Mountains in the distance. Within the central portion of Ranchero Road, this area of the roadway is more developed compared to the western portion. More residential subdivisions and commercial strip malls obstruct the distant views of the mountains. At this section of Ranchero Road, some sections of the roadway have been constructed to accommodate four lanes. The eastern portion of the project area exhibits the same qualities as the western and central segments of the project area with the widened paved roadway and overhead utility lines; however, the eastern segment is the most developed segment, as evidenced by the dense pattern of residential development.

One additional element to be considered in the regional landscape is the smog that frequently develops in the area and obscures the views of the mountains, which influences the overall appearance of the regional landscape.

Viewer Groups

Viewer groups are groups of people who regularly travel through the project corridor or who have a certain degree of sensitivity to changes in the visual environment. The two main viewer groups are motorists and residents.

A viewer group's sensitivity to visual change is impacted by several variables, such as distances separating viewers from visual resources, the visibility of resources, frequency and duration of views, and type and expectations of the viewer groups. The motorist viewer group typically only has fleeting views and tends to focus on

commute traffic, not on surrounding scenery; therefore, the motorist viewer group would be assumed to have a low level of visual sensitivity. The resident viewer group would have extended viewing periods and may have a somewhat higher level of visual sensitivity; however, residential viewers along the corridor are already exposed to the existing Ranchero Road, overhead power lines, and a rapidly urbanizing landscape.

Most people within each of these viewer groups would experience a low sensitivity to change in the visual environment as they are typically only using the corridor for Regulatory Setting

CEQA establishes that the policy of the State is to take all action necessary to provide the people of the State "with…enjoyment of *aesthetic,* natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

The general plans for the City and the County were reviewed to determine the regulatory requirements within the project area. The regulatory setting for aesthetics and visual resources in the project area is discussed below.

2.1.1.1 City of Hesperia

Relevant policies from the City of Hesperia's Land Use Element include:

- Policy LU-8.5: Adopt design standards which will assure land use compatibility and enhance the visual environment, by providing attractive, aesthetically pleasing development which is sensitive to the unique local characteristics of the Hesperia community.

2.1.1.2 San Bernardino County

Relevant policies from San Bernardino County's Open Space Element include:

- Goal OS-4: The County will preserve and protect cultural resources throughout the County, including parks, areas of regional significance, and scenic, cultural, and historic sites that contribute to a distinctive visual experience for visitors and quality of life for County residents.

2.1.2 Criteria for Determining Significance

The following evaluation criteria for determining the significance of impacts related to visual resources are based on Appendix G of the CEQA Guidelines. The proposed project would result in a significant impact to visual resources if it:

a) Has a substantial adverse effect on a scenic vista.
b) Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
c) Substantially degrades the existing visual character or quality of the site and its surroundings.
d) Creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

2.1.3 Construction Impacts

2.1.3.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road; therefore, no construction-related impacts to visual or aesthetic resources would occur.

2.1.3.2 Build Alternative

The construction phase of the project could potentially result in temporary visual impacts. During construction of the proposed project, the presence of construction vehicles and equipment could temporarily degrade the visual quality of the project site; however, the presence of construction vehicles would be temporary and would cease once construction is complete. In summary, the visual character and quality of the project corridor would be temporarily affected by removal of vegetation, heavy equipment use and storage, excavation, and the presence of other visible general construction activity. This would result in a less than significant impact.

2.1.4 Permanent Impacts

2.1.4.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road. Under this alternative, the existing visual characteristics of the project area would not change; therefore, no impacts to visual or aesthetic resources would occur.

2.1.4.2 Build Alternative

State Scenic Highway and Scenic Resources

The proposed project is not located on or near a state scenic highway. Based on a site reconnaissance, neither rock outcroppings nor historic buildings were observed along the project corridor.

Additionally, no notable scenic vistas or scenic resources, including those from adjacent homes, would be significantly altered by the proposed project. While roadway construction would be required along the entire alignment, this work is not anticipated to affect any scenic vista.

Street lights along Ranchero Road already exist within the City and County limits. Other light sources within the study area are from residential and commercial developments. Vehicles provide the primary light and glare sources as they drive through the area during nighttime hours or inclement weather. With an additional lane on both sides of the existing road, light and glare from vehicles would be moved closer to existing and planned future residences; however, in most cases, the homes are set back a considerable distance from the road and are not anticipated to be substantially affected. Given the above considerations and with incorporation of mitigation measure VIS-3, it is not likely that the project would substantially degrade the existing day or nighttime views in the project area.

Changes to Existing Visual Character and Quality

The proposed project would require widening the existing two-lane segments of Ranchero Road to four lanes. As discussed above, viewer groups affected would include local residents and motorists. For these viewer groups, the project would produce minor changes in the existing visual character along Ranchero Road through widening the existing pavement from a two-lane roadway to a four-lane facility; however, this minor change would only occur in areas that have not been widened to four lanes because certain segments of Ranchero Road have already been paved to accommodate the proposed four-lane configuration. As indicated above, the project would not involve any overcrossing structures and would be constructed at-grade, which would maintain the existing views of the desert landscape. While the project would entail vegetation removal along both sides of the roadway in some areas, existing residential and commercial structures would not be affected. The proposed project improvements could be perceived by some as beneficial along segments of the roadway that currently have a degraded appearance. Given the above considerations, and with incorporation of minimization measures, the project would not substantially degrade the existing visual character or quality of the project area. Furthermore, the project is consistent with City Policy LU-8.5 and County Goal OS-4, which both seek to maintain the existing visual character along Ranchero Road.

Because the views of the mountains are obstructed by existing development and structures, the proposed project is not anticipated to produce significant impacts to visual resources. In addition, the views of the project site as it exists today provide for

a low visual quality. There are no memorable elements that leave the viewer with a visual impression from contrasting landscape elements that combine to form a striking and distinctive visual pattern. The street views provide a variety of disconnected elements, such as power lines, signs, and differing architectural treatments on existing residences and other structures. As a result, the integrity of the visual order is diminished as the encroachment of these elements impacts the view of the natural landscape. Finally, the visual resources of the landscape and man-built environment do not provide for a coherent, harmonious visual pattern. It is anticipated that the proposed project would not cause a significant impact on the overall visual quality within the project area. Based on the CEQA significance criteria listed for visual resources, the visual experience for nearby residents living adjacent to the proposed project and motorists traveling along Ranchero Road is not expected to be significantly altered by the proposed project. Less than significant impacts to visual and aesthetic resources are anticipated as a result of the proposed project.

2.1.5 Avoidance, Minimization, and/or Mitigation Measures:

The proposed project would change the visual character of the roadway in most areas from a secondary collector-type facility to a four-lane arterial. Vehicles provide the primary light and glare sources as they drive through the area during nighttime hours or inclement weather. With an additional lane on both sides of the existing road, light and glare from vehicles would be moved closer to existing and planned future residences. The following measures would apply to the proposed project to minimize potential impacts:

- **VIS-1:** Design the project to be consistent with the City's visual enhancement goals.
- **VIS-2:** Consistent with the City's 2010 General Plan policy (CN-1.1), use drought-resistant landscaping to minimize the contrast between the project and surrounding areas. Plan landscaping to complement existing natural and man-made features, including the dominant landscaping of surrounding areas.
- **VIS-3:** Incorporate design measures to reduce potential glare and night-lighting impacts during facility construction. Where appropriate, this should include provisions for shielding, specifying light intensity (e.g., number of lights, lumens, and wavelengths) in accordance with the City's lighting ordinance.
- **BIO-8:** Provide replacement landscaping or vegetation to disturbed areas consistent with the natural surroundings, and in accordance with City Code Section 16.24.150 and County Codes 88.01.050 (Tree or Plant Removal Permits) and 88.01.060 (Desert Native Plant Protection).

2.2 Agricultural Resources

This section addresses potential impacts to farmland, agricultural resources, and forest land within the project area that could result from implementation of the proposed project.

2.2.1 Environmental Setting

Regionally, in terms of dollar value, agriculture is a large industry in San Bernardino County, providing employment for a significant portion of the regional population. According to the County's 2007 General Plan, "The County consistently ranks in the top 15 agricultural-producing counties in the state" (p. V-12). The value of agricultural production in the year 2002 for the County totaled $631,550,100, a decrease of nearly $72 million from the previous year (County of San Bernardino, Department of Agriculture/Weights, and Measures, 2002). Agricultural uses within the County continue to decline as a result of the effects of urbanization and economic considerations, which have resulted in many farmlands becoming quite desirable and economically valuable to use for urban development.

The project corridor predominantly passes through rural residential land uses, with a small number of parcels on the north side of Ranchero Road, between the California Aqueduct and the existing rail line west of Santa Fe Avenue, zoned for "Limited Agriculture" (City of Hesperia, 2010b). According to the 2010 Hesperia General Plan, the intent of Limited Agricultural land use classification is intended to continue the current rural lifestyle within Hesperia. This designation mandates a minimum 1-acre lot size and a gross density range of 0.41 dwelling units per acre to 1.0 dwelling units per acre. For more information on the location of these parcels, see the City of Hesperia Zoning Map located in Section 2.9, Land Use and Planning. This zoning is defined as "intended to protect rural lifestyles within the City and SOI" (Hesperia, 2010b: LU-41). None of these properties will need to be acquired as part of the proposed project; therefore, no impacts to existing agricultural properties are anticipated as part of the Ranchero Road Widening project.

2.2.2 Regulatory Setting

The general plans for the City and the County were reviewed to determine the regulatory requirements within the project area. The regulatory setting for agricultural resources within the project area is discussed below.

Williamson Act

California has a diverse array of farmland retention policies to encourage the preservation of lands used for agricultural purposes. The Williamson Act (1965) is the State's best-known farmland retention policy, which "enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based on farming and open space uses as opposed to full market value" (State of California Department of Conservation, 2012). Currently, no parcels along the project corridor are protected by Williamson Act contracts.

2.2.3 Criteria for Determining Significance

The following evaluation criteria for agriculture are drawn from Appendix G of the CEQA guidelines. The proposed project would result in a significant impact to agricultural resources if it:

a) Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use.
b) Conflicts with existing zoning for agricultural use or a Williamson Act contract.
c) Conflicts with existing zoning for, or cause rezoning of, forest land (as defined in PRC Section 12220 (g)), timberland (as defined by PRC Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g)).
d) Results in the loss of forest land or conversion of forest land to non-forest use.
e) Involves other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or conversion of forest land to non-forest use.

2.2.4 Construction Impacts

2.2.4.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road; therefore, no construction-related impacts to agricultural resources would occur.

2.2.4.2 Build Alternative

Less than significant impacts to farmland would be associated with the project during construction. Temporary road closures and detours might occur as part of project construction, which might impact access to and from existing agricultural uses along

the east end of the corridor. Project construction BMPs would be employed to minimize dust and noise, and to manage stormwater runoff. Construction staging would not occur on agricultural land, and adjacent agricultural parcels would not be otherwise significantly impacted during project construction. Construction-related impacts to agricultural resources would be less than significant.

2.2.5 Permanent Impacts

2.2.5.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road; therefore, this alternative would not result in permanent impacts to agricultural resource.

2.2.5.2 Build Alternative

Although a small number of parcels currently zoned for limited agriculture are located east of the California Aqueduct along the project corridor, permanent impacts, including acquisition and conversion, to these parcels are not expected for the Build Alternative. Therefore, the proposed project is not expected to conflict with other projects or changes within the existing environment that might result in conversion of farmland.

