STATE ROUTE 14 (STATE ROUTE 138)/AVENUE J INTERCHANGE
IMPROVEMENTS PROJECT
CITY OF LANCASTER, LOS ANGELES COUNTY, CALIFORNIA
District 7-SR-14 (SR-138)-PM R67.3/68.3
EA 316200 – EFIS 0715000198

Initial Study

Proposed Mitigated Negative Declaration

Prepared by the
State of California Department of Transportation

September 2018
State Route 14/State Route 138 And Avenue J Interchange Improvements Project

INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation
CEQA Lead Agency

Responsible Agencies: City of Lancaster,
California Transportation Commission

Sept 7, 2018
Date of Approval

Ronald Kosinski
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District 7, Division of Environmental Planning
California Department of Transportation

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PROPOSED MITIGATED NEGATIVE DECLARATION
Pursuant to Division 13, State of California Public Resources Code

Project Description:
The California Department of Transportation (Caltrans), in cooperation with the City of Lancaster (City) and the Los Angeles County Metropolitan Transportation Authority (Metro), propose to modify and improve the operational capacity of the State Route 14 (SR-14) (State Route 138 [SR-138])/Avenue J interchange, and supporting roadways, in the City of Lancaster, California. Caltrans is the California Environmental Quality Act (CEQA) lead agency for the project.

The proposed SR-14 (SR-138)/Avenue J Interchange Improvements project proposes to improve capacity at the existing interchange and local roadway operations on Avenue J between 15th Street West and 25th Street West. The proposed project will help reduce congestion, enhance operational capacity, improve local circulation of traffic, improve wayfinding, and provide multi-modal facilities in the form of bikeways and sidewalks.

Determination:
This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is Caltrans’ intent to adopt an MND for this project. This does not mean that Caltrans’ decision regarding the project is final. This MND is subject to change based on comments received by interested agencies and the public.

Caltrans has prepared an Initial Study (IS) for this project, and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project will have no impact on agricultural and forestry resources, mineral resources, or public services.

The proposed project will have less than significant impacts on aesthetics, air quality, cultural resources, hazards and hazardous materials, geology and soils, hydrology and water quality, land use and planning, population and housing, noise and vibration, recreation, transportation/traffic, tribal cultural resources, or utilities.

The proposed project will have less than significant impacts on biological resources with incorporation of mitigation measures.

Mitigation measures that would reduce potentially significant impacts resulting from the proposed project to less than significant are summarized in the Mitigation Monitoring Program for the proposed project (Chapter 5 of the IS).

Ronald Kosinski
Deputy District Director
District 7, Division of Environmental Planning
California Department of Transportation

Date of Approval
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City of Lancaster  
Initial Study/Proposed Mitigated Negative Declaration  
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Chapter 1   INTRODUCTION

The California Department of Transportation (Caltrans), in cooperation with the City of Lancaster (City) and the Los Angeles County Metropolitan Transportation Authority (Metro), proposes to modify and improve the operational capacity of the State Route (SR-14)(SR-138)/Avenue J interchange, and supporting roadways, in the City of Lancaster, California. The project limits on SR-14 (SR-138) include post mile (PM) R67.3/68.3. Caltrans is the CEQA Lead Agency.

The existing SR-14 (SR-138)/Avenue J interchange is a partial compact diamond interchange with a northbound (NB) on-ramp and a southbound (SB) off-ramp. Less than half a mile south, the existing SR-14 (SR-138)/Avenue J-8 interchange is another partial interchange with a NB off-ramp and a SB on-ramp. Vehicle trips in this area heavily utilize local north-south streets primarily 20th Street West and 15th Street West because of the partial interchanges at Avenue J and J-8, thereby creating congestion on the local street network. The existing mainline configuration within the project limits consists of 8- to 10-foot wide outside shoulders, three mixed-flow lanes in each direction, 5-foot inside shoulders and a 70-foot median.

This SR-14 (SR-138)/Avenue J Interchange Improvements project (project) proposes to improve capacity at the existing interchange and local roadway operations on Avenue J between 15th Street West and 25th Street West. The project will help reduce congestion, enhance operational capacity, improve local circulation of traffic, improve wayfinding, and provide multi-modal facilities in the form of bikeways and sidewalks.

1.1 Project Location

Caltrans, in cooperation with the City and Metro, proposes to modify and improve the operational capacity of the SR-14 (SR-138)/Avenue J interchange in the City of Lancaster, California (see Figure 1-1, Regional and Project Location). Lancaster is located in the Antelope Valley within the Mojave Desert, and is bordered by the Tehachapi Mountains in the northwest, and the foothills of the San Gabriel Mountains to the southwest.

The project area is occupied by the existing SR-14 (SR-138)/Avenue J Interchange. SR-14 (SR-138) is an existing highway corridor that divides Lancaster into east and west. The western portion of Lancaster is predominantly developed with residential uses, while the eastern portion contains more commercial and industrial uses intermixed with residential uses.

1.2 Purpose and Need

1.2.1 Project Purpose

The purpose of the project is to improve the safety and operational capacity at the SR-14 (SR-138)/Avenue J interchange by reducing congestion, improving safety on the local streets, improving vehicular, pedestrian and bikeway facilities, wayfinding, and incorporating context sensitive solutions.
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FIGURE 1-1. REGIONAL AND PROJECT LOCATION
SR-14 (SR-138)/Avenue J Interchange Improvements Project
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1.2.2 Project Need

1.2.2.1 INTERCHANGE MODIFICATION

The SR-14 (SR-138) freeway serves as a north-south interregional commute corridor for the cities of Palmdale, Santa Clarita, Lancaster, and various unincorporated communities. The segment of the freeway within the project limits was built in 1972 and consists of three mix-flow lanes in each direction. This segment is an urbanized route with primarily residential and commercial land uses.

The City has realized the need to improve the operational capacity of this interchange. The existing SR-14 (SR-138)/Avenue J Interchange is a partial Type L-1 Local Street interchange consisting of ramps on the northern half of the interchange. The missing NB off-ramp is accommodated by a partial interchange NB off-ramp at 20th Street West, while the missing SB on-ramp is accommodated by a partial interchange SB on-ramp at Avenue J-8.

As a result of the two partial interchanges, vehicle trips between the freeway and various destinations in this part of the City of Lancaster (City) use other north-south City streets, primarily 20th Street West as well as 15th Street West. This creates incremental congestion on the local street network and intersections, as well as the diversion of trips to the Avenue K Interchange. In addition, the partial interchanges create driver confusion and present challenges to wayfinding.

1.2.2.2 AVENUE J IMPROVEMENTS

The project would improve capacity at the existing interchange and local roadway operations on Avenue J between 15th Street West and 25th Street West. Improvement actions vary amongst the different Build Alternatives. Overall, the project would include the addition, removal, and modification of ramps at the SR-14 (SR-138)/Avenue J and SR-14 (SR-138)/20th Street West interchanges and/or construction of a frontage road; widening along Avenue J between Amargosa Creek and Sundell Avenue to provide channelization, Class II bike lanes, and pedestrian improvement facilities; and the addition or modification to traffic signals and signage in the project area. The Project would help reduce congestion, enhance operational capacity, improve local circulation of traffic, improve wayfinding, and provide multi-modal facilities in the form of bikeways and sidewalks.

1.2.3 Project Funding

The City has secured funding from Metro to receive Measure R Highway Funds that would be allocated towards improving and enhancing the Avenue M, L, K, J, and G Interchanges. These five projects would cost approximately $65 million and are funded through construction by the Measure R Highway Equity fund program. The SR-14 (SR-138)/Avenue J Improvement Project is expected to cost approximately $18.4 million.

The project is being conducted in cooperation with the City, California Department of Transportation (Caltrans) District 7, Metro, and County of Los Angeles. The project is identified in the Approved 2017 Federal Transportation Improvement Program (FTIP) as number (No.) LA0G928. The Metro Board has determined the project is eligible for highway operational improvements and funding by action on the program by the Metro Board. The project is not a federal action, nor would it require the use of federal funds or approval; therefore, there is no requirement that this project complies with the National Environmental Policy Act (NEPA).
1.3 Permits and Approvals Needed

The permits, reviews, and approvals that will be required for project construction are shown below in Table 1-1, Project Permits and Approvals Needed.