2.2.6 Avoidance, Minimization, and/or Mitigation Measures

The following measures would apply to the proposed project to minimize potential impacts:

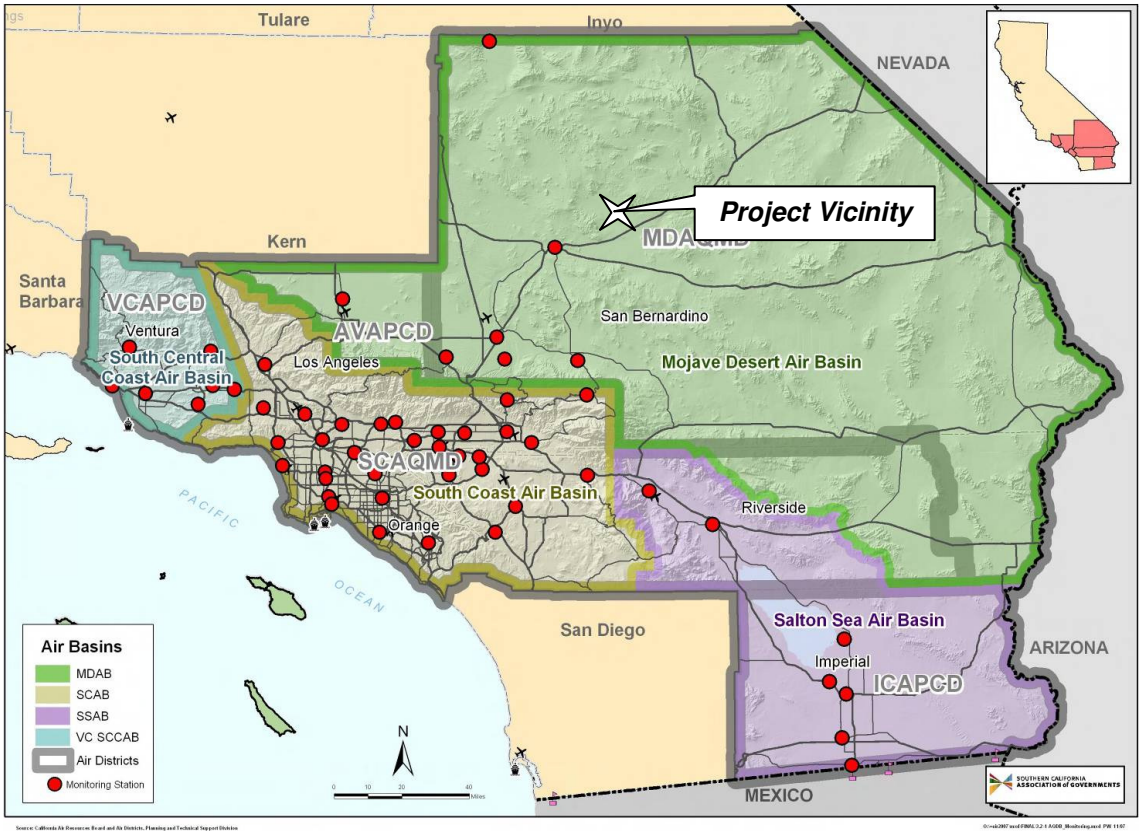
- **AG-1**: Project construction Best Management Practices (BMPs) would be employed to minimize dust and noise, and to manage stormwater runoff.
- **AG-2**: Construction staging would not occur on agricultural land, and adjacent agricultural parcels would not be otherwise significantly impacted during project construction.
- **TRANS-1**: The City will prepare and implement a Transportation Management Plan (TMP) to minimize the inconveniences during construction. Included among the provisions, the City and its contractor will coordinate with local police, fire, and emergency medical service providers regarding construction scheduling and any other practical measures to maintain adequate access to properties and response times. Two-way traffic through the construction zone will be maintained throughout the construction period.

2.3 Air Quality

This section provides a discussion of existing air quality within the region and the project area, and presents analysis of the potential impacts associated with implementation of the proposed project. Potential short-term and long-term air quality emissions associated with the proposed project are assessed with respect to federal and State ambient air quality standards and local agency rules and regulations.

2.3.1 Environmental Setting

The project site is located in the Mojave Desert Air Basin (MDAB). As shown in Figure 2.3-1, the proposed project site is near the southern edge of the western portion of the MDAB.



Source: Southern California Associated Governments.

Figure 2.3-1 MDAQMD Boundary

Topography and Climate

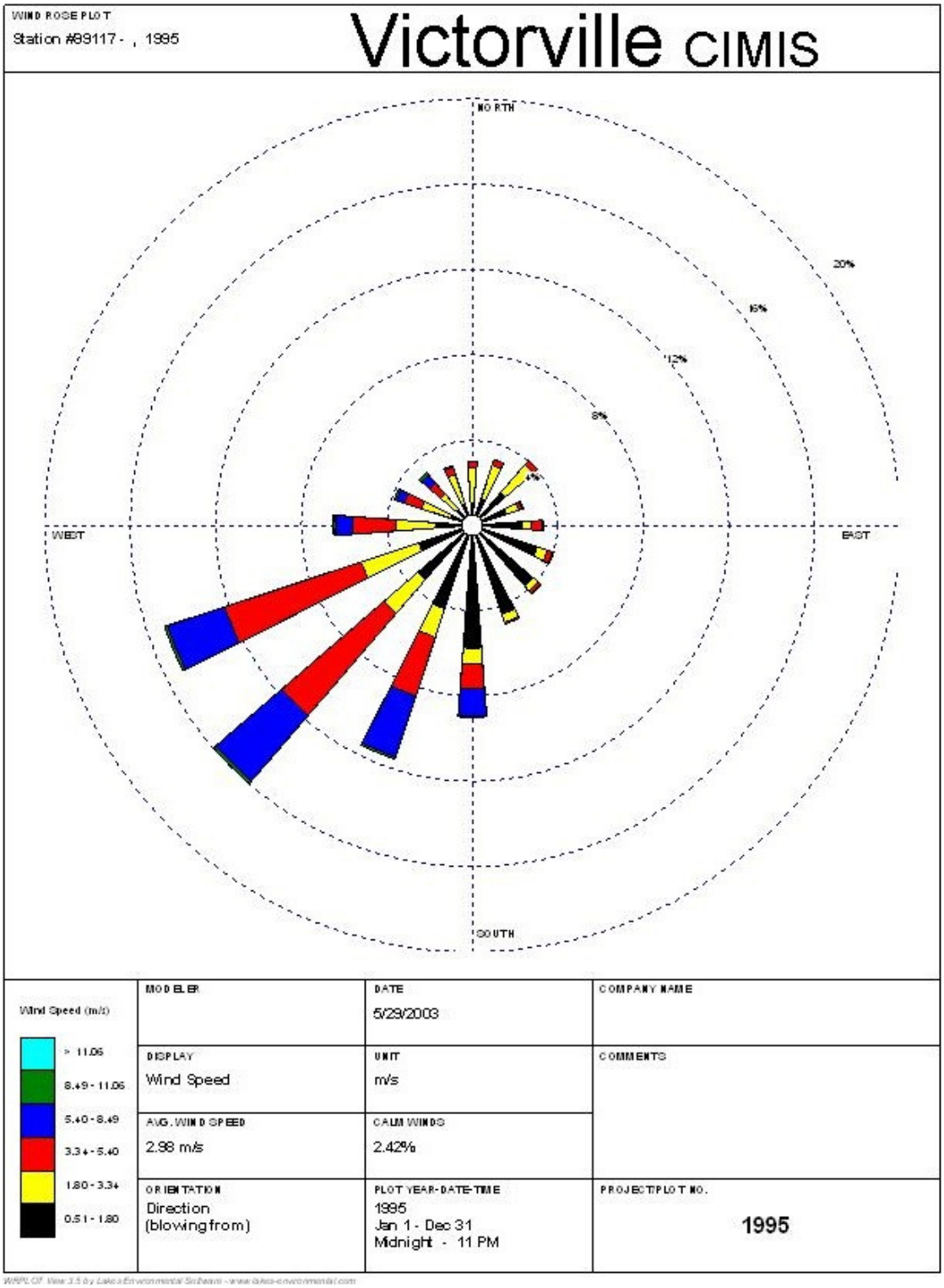
The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains rise from 1,000 to 4,000 ft above the valley floor. Prevailing winds in the MDAB are out of the west and

southwest. These prevailing winds are due to the MDAB's proximity to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north.

Air masses pushed onshore in southern California by differential heating are channeled through the MDAB. Such air movements can contribute to the transport of pollutants from the neighboring South Coast Air Basin (SCAB). At the extreme northwest of the MDAB, predominant winds from the northwest can contribute to the transport of pollutants from the adjacent San Joaquin Valley Air Basin (SJVAB).

Figure 2.3-2 shows a sample of the relative annual frequency of wind speeds and directions in Victorville, which is approximately 13 miles northeast of the project site. At this location, winds from the southwest (from the lower left, as shown in Figure 2.3-2) tend to predominate on an annual average basis. Winds exceeding 7.5 miles per hour (mph) are common in Victorville (shown in red and blue in Figure 2.3-2). These relatively high winds tend to reduce the degree of localized buildup of directly emitted gaseous pollutants, but they also tend to increase the degree to which dust can be entrained in the air. The MDAB is separated from the southern California coastal and central California Valley regions by mountains (highest elevation approximately 10,000 ft). Passes within these mountains are the main channels for movement of air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains and is separated from the San Gabriel Mountains by the Cajon Pass (4,200 ft). The project site is just northeast of Cajon Summit.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, which inhibits cloud formation and encourages daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska because these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives via infrequent warm, moist, and unstable air masses from the south. The MDAB averages 3 to 7 inches of precipitation per year (from 16 to 30 days with at least 0.01-inch of precipitation). Victorville averages 7.5 inches of precipitation and 27 precipitation days per year. The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert; at least 3 months per year have maximum average temperatures over 100.4 degrees Fahrenheit (°F).



Source: Air Quality Monitoring System

Figure 2.3-2 Wind Rose: Victorville, CA

Regional Climate

During summer, the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between 3 and 7 inches of precipitation per year, with precipitation on approximately 16 to 30 days per year. Victorville, which is just north of Hesperia, averages approximately 7.5 inches of precipitation and approximately 27 precipitation days per year. The MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert.

Strong winds are a common occurrence in the High Desert and Hesperia. These winds are generated by the climatic differences between the desert and mountains, and also through the tunneling effect of air in the Cajon Pass. The dry surface sediments and soils are easily displaced by these winds often causing soil erosion and impacting air quality and visibility (City of Hesperia, 2010c).

Sensitive Receptors

Some population groups, such as children, the elderly, and acutely and chronically ill persons, especially those with cardiorespiratory problems, are considered more sensitive to air pollution than others. Sensitive receptors are generally defined as locations including schools, residential areas, hospitals, elder-care facilities, rehabilitation centers, daycare centers, and parks. Residential areas are considered sensitive to air pollution because residents, including children and the elderly, tend to be at home for extended periods of time, resulting in sustained exposure to pollutants.

Sensitive land uses in the project vicinity include single-family residences that are located along and nearby the project corridor. Other potentially sensitive uses in the more distant area include schools, parks, and churches, as described in Table 2.3-1.

Table 2.3-1 Non-Residential Sensitive Receptors

Sensitive Receptors		Distance from Project Corridor
Schools	Just 4 Kids/Just 4 Toddlers	81 ft
	Oak Hills Christian Preschool	298 ft
	Oak Hills High School	0.4-mile
	Krystal School of Science, Math, and Technology	0.5-mile
	Mesquite Trails Elementary School	1-mile
	Cedar Middle School	1.5 mile
	Lime Street Elementary School	1.5 mile
	Cottonwood Elementary School	1.9 mile
	Sultana High School	1.9 mile
	Sultana Middle School	2 mile
	Mission Crest Elementary School	2 mile
Parks	Lime Street Park	1.5 mile
	Hesperia Recreational Park	1.5 mile
Churches	Jehovah's Witness	1.5 mile
	Abundant Life Church	100 ft
	River of Life Church of God	1.5 mile
	Hesperia Church of Nazarene	1.7 mile
	Primera Iglesia Bautista	1.8 mile

Current Air Quality Monitoring Data

Criteria air pollutant concentrations in California are regularly sampled at various monitoring stations operated by the California Air Resources Board (CARB) or the various air districts. Table 2.3-2 summarizes data for key criteria air pollutants collected at the two Mojave Desert Air Quality Management District (MDAQMD) monitoring locations nearest to the project site (Olive Street in Hesperia [closest monitoring station] and 14306 Park Avenue, Victorville) and the San Bernardino County portion of the MDAB, as well as the Western Mojave Desert 8-Hour Ozone (O_3) Planning Area (see Figure 2.3-1). The data are from 2004 to 2006, the most recent 3 years for which complete annual monitoring data is available. In all but one case, the highest pollutant concentrations and cumulative days of exceedances for the Western Mojave Desert 8-Hour O_3 Planning Area encompass the results for the entire MDAB. The exception is the number of days during which the 8-hour O_3 national ambient air quality standard (NAAQS) was exceeded in 2005.