**Table 1-1: Project Permits and Approvals Needed**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Department of Transportation</td>
<td>Project Approval</td>
</tr>
<tr>
<td>District 7</td>
<td></td>
</tr>
<tr>
<td>City of Lancaster</td>
<td>Public Works: Engineering Approval</td>
</tr>
<tr>
<td>City of Lancaster</td>
<td>Public Works: Precise Design Plan</td>
</tr>
<tr>
<td>City of Lancaster</td>
<td>Public Works: Grading Permit</td>
</tr>
<tr>
<td>County of Los Angeles</td>
<td>Public Works: Grading Permit</td>
</tr>
<tr>
<td>California Department of Fish and Wildlife</td>
<td>1602 Streambed Alteration Agreement</td>
</tr>
<tr>
<td>Los Angeles Regional Water Quality Control</td>
<td>Waste Discharge Requirements Permit</td>
</tr>
<tr>
<td>Board</td>
<td></td>
</tr>
<tr>
<td>Los Angeles Regional Water Quality Control</td>
<td>Construction General Permit</td>
</tr>
<tr>
<td>Board</td>
<td></td>
</tr>
</tbody>
</table>
Chapter 2  PROJECT DESCRIPTION

2.1 Project Alternatives

To meet the purpose and need for the project, five alternatives were developed, including four build alternatives and one no-build alternative.

2.1.1 “No-Build” Alternative

Implementation of the “No-Build” Alternative would maintain the existing configuration of the SR-14 (SR-138)/Avenue J and J-8 interchanges, as well as the existing local roadway circulation.

2.1.2 Alternative 1 – Full Type L-1 Diamond Interchange

Alternative 1, which is shown in Figure 2-1, would convert the SR-14 (SR-138)/Avenue J interchange into a full interchange by adding a NB off-ramp and a SB on-ramp, and realigning the existing NB on-ramp and the existing SB off-ramp. There would also be widening along Avenue J between Amargosa Creek and Sundell Avenue to provide channelization, Class II bike lanes, and pedestrian improvement facilities between 25th Street West and 15th Street West. Furthermore, Alternative 1 proposes to modify existing traffic signals and add new traffic signal at the Avenue J/NB ramp intersections. The NB off-ramp to 20th Street West would also be widened and existing signage on SR-14 (SR-138) would be modified to improve wayfinding. Alternative 1 would reduce through lanes on Avenue J from three lanes to two lanes in each direction between 25th Street West and 15th Street West to provide improved channelization and lane utilization, bike lanes, and wider sidewalks.

All four build alternatives would require right-of-way (ROW) from the following parcels:

- A partial take (approximately 0.04 acre) on the north side of Avenue J from 44400 Valley Central Way (Assessor’s Parcel Number [APN] 3153-051-006);
- A partial take (approximately 0.04 acre) on the north side of Avenue J from 44402 Valley Central Way (APN 3153-051-005);
- A partial take (approximately 0.02 acre) at Amargosa Creek (APN 3122-038-900);
- A full take (approximately 0.04 acre) from APN 3124-012-007 from a parcel adjacent to the Avenue J/SB on-ramp;
- A full take (approximately 0.3 acre) from APN 3124-012-008 from a parcel adjacent to the Avenue J/SB on-ramp;
- A full take (approximately 1.5 acres) from APN 3124-012-009 from a parcel adjacent to the Avenue J/SB on-ramp; and
- A full take (approximately 2.11 acres) from APN 3124-012-012 from a parcel adjacent to the Avenue J/SB on-ramp.

The project would require ground disturbance, including grading, utility relocations, and traffic signal installation; the maximum proposed ground disturbance is anticipated to be 14.6 acres. It is anticipated that the project would also require staging; staging locations would be identified during final design of the project.
2.1.3 Alternative 2A – Alternative 1 with Ramp Removals at Avenue J-8 and 20th Street West

Alternative 2A is shown in Figure 2-2. Alternative 2A improvements are the same as Alternative 1 improvements with the following exceptions:

- Remove the SB loop on-ramp at Avenue J-8
- Remove NB off-ramp at 20th Street West
- Provide median gap closures at removed ramp intersections along Avenue J-8 and 20th Street West

2.1.4 Alternative 2B – Alternative 1 with Ramp Removal at Avenue J-8 Only

Alternative 2B is shown in Figure 2-3. Alternative 2B improvements are the same as Alternative 1 improvements with the following exceptions:

- Remove the SB loop on-ramp at Avenue J-8
- Provide median gap closures at removed ramp intersection along Avenue J-8

2.1.5 Alternative 3 – Partial Type L-1 Diamond Interchange with New NB Frontage Road between 20th Street West and Avenue J

Alternative 3 is shown in Figure 2-4. Alternative 3 improvements are the same as Alternative 1 improvements with the following exception:

- In lieu of adding a new NB off-ramp at Avenue J, this Alternative would provide a one-way NB local frontage road from the 20th Street West/NB off-ramp intersection to the Avenue J/NB on-ramp intersection. This frontage road would be located adjacent to the existing state ROW and Amargosa Creek.
- Install traffic signal at the Avenue J/frontage road intersection and modify existing traffic signal at the 20th Street West/frontage road intersection.
FIGURE 2-1. ALTERNATIVE 1 LAYOUT
SR-14(SR-138)/Avenue J Interchange Improvements Project
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FIGURE 2-2. ALTERNATIVE 2A LAYOUT
SR-14(SR-138)/Avenue J Interchange Improvements Project
Chapter 2 Project Description

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FIGURE 2-3. ALTERNATIVE 2B LAYOUT
SR-14(SR-138)/Avenue J Interchange Improvements Project
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FIGURE 2-4. ALTERNATIVE 3 LAYOUT
SR-14(SR-138)/Avenue J Interchange Improvements Project
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Chapter 3  CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) CHECKLIST

The environmental factors checked below would be potentially affected by this project. Please see the checklist below for additional information regarding affected factors, involving at least one impact that is "Less Than Significant with Mitigation Incorporated."

<table>
<thead>
<tr>
<th>Aesthetics</th>
<th>Agriculture and Forestry</th>
<th>Air Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological Resources</td>
<td>Cultural Resources</td>
<td>Geology/Soils</td>
</tr>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>Hazards and Hazardous Materials</td>
<td>Hydrology/Water Quality</td>
</tr>
<tr>
<td>Land Use/Planning</td>
<td>Mineral Resources</td>
<td>Noise</td>
</tr>
<tr>
<td>Population/Housing</td>
<td>Public Services</td>
<td>Recreation</td>
</tr>
<tr>
<td>Transportation/Traffic</td>
<td>Tribal Cultural Resources</td>
<td>Utilities/Service Systems</td>
</tr>
<tr>
<td>❌ Mandatory Findings of Significance</td>
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</tr>
</tbody>
</table>

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the project indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included following the applicable section of the checklist. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below.
3.1 Aesthetics

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>AESTHETICS. Would the Project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Have a substantial adverse effect on a scenic vista?</td>
<td>☐</td>
<td>☐</td>
<td>☣</td>
<td>☐</td>
</tr>
<tr>
<td>b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</td>
<td>☐</td>
<td>☐</td>
<td>☣</td>
<td>☣</td>
</tr>
<tr>
<td>c. Substantially degrade the existing visual character or quality of the site and its surroundings?</td>
<td>☐</td>
<td>☐</td>
<td>☣</td>
<td>☐</td>
</tr>
<tr>
<td>d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?</td>
<td>☐</td>
<td>☐</td>
<td>☣</td>
<td>☐</td>
</tr>
</tbody>
</table>

A Visual Impact Analysis (VIA) was completed for the project in August 2018 (GPA Consulting, 2018a). The study supports the discussion included below.

REGULATORY SETTING

State

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

Local

The City of Lancaster General Plan 2030 outlines the following goal, objectives, policies, and actions (City of Lancaster, 2009a):

Goal 3: To identify the level of natural resources needed to support existing and future development within Lancaster and its sphere of influence, and ensure that these resources are managed and protected.

Objective 3.8: Preserve and enhance important views within Lancaster, and significant visual features.

Policy 3.8.1: Preserve views of surrounding ridgelines, slope areas and hilltops, as well as other scenic vistas (see also Policy 19.2.5).

Specific Action 3.8.1(a): Encourage the creation of vistas and view corridors of community or neighborhood value during the development review process, through the siting of buildings to avoid blocking views and view corridors.

Policy 3.8.2: Explore the potential for establishing scenic corridors within the Study Area.
Specific Action 3.8.2(a): Conduct a study to determine the potential for designating certain streets within the Study Area as scenic corridors. If it is determined that certain streets would merit such identification, develop a scenic corridor plan which considers the following:

- An emphasis on roadway patterns and grades that fit the natural topography along secondary arterials, collector, and local streets;
- Acquisition of wider ROW than comparable, non-scenic roadways to increase the field of vision along the street and to accommodate appropriate landscaping and street furniture;
- Elimination, to the greatest extent feasible, of unsightly development and outdoor and/or off-site advertisements;
- Provision of vegetative screens for potentially objectionable views;
- Provision of appropriate view corridors; and
- Provision of roadside parking areas and lookouts where warranted.

Goal 19: To achieve an attractive and unique image for the community by creating a sustainable, cohesive and enduring built environment.

Policy 19.2.5: Create a network of attractive paths and corridors that encourage a variety of modes of transportation within the city (see also Policy 3.8.1).