Table 2.3-2 Air Monitoring Data Summary for Key Criteria Air Pollutants

Air Pollutant	Averaging Period	Parameter	Olive St., Hesperia (ADAM ID 2650) / 14306 Park Ave., Victorville (ADAM ID 3500)[a]			San Bernardino County Portion of MDAB			MDAB (All), Western Mojave Desert 8-Hour Ozone Planning Area[b]		
			2004	2005	2006	2004	2005	2006	2004	2005	2006
O_3	1-hour	Max. Concentration (ppm)	0.138	0.14	0.148	0.138	0.145	0.148	0.138	0.145	0.148
		Days >CAAQS (0.09 ppm)	28	41	22	63	59	56	75	66	61
	8-hour	Max. Concentration, Natl. Spec. (ppm)	0.119	0.120	0.124	0.119	0.123	0.124	0.119	0.123	0.124
		Days > NAAQS (0.08 ppm)[c]	21	34	18	41	49	47	49	55,*53*	50
		4th-highest Conc., 3-year Mean (ppm)	0.107	0.104	0.099	0.107	0.105	0.103	0.107	0.105	0.103
		4th-highest (3-year) > Prev. NAAQS?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Max. Concentration, CA Spec. (ppm)	0.119	0.121	0.125	0.119	0.123	0.125	0.119	0.123	0.125
		Days > CAAQS (0.070 ppm)	67	89	76	121	123	119	132	128	124
PM_{10}	24-hour	Max. Concentration, Natl. Spec. (µg/m^3)	50	58	56	88	78	83	199	131	184
		Calc. Days > NAAQS (150 µg/m^3)[d]	0	0	0	0	0	0	0	0	0
		Max. Concentration, CA Spec. (µg/m^3)	41	53	53	83	70	77	83	70	77
		Calc. Days > CAAQS (50 µg/m^3)[d]	0	5.75	0	0	19	12	0	19	26
	Annual Mean[e]	Concentration (µg/m^3)	*	*25.8*	*30.5*	*	*26.1*	*30.5*	*18.3*	*26.1*	*30.5*
		Days > CAAQS (20 µg/m^3)?	*	*Yes*	*Yes*	*	*Yes*	*Yes*	*No*	*Yes*	*Yes*
$PM_{2.5}$	24-Hour	Max. Concentration (µg/m^3)	*34*	*27*	*22*	*34*	*27*	*22*	*34*	*28*	*22*
		Est. Days > NAAQS (35 µg/m^3) [d]	*0*	*	*0*	*0*	*	*0*	*0*	*	*0*
		98th Percentile (µg/m^3)	*20*	*	*19*	*20*	*	*19*	*20*	*	*19*
	Annual Mean[e]	Concentration (µg/m^3)	*10.8*	*	*10.4*	*10.8*	*	*10.4*	*10.8*	*	*10.4*
		Days > NAAQS (15 µg/m^3)?	*No*	*	*No*	*No*	*	*No*	*No*	*	*No*
		Concentration, 3-year Max. (µg/m^3)	*14*	*11*	*11*	*14*	*11*	*11*	*14*	*11*	*11*
		Days > CAAQS (12 µg/m^3)?	*Yes*	*No*	*No*	*Yes*	*No*	*No*	*Yes*	*No*	*No*

Table 2.3-2 Air Monitoring Data Summary for Key Criteria Air Pollutants

Air Pollutant	Averaging Period	Parameter	Olive St., Hesperia (ADAM ID 2650) / 14306 Park Ave., Victorville (ADAM ID 3500)[a]			San Bernardino County Portion of MDAB			MDAB (All), Western Mojave Desert 8-Hour Ozone Planning Area[b]		
			2004	2005	2006	2004	2005	2006	2004	2005	2006
CO	1-hour	Max. Concentration (ppm)	*2.4*	*2.5*	*2.2*	*2.4*	*3.3*	*3.5*	*2.9*	*3.3*	*3.5*
		Days > NAAQS (20 ppm)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
		Days > CAAQS (35 ppm)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	8-hour	Max. Concentration (ppm)	*1.7*	*1.6*	*1.6*	*1.7*	*1.6*	*1.6*	*1.7*	*1.6*	*1.6*
		Days > NAAQS (9 ppm)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
		Days > CAAQS (9.0 ppm)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

[a] For pollutants monitored at the Hesperia-Olive Street station, data reported beneath this heading of the table is from that station. For other pollutants, data from the Victorville-14306 Park Avenue station is reported instead and is shown in *italic type*.

[b] For monitoring data relating to all NAAQS but the 8-hour O_3 NAAQS, the rightmost three rows of this table apply to the entire Mojave Desert Air Basin (MDAB). For data relating to the 8-hour O_3 NAAQS, the rightmost three rows of this table apply to the entire MDAB and that portion of the MDAB that comprises the Western Mojave Desert 8-Hour Ozone Planning Area. For one of the metrics – "Days > Prev. NAAQS (0.08 ppm)" – the year-2005 value for the Western Mojave Desert 8-Hour Ozone Planning Area is slightly lower than the corresponding value for the MDAB as a whole. In that case, the value specific to the Western Mojave Desert 8-Hour Ozone Planning Area is shown in *underlined italic type*.

[c] The latest 8-hour O_3 NAAQS is 0.075 ppm, and was officially adopted on March 12, 2008; however, it is not expected to become effective until 60 days after publication of this new NAAQS in the *Federal Register*. At this time, CARB's databases report days over the 8-hour O_3 NAAQS based on the NAAQS currently in effect -- 0.08 ppm.

[d] The values in this row are estimated based on an extrapolation of the number of days on which exceedances were actually measured according to a ratio of total number of days in the year to the number of days during which measurement data are available.

[e] This is the annual arithmetic mean.

CAAQS = California Ambient Air Quality Standards; CARB = California Air Resources Board; $\mu g/m^3$ = microgram per cubic meter; NAAQS = National Ambient Air Quality Standards; PM_{10} = particulate matter less than 10 microns in diameter; $PM_{2.5}$ = particulate matter less than 2.5 microns in diameter ; ppm = part per million

Source: MDAQMD 2008.

Federal Regulations and Ambient Air Quality Standards

Ozone

In 2008, the United States Environmental Protection Agency (EPA) announced, and then formally published, a revised 8-hour O_3 NAAQS of 0.075 part per million (ppm). The process of updating O_3 designations in response to this revised standard has begun. Future O_3 planning within the MDAB will reflect these updated designations. Within the MDAB, the moderate nonattainment designation with respect to the previous 8-hour O_3 NAAQS (0.08 ppm) is limited to that portion of San Bernardino County within the Western Mojave Desert Federal 8-Hour Ozone Planning Area. This includes the project area.

Particulate Matter

For the NAAQS for particulate matter less than 10 microns in diameter (PM_{10}), the nonattainment designation also applies to only a portion of the MDAB; in this case, it applies to the entire San Bernardino County portion of the MDAB, including areas north and east of the Western Mojave Desert Federal 8-Hour Ozone Planning Area. The MDAB is designated as unclassified/attainment with respect to the NAAQS for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). This includes the project area.

Other

With respect to the NAAQS for other federal criteria air pollutants, the MDAB is designated unclassified and/or attainment.

State Regulations and Ambient Air Quality Standards

The State of California began to set California Ambient Air Quality Standards (CAAQS) in 1969 under the mandate of the Mulford- Carrell Act. The CAAQS are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are additional CAAQS standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

Originally, there were no attainment deadlines for the CAAQS; however, the California Clean Air Act (CCAA) of 1988 provided a time frame and planning structure to promote attainment. The CCAA required nonattainment areas in the state to prepare attainment plans, and it proposed to classify each such area on the basis of the submitted plan as follows: “Moderate,” if CAAQS attainment could not occur before December 31, 1994; “Serious,” if CAAQS attainment could not occur before December 31, 1997; and “Severe,” if CAAQS attainment could not be conclusively

demonstrated at all. The attainment plans are required to achieve a minimum 5 percent annual reduction in the emissions of nonattainment pollutants, unless all feasible measures have been implemented.

Ozone

The California Air Resources Board (CARB) has retained a 1-hour-average O_3 standard. On April 28, 2005, CARB approved a new 8-hour-average O_3 standard of 0.070 ppm to further protect California's most vulnerable population (i.e., children) from the adverse health effects associated with ground-level O_3. The standard went into effect in early 2006. Both 1-hour and 8-hour standards are considered in determining attainment status for O_3 at the state level. Aside from eastern Kern County, which currently lacks a formal state O_3 designation, the MDAB is designated nonattainment (classified "moderate") with respect to O_3.

Particulate Matter

The entire MDAB is designated nonattainment with respect to PM_{10}. The nonattainment area with respect to $PM_{2.5}$ is limited to the same boundaries as the Western Mojave Desert Federal 8-Hour Ozone Planning Area.

Other

The Searles Valley Planning Area, near the northwest corner of San Bernardino County where it borders Inyo County, is designated nonattainment with respect to hydrogen sulfide. For all other CAAQS, the MDAB is designated unclassified and/or attainment.

Various health effects are associated with exposure to criteria air pollutants. Table 2.3-3 summarizes the health effects of key criteria air pollutants.

Table 2.3-3 Health Effects Summary for Criteria Air Pollutants

Pollutant	Sources	Primary Effects
Ozone (O_3)	Atmospheric reaction of organic gases – referred to as volatile organic compounds (VOCs) or reactive organic gases (ROGs) – with nitrogen oxides (NO_X) in the presence of sunlight. These O_3-forming compounds are often referred to as "O_3 precursors."	• Airway irritation, coughing, and pain when taking a deep breath; • Wheezing and breathing difficulties during exercise or outdoor activities; • Inflammation, which is much like a sunburn on the skin; • Aggravation of asthma and increased susceptibility to respiratory illnesses such as pneumonia and bronchitis; and • Permanent lung damage with repeated exposures.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Some particles, known as primary particles, are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks, or fires. Others form in complicated reactions in the atmosphere of chemicals, such as sulfur dioxides (SO_2) and NO_X, which are emitted from power plants, industries, and automobiles. These particles, known as secondary particles, make up most of the fine particle pollution in the country.	• Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; • Decreased lung function; • Aggravated asthma; • Development of chronic bronchitis; • Irregular heartbeat; • Nonfatal heart attacks; and • Premature death in people with heart or lung disease.
Carbon Monoxide (CO)	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; and natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise; • Impairment of mental function; • Impairment of fetal development; • Impairment of learning ability; • Aggravation of some cardiovascular diseases (angina); and • Death at high levels of exposure.

Sources: United States Environmental Protection Agency 2007, 2008.

2.3.2 Regulatory Framework

The plans, policies, and regulations applicable to the proposed project are discussed below.

2.3.2.1 Federal Regulations

Clean Air Act

The federal Clean Air Act (CAA), as amended in 1990, forms the basis for the national air pollution control effort. Basic elements of the act include NAAQS for criteria air pollutants, hazardous air pollutants (HAPs) emission standards, state attainment plans, motor vehicle emissions standards, stationary source emission standards and permits, acid rain control measures, stratospheric O_3 protection, and enforcement provisions.

The NAAQS are two-tiered; primary standards to protect public health and secondary standards to prevent degradation to the environment (e.g., impairment of visibility, damage to vegetation and property). The CAA mandates that the State submit and implement a State Implementation Plan (SIP) for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met.

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

Title I of the CAA identifies attainment, nonattainment, and unclassifiable areas with regard to the criteria pollutants, and it sets deadlines for all areas to reach attainment for the six criteria pollutants, which are carbon monoxide (CO), nitrogen oxides (NO_X, measured as nitrogen dioxide, NO_2), O_3, sulfur oxides (SO_X, measured as sulfur dioxide, SO_2), PM_{10}, and lead (Pb). The NAAQS were amended in July 1997 to include the 8-hour O_3 standard and an NAAQS for $PM_{2.5}$. Table 2.3-4 shows NAAQS for criteria pollutants.

Table 2.3-4 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a,c] Concentration	Federal Standards [b,c]	
			Primary	Secondary
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	—	—
	8 Hour	0.07 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	—
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	Annual (AAM)	20 µg/m^3	— [d]	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard	35 µg/m^3 [e]	Same as Primary
	Annual (AAM)	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	None
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual (AAM)	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3) [f]	None
Sulfur Dioxide (SO_2)	Annual (AAM)	—	0.030 ppm (80 µg/m^3)	—
	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	—
	3 Hour	—	—	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	—	—

Table 2.3-4 Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [a,c] Concentration	Federal Standards [b,c]	
			Primary	Secondary
Lead (Pb) [g]	30-Day Average	1.5 µg/m^3		—
	Calendar Quarter	—	1.5 µg/m^3	Same as Primary
	Rolling 3-Month [h]	—	0.15 µg/m^3	Same as Primary
Visibility-Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more due to particles when relative humidity is less than 70% Method: CARB Method V.	No Federal Standards	
Sulfates	24 Hour	25 µg/m^3		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride [g]	24 Hour	0.01 ppm (26 µg/m^3)		

[a] California standards for O_3, CO (except Lake Tahoe), SO_2 (1 and 24 hour), NO_2, suspended particulate matter (PM_{10}, $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[b] National standards (other than O_3, particulate matter, and those based on annual averages or AAM) are not to be exceeded more than once per year. The O_3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard (effective May 27, 2008). For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

[c] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on reference temperature of 25°C and reference pressure of 760 torr. Most measurements of air quality are to be corrected to these reference conditions; ppm in the table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[d] The annual standard of 50 µg/m^3 was revoked by EPA in December 2006 due to lack of evidence linking health problems to long-term exposure to coarse particulate pollution.