Affected Environment

Scenic Vista

A scenic vista is defined as an area that provides expansive views of a highly valued landscape for the benefit of the general public. The City of Lancaster General Plan 2030 identifies five scenic areas in Lancaster and the immediate surrounding area. The scenic areas include the local views of the surrounding buttes, Quartz Hill, and long-distance panoramas of the San Gabriel Mountains and desert expanses (City of Lancaster, 2009a). The portion of SR-14 (SR-138) in the project area provides long-range views of the San Gabriel Mountains to the southwest, south, and southeast; far-off views of the San Bernardino Mountains to the southeast; and views of the Tehachapi Mountains to the northwest. There are similar views from the areas surrounding the highway.

Scenic Route

The project is located along SR-14 (SR-138), which is not a designated (or eligible for designation) state scenic highway (California Department of Transportation, 2011). Although there are no officially designated scenic routes or highways within the project area, the Los Angeles County’s Antelope Valley Community Plan identifies local roadways which could potentially serve as scenic routes (City of Lancaster, 2009b). One of those local roadways is the Antelope Valley Freeway (SR-14 [SR-138]), between Avenues A and M, from which there are long-range views of surrounding mountains. Where the freeway is at ground-level, views from the freeway provide travelers with an introduction to the character of the Lancaster area. Looking to the north, SR-14 (SR-138) provides views of open desert lands (City of Lancaster, 2009b).
CHARACTER AND QUALITY

The project is located on SR-14 (SR-138) between West Lancaster Boulevard and West Avenue J-8, and on West Avenue J between 25th Street West and 15th Street West in Lancaster, California. SR-14 (SR-138) is an existing highway corridor that divides Lancaster into western and eastern portions. The western portion of Lancaster is predominantly developed with residential uses, while the eastern portion contains more commercial and industrial uses intermixed with residential uses.

Visual quality varies somewhat throughout the project area but is moderate overall. The project area is comprised of transportation and commercial corridors and residential neighborhoods. Existing structures, vegetation, and other visual elements vary throughout the project area, and are generally not unified, although the visual elements within the SR-14 (SR-138) corridor are slightly more uniform. Although there are some views of the surrounding mountains, overall the views in the project area are not very memorable, and there are no aesthetic treatments or features that enhance the visual quality. Seasonal changes within the visual setting are minimal because most of the existing landscaping is perennial and weather in the area is temperate throughout the year. Overall, the project area is considered to have moderate visual quality.

LIGHT AND GLARE

The existing sources of lighting in the project area are primarily associated with roadway vehicles and street lamps. Nighttime lighting is limited along SR-14 (SR-138); however, there is some street lighting on the West Avenue J and some of the commercial businesses are lighted at night.

VIEWERS

There are two major types of viewer groups for highway projects: highway neighbors and highway users. Highway neighbors are people who have views “to” the road. Highway users are people who have views “from” the road. Highway neighbors include owners, employees, and patrons that may be using the commercial businesses within the project area, including Avenue J and SR-14, and residents along Avenue J and 22nd Street West. Highway users include commuters or residents traveling along SR-14 (SR-138) or the sidewalks along Avenue J, and visitors in the project area, including business patrons, and other travelers that may be passing through or staying in the area.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.1(a) **Less Than Significant Impact.** Operation of the project would not degrade the existing views from SR-14 (SR-138). New vertical elements (highway ramp, retaining wall, frontage road, and traffic signal) would be introduced into the project area; however, these elements would be consistent with existing infrastructure in the area. The project would not include features that would obstruct or impact views from the SR-14 (SR-138). See Appendix F: Project Simulations for depictions of what the project area would look like following project completion.

During project construction, views to and from the project area could be impacted by vegetation removal, equipment staging and storage, and stockpiled materials. However, these impacts would be temporary, and would not be expected to obstruct views of surrounding areas. In addition, the project area would be revegetated following construction. Therefore, impacts on scenic vistas would be less than significant.
3.1(b) **No Impact.** The project is not on a designated state scenic highway. As discussed in Response 3.1(a), the project would not obstruct existing views. Therefore, the project would have no impact on a state scenic highway.

3.1(c) **Less Than Significant Impact.** Visual changes would result primarily from construction of the new SB on-ramp at West Avenue J (all alternatives), the new traffic signal at the West Avenue J/NB ramp intersection (all alternatives), landscaping at the Avenue J/22nd Street West intersection (all alternatives), removal of the on/off-ramps at Avenue J-8 and 20th Street West (Alternative 2A), removal of the on-ramp at West Avenue J-8 only (Alternative 2B), and construction of a new frontage road between 20th Street West and West Avenue J (Alternative 3).

Some visual elements related to new roadway features, particularly the new ramp constructed at Avenue J/22nd Street West, would result in a visual change. These changes would be within a residential neighborhood, where viewers would be more aware of, and sensitive to, changes; however, proposed improvements would be consistent with existing infrastructure in the area. In addition, the minimization measures listed below would be implemented to reduce impacts to the extent feasible. The project would result in less than significant impacts on aesthetics of the project area.

The project would also include redesigning the interchange according to a unified theme that would give visitors, commuters, and residents a sense of arrival when they drive though Lancaster; therefore, the project would result in an overall benefit to the visual quality of the project area. The project is not expected to result in cumulatively adverse impacts on visual resources; rather, cumulative impacts would be expected to be beneficial.

**Avoidance and Minimization Measures:**

The following visual avoidance and minimization measures would be incorporated into the project:

**VIS-1:** A staging area is proposed within the undeveloped parcel adjacent to the location of the new SB on-ramp. Staging areas would be fenced to reduce visibility and would be kept clean and orderly. Soil and debris piles would be covered when not in active use. Fencing of staging areas would reduce visibility of equipment and materials from the residential properties along 22nd Street West. This measure would be used for all alternatives.

**VIS-2:** Vegetation removal would be minimized to the extent feasible. Vegetated areas temporarily disturbed by the project, including surface roadways and freeway ramps, would be re-landscaped following project construction using a context sensitive design. For new slopes steeper than 4:1, Rolled Erosion Control (Netting) Product made with coir fiber would be installed with seeds to provide long-term vegetation and protection from surface erosion. Landscaping would consist of drought tolerant tree and plant species, native to the Mojave and Sonoran deserts. Landscape design within Caltrans ROW would be coordinated with, and approved by, a Caltrans Landscape Architect. Vegetation removal at the location of the SB on-ramp removal at West Avenue J-8 (Alternative 2A and Alternative 2B), and off-ramp removal at 20th Street West (Alternative 2A) would be
limited to the area directly adjacent to the paved ramp and would be replaced with planting consistent with the existing vegetation. Landscaping proposed (Alternative 3) along the new frontage road would consist of native desert species and would integrate with the existing vegetation along the highway berm.

**VIS-3:** Retaining walls and other hardscape elements used for the new ramps and streetscaping elements would be designed using materials and aesthetic treatments that fit into Lancaster’s desert landscape (i.e. rock or stained/colored concrete) consistent with the surrounding landscape features. Retaining walls would be located along the new SB on-ramp at West Avenue J (all alternatives) and the frontage road adjacent to Amargosa Creek (Alternative 3). Features within Caltrans ROW would be designed in consultation with the Caltrans Landscape Architect.

3.1(d) **Less Than Significant Impact.** The new on-ramp and off-ramps in the project area would be similar to existing infrastructure in the area and would not include additional lighting or materials that could cause glare. The project would include modification to existing traffic signals and addition of a new traffic signal at the Avenue J/NB ramp intersections under all Build Alternatives. Alternative 3 would include an additional traffic signal for the proposed frontage road. Proposed traffic signals would be erected behind commercial land uses and away from residential areas. The light and glare emitted from the new and modified signals would be consistent with existing traffic signals in the project area. Construction activities could result in the temporary generation of night lighting; however, under Municipal Code 8.24.040, the City prohibits the operation of any tools or equipment used in construction operations between the hours of 8 p.m. and 7 a.m., which would substantial minimize the potential for nuisance nighttime lighting (see Section 3.12). Construction is anticipated to last approximately 16 months, and impacts would be limited to this period. Therefore, the project would result in less than significant impacts on lighting and glare.
3.2 Agricultural and Forestry Resources

AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in the Forest Protocols adopted by the California Air Resources Board.

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td></td>
<td></td>
<td></td>
<td>☒</td>
</tr>
<tr>
<td>b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?</td>
<td></td>
<td></td>
<td></td>
<td>☒</td>
</tr>
<tr>
<td>c. Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?</td>
<td></td>
<td></td>
<td></td>
<td>☒</td>
</tr>
<tr>
<td>d. Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td></td>
<td></td>
<td></td>
<td>☒</td>
</tr>
<tr>
<td>e. Involve other changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?</td>
<td></td>
<td></td>
<td></td>
<td>☒</td>
</tr>
</tbody>
</table>

REGULATORY SETTING

CEQA requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

AFFECTED ENVIRONMENT

The project is located in an urban area surrounded by residential and commercial properties. The nearest agricultural land use is over six miles to the southeast.
ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.2(a) No Impact. The project is located in an urban area surrounded by residential and commercial properties. There are no existing agricultural uses in, or near, the project area (California Department of Conservation, 2016). Therefore, there would be no impacts.

3.2(b) No Impact. The project area is not zoned for agricultural use and is not under the Williamson Act Contract. Therefore, there would be no impacts.

3.2(c) No Impact. The project area is not zoned as forestland or timberland. Therefore, there would be no impacts.

3.2(d) No Impact. The project area does not contain forestland. Therefore, there would be no impacts.

3.2(e) No Impact. There is no forestland in the project area and surrounding area. There are no agricultural uses in the project area and surrounding area. Therefore, there would be no impacts.
3.3 **Air Quality**

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AIR QUALITY.</strong> When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

An Air Quality Assessment (AQA) was completed for the project in June 2018 (Michael Baker International, 2018a). The results of this study are included in the discussion below.

**REGULATORY SETTING**

**State**

*California Clean Air Act*

The California Air Resources Board (CARB) administers air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards are generally more stringent and apply to more pollutants than the National Ambient Air Quality Standards (NAAQS) (i.e., visibility reducing particulates, hydrogen sulfide, and sulfates).

The Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (EPA) to establish NAAQS for criteria pollutants, which are ozone (O₃), coarse particulate matter less than 10 microns in diameter (PM₁₀), fine particulate matter less than 2.5 microns in diameter (PM₂.₅), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb). Under the California Clean Air Act (CCAA), the CARB requires that each local air district prepare and maintain an air quality management plan to achieve compliance with CAAQS. These standards are generally more stringent and apply to more pollutants than the NAAQS. The CCAA requires that each local air district prepare and maintain an air quality management plan (AQMP) to achieve compliance with CAAQS.
These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California. CARB also administers the state’s mobile source emissions control program and oversees air quality programs established by state statute, such as Assembly Bill (AB) 2588, the Air Toxics “Hot Spots” Information and Assessment Act of 1987.

**California State Implementation Plan**

The 1990 amendments to FCAA set new deadlines for attainment based on the severity of the pollution problem and launched a comprehensive planning process for attaining the NAAQS. The promulgation of the national eight-hour ozone standard and the fine particulate matter (PM_{2.5}) standards in 1997 resulted in additional statewide air quality planning efforts. In response to new federal regulations, SIPs also began to address ways to improve visibility in national parks and wilderness areas. SIPs are not single documents, but rather a compilation of new and previously submitted plans, programs, district rules, state regulations and federal controls. Many of California’s SIPs rely on the same core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations, and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP.

**Local and Regional**

Air districts have the primary responsibility to control air pollution from all sources other than those directly emitted from motor vehicles, which are the responsibility of the CARB and the U.S. EPA. Air districts adopt and enforce rules and regulations to achieve State and Federal ambient air quality standards and enforce applicable State and Federal law.

The Antelope Valley Air Quality Management District (AVAQMD) adopted its own 2008 Federal 8-Hour Ozone Attainment Plan on May 20, 2008. The document sets forth a comprehensive program that would lead the area into compliance with federal and state air quality standards. The 2008 Federal 8-Hour Ozone Attainment Plan includes the latest planning assumptions regarding population, vehicle, and industrial activity and addresses all existing and forecasted ozone precursor-producing activities within the Antelope Valley through the year 2020. In August 2011, the AVAQMD adopted CEQA and Federal Conformity Guidelines to provide direction on the preferred analysis approach in preparing environmental analysis or document review. The guidelines characterize the topography and climate of the Mojave Desert Air Basin (MDAB), defines cumulative impacts, and provide emission thresholds for construction and operation. The CEQA and Federal Conformity Guidelines establishes significance thresholds for projects. Any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The evaluation criteria includes (1) Generates total emissions (direct and indirect) in excess of the thresholds; (2) Generates a violation of any ambient air quality standard when added to the local background; (3) Does not conform with the applicable attainment or maintenance plan(s) [Lancaster General Plan]; and (4) Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1. For purposes of this air quality analysis, the emissions comparison (Criteria Number 1) was utilized as it is most applicable to the project.
AFFECTED ENVIRONMENT

The State of California is geographically divided into 15 air basins. Lancaster is located within the MDAB. The MDAB also includes the desert portions of Los Angeles and San Bernardino Counties, the eastern desert portion of Kern County, and the northeastern desert portion of Riverside County. The MDAB is separated from the southern California coastal, and central California Valley regions by mountains. The passes through these mountains form the main channels for air masses that are pushed onshore.

The project is located within the MDAB, under the jurisdiction of the AVAQMD. Under the NAAQS, the AVAQMD has been designated as a nonattainment area for the state O₃ and PM₁₀ air quality standards. Under the CAAQS, the MDAB has been designated as a nonattainment area for O₃ and PM₁₀. In 2008, the AVAQMD developed a Federal 8-Hour Ozone Attainment Plan that sets forth a comprehensive program that would lead the area into compliance with NAAQS and CAAQS air quality standards. Local air quality level data recorded for the past three years is available in Table 3-1 below.

Table 3-1: Local Air Quality Levels

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>California Standard</th>
<th>Federal Standard</th>
<th>Year</th>
<th>Maximum Concentration</th>
<th>Number of Days State/Federal Std. Exceeded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Monoxide (CO)² (1-hour)</td>
<td>20 ppm for 1 hour</td>
<td>35 ppm for 1 hour</td>
<td>2014</td>
<td>1.54 ppm</td>
<td>NM/NM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>1.49</td>
<td>NM/NM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>2.57</td>
<td>NM/NM</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)² (8-hour)</td>
<td>9.0 ppm for 8 hours</td>
<td>9.0 ppm for 8 hours</td>
<td>2014</td>
<td>1.1 ppm</td>
<td>NM/NM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>1.3</td>
<td>NM/NM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>1.5</td>
<td>NM/NM</td>
</tr>
<tr>
<td>Ozone (O₃)² (1-Hour)</td>
<td>0.09 ppm for 1 hour</td>
<td>N/A</td>
<td>2014</td>
<td>0.101 ppm</td>
<td>3/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>0.132</td>
<td>26/1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>0.108</td>
<td>3/0</td>
</tr>
<tr>
<td>Ozone (O₃)² (8-Hour)</td>
<td>0.070 ppm for 8 hours</td>
<td>0.070 ppm for 8 hours</td>
<td>2014</td>
<td>0.088 ppm</td>
<td>36/35</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>0.103</td>
<td>82/80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>0.091</td>
<td>65/60</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NOₓ)² (1-Hour)</td>
<td>0.18 ppm for 1 hour</td>
<td>0.100 ppm for 1 hour</td>
<td>2014</td>
<td>51.9 ppm</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>41.8</td>
<td>0/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>48.8</td>
<td>0/0</td>
</tr>
<tr>
<td>Particulate Matter (PM₁₀)²³,₄ (24-Hour)</td>
<td>50 μg/m³ for 24 hours</td>
<td>150 μg/m³ for 24 hours</td>
<td>2014</td>
<td>131.5 μg/m³</td>
<td>NM/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>112.8</td>
<td>NM/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>49.6</td>
<td>NM/0</td>
</tr>
<tr>
<td>Particulate Matter (PM₂.₅)²³,₄ (24-Hour)</td>
<td>No Separate State Standard</td>
<td>35 μg/m³ for 24 hours</td>
<td>2014</td>
<td>42.0 μg/m³</td>
<td>NM/1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2015</td>
<td>10.4</td>
<td>NM/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2016</td>
<td>64.8</td>
<td>NM/2</td>
</tr>
</tbody>
</table>

Source: Michael Baker, 2018a

Notes: ppm = parts per million, PM₁₀ = particulate matter 10 microns in diameter or less, μg/m³ = micrograms per cubic meter, PM₂.₅ = particulate matter 2.5 microns in diameter or less, NM = Not Measured, and NA = Not Applicable
During the summer, a Pacific Subtropical High cell that is located off the coast inhibits cloud formation and encourages daytime solar heating in the MDAB. Desert moisture primarily arrives from infrequent warm, moist, and unstable air masses from the south. However, the Antelope Valley portion of the MDAB does not receive the extensive ocean breezes found in the South Coast Air Basin. Instead, an uplifting of wind masses occurs where warm moist air from Pacific Ocean storms is lifted upward by the San Gabriel Mountains and Sierra Pelona. This uplifting creates heavier precipitation in the Los Angeles basin, and less precipitation with greater temperature variation throughout the year in the MDAB.