[e] Based on 2004-2006 monitored data, EPA tightened the 24-hour standard of $PM_{2.5}$ from the previous level of 65 µg/m^3. The updated area designation became effective on October 8, 2009.

[f] To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that EPA standards are in units of parts per billion (ppb), which is equivalent to 1,000 ppm. The national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

[g] The CARB has identified Pb and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[h] Final rule for the new federal standard was signed October 15, 2008.

AAM – annual arithmetic mean; mg/m3– milligrams per cubic meter; µg/m3– micrograms per cubic meter; ppm – parts per million

Source: CARB, 2011.

Title II of the CAA contains many provisions with regard to mobile sources, including motor vehicle emission standards (e.g., new tailpipe emissions standards for cars and trucks, NO_X standards for heavy-duty vehicles), fuel standards (e.g., requirements for reformulated gasoline), and a program for cleaner fleet vehicles.

Transportation Conformity Rule

Under the 1990 CAA Amendments, the U.S. Department of Transportation (DOT) cannot fund, authorize, or approve federal actions to support programs or projects that are not first found to conform to the SIP for achieving the CAA requirements. Conformity with the CAA takes place on two levels – first at the regional level and second at the project level. The proposed project must conform at both levels to be approved.

Regional Conformity

Regional-level conformity in California is concerned with how well the region meets the standards set for CO, NO_2, O_3, and particulate matter. California is in attainment for the other criteria pollutants. At the regional level, RTPs are developed that include all of the transportation projects planned for a region over a period of years, usually at least 20. Based on the projects included in the RTP, an air quality model is run to determine whether implementation of those projects would conform to emission budgets or other tests showing that attainment requirements of the CAA are met. If the conformity analysis is successful, the regional planning organization (e.g., SCAG for San Bernardino County) and the appropriate federal agencies (e.g., Federal Highway Administration [FHWA]) make the determination that the RTP is in conformity with the SIP for achieving the goals of the CAA. Otherwise, the projects in the RTP must be modified until conformity is attained. If the design and scope of the proposed transportation project are the same as described in the RTP, then the proposed project is deemed to meet regional conformity requirements for purposes of project-level analysis.

The 2012 RTP was found to conform by SCAG on May 4, 2012, and FHWA and Federal Transit Administration (FTA) adopted the air quality conformity finding on June 4, 2012.

The proposed project is locally funded and is in the modeling list of SCAG's 2012 RTP. To conform, a project must be included in the list of projects in the approved transportation plans and programs. The proposed project is listed in the Modeling Listing of 2012 RTP.

Project-Level Conformity

Project-level conformity is required for projects in CO, PM_{10}, and $PM_{2.5}$ nonattainment and maintenance areas. As discussed previously, a region is a nonattainment area if one or more monitoring stations in the region fail to attain the relevant CAAQS or NAAQS. Areas that were previously designated as nonattainment, but have recently met the CAAQS or NAAQS, are called maintenance areas. In general, projects must not cause the CO standard to be violated, and in nonattainment areas, the project must not cause any increase in the number and severity of violations.

2.3.2.2 State Regulations/Standards

California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. Table 2.3-4 shows the CAAQS currently in effect for each of the criteria pollutants, as well as the other pollutants recognized by the State. As shown, the CAAQS are more stringent than the NAAQS for most of the criteria air pollutants. The CAAQS include standards for pollutants, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. On April 28, 2005, CARB approved a new 8-hour-average O_3 standard of 0.070 ppm to further protect California's most vulnerable population (i.e., children) from the adverse health effects associated with ground-level O_3. The standard went into effect early 2006.

Air quality regulations within the project area are implemented through the Mojave Desert Air Quality Management District (MDAQMD). A variety of emission sources contribute to ambient criteria air pollutant concentrations. Mobile sources are important contributors to the O_3 precursors: reactive organic gas (ROG), which is a slightly more-inclusive variant of volatile organic compound (VOC), applied at the state level; and NO_X. Sources include on-road motor vehicles and off-road mobile sources associated with recreation, construction, and transportation. Diesel-powered locomotives contribute more regional NO_X emissions than they do regional ROG emissions. For $PM_{2.5}$, and especially PM_{10}, area-wide sources are particularly important contributors. Area-wide sources include "fugitive" dust (i.e., dust entrained into the air) from construction activities/sites and other sources. The federal and state attainment status for the MDAB is provided in Table 2.3-5.

Table 2.3-5 Mojave Desert Air Basin Attainment Status

Pollutant	Attainment Status Basis	
	National Standard	California Standard
Ozone (O_3), 1-hour average	N/A [a]	Nonattainment; classified Moderate.[f]
Ozone (O_3), 8-hour average	Nonattainment; classified Moderate[b] (MDAB portion of San Bernardino County outside of Western Mojave Desert Federal 8-Hour O_3 Planning Area. Indian Wells Valley in eastern Kern County and portion of Riverside County within MDAB are unclassified/attainment).[c]	
PM_{10}	Nonattainment; classified Moderate in Western Mojave Desert and serious in Kern River/Cummings Valleys portion of eastern Kern County[d]. Indian Wells Valley portion of eastern Kern County designated attainment/ maintenance. Portions of MDAB in Los Angeles and Riverside counties and remainder of southeastern Kern County are unclassified/attainment.[e]	Nonattainment.
$PM_{2.5}$	Unclassified/attainment.	Nonattainment (portion of MDAB outside of Western Mojave Desert Federal 8-Hour O_3 Planning Area is unclassified/attainment).
Carbon Monoxide (CO)	Attainment.	Attainment.
Nitrogen Dioxide (NO_2)	Attainment/unclassified.	Attainment/unclassified.[g]

N/A = not applicable

[a] The 1-hour O_3 NAAQS was revoked on June 15, 2005.

[b] Portion of eastern Kern County, excluding Indian Wells Valley, is classified nonattainment: Subpart 1.

[c] Attainment status for O_3 was established based on the NAAQS in effect before March 12, 2008.

[d] Portions near the northwest tip of the MDAB within the Kern River Valley and western half of the Tehachapi Region are designated serious nonattainment per designations that were applied when those areas were considered part of the neighboring SJVAB. While EPA has found the entire SJVAB to have attained the PM_{10} NAAQS, formal redesignation is still pending.

[e] In 2002, EPA issued a final rule that included a finding that the portion of Searles Valley within San Bernardino County had attained the PM_{10} NAAQS; however, a formal redesignation to attainment status for that area has not been completed.

[f] Eastern Kern County currently has no formal designation with respect to the 8-hour O_3 CAAQS.

[g] The NO_2 CAAQS was amended on February 22, 2007, to lower the 1-hour standard to 0.18 ppm and establish a new annual standard of 0.030 ppm. These changes became effective on February 19, 2008. The attainment status provided in this table is based on the old standard.

Source: Parsons, 2008a.

2.3.2.3 Local Plans and Regulations

Regional Air Quality Plan

The CARB coordinates and oversees both state and federal air pollution control programs in California. The CARB has divided the state into 15 air basins. Authority for air quality control within each basin has been given to local Air Pollution Control Districts (APCD) or Air Quality Management Districts (AQMD) to regulate stationary source emissions and develop local plans for achieving and maintaining attainment.

As mentioned above, MDAQMD is the agency responsible for attaining state and federal clean air standards in the MDAB. MDAQMD has adopted a series of Air Quality Attainment Plans to meet the CAAQS and NAAQS. These plans include, among other emissions-reducing requirements, control technology for existing sources and control programs for area sources and indirect sources.

Table 2.3-6 summarizes MDAQMD's historical planning activities pursuant to the CAA and CCAA.

Additionally, MDAQMD adopts rules and regulations to implement portions of the attainment plans. Several of these rules may apply to construction or operation of the project. The most pertinent MDAQMD rules to the proposed project are listed below.

Rule 402 – Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 – Fugitive Dust. This rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area that remains visible beyond the emission source property line. During proposed project construction, best available control measures identified in the rule would be utilized to minimize fugitive dust emissions from proposed demolition, grading, and earth-moving activities. These measures would include site prewatering and rewatering as necessary to maintain sufficient soil moisture content.

Table 2.3-6 MDAQMD Attainment Plans

Name of Plan	Date of Adoption	Applicable Area		Pollutants Targeted	Targeted Attainment Date[1]
		Description	Includes Project Vicinity?		
1991 Air Quality Attainment Plan	8/26/1991	San Bernardino County portion	Yes	NO_X and VOCs	1994
Reasonable Further Progress Rate-of-Progress Plan	10/26/1994	Southeast Desert Modified AQMD	Yes	NO_X and VOCs	2007
Post 1996 Attainment Demonstration and Reasonable Further Progress Plan	10/26/1994	Southeast Desert Modified AQMD	Yes	NO_X and VOCs	2007
Searles Valley PM_{10} Plan	6/28/1995	Searles Valley Planning Area	Yes	PM_{10}	1994
Mojave Desert Planning Area Federal Particulate Matter (PM_{10}) Attainment Plan	7/31/1995	Mojave Desert Planning Area	Yes	PM_{10}	2000
Triennial Revision to the 1991 Air Quality Attainment Plan	1/22/1996	Entire District	Yes	NO_X and VOCs	2005
Attainment Demonstration, Maintenance Plan, and Redesignation Request for the Trona Portion of the Searles Valley PM_{10} Nonattainment Area	3/251996	Searles Valley Planning Area	No	PM_{10}	N/A
2004 Ozone Attainment Plan (State and Federal)	4/26/2004	Entire District	Yes	NO_X and VOCs	2007
Federal 8-Hour Ozone Attainment Plan	6/9/2008	Entire District	Yes	NO_X and VOCs	2021

[1] A historical target attainment date given in an attainment plan does not necessarily mean that the affected area has been redesignated to attainment to Table 4 for current attainment status within the MDAQMD's jurisdiction and the remainder of the MDAB.

NO_X – nitrogen oxides; PM_{10} – particulate matter less than 10 microns in diameter; VOCs – volatile

Source: Mojave Desert Air Quality Management District, 2008.

Rule 431.2 – Sulfur Content of Liquid Fuels. This rule limits the sulfur content in diesel and other liquid fuels for reducing the formation of SO_X and particulates during combustion and to enable the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers, such as distributors, and retailers, as well as users of diesel, low-sulfur diesel, and other liquid fuels for stationary source applications in the District. The rule also affects diesel fuel supplied for mobile source applications. Low sulfur diesel fuel (i.e., less than 15 ppm by weight) should be utilized in all diesel-powered construction equipment.

2.3.2.4 San Bernardino County

Local jurisdictions, such as San Bernardino County, have the authority and responsibility to reduce air quality through their police power and decision-making authority. San Bernardino County has responsibility for the unincorporated areas of San Bernardino County, which is where the project is located, to manage environmental programs with anticipated future growth and development. This is accomplished by developing a blueprint through the San Bernardino County General Plan that provides policies that govern the way in which growth and development occur in the unincorporated areas of the County, outlining threshold levels for evaluating project impacts, and provide recommended mitigations measures to minimize project impacts.

The San Bernardino County General Plan includes an air quality section within their Conservation Element (Chapter 5). The Element provides goals and policies for the County's three subregions, representing Valley, Mountain, and Desert regions.

Relevant policies from the San Bernardino County General Plan include:

- CO-4: The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy.
- CO-4.2: Coordinate air quality improvement technologies with the South Coast Air Quality Management District (SCAQMD) and the MDAQMD to improve air quality through reductions in pollutants from the region.
- CO-4.3: The County will continue to ensure through coordination and cooperation with all airport operators a diverse and efficient ground and air transportation system, which generates the minimum feasible pollutants.
- CO-4.4: Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by ensuring the timely provision of infrastructure to serve new development.

2.3.2.5 City of Hesperia

Relevant policies from the City of Hesperia's General Plan include:

- CN-7.3: Coordinate with neighboring cities and public jurisdictions in the preservation of air quality resources.
- CN 7.9: Promote sustainable principles in development that conserves such natural resources as air quality and energy resources.

- CN 8: Implement policies and measures to reduce air pollution and emissions of pollutants.
- CN-8.1: Implement measures to reduce fugitive dust from unpaved areas, parking lots, and construction sites.
- CN-8.2: Implement measures to reduce exhaust emissions from construction equipment.
- CN-8.3: Work with the MDAQMD, San Bernardino Associated Governments (SANBAG), San Bernardino County and neighboring jurisdictions to implement the federal O_3 and PM_{10} nonattainment plans and meet federal state air quality standards and reduce overall emissions from mobile and stationary sources.
- CN-8.5: Minimize exposure of sensitive receptor land uses and sites to health risks related to air pollution.

2.3.3 Criteria for Determining Significance

The following evaluation criteria for air quality are drawn from Appendix G of the CEQA guidelines. The proposed project would result in a significant impact to air quality if it:

a) Conflicts with or obstructs implementation of the applicable air quality plan.
b) Violates any air quality standard or contributes substantially to an existing or projected air quality violation.
c) Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard, including releasing emissions that exceed quantitative thresholds for ozone precursors.
d) Exposes sensitive receptors to substantial pollutant concentrations.
e) Creates objectionable odors affecting a substantial number of people.

Table 2.3-7 provides the MDAQMD CEQA Significance Criteria for Construction and Operational Emissions of Criteria Air Pollutants. With regard to short-term (construction) impacts, a project and/or cumulative impacts will be deemed significant if air pollution emissions from project-related construction activities last 5 years or more and exceed MDAQMD emissions thresholds; and/or do not comply with all relevant federal, state, and MDAQMD rules, regulations, ordinances, and statutes and with Caltrans specifications addressing construction-related air pollution control. With regard to long-term (operational) impacts, a project and/or cumulative impacts will be deemed significant if the project generates a predicted increase in

study-area motor-vehicle emissions exceeding corresponding thresholds shown in Table 2.3-7.

Table 2.3-7 Construction and Operational Emissions of Criteria Air Pollutants: MDAQMD CEQA Significance Criteria

	Emissions							
	Worst-Case Day (lb)				Annual (tons)			
	VOC	NO_X	CO	PM_{10}	VOC	NO_X	CO	PM_{10}
CEQA Significance Criteria: Construction	137	137	548	82	25	25	100	15

Source: MDAQMD, 2011

2.3.4 Construction Emissions

2.3.4.1 No Build Alternative

Under the No Build Alternative, none of the project proposed improvements would be built and, aside from minor amounts of air emissions due to typical roadway maintenance work, there would be no measurable short-term construction air quality impacts under this alternative.

2.3.4.2 Build Alternative

Construction-related impacts to air quality are short term in duration and are not anticipated to result in adverse or long-term conditions. Implementation of appropriate minimization measures will reduce any air quality impacts from construction activities.

Temporary construction-related airborne dust and vehicle emissions would occur during site preparation and project construction. Compliance with MDAQMD and Caltrans BMPs would sufficiently reduce the construction-related air pollutant emissions to less than significant levels. Emissions from construction equipment are also expected and would include CO, NO_X, VOCs, directly emitted particulate matter (PM_{10} and $PM_{2.5}$), and toxic air contaminants (TACs) such as diesel exhaust (DE) particulate matter. O_3 is a regional pollutant that is derived from NO_X and VOCs in the presence of sunlight and heat. Construction emissions are not predicted to exceed MDAQMD thresholds, which would result in a less than significant impact.

Project construction would not expose sensitive receptors to significant levels of TACs or objectionable odors.

With the implementation of minimization measures, no adverse construction air quality impacts are anticipated.

Construction Impacts

In accordance with Caltrans guidance, construction-related air quality impacts are addressed by first comparing the duration of the construction period with the minimum duration of construction activity that would require analysis of construction impacts under Transportation Conformity rules. In the context of construction air quality emissions analysis, federal conformity regulations require analysis of construction impacts for projects when construction activities will last for more than 5 years. When the anticipated duration of construction is less than 5 years, these impacts are qualitatively considered within the context of applicable rules and regulations. Project construction would be completed in less than 5 years.

Use of heavy-duty construction equipment would result in off-road (i.e., onsite) mobile source criteria air pollutant emissions, primarily NO_X. Paving operations would release VOCs. Construction activities would also generate emissions of TACs (i.e., diesel particulate matter [DPM]/diesel exhaust organic gas [DEOG] from the exhaust of diesel-powered equipment). Air quality impacts would also be associated with vehicle trips by construction workers traveling to and from the project site. Fugitive dust emissions would result from earthwork and onsite construction activities. Lastly, construction of the project would temporarily contribute locally to greenhouse gas (GHG) emissions. The increase in local GHG emissions is associated with combustion of fossil fuel and energy demand related to water conveyance required to facilitate construction activities (e.g., for dust control and for compacting embankment material, subbase, base, and surfacing material). Construction-related emissions and the rate at which water is used can vary substantially from day to day over the construction period depending on the level of activity, the specific mix of construction equipment, and the prevailing weather conditions.

Construction emissions from project-related construction activities would last less than 5 years; therefore, by complying with all relevant federal, CARB, and MDAQMD rules, regulations, ordinances, and statutes, and by incorporating Caltrans' specifications for addressing construction-related air pollution control, no adverse construction air quality impacts are anticipated. In addition to compliance with regulations and implementation of minimization measures, construction of the proposed project is not anticipated to exceed MDAQMD criteria air pollutant thresholds.

Table 2.3-8 presents the proposed project's predicted construction emissions pertaining to criteria air pollutants (VOC, NO_X, CO, and PM_{10}), compared with CEQA significance criteria thresholds for these pollutants. Although emissions are predicted for each of the four criteria air pollutants as a result of the proposed project's construction activities, predicted emissions (daily and annual) are well below the CEQA significance criteria thresholds; therefore, there is no predicted exceedance of the significance criteria thresholds under CEQA with regard to the proposed project's construction emissions. As a result, there are no associated significant air quality impacts due to the proposed project's construction activities.

Table 2.3-8 Construction Emissions of Criteria Air Pollutants: Compared with CEQA Significance Criteria

	Emissions							
	Worst-Case Day (lb)				Annual (tons)			
	VOC	NO_X	CO	PM_{10}	VOC	NO_X	CO	PM_{10}
CEQA Significance Criteria	*137*	*137*	*548*	*82*	*25*	*25*	*100*	*15*
Predicted Emissions	**16**	**109**	**76**	**14**	**2.6**	**19**	**12**	**2**
Exceeds Significance Criteria?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Parsons, 2010

2.3.5 Operational Emissions

2.3.5.1 No Build Alternative

Under the No Build Alternative, emissions from motor vehicle traffic would change as vehicle traffic volumes, driving speed, and the vehicle type change year by year. Emissions would decrease as older vehicles are replaced by newer ones; however, emissions would increase due to projected future growth as more vehicles would be traveling with reduced average speeds on an increasingly congested roadway.

2.3.5.2 Build Alternative

Regional Operational Impacts

The primary source of air pollutant emissions associated with the proposed project would be motor vehicle traffic. The proposed project is included in the adopted 2012 RTP and the 2010-2011 Regional Transportation Improvement Program (RTIP) *Annual Listing of Obligated Projects*. The project's influence on mobile source air pollutant emissions was incorporated into the air quality modeling used in MDAQMD's conformity determinations for the 2012 RTP and 2008 RTIP and its

2012-2035 RTP Transportation Conformity Report. The project's inclusion in a conforming RTP/RTIP is one indicator that operation of the Build Alternative would not produce a substantial regional impact on air pollutant emissions.

Another indicator that the proposed project would not have a substantial regional emissions impact is the net influence of the project on motor vehicle traffic emissions in the project vicinity, relative to the baseline emissions under no-action conditions. For the Build Alternative, AM and PM period average travel speeds for automobiles and trucks within the corridor are expected to increase after construction, thereby decreasing the estimated emissions. These reductions in estimated emissions are primarily attributable to the predicted increases in average travel speeds.

Based on the inclusion of the project in a conforming RTP/RTIP and an anticipated reduction in overall emissions, no adverse regional air quality impacts would result from operation of the Build Alternative.

Localized Operational Impacts

The local analysis is commonly referred to as project-level air quality or hot-spot analysis. The primary focus is on the localized operational impacts on air quality attributable to operation of the Build Alternative. The analysis is provided for CO, PM_{10}, and $PM_{2.5}$. The analysis years consist of the project opening year and the design or horizon year referenced in the approved plan, rather than present and future years. The CO analysis can be qualitative or quantitative. Qualitative PM_{10} and $PM_{2.5}$ analysis is required if the project is deemed a project of air quality concern (POAQC).

One contributor to the potential for localized hot spots of air pollutants emitted by vehicle exhaust is traffic congestion. Level of Service (LOS) is evaluated on a scale from A to F, with A representing negligible congestion and F representing severe congestion. As a point of reference, the City has established a minimum acceptable LOS of D as a design/planning goal. The proposed project would have a neutral to beneficial influence on intersection congestion. With implementation of the Build Alternative, many intersections that are predicted to have LOS below the City's goal under the No Build Alternative are predicted to meet the City goal under the Build Alternative. Over the subsequent decades after construction, the surrounding area will develop. As part of this process, increases in traffic demand are expected to eventually cause deterioration in LOS at some of the intersections; however, project-related improvements in LOS would still be evident.

Table 2.3-9 presents the proposed project's predicted operational change in emissions pertaining to criteria air pollutants (VOC, NO_X, CO, and PM_{10}), compared with CEQA significance criteria for those pollutants. Although implementation of the proposed project would incrementally add to existing criteria air pollutant emissions, emissions would still be well below the CEQA significance criteria thresholds; therefore, there is no predicted exceedance of the significance criteria thresholds under CEQA with regard to the proposed project's operational impacts on air quality. As a result, there are no associated significant air quality impacts due to the proposed project's operation.

Table 2.3-9 Operational Change in Emissions of Criteria Air Pollutants: Compared with CEQA Significance Criteria

	Emissions within MDAB (lbs/day)				Emissions within MDAB (tons/year)			
	VOC	NO_X	CO	PM_{10}	VOC	NO_X	CO	PM_{10}
No Build	132.3	216.71	2,281.42	495.46	24.39	43.38	389.18	90.42
Future with Project	149.09	249.2	2,506.94	557.29	27.47	49.88	429.51	101.70
Project Increment	**16.79**	**32.49**	**225.52**	**61.83**	**3.08**	**6.50**	**40.33**	**11.28**
CEQA Significance Criteria	137	137	548	82	25	25	100	15
Exceeds Significance Criteria?	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Parsons, 2012.

2.3.6 Avoidance, Minimization, and/or Mitigation Measures

During the operational phase, the proposed project would not result in significant impacts to air quality; therefore, no mitigation measures are required.

Although operational emissions from the project are anticipated to be less than significant, site preparation and roadway construction would involve clearing, cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces, which may affect nearby sensitive receptors. To ensure that potential construction-related air quality impacts are minimized, the following measures would apply to the proposed project to mitigate impacts to less than significant:

- **AQ-1:** Periodic watering for short-term stabilization of disturbed surface areas to minimize visible fugitive dust emissions (for purposes of this Rule, use of a water truck to maintain most disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance).
- **AQ-2:** Take actions sufficient to prevent project-related track-out onto paved surfaces.
- **AQ-3:** Cover loaded haul vehicles while operating on publicly maintained paved surfaces.
- **AQ-4:** Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions.
- **AQ-5:** Reduce nonessential earth-moving activity under high wind conditions (for purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance).
- **AQ-6:** Water exposed surfaces at least twice per day; activities will be scheduled to allow for early paving of road surfaces; reduced travel speeds (15 mph) on unpaved surfaces shall be enforced; simultaneous disturbance areas will be limited to the smallest area as practical; and all stockpiles will be covered with tarps.
- **AQ-7:** Measures contained in the MDAQMD Rule 403 would be followed, as applicable, during project construction. The City of Hesperia would be responsible for selecting appropriate applicable Rule 403 measures to be followed during project construction and for overseeing compliance with the measures by the construction contractors. The construction contractors would be required to obtain construction permits from the City, and the permits would state the required Rule 403 measures that must be followed by the contractors.

2.4 Biological Resources

This section summarizes information documented in the technical report for this project, *Biological Report for the Ranchero Road Widening Project* (ECORP, 2013b), which is included as Appendix N of this document.

2.4.1 Environmental Setting

The proposed project is located in a distinct biological area as defined by the Mojave Desert and the San Bernardino National Forest. According to Hesperia's 2010 General Plan, this area supports a diverse range of biological resources including vegetation communities and special-status species.

A large portion of Hesperia has been disturbed with development. The project study area is unlikely to contain vegetation that would be habitat for sensitive species. Areas adjacent to Ranchero Road are generally developed with residential homes and commercial buildings and most of the undeveloped area are disturbed by off-road vehicles and foot traffic; however, there are several areas of the region that may potentially contain biological resources, including washes west of the Oro Grande Wash, undeveloped land along I-15, the East Fork of the Mojave River, and undeveloped land in the Summit Valley. These areas provide unique and valuable habitats for a diverse collection of plants and animals within plant communities such as the Mohave Mixed Woody Scrub, Chamise Chaparral, Mojavean Pinyon, Juniper Woodlands, Interior Live Oak Chaparral, Mojave Riparian Forest, and Big Sagebrush Scrub (City of Hesperia, 2010b).

The project area has been in the process of urbanizing since the 1980s. In this regard, the project study area has been extensively disturbed by urban development, including grading for roads, low-density residential uses, commercial developments, power lines, aqueduct, and railroad line. Various roads cross the project area, and vehicular traffic on these roadways is a major source of disturbance. There is also evidence of illegal dumping at some locations of the study area.