Winds in Lancaster occur from the west, west-southwest, and southwest. Although a portion of Lancaster's winds come from the Los Angeles basin, a significant amount of wind is a result of the “orographic effect.” This is a change in atmospheric conditions caused by a change in elevation; the air is forced over the mountain range, losing moisture as it rises and compressing and heating when it descends. Although prevailing winds are usually sufficient to dissipate locally produced air pollution, these winds often transport air pollutants from the Los Angeles basin and San Joaquin Valley into the desert basin.

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original or “primary” pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form “secondary” pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of southern California.

The southern California region often experiences temperature inversions, which causes pollutants to be trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. When the inversion layer is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over mountain slopes or passes. At a height of 1,200 feet, the inversion concentrates pollutants into a shallow layer. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight.

Sensitive populations, or sensitive receptors, are more susceptible to the effects of air pollution than the general population. Of particular concern are sensitive receptors that are in proximity to localized sources of toxics and CO. According to the AVAQMD, a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Certain land uses are also considered sensitive receptors and include: residences, motels/hotels, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. In the project area, the closest sensitive receptors are residential uses adjacent to the project area along the southwestern and northeastern border of the project, parallel to SR-14 (SR-138).
ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.3(a) *Less Than Significant Impact.* Operation of the project would not result in adverse, long-term impacts on air quality because the project includes improvements to the existing interchange that would allow for improved traffic flow, decreased congestion, less idling, and therefore improved air quality. The project is also consistent with the goals and policies of the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Southern California Association of Governments, 2016).

However, construction of the project is anticipated to result in short-term increases of criteria air pollutants from fugitive dust emissions during earth moving activities, and mobile source emissions from the use of construction equipment and vehicle trips by construction workers to and from the project area. The project could also result in asbestos concerns if these materials are present in the existing structures to be modified as part of the project.

The project would comply with any state, federal, and/or local rules and regulations developed as a result of implementing control and mitigation measures proposed as part of the SIP. Impacts on implementation of applicable air quality plans would be less than significant.

3.3(b) *Less Than Significant Impact.* The project would not be considered a project of air quality concern (POAQC) under 40 CFR 93.123(b)(1), because it would not create a new or worsen an existing particulate matter violation. A carbon monoxide hot-spot analysis was performed per the 1997 Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) developed by the Institute of Transportation Studies at the University of California, Davis. The analysis concluded that the project would not be expected to create a CO hot-spot.

Short-term impacts to air quality would occur during demolition, grading/trenching, new pavement construction, and the restriping phase. Construction of the project is anticipated to commence in mid-2019 and be completed in late 2020. All construction vehicles and equipment would be required to be equipped with the state-mandated emission control devices pursuant to state emission regulations and standard construction practices. Following construction of the project, all construction-related impacts to air quality would cease. The project would not violate state or federal air quality standards or contribute to the existing air quality violations in the MDAB. Measures AQ-1 through AQ-5 would be implemented for the project. Impacts on air quality standards would be less than significant.

Avoidance and Minimization Measures:

**AQ-1:** Prior to the issuance of grading permits or approval of grading plans, a dust control plan shall be a part of the construction contract standard specifications, which shall include measures to meet the requirements of AVAQMD Rules 402 (Nuisance) and 403 (Fugitive Dust). Such measures may include, but are not limited to, the following:

(a) Attempt to phase and schedule activities to avoid high-ozone days and first-stage smog alerts.
(b) Discontinue operation during second-stage smog alerts.
(c) All haul trucks shall be covered prior to leaving the site to prevent dust from impacting the surrounding areas.
(d) Comply with AVAQMD Rule 403, particularly to minimize fugitive dust to surrounding areas. AVAQMD Rule 403, should be adhered to, ensuring the cleanup of the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils, should be implemented for construction vehicle access, as directed by the Resident Engineer.
(e) Moisten soil each day prior to commencing grading to depth of soil cut.
(f) All haul trucks shall be covered prior to leaving the site to prevent dust from impacting the surrounding areas.
(g) Comply with AVAQMD Rule 403, particularly to minimize fugitive dust to surrounding areas. AVAQMD Rule 403, should be adhered to, ensuring the cleanup of the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils, should be implemented for construction vehicle access, as directed by the Resident Engineer.
(h) Water exposed surfaces at least twice a day under calm conditions, and as often as needed on windy days or during very dry weather in order to maintain a surface crust and minimize the release of visible emissions from the construction site.
(i) Treat any area that will be exposed for extended periods with a soil conditioner to stabilize soil or temporarily plant with vegetation.
(j) Wash mud-covered tires and under carriages of trucks leaving construction sites.
(k) Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud that would otherwise be carried off by trucks departing project sites.
(l) Provide for permanent sealing of all graded areas, as applicable, at the earliest practicable time after soil disturbance.
(m) Maintain construction equipment in peak operating condition so as to reduce operating emissions.
(n) Use low-sulfur diesel fuel in all equipment.
(o) Use electric equipment whenever practicable/shut off engines when not in use.

AQ-2: Project grading plans shall show the duration of construction. Ozone precursor emissions from construction equipment vehicles shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer’s specifications, to the satisfaction of the Resident Engineer, which may include periodic inspections of construction equipment.

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

AQ-4: The contractor would adhere to Caltrans Standard Specifications for Construction Section 14-9 (California Department of Transportation, 2015).

AQ-5: In order to further minimize construction-related emissions, all construction vehicles and construction equipment would be required to be equipped with the State-mandated emission control devices pursuant to State emission regulations and standard construction practices.
3.3(c) *Less Than Significant Impact.* Pursuant to the FCAA, the U.S. EPA has established NAAQS for the following air pollutants: CO, O₃, NO₂, SO₂, PM₁₀, PM₂.₅, and lead (Pb). These pollutants are referred to as criteria pollutants because numerical criteria have been established for each pollutant, which define acceptable levels of exposure. The U.S. EPA has revised the NAAQS several times since their original implementation and will continue to do so as the health effects of exposure to air pollution are better understood.

According to the California Air Resources Board, the MDAB is a nonattainment area for O₃, under both state and federal standards, and PM₁₀ under state standards.

- **Ozone (O₃)** - Ozone, a colorless gas with a sharp odor, is one of a number of substances called photochemical oxidants (highly reactive secondary pollutant). These oxidants are formed when hydrocarbons, Nitrous Oxide (NOₓ), and related compounds interact in the presence of ultraviolet sunlight. The state standard for O₃ is 0.09 parts per million (ppm), averaged over one hour, and 0.07 ppm, averaged over eight hours.

- **Coarse Particulate Matter (PM₁₀)** - PM₁₀ refers to suspended particulate matter which is smaller than 10 microns (or ten one-millionths) of a meter. PM₁₀ arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM₁₀ scatters light and significantly reduces visibility. In addition, these particulates penetrate in the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children’s Environmental Health Protection Act, Senate Bill 25. The federal 24-hour standard of 150 µg/m³ was retained.

The project proposes four build alternatives which would be constructed over 16 months, beginning in mid-2019. As a result, project construction would not last more than five years and is considered temporary. Project construction would result in temporary emissions of CO, NOₓ, reactive organic gases (ROG), PM₂.₅, and PM₁₀. Stationary or mobile powered on-site construction equipment typically include trucks, tractors, signal boards, excavators, backhoes, concrete saws, crushing and/or processing equipment, graders, scrapers, trenchers, pavers, and other paving equipment. Based on the insignificant amount of daily work trips required for project construction, construction worker trips are not anticipated to significantly contribute to or affect traffic flow on local roadways and are therefore not considered significant. Avoidance and minimization measures AQ-1 through AQ-5 would be implemented for the project. Impacts on criteria pollutants would be less than significant.

*Table 3-2* depicts the estimated daily emissions associated with each construction phase for Build (Alternatives 1, 2A, 2B, and 3) conditions. The emissions were estimated based on the assumptions described above and using the Roadway Construction Emissions Model (RCEM) (Version 8.1.0) developed by the Sacramento Metropolitan Air Quality Management District (SMAQMD). The emissions modeling is based on a conservative assumption of 128,525 cubic yards (CY) of import and 9,156 CY of export for Alternatives 1/2A/2B, as well as 84,844 CY of import and 82,251 CY of export for Alternative 3. It is noted that the main difference between Alternatives 1/2A/2B and Alternative 3 is the addition of a NB off-ramp at Avenue J for Alternatives 1/2A/2B and a NB collector-distributor (C-D) between 20th Street West and Avenue J.
for Alternative 3. Equipment fleets have been adjusted to reflect these differences (refer to Appendix A of the AQA for a full list of default construction equipment assumptions) (Michael Baker International, 2018a).