2.4.1.1 Existing Conditions

Soils and Topography

The slope of the project area gently declines from the southwest to the northeast, with elevations ranging from approximately 3,825 ft amsl on the west end of the subject roadway corridor to approximately 3,416 ft amsl on the east end. According to the NRCS Soil Survey, the project area is underlain by Hesperia loamy fine sand of the

regional Hesperia-Lucerne association. This alluvial soil is of granitic origin, very deep, and moderately well drained on 2 to 5 percent slopes.

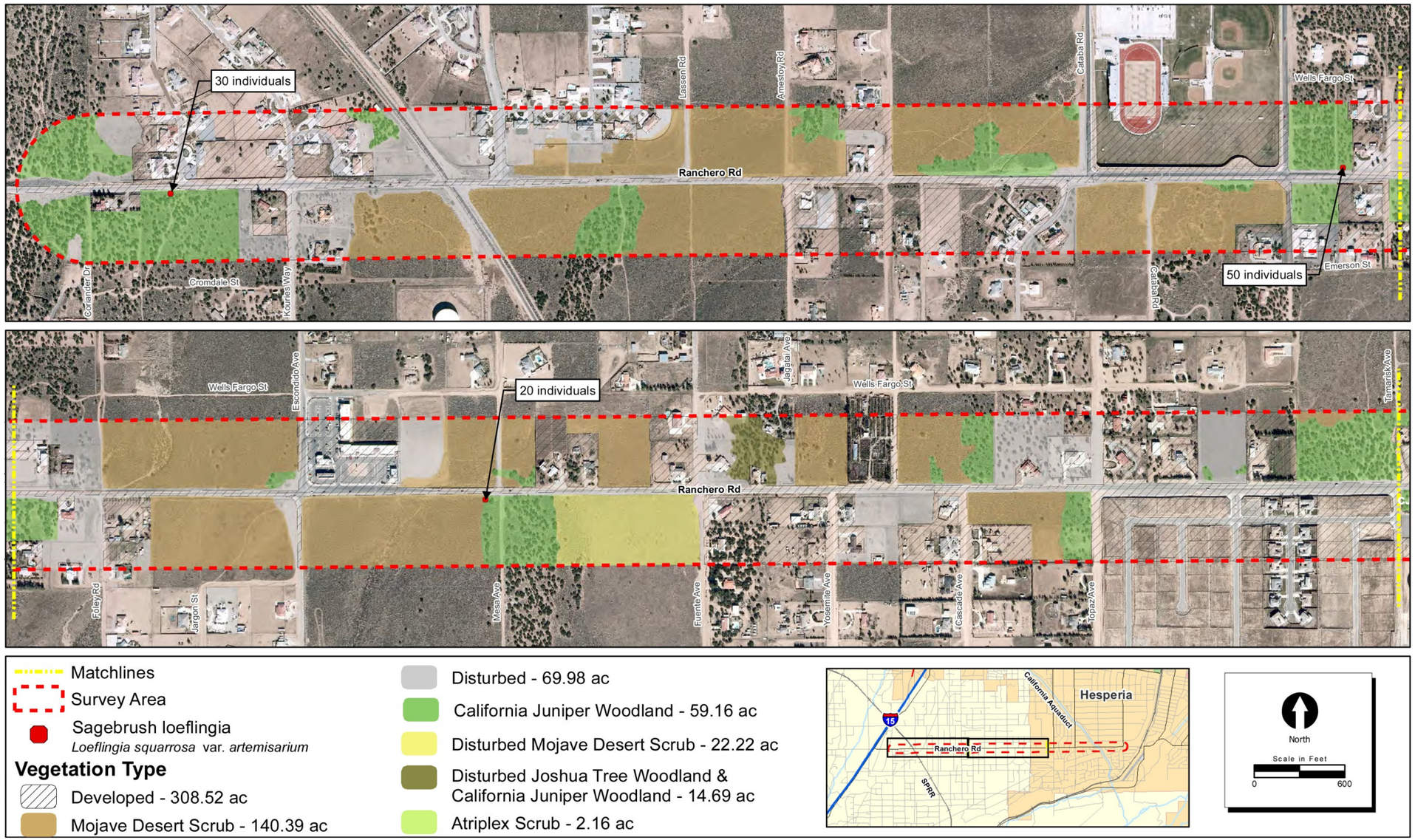
Habitats within the Project Area

Native desert habitat exists within the project area. Figure 2.4-1 is a map of the vegetation communities surveyed in the project area, which are described below. Table 2.4-1 shows the amount of plant community by type within the survey area.

Table 2.4-1 Vegetation Community Area by Type

Vegetation Community	Acres
Atriplex Scrub	13.58
Joshua Tree Woodland and California Juniper Woodland	13.43
Disturbed Joshua Tree Woodland and California Juniper Woodland	34.34
California Juniper Woodland	15.46
Mojave Desert Scrub	158.66
Non-native Grassland	11.64
Disturbed	62.01
Developed	308.05
Total	617.17

- **Atriplex Scrub –** The atriplex scrub plant community within the project area consists of the dominant species fourwing saltbush *(Atriplex canescens)* and associated species, including telegraph weed *(Heterotheca grandiflora)* and California buckwheat *(Eriogonum fasciculatum).* There was a small occurrence of this plant community located on the embankments of the California Aqueduct. There are 13.58 acres of this community within the project area.
- **Joshua Tree Woodland and California Juniper Woodland –** Joshua tree woodland and California juniper woodland intergrade and occur throughout the project area. Joshua tree *(Yucca brevifolia)* and California juniper *(Juniperus californica)* are the dominant species in this community. Associated species include Nevada tea *(Ephedra nevadensis),* peach thorn *(Lycium cooperi),* cotton-thorn *(Tetradymia sp.),* buckhorn cholla *(Cylindropuntia acanthocarpa),* basin sagebrush *(Artemisia californica),* and California buckwheat. This plant community occurs throughout the western fourth of the project with varying levels of disturbance as it appears between developments. There are 13.43 acres of this community within the project area. Disturbed Joshua Tree Woodland and California Juniper Woodland are found primarily in the eastern half of the project area, totaling approximately 34.34 acres.



Source: ECORP, 2013b.

Figure 2.4-1 Vegetation Map

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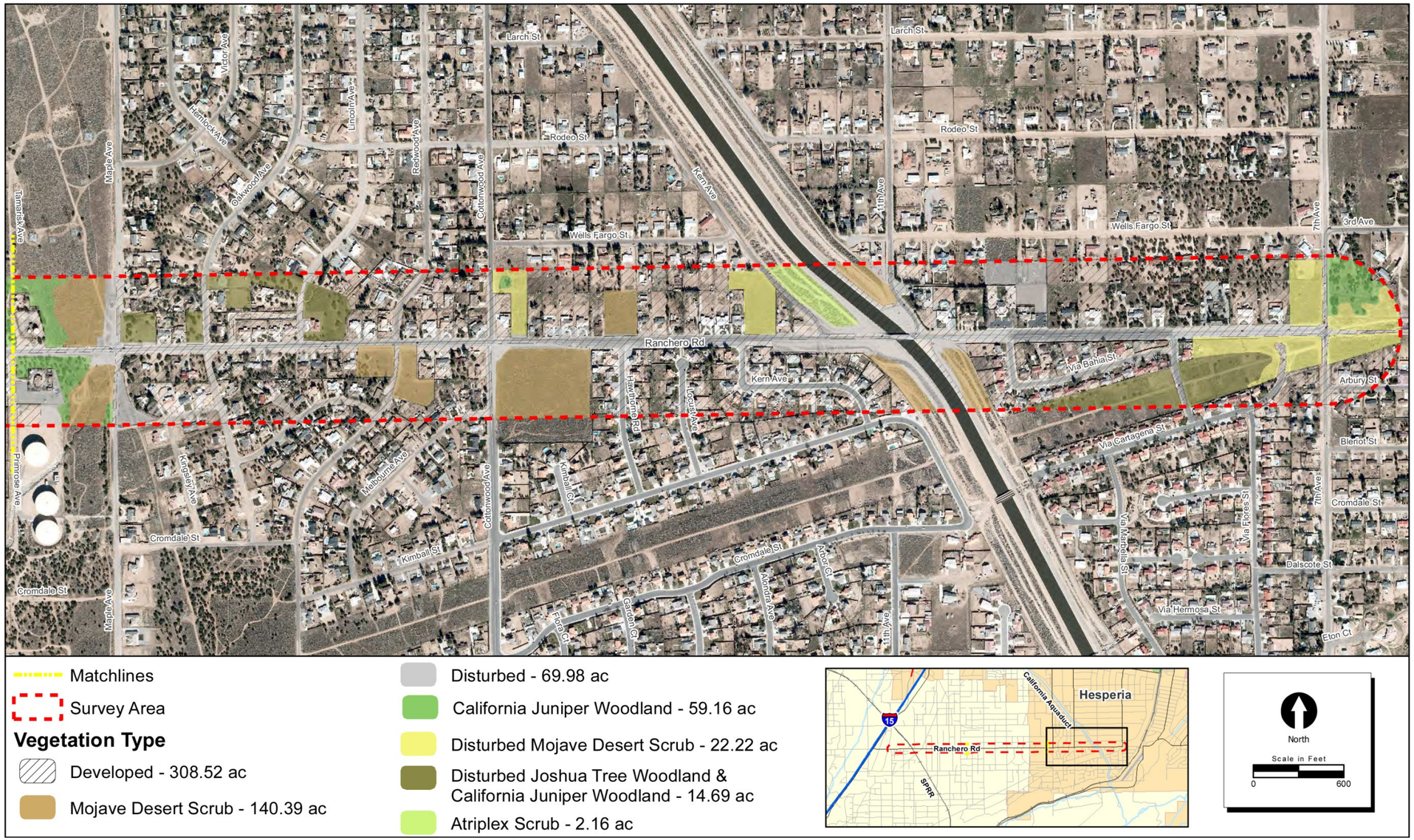

Source: ECORP, 2013b.

Figure 2.4-1 Vegetation Map

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- **California Juniper Woodland –** California juniper woodland occurs throughout the project area. California juniper is the dominant species in this plant community. Associated species include Joshua tree, Dorr's sage *(Salvia dorri),* and California buckwheat. This plant community occurs at three different points central to the project, with varying levels of disturbance as it appears between developments. There are 15.46 acres of this community within the project area.
- **Mojave Desert Scrub –** The Mojave desert scrub community consists of widely spaced desert shrubs such as white bursage *(Ambrosia dumosa),* cheesebush *(Hymenoclea salsola),* and Nevada tea. Associated species include occasional Joshua trees, Davidson's buckwheat *(Eriogonum davidsonii),* and small wirelettuce *(Stephanomeria* sp.). This plant community primarily occurs throughout the western half of the project, with varying levels of disturbance as it appears between developments. This is the most common plant community found within the project. There are 158.66 acres of this community within the project area.
- **Non-native Grassland –** This community consists of Russian thistle *(Salsola tragus),* foxtail grass *(Bromus madritensis* ssp. *rubens),* cheat grass *(Bromus tectorum),* black mustard *(Brassica nigra),* and filaree *(Erodium cicutarium).* A few native species, such as white bursage and telegraph weed, also occur within this plant community. There are a few small occurrences of this plant community located near the center of the project. There are 11.64 acres of this community within the project area.
- **Disturbed –** Disturbed areas can be described as natural vegetation being altered by activities such as trampling, burning, or mechanical clearing. The soils in these areas are often highly compacted and may consist of barren ground. Disturbed habitats usually support only non-native or otherwise weedy species, such as Russian thistle, black mustard, and filaree. There are 62.01 acres of this community within the project area.
- **Developed –** Developed portions of the project area include the existing residential and commercial lots. Developed areas may feature ornamental plantings of non-native species, remnant native species, or little to no vegetation at all. There are often disturbed areas associated with development where weedy species persist. There are 308.05 acres of this community within the project area.

Special-Status Communities/Species

A literature search (ECORP, 2011b) was completed to identify special-status plant and animal species that have the potential to occur within the project area. The potential for each plant species to occur is determined by the following guidelines:

Present: Species was observed onsite during a site visit or focused survey.

High: Habitat, including soils and elevation factors, for the species occurs onsite, and a known occurrence has been recorded within 5 miles of the site.

Moderate: Either habitat, including soils and elevation factors, for the species occurs onsite and a known occurrence occurs within the database search, but not within 5 miles of the site; or a known occurrence occurs within 5 miles of the site and marginal or limited amounts of habitat occurs onsite.

Low: Limited habitat for the species is present onsite and a known occurrence occurs within the database search, but not within 5 miles of the site, or suitable habitat strongly associated with the species occurs onsite, but no records were found within the database search.

Not Expected: Species was found within the database search, but habitat, including soils and elevation factors, do not exist onsite.

The project area provides suitable habitat for 7 of 16 special-status plant species documented in the literature search. These species are discussed individually below.

Mojave milkweed (*Asclepias nyctaginifolia*) is a California Native Plant Society (CNPS) List 2.1 perennial herb species that occurs in Mojave desert scrub and pinyon-juniper woodland habitats at elevations ranging from 3,280 to 5,576 ft amsl. There is limited suitable habitat for Mojave milkweed within the project area. This species has a moderate potential to occur, and a record exists 4 miles southwest of the project's western terminus in the Cajon Pass region (CNDDB, 2009).

Booth's evening primrose (*Camissonia boothii* ssp. *boothii*) is a CNPS List 2.3 annual herb. The evening primrose occurs in Joshua tree woodland and pinyon-juniper woodland habitats at elevations from 2,953 to 7,874 ft amsl. Suitable habitat exists for Booth's evening primrose in the project area. This species has a high potential to occur, and a record exists 3 miles northeast of the project's eastern terminus (CNDDB, 2009).

Pygmy poppy (*Canbya candida*) is a CNPS List 4.2 annual herb that is endemic to California. It occurs in gravelly or sandy sites within creosote bush scrub and Joshua tree woodland habitats from elevation 1,969 to 4,790 ft amsl. Suitable habitat exists for pygmy poppy in the project area. This species has a high potential to occur, and a record exists 1-mile south of the project area (CNDDB, 2009).

Sensitive Plant Species

Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*) is a CNPS List 2.2 and Bureau of Land Management (BLM)-sensitive annual herb that is found in sandy flats within great basin scrub, Sonoran desert scrub, and desert dune habitats from 2,297 to 3,937 ft amsl. Suitable habitat exists for sagebrush loeflingia in the project area. This species has a moderate potential to occur, and a record exists 6.3 miles north of the project's western terminus (CNDDB, 2009). However, it is not classified as rare, threatened, or endangered by state law according to the most recent State and Federally Listed Endangered, Threatened, and Rare Plants of California list (CDFW, 2013).

White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) is a CNPS List 1B.2 annual herb that is found in sandy or gravelly Mojave desert scrub and pinyon-juniper woodland habitats at elevations ranging from 984 to 3,936 ft amsl. Suitable habitat exists for white-bracted spineflower in the project area. This species has a low potential to occur, and a record exists 9.9 miles southwest of the project's western terminus in the Cajon Pass region (CNDDB, 2009).

Short-joint beavertail cactus (*Opuntia basilaris* var. *brachyclada*) is a CNPS List 1B.2 stem succulent that is endemic to California. It occurs within a variety of habitats, including chaparral, Joshua tree woodland, Mojavean desert scrub, pinyon-juniper woodland, and riparian woodland from 1,394 to 5,906 ft amsl. Suitable habitat exists for the beavertail cactus in the project area. This species has a high potential to occur, and a record exists 1-mile southeast of the project's eastern terminus (CNDDB, 2009).

Golden violet (*Viola aurea*) is a CNPS List 2.2 perennial herb that is found in sandy regions within great basin scrub and pinyon-juniper habitats at elevations ranging from 3,280 to 6,691 ft amsl. There is limited suitable habitat for golden violet within the project area. This species has a moderate potential to occur, and a record exists 4 miles southwest of the project's western terminus in the Cajon Pass region (CNDDB, 2009).

Sensitive Wildlife Species

A literature search (ECORP, 2011b) was completed to identify sensitive plant species that have the potential to occur within the project area. Of the 21 species documented by the California Natural Diversity Database (CNDDB), suitable habitat is present for only 9 species, which are discussed individually below.

Reptiles

Desert tortoise (*Gopherus agassizii*) is a federal and state-listed threatened species. Tortoises inhabit desert habitats with friable soils in which it constructs burrow and nest sites; however, tortoises are highly susceptible to disturbances and generally do not occur near highly developed areas or highly populated areas. The project area contains a relatively small area of marginal habitat with several disturbances, including urban developments, foot traffic, trash dumping, and vehicle traffic. Even though there is natural habitat present within the project area, the surrounding area is developed with residential and commercial properties with little remaining undisturbed desert vegetation. The project area is effectively within an island of habitat that has very tenuous connectivity to any large open space areas with high-quality habitat. No desert tortoises or desert tortoise sign were observed during the habitat assessment. No records of desert tortoise were found in Hesperia in the CNDDB, and the nearest record was in northern Adelanto, more than 13 miles northwest of the western terminus of the project area.

Several factors have extirpated tortoises from the more urban portions of the high desert, including habitat fragmentation, trash dumping, urban edge effects, predation by pets and ravens, and collection of tortoises by individuals for the pet trade or for personal pets. The project area likely supported desert tortoises in the past, and although natural creosote bush scrub does still occur nearby, the various developmental pressures and associated urban edge effects are thought to have extirpated the desert tortoise from the project area.

San Diego coast horned lizard (*Phrynosoma coronatum blainvillei*) is a California Species of Concern (CSC) species and U.S. Forest Service-listed sensitive species associated with open stages of dry scrub with ample ant prey. Suitable habitat exists within the project area, with the closest known record located 3.5 miles southwest of the western terminus of the project area (CNDDB, 2009); therefore, this species has a high potential to occur.

Coastal western whiptail (*Aspidoscelis tigris stejnegeri*) is a CSC species associated with deserts and semiarid areas with sparse vegetation and open areas; it is also found in woodland and riparian areas. Suitable habitat exists within the project area, with the closest known record located 8 miles southwest of the western terminus of the project area (CNDDB, 2009); therefore, this species has a moderate potential to occur.

Birds

Cooper's hawk *(Accipiter cooperii)* is a state watch list species typically associated with riparian and oak woodlands. No suitable nesting habitat exists within the project area, and the closest known record is located 2 miles north of the eastern terminus of the project area (CNDDB, 2009). This species may hunt for prey within habitats found within the project area; however, this species has a low potential to occur.

Burrowing owl (*Athene cunicularia*) is a CSC species, but it typically requires special mitigation measures due to its rarity and declining status across California. Burrowing owls occupy a variety of habitats in California, including open scrub, grassland, agricultural areas, and other habitats with low-lying vegetation. They are often found in association with the common California ground squirrel, modifying the burrows of this mammal for their own use. In addition to natural burrows, burrowing owls will use various types of debris piles, cliffs, culverts, and other man-made structures as burrows. The project area supports open scrub habitats and grassland, which are both suitable habitats for burrowing owl use.

No burrowing owls or burrowing owl burrows were observed during the habitat assessment. There are multiple occurrences of burrowing owl within 10 miles of the project area, and several locations within 5 miles of the project area. The nearest recorded concentrations of owls are located 6 to 7 miles northwest of the project area along Bear Valley Road (CNDDB, 2009). Although no burrowing owls seem to be currently present within the project area, the area supports suitable habitat and potential burrow locations for this species; therefore, the burrowing owl has a high potential to occur. However, the remaining habitat patches adjacent to Ranchero Road are highly disturbed and fragmented by urban and residential encroachment and off-road uses.

Le Conte's thrasher (*Toxostoma lecontei*) is a CSC species and BLM-listed sensitive species typically associated with desert habitats containing dense shrubs for nesting. Suitable habitat exists within the project area, with the closest known record located

3.25 miles northeast of the eastern terminus of the project area (CNDDB, 2009); therefore, this species has a high potential to occur.

Gray vireo (*Vireo vicinior*) is a CSC species and BLM-listed sensitive species typically associated with desert, chaparral, and woodland habitats. Suitable habitat exists within the project area, with the closest known record located 1.25 miles east of the eastern terminus of the project area (CNDDB, 2009); therefore, this species has a high potential to occur.

Mammals

Mohave ground squirrel *(Spermophilus mohavensis)* is a state-listed threatened species that is found in desert scrub, alkali scrub, and Joshua tree woodland habitats. Winterfat *(Kraschennenikovia lanata)* and spiny hopsage *(Grayia spinosa)* are the known food plants for the species. The project area is within the home range of this species, but none of the habitat elements that support this species were present in the project area, and no potential burrow locations were observed during the survey. Although habitat potentially supporting Mohave ground squirrel does exist, these patches of vegetation are highly disturbed and fragmented by urban and residential encroachment and off-road uses.

Several observations of this species were recorded in the CNDDB, but only one record was from Hesperia. This record was from 1931, more than 80 years ago, when the area was less developed and the habitat was less fragmented. The record indicates that the observation was made approximately 3 miles northeast of the eastern terminus of the project area, located west of Hesperia Road and south of Main Street, in an area that is now commercially developed. The next closest recorded sightings are two observations located approximately 4.5 and 7 miles north of the project area, across large tracts of developed lands and I-15. These observations were made in 2005 and 1977, respectively. It is unknown if the most recent sighting was made during a trapping effort. The CNDDB indicates that Mohave ground squirrel has never been observed within the project area.

Only marginal suitable habitat is present onsite, with very limited connectivity to other fragmented habitat within urban portions of Hesperia and Apple Valley. Nearly all of the historic sightings of Mohave ground squirrel date back more than 30 years. The one most recent sighting is separated from the project area by large tracts of developed residential properties. Although the site does support natural desert habitat, its isolation, lack of constituent habitat elements (i.e., food plants and burrows) for

the Mohave ground squirrel, and lack of nearby recent sightings led to the conclusion that the squirrel would not occur within the project area. Therefore, although the site does support suitable habitat for Mohave ground squirrel, its isolation, lack of constituent habitat elements, and lack of nearby recent sighting lead to the conclusion that this species would not likely occur within the project area.

American badger *(Taxidea taxus)* is a CSC species associated with open stages of dry scrub, forest, and herbaceous habitats. The badger requires large areas of open uncultivated ground for foraging and friable soils for digging. Suitable habitat exists within the project area, but no observations of this species have been documented in the nearby vicinity, and it does not have adjacent large areas of habitat preferred by the badger; therefore, this species has a low potential to occur.

Wetlands and Waters of the U.S.

Wetland delineation work was conducted by ECORP Consulting, Inc., within the proposed project ROW along Ranchero Road between Seventh Avenue and Coriander Drive in October 2009. Based on the wetland delineation work, a Jurisdictional Delineation, dated September 2010, was prepared by ECORP Consulting, Inc., for the proposed project. In the evaluation of the project, it was determined that several drainages occur throughout the project area that may be jurisdictional to the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or California Department of Fish and Wildlife (CDFW). It should be noted that the information presented in this section regarding the impacts to jurisdictional drainages are preliminary until a concurrence from USACE is issued.

Wetlands

Following field assessments of the project area, there were no features that exhibited all three criteria to be considered a wetland as defined by USACE. A sample point was taken near a feature that exhibited urban runoff and supported apparent hydrophytic vegetation. This area did not support sufficient soil indicators to be considered a wetland. The identified vegetation was hydrophytic, and the area was observed to support standing water; however, the soils lacked any features that serve as indicators for wetland soils. The water originated from irrigation of a landscaped area next to a residential development and ran along a curb before entering a shallow earthen channel that led towards the California Aqueduct. The drainage crossed a disturbed area along the west side of the aqueduct and southern side of Ranchero

Road. This drainage feature was determined to be an ephemeral drainage. National Wetlands Inventory mapping indicates no features mapped within the project area.

Waters of the U.S.

Other potential waters of the U.S. observed within the project area are limited to ephemeral drainages that exhibit signs of an ordinary high water mark (OHWM) or changes in vegetation within their beds. None of the creeks flow into named drainages, and they appear to enter into urbanized storm drains at various distances after leaving the project area. These drainages flow during storm events and in the days shortly afterwards. Eventually the waters from larger storm events likely flow from the drainages into the Mojave River; therefore, they are considered potential jurisdictional waters of the U.S. Within the project area, 0.232-acre of potential jurisdictional waters of the U.S. in the form of an ephemeral drainage exhibiting signs of OHWM is present within the area surveyed and runs the course of 2,219 linear ft of drainage.

CDFW Jurisdiction

The CDFW jurisdiction within the project area includes the entire 0.232-acre of USACE jurisdiction as waters of the State and some additional areas that are floodplain areas but are not waters of the State. Additional areas are classified as detention basin, disturbed wetland, man-made ditch, southern willow scrub, and streambed. The total CDFW jurisdiction within the area surveyed is 0.723-acre.

RWQCB Jurisdiction

All waters of the State would be regulated by RWQCB under Section 401 of the CWA. Generally, waters of the U.S. are also known as waters of the State. Within the project study area, there is approximately 0.232-acre (2,219 linear ft) of waters of the State.

2.4.2 Regulatory Setting

The following sections discuss the federal, state, and local regulatory environment of the project.