Table 3-2: Estimated Daily Construction Emissions

<table>
<thead>
<tr>
<th>Construction Phase</th>
<th>Pollutant (pounds/day)</th>
<th>ROG</th>
<th>CO</th>
<th>NO\textsubscript{x}</th>
<th>PM\textsubscript{10}</th>
<th>PM\textsubscript{2.5}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternatives 1/2A/2B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grubbing/Land Clearing</td>
<td></td>
<td>3.97</td>
<td>29.33</td>
<td>46.62</td>
<td>201.97</td>
<td>43.37</td>
</tr>
<tr>
<td>Grading/Excavation</td>
<td></td>
<td>21.27</td>
<td>151.96</td>
<td>234.10</td>
<td>211.11</td>
<td>51.69</td>
</tr>
<tr>
<td>Drainage/Utilities/Sub-Grade</td>
<td></td>
<td>14.59</td>
<td>119.09</td>
<td>142.13</td>
<td>207.54</td>
<td>48.63</td>
</tr>
<tr>
<td>Paving</td>
<td></td>
<td>4.46</td>
<td>48.23</td>
<td>43.96</td>
<td>2.59</td>
<td>2.32</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td>21.27</td>
<td>151.96</td>
<td>234.10</td>
<td>211.11</td>
<td>51.69</td>
</tr>
<tr>
<td>Alternative 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grubbing/Land Clearing</td>
<td></td>
<td>3.97</td>
<td>29.33</td>
<td>46.62</td>
<td>201.97</td>
<td>43.37</td>
</tr>
<tr>
<td>Grading/Excavation</td>
<td></td>
<td>19.46</td>
<td>139.34</td>
<td>216.12</td>
<td>210.12</td>
<td>50.79</td>
</tr>
<tr>
<td>Drainage/Utilities/Sub-Grade</td>
<td></td>
<td>14.59</td>
<td>119.09</td>
<td>142.13</td>
<td>207.54</td>
<td>48.63</td>
</tr>
<tr>
<td>Paving</td>
<td></td>
<td>4.46</td>
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<td>2.59</td>
<td>2.32</td>
</tr>
<tr>
<td>Maximum</td>
<td></td>
<td>19.46</td>
<td>139.34</td>
<td>216.12</td>
<td>210.12</td>
<td>50.79</td>
</tr>
</tbody>
</table>

Notes:
1. Emissions were calculated using the RCEM (Version 8.1.0) developed by the SMAQMD.
2. PM\textsubscript{10} and PM\textsubscript{2.5} estimates assume control of fugitive dust from watering and associated dust control measures.
3. Emissions include the sum of exhaust and fugitive dust.

Source: Michael Baker International, 2018a

3.3(d) Less Than Significant Impact. The CEQA and Federal Conformity Guidelines establish a significance threshold for projects. Any project would be significant if it triggers or exceeds the most appropriate evaluation criteria. The evaluation criteria includes: (1) Generates total emissions (direct and indirect) in excess of the thresholds; (2) Generates a violation of any ambient air quality standard when added to the local background; (3) Does not conform with the applicable attainment or maintenance plans; and (4) Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a HI (non-cancerous greater than or equal to 1).

Sensitive populations (sensitive receptors) are more susceptible to the effects of air pollution than the general population. Sensitive receptors that are in proximity to localized sources of toxics and CO are of particular concern. According to the AVAQMD, a sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Land uses considered sensitive receptors include residences, motels/hotels, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The closest sensitive receptors to the project include residential uses that are along the southwestern and northeastern border of the project area, parallel to SR-14 (SR-138).
During the construction phase of the project, these sensitive receptors would have short-term impacts. However, following construction, impacts would cease and return to conditions subsequent to construction. Therefore, the impacts from exposure of pollutant concentrations to sensitive receptors would be less than significant.

3.3(e) **Less than Significant Impact.** Irritating odors are often associated with particulates. Some examples of sources are gasoline and diesel engine exhausts, large-scale coffee roasting, paint spraying, street paving, and trash burning. The U.S. EPA replaced total suspended particulates (TSP) as the indicator for both the annual and 24-hour primary (i.e., health related) standards in 1987. The indicator includes only those particles with an aerodynamic diameter smaller than or equal to PM$_{10}$.

During construction, the project could result in potential odors from exhaust emissions from construction equipment used on the construction site, as well as the vehicles used to transport materials to and from the site, and from the motor vehicles of the construction crew. These exhaust emissions include:

- **Volatile Organic Compounds (VOCs)** contribute to the formation of smog and/or may themselves be toxic. VOCs often have an odor; some examples include gasoline, alcohol, and the solvents used in paints.
- **Carbon monoxide (CO)** is a colorless and odorless gas. The automobile and other types of motor vehicles are the main source of this pollutant in the MDAB. CO concentrations are generally higher along roadways, especially in the early mornings. The state and federal standard for CO is 9.0 parts per million (ppm), averaged over eight hours. The state one-hour standard is 20 ppm, and the federal one-hour standard is 35 ppm.
- **Ozone (O$_3$)**, a colorless gas with a sharp odor, is one of a number of substances called photochemical oxidants (highly reactive secondary pollutant). These oxidants are formed when hydrocarbons, NO$_X$, and related compounds interact in the presence of ultraviolet sunlight. The state standard for O$_3$ is 0.09 ppm, averaged over one hour, and 0.07 ppm, averaged over eight hours.
- **Nitrogen Dioxide (NO$_2$)** is a reddish-brown gas with an odor similar to bleach and is the by-product of fuel combustion, which results from mobile and stationary sources. It has complex diurnal concentrations that are typically higher at night. The MDAB has relatively low NO$_2$ concentrations, as very few monitoring stations have exceeded the state standard of 0.18 ppm (one hour) since 1988.
- **Oxides of Sulfur (SO$_X$)** is a colorless gas with a sharp, irritating odor and results from the combustion of sulfur-containing fossil fuels from mobile and stationary sources. Diurnal concentrations are complex but are typically higher at night. The state standard for SO$_2$ is 0.25 ppm averaged over one-hour, and the federal standard is 0.075 ppm averaged over one-hour.

However, the odors would be temporary during the construction period. Following construction, odors would not be greater than the existing odors emitted prior to project construction. Therefore, impacts would be less than significant.
### 3.4 Biological Resources

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BIOLOGICAL RESOURCES. Would the Project:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Have a substantial adverse effect on protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filing, hydrological interruption, or other means?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>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?</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

A Natural Environmental Study (NES) was completed for this project in June 2018 (GPA Consulting, 2018b). Additionally, a Biological Resources Existing Conditions Report was conducted for planned interchange improvement projects along SR-14 (SR-138) in March 2016 (GPA Consulting, 2016a). The results of these studies are included in the discussion below.
REGULATORY SETTING

State

California Fish and Game Code Section 1602
In compliance with California Fish and Game Code Section 1602, the California Department of Fish and Wildlife (CDFW) issues agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams and rivers are defined by the presence of a channel bed, banks, and perennial, intermittent, or ephemeral flow of water. CDFW typically extends the limits of their jurisdiction laterally beyond the channel banks for streams to the outer edges of riparian vegetation.

California Endangered Species Act
The California Endangered Species Act (CESA) states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The CDFW will work with all interested persons, agencies, and organizations to protect and preserve such sensitive resources and their habitats. (California Department of Fish and Wildlife, 2016).

Regional Water Quality Control Board
There are Regional Water Quality Control Board (RWQCB) jurisdictional wetlands and waters within the biological study area (BSA). Amargosa Creek is an ephemeral stream that flows within the BSA; however, the creek is not considered jurisdictional because it is an isolated, non-navigable waterway and is not a tributary to other navigable waters of the United States (U.S.). The RWQCB jurisdiction extends to all surface waters within California; therefore, although the project is not expected to require a Section 404 permit from the U.S. Army Corps of Engineers (USACE), the waters are still subject to regulation by the RWQCB, and Waste Discharge Requirements may be required.

AFFECTED ENVIRONMENT
Vegetation communities and habitat types within the BSA were assessed and classified according to CDFW’s Preliminary Descriptions of the Terrestrial Natural Communities of California (Holland, 1986). Habitats meeting the definition of wetlands and/or non-wetland waters of the U.S. and state within the delineated areas may also be further classified according to United States Fish and Wildlife Service (USFWS) Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, Carter, Golet, & LaRoe, 1979). Wetlands are classified by identifying the delineated area’s systems (Riverine, Palustrine, Lacustrine, Estuarine, or Marine), general vegetation cover types, primary sources of hydrology, and factors related to the origin of the wetland. This system is the most widely accepted wetlands classification system, and it is currently used for the USFWS National Wetlands Inventory (NWI) mapping system.

Vegetation within the BSA consists of a mix of native and non-native species. There are various vegetation communities and cover classes within the BSA, including Desert Saltbush Scrub, Disturbed Desert Scrub, Dry Desert Wash, Coastal and Valley Freshwater Marsh, Open Water, Southern Willow Scrub, Non-Native Grassland, Ornamental Landscaping, and Ruderal. The vegetation communities within this area are considered disturbed because of the prevalence of
human activity (e.g., trash dumping, off-road vehicle activity, illegal camping, etc.). These communities and cover classes are briefly described below.