2.4.2.1 Threatened and Endangered Species

The primary federal law protecting listed threatened and endangered species is the Federal Endangered Species Act (FESA). This act and subsequent amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7, federal agencies are required to consult with the U.S. Fish and Wildlife Service (USFWS) (and/or the National Marine Fisheries Service [NOAA Fisheries]) to ensure that they are not undertaking, funding,

permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or destroy or adversely modify designated critical habitat.

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), which emphasizes early agency consultation to avoid potential impacts to rare, endangered, and threatened plant or animal species and to develop appropriate planning to offset project-caused losses of listed species, populations, and their essential habitats. CDFW is the agency responsible for implementing CESA.

2.4.2.2 Nonlisted Special-Status Plants and Animals Evaluated under the California Environmental Quality Act

State and federal agencies recognize that species may exist that are not listed but deserve attention. For plants, CDFW recognizes plants listed by the CNPS Inventory of Rare and Endangered Plants in California as those that may meet the criteria for listing and should be considered under CEQA. Additionally, California Species of Special Concern (SPOC) are species designated by CDFW as vulnerable to extinction because of declining population levels, limited ranges, and/or continuing threats.

2.4.2.3 Migratory Birds and Raptors

Impacts to raptors and nesting birds are prohibited under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any listed migratory bird. In addition, the California Fish and Game Code prohibits the take, possession, or destruction of birds, their nests, or eggs.

2.4.2.4 Wetlands and Waters of the U.S.

Wetlands and other Waters of the U.S. are protected under the federal CWA (33 United States Code [U.S.C.] 1344). The CWA regulates the discharge of dredged or fill material into waters of the U.S., including wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used. That includes hydrophytic (i.e., water-adapted) vegetation, wetland hydrology, and hydric soils (i.e., soils subject to saturation/inundation).

The California RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. The RWQCB issues water quality certifications in compliance with Section 401 of the federal CWA.

Under state law, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or

wildlife. Diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife require authorization from CDFW by means of entering into an agreement pursuant to Section 1602 of the Fish and Game Code.

2.4.2.5 City of Hesperia

Relevant policies from the City of Hesperia's 2010 General Plan include:

- CN-4: Establish policies and regulations to protect the natural environment and habitat of the City's biological resources.
- CN-4.2: Encourage the protection, preservation and long-term viability of environmentally sensitive habitats and species in the City.
- CN-4.3: Identify lands that are suitable for preservation for sensitive species and their habitats.
- CN-4.4: In those areas known as possible habitat for endangered and sensitive species, require proper assessments before authorizing development.
- CN-4.5: Where such assessments indicate the presence of endangered or sensitive species, require appropriate actions to preserve the habitat and protect the identified species.
- D/CO 1.3: Require retention of existing native vegetation for new development projects, particularly Joshua trees, Mojave yuccas, and creosote rings, and other species protected by the Development Code and other regulations. This can be accomplished by:
  a. Requiring a landscape plan, approved as part of the location development plan review and approval process for all new development projects.
  b. Requiring the Building Official to make a finding that no other reasonable siting alternatives exist for development of the land prior to removal of a protected plant.
  c. Encourage onsite relocation of Joshua trees and Mojave yuccas; however, if onsite relocation is not feasible, require developers to consult a list that will be established and maintained in the County Building and Safety Office of residents willing to adopt and care for relocated trees.
  d. The developer/home builder shall bear the cost of tree or yucca relocation.
  e. Retention and transplantation following nursery best practices.

2.4.2.6 San Bernardino County

Desert native plant species are managed and regulated according to the County's Plant Protection and Management Code. Section 88.01.50 (Tree or Plant Removal Permits) of the County code regulates the removal of "specimen size" plant species as defined in the code and identifies requirements for the approval, removal, and replacement of protected desert native plant species.

Section 88.01.060 (Desert Native Plant Protection Ordinance) identifies the desert species that are specifically protected and must be analyzed to receive a Tree or Plant Removal Permit. Removal of these species is not permitted, except under the County's Tree or Plant Removal Permit in compliance with Section 88.01.050 (Tree or Plant Removal Permits).

Species protected under this code include:

- The following desert native plants with stems 2 inches or greater in diameter or 6 ft or greater in height:
  - *Dalea spinosa* (smoketree)
  - All species of the genus *Prosopis* (mesquites)
- All species of the family *Agavacea* (century plants, nolinas, yuccas)
- Creosote Rings, 10 ft or greater in diameter
- All Joshua trees
- Any part of the following species, whether living or dead:
  - *Olneya tesota* (desert ironwood)
  - All species of the genus *Prosopis* (mesquites)
  - All species of the genus *Cercidium* (palos verdes)

In addition, the following policy from the County's General Plan relates to the proposed project:

- CI-1.3: Design road locations and alignments in such a manner to help preserve and protect sensitive habitats.

2.4.3 Criteria for Determining Significance

Appendix G of the CEQA guidelines provides the following criteria for determining significance of an impact to biological resources.

A project may be deemed to have a significant effect on the environment if it is likely to:

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 CDFW and 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 by CDFW and USFWS.
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA 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.
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or 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.

Project-related impacts can occur in two forms – direct or indirect.

Direct impacts are those that involve the loss, modification, or disturbance of plant communities, which in turn directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or wildlife.

Indirect impacts may involve impacts such as increases in ambient levels of noise or light, unnatural predators (i.e., domestic cats and other non-native animals), competition with exotic plants and animals, and increased human disturbance, such as hiking and dumping of green waste onsite. These impacts are referred to as "edge effects," and they may result in a slow replacement of native plants by exotics, changes in the behavioral patterns of wildlife, and reduced wildlife diversity and abundances in habitats adjacent to project sites.

2.4.4 Construction Impacts

2.4.4.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road; therefore, no construction-related impacts to biological resources would occur.

2.4.4.2 Build Alternative

Limited temporary impacts to biological resources would be associated with the proposed project's construction phase. Areas immediately adjacent to Ranchero Road (and within a 30-ft-wide buffer on either side of the road), will likely be temporarily impacted by construction activities, including vehicle and equipment staging areas, access roads, and other construction-related activities. Once the roadway construction is complete, these impacted areas will be revegetated and restored to pre-project conditions in accordance with project avoidance, minimization, and/or mitigation measures as discussed in measure BIO-8. Temporary impact acreages for vegetation communities along Ranchero Road are listed in Table 2.4-2 and illustrated in Figure 2.4-2.

Table 2.4-2 Temporary Impacts to Vegetation Communities

Vegetation Community	Temporary Impact Acreage
Atriplex Scrub	0
Joshua Tree Woodland and California Juniper Woodland	0
Disturbed Joshua Tree Woodland and California Juniper Woodland	0.10
California Juniper Woodland	2.30
Mojave Desert Scrub	7.07
Non-native Grassland	0
Disturbed	3.43
Developed	6.53
Total	**19.43**

The project contains many occurrences of Joshua tree and California juniper, which are pursuant to Section 16.24.150 of Hesperia's Protected Plant Ordinance, and Section 88.01.060 of the County's Plant Protection and Management Code. This provision states that listed desert plants in the municipal code are to be regulated and, in some instances, protected. The removal of such plant species would require a removal permit granted by the City. The project team will adhere to the conditions of this development code and related permits as needed.

Implementation of BMPs, preconstruction surveys, construction monitoring, and prescribed mitigation would reduce all potential impacts to sensitive species. Although there will be short-term impacts associated with construction of the project,

these impacts would not adversely impact the greater population of plant and wildlife species, or associated habitats onsite due to the abbreviated duration and minimization techniques employed.

2.4.5 Permanent Impacts

2.4.5.1 No Build Alternative

The No Build Alternative would not construct additional lanes or implement other improvements along Ranchero Road; therefore, no permanent impacts to biological resources would occur.

2.4.5.2 Build Alternative

Construction of the proposed project is likely to result in permanent impacts to existing natural communities, including Mojave Desert Scrub, California Juniper Woodland, and Atriplex Scrub; however, in recent years, the proposed project area has been disturbed by continued surrounding development. Most of the permanent impacts will be focused in areas that are directly adjacent to existing roadways and are heavily disturbed; however, the proposed project will minimize permanent impacts to natural communities by implementing the minimization measures identified in Section 2.4-6. Permanent impact acreages for vegetation communities along Ranchero Road are listed in Table 2.4-3 and illustrated in Figure 2.4-3.

Table 2.4-3 Permanent Impacts to Vegetation Communities

Vegetation Community	Permanent Impact Acreage
Atriplex Scrub	0
Joshua Tree Woodland and California Juniper Woodland	0
Disturbed Joshua Tree Woodland and California Juniper Woodland	0.02
California Juniper Woodland	1.49
Mojave Desert Scrub	3.56
Non-native Grassland	0
Disturbed	6.61
Developed	30.63
Total	**42.31**

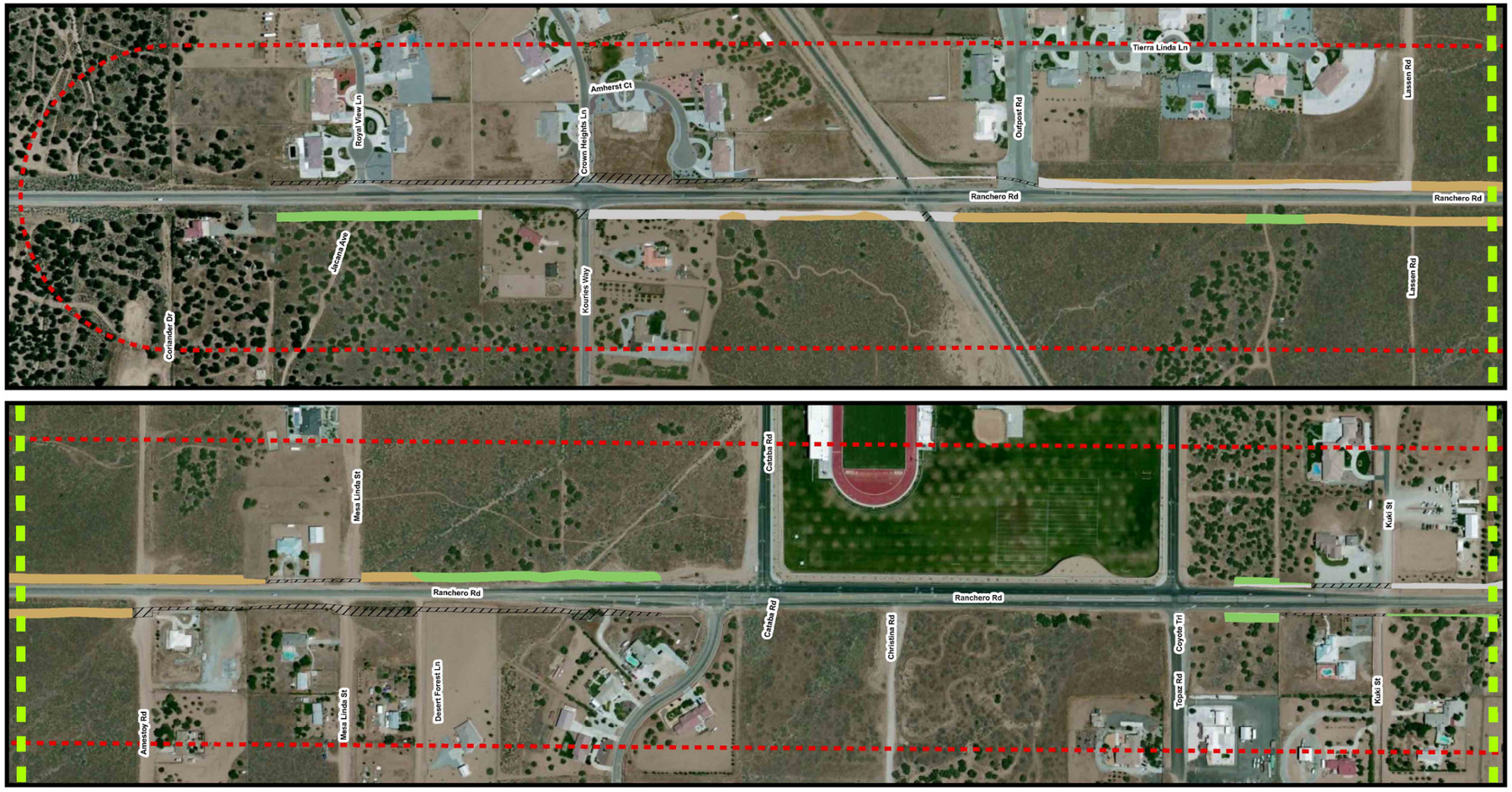

Figure 2.4-2 Map of Temporary Impacts to Vegetation Communities (page 1 of 3)

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