VEGETATION COMMUNITIES

Desert Saltbush Scrub: Desert Saltbush Scrub communities are generally dominated by a single *Atriplex* species widely spaced with a low total percent vegetation cover. These communities exist in areas with fine-textured soils with high alkalinity or salinity. The Desert Saltbush Scrub community covers 7.96 acres on the west side of the highway, south of Avenue J-8.

Disturbed Desert Scrub: Disturbed Desert Scrub communities have a native, shrubby overstory with weedy, herbaceous vegetation in the understory. The Disturbed Desert Scrub community covers 15.77 acres in the BSA and is along the east and west sides of the highway and along the highway ramps.

Dry Desert Wash: Dry Desert Wash communities are characterized by the presence of various sized, often spiny shrubs generally associated with intermittent streams (washes) or drier bajadas (alluvial deposits adjacent to washes). The vegetative composition of areas depends on latitude, elevation, and precipitation. Stand development depends on water availability (e.g., precipitation, ground water). The Dry Desert Wash community covers 1.10 acres in Amargosa Creek along the entire length of the BSA.

Non-Native Grassland: Non-Native Grassland communities are dominated by annual and perennial, introduced/non-native, pioneering, herbaceous plants that readily colonize disturbed ground. These communities are typical in early successional stages following extreme human disturbance or recurrent natural disturbance. Non-Native Grassland communities are within all of the BSAs in areas where soil has been disturbed by grading or disking. The Non-Native Grassland community covers 12.7 acres on the west side of the highway, north and south of Avenue J, and south of Avenue J-8. This community is also on the north side of Avenue J-8, east of the highway, along the edge of an open field.

Coastal and Valley Freshwater Marsh: Coastal and Valley Freshwater Marsh communities are typically in areas that are permanently flooded and are dominated by emergent monocot plant species. The Coastal and Valley Freshwater Marsh community is between Avenue J-8 and West Lancaster Boulevard. The Coastal and Valley Freshwater Marsh community covers 0.41 acre in the BSA.

Southern Willow Scrub: Southern Willow Scrub communities dominate in and alongside creek channels when the frequency and duration of flooding increases. Southern Willow Scrub communities are composed of young, newly established willows that can survive the frequent inundation from flooding. This community is within Amargosa Creek between Avenue J-8 and West Lancaster Boulevard. The Southern Willow Scrub community covers 2.07 acres in Amargosa Creek between Avenue J-8 and West Lancaster Boulevard.

COVER CLASSES

Open Water: Open Water communities are permanently flooded and support emergent or submerged vegetation. Open water habitat is valuable to wildlife such as migrating birds, reptiles, and amphibians, especially during times of drought or in the heat of the summer. This community is in Amargosa Creek in the BSA where the culvert and drainages daylight. Open Water communities were also identified on the west side of the highway, south of Avenue J, in a small, concrete-lined drainage adjacent to the highway. Emergent vegetation was observed in some
areas of open water habitat. The Open Water community is between Avenue J-8 and West Lancaster Boulevard. This community covers 0.44 acre in the BSA.

**Ornamental Landscaping:** Ornamental Landscaping predominantly consists of non-native horticultural plants, including introduced trees, shrubs, flowers, and turf grass. Ornamental Landscaping may provide roosting and potential nesting habitat for numerous species of birds, particularly where they are in close proximity to open space and other undeveloped lands. The Ornamental Landscaping community covers 5.33 acres on the east and west side of the highway, north and south of Avenue J-8. This community also occupies a small area at the edge of an open field south of Avenue J.

**Ruderal:** Ruderal vegetation communities often exist along roadsides and fence lines, near developments, and in other areas where vegetation has been substantially altered by mowing or herbicide. The Ruderal community is within the highway median, along the majority of the eastern side of highway (and a small section to the east of the highway and north of Avenue J-8), and within a small strip of land between Avenue J and Avenue J-8. The BSA contains 29.75 acres of the Ruderal community.

**WILDLIFE**

Wildlife species observed within the BSA during the biological surveys include red-tailed hawk (*Buteo jamaicensis*), California quail (*Callipepla californica*), Anna’s hummingbird (*Calypte anna*), killdeer (*Charadrius vociferous*), northern harrier (*Circus cyaneus*), rock pigeon, common raven (*Corvus corax*), house finch (*Haemorhous mexicanus*), Northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), western tanager (*Piranga ludociciana*), lesser goldfinch (*Spinus psaltria*), European starling (*Sturnus vulgaris*), mourning dove (*Zenaida macroura*), California ground squirrel (*Otospermophilus beecheyi*), house sparrow (*Passer domesticus*), and coyote (*Canis latrans*). The Desert Saltbush Scrub community provides foraging and cover for many bird and mammal species including the California quail (*Callipepla californica*), sage sparrow (*Artemisiospiza belli*), Le Conte’s thrasher (*Toxostoma lecontei*), desert woodrat (*Nevotoma lepida*), desert cottontail (*Sylvilagus audubonii*), desert tortoise (*Gopherus agassizii*), Great Basin whiptail lizard (*Cnemidophorus tigris tigris*), California side-blotched lizard (*Uta stansburiana elegans*), desert night lizard (*Stularia vigilis vigilis*), California king snake (*Lampropeltis getula californiae*), and Mojave rattlesnake (*Crotalus scutulatus*). This community may also be used during migration by riparian birds.

The Disturbed Desert Scrub provides foraging areas, breeding, cover, and food for California quail, sage sparrow, desert tortoise, desert woodrat, desert cottontail, desert kit fox, and bobcat (Lynx rufus). A variety of reptiles also benefit from this community, including the desert tortoise (*Gopherus agassizii*), Great Basin whiptail lizard (*Cnemidophorus tigris tigris*), California side-blotched lizard (*Uta stansburiana elegans*), desert night lizard (*Xantusia vigilis vigilis*), California king snake (*Lampropeltis getula californiae*), and Mojave rattlesnake (*Crotalus scutulatus*). This community may also be used during migration by riparian birds.

Common species that can be found within the Dry Desert Wash community include California ground squirrel, desert cottontail, deer mouse (*Peromyscus maniculatus*), and California side-blotched lizard.

Non-Native Grasslands support fewer bird and mammal species than native grasslands. Herbivorous small mammals typically in this habitat are California ground squirrel, Botta’s pocket gopher (*Thomomys bottae*), and California vole (*Microtus californicus*). Reptiles associated with
Non-Native Grassland communities include gopher snake (*Pituophis catenifer*) and Great Basin whiptail lizard.

Freshwater marsh habitat generally has a high value for wildlife because food sources are abundant and emergent vegetation provides protective cover. Surface waters in this community are an essential source of drinking water for many species of wildlife and provide potential breeding habitat for a number of amphibians and reptiles such as pacific chorus frog (*Pseudacris regilla*), California toad (*Bufo boreas halophilus*), Great Basin whiptail lizard, side-blotched lizard, desert night lizard, and California king snake.

Southern Willow Scrub communities are important browsing and foraging habitat for many wildlife species and are a good source of insects. The structure of the young willow trees also provides nesting and cover habitat for many songbirds.

The ruderal vegetation communities within the BSA provide limited benefits to wildlife because of a high degree of human disturbance to soil and vegetation.

The BSA is within a highway corridor and is surrounded by undeveloped lands, industrial, residential, commercial, roadway, and freeway infrastructure. According to the CDFW Biogeographic Information and Observation System (BIOS) Habitat Connectivity Viewer, the BSA is not within an essential connectivity area, and is not expected to be used as a regional wildlife movement corridor. However, the BSA is likely used for local wildlife movement and foraging. The highway is a physical barrier to wildlife migration from the east to west, and no potential wildlife crossings were observed during the biological surveys.

**NATURAL COMMUNITIES**

According to the California Natural Diversity Database (CNDDB) search, six special-status natural communities have the potential to be in the BSA based on geographical location, including Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, Southern Willow Scrub, Valley Needlegrass Grassland, and Wildflower Field vegetation communities. However, the BSA is dominated by Disturbed Desert Scrub, Coastal and Valley Freshwater Marsh, and Non-Native Grassland communities, and there are no special-status vegetation communities within the BSA. During the field delineation conducted on July 30, 2015, and July 31, 2015, approximately 2.8 acres of wetland habitat were delineated within Amargosa Creek within the BSA.

**SPECIAL-STATUS ANIMALS**

According to the CNDDB and USFWS searches, 48 special-status animal species have the potential to be in the BSA based on recorded geographical distribution (see Appendix G).

There is a small area of Desert Saltbrush Scrub within the BSA; therefore, there is the potential for the northern legless lizard (*Anniella pulchra*), a California species of special concern; California legless lizard (*Anniella sp. 1*), California glossy snake (*Arizona elegans occidentalis*), a California species of special concern, loggerhead shrike (*Lanius ludovicianus*), a California species of special concern; and Le Conte’s thrasher (*Toxostoma lecontei*), a California species of special concern to be within this area.

The Non-Native Grasslands in the BSA contain marginal habitat for the burrowing owl (*Athene cunicularia*), a California species of special concern; California horned lark (*Eremophila alpestris*), and...
actia), on the CDFW watch list; mountain plover (Charadrius montanus), a California species of special concern; coast horned lizard (Phrynosoma blainvillii), a California species of special concern; San Diego black-tailed jackrabbit (Lepus californicus bennettii), a California species of special concern; and southern grasshopper mouse (Onychomys torridus ramona), a California species of special concern. This area also contains suitable foraging habitat for the Cooper’s hawk (Accipiter cooperii), on the CDFW’s Watch List; Bell’s sage sparrow (Artemisiospiza belli belli), on the CDFW’s watch list; short-eared owl (Asio flammeus), a California species of special concern; ferruginous hawk (Buteo regalis), on the CDFW’s watch list; Swainson’s hawk (Buteo swainsoni), a state threatened species; prairie falcon (Falco mexicanus), on the CDFW’s watch list; and merlin (Falco columbarius), on the CDFW’s watch list.

The Coastal and Valley Freshwater Marsh could provide marginal habitat for the state endangered tri-colored blackbird (Agelaius tricolor); northern harrier (Circus cyaneus), a California species of special concern; yellow-headed blackbird (Xanthocephalus xanthocephalus), a California species of special concern; white-faced ibis (Plegadis chihi), on the CDFW’s watch list; black-crowned night heron (Nycticorax nycticorax), on the CDFW’s watch list; and a foraging habitat for the great egret (Ardea alba).

Because there are dry open areas with sparse vegetation in the BSA, there is also potential for the coastal whiptail (Aspidoscelis tigris stejnegeri), a California species of special concern. Small mammal burrows were observed throughout the BSA and food genera for the Crotch bumble bee (Bombus crotchii) was also observed; therefore, there is potential for this species to be in the BSA. Based on research regarding habitat requirements, there is no suitable habitat for other special-status animal species within the BSA.

SPECIAL-STATUS PLANTS

According to the CNDDB and USFWS search, 24 special status plant species have the potential to be in the BSA based on recorded geographical distribution. Based on research regarding habitat requirements and the results of the biological surveys, there is a low potential for the alkali mariposa-lily (Calcohortus striatus), white pygmy-poppy (Canbya candida), Mojave spineflower (Chorizanthe spinosa), Clokey’s cryptantha (Cryptantha clokeyi), Barstow woolly sunflower (Eriophyllum mohavense), Golden goomania (Goodmania luteola), Torrey’s box-thorn (Lycium torreyi), Crowned muilla (Muilla coronata), and short-joint beavertail (Optunia basilaris var. brachyclada) to be in the BSA. These species were not observed during the biological surveys which were conducted during the typical bloom period for these species; however, because there is suitable habitat, the potential for these species to be within the BSA cannot be ruled out. The 15 remaining special status plant species are not anticipated to be in the BSA.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.4(a) Less Than Significant with Mitigation Incorporated. The project area is located within a highway corridor and is surrounded by commercial and urban residential development. According to the CNDDB and the USFWS, multiple special-status species have the potential to be identified within the project area based on geographical location; 24 special-status plant species and 48 special-status animal species have the potential to be in the BSA based on recorded geographical distribution. Special-Status Wildlife:
There are several wildlife species that have the potential to be present in the BSA and the project could result in impacts to these species. These species include the following: tricolored blackbird, yellow-headed blackbird, Le Conte’s thrasher, mountain plover, northern harrier, loggerhead shrike, northern legless lizard, coast horned lizard, coastal whiptail, San Diego black-tailed jackrabbit, southern grasshopper mouse, and burrowing owl. These species are identified as endangered or species of special concern by the CESA or the CDFW.

**Tricolored Blackbird**

The tricolored blackbird is a highly colonial species that is found in freshwater marshes dominated by cattails and bulrushes. The tricolored blackbird was listed as endangered under CESA on December 3, 2014, on an emergency basis, because of a huge decline in the species population. This species requires open water, protected nesting substrate, and foraging habitat with insect prey within a couple of miles of the colony.

Permanent impacts on the Coastal and Valley Freshwater Marsh community would not be required for this project; therefore, direct impacts on the tricolored blackbird are not anticipated. However, the tricolored blackbird could be indirectly impacted through noise and disturbance if individuals were to nest in the Coastal and Valley Freshwater Marsh community during construction. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all Coastal and Valley Freshwater Marsh habitat that is suitable for the tricolored blackbird within the Amargosa Creek Watershed. Habitat removal resulting from current and future development in the area and loss of prey are the biggest threats to the tricolored blackbird. The project would not result in the loss of tricolored blackbird habitat or the loss of its prey base. The project could result in a temporary impact to nesting behavior during construction; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. Therefore, the project would not be expected to result in cumulatively considerable impacts on the tricolored blackbird.

**Yellow-headed Blackbird**

The yellow-headed blackbird is a CDFW species of special concern. The species nests in freshwater emergent wetlands, often along borders of lakes or ponds with dense vegetation and deep water. This species only nests where large insects such as dragonflies and damselflies (order Odonata) are abundant and nesting is timed to occur when the emergence of aquatic insects is at its peak. Nests are lashed to standing vegetation growing in water, usually no more than three feet above the water’s surface. This species forages on the ground in open fields, near the edge of water, and in low marsh vegetation.

Permanent impacts on the Coastal and Valley Freshwater Marsh community would not be required for the project; therefore, direct impacts on the yellow-headed blackbird are not anticipated. The yellow-headed blackbird could be indirectly impacted through noise and disturbance if individuals were to nest in the Coastal and Valley Freshwater Marsh community during construction. Impacts to this species would be less than significant; they
would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all Coastal and Valley Freshwater Marsh habitat that is suitable for the yellow-headed blackbird within the Amargosa Creek Watershed. Habitat removal resulting from current and future development in the area and loss of prey are the biggest threats to the yellow-headed blackbird. The project would not result in the loss of yellow-headed blackbird habitat or the loss of its prey base. But, the project could result in a temporary impact to nesting behavior during construction; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the yellow-headed blackbird.

**Le Conte’s Thrasher**

The Le Conte’s thrasher is listed as a species of special concern by CDFW, a Bureau of Land Management (BLM) sensitive species, and protected by the Migratory Bird Treaty Act (MBTA). Le Conte’s Thrasher is a year-around desert resident that inhabits various desert scrub and wash habitats and typically breeds in desert areas that support cactus, Mojave yucca (*Yucca schidigera*), Joshua trees (*Yucca brevifolia*), and large thorny shrubs such as boxthorn (*Lycium* spp.). They can also be found in desert flats with sparse growths of saltbush and in creosote bush flats where there are a few slightly larger mesquites or cholla cacti. Several species of saltbush found in the Le Conte’s thrasher’s range, such as shadscale (*Atriplex confertifolia*), quailbush, desert holly, and four-winged saltbush, may be occasionally used for nesting. Other plants used are branched pencil cholla, smoke tree, blue palo verde, honey mesquite, and Mojave yucca. To a lesser degree this species has been found to nest in jojoba (*Simmondsia chinensis*) and California juniper (*Juniperus californica*). This species is distributed from the Mojave Desert east into southern Utah and northern Arizona, and south into northern Mexico.

Tree and vegetation removal could directly impact the Le Conte’s thrasher if they were nesting within the BSA during construction. Temporary noise-generating activities, such as paving and grading, would also result in temporary if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all desert scrub and wash habitat that is suitable for Le Conte’s thrasher nesting within the Antelope Valley. Habitat removal resulting from current and future development in the area and loss of prey are the biggest threats to this species. The project would not result in the loss of Le Conte’s thrasher habitat or the loss of its prey base. The project could result in a temporary impact to nesting behavior during construction; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the Le Conte’s thrasher.
Mountain Plover

The Mountain Plover is a CDFW species of special concern. This species is found in short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. The mountain plover is found in areas with short vegetation, bare ground, and flat topography. This species prefers grazed areas as well as areas with burrowing rodents.

Tree and vegetation removal could directly impact the mountain plover if they are nesting within the BSA during construction. Temporary noise-generating activities, such as paving and grading, could also result in temporary indirect impacts on the mountain plover if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all area containing short vegetation, bare ground, and flat topography that is suitable habitat for the mountain plover and its nesting habitat within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the mountain plover. The project would not result in the loss of mountain plover habitat. Vegetation removal, grading, and temporary noise-generating activities could result in temporary impacts to nesting behavior; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the mountain plover.

Northern Harrier

The northern harrier is a CDFW species of special concern. The northern harrier is found in coastal salt and fresh-water marsh habitat. This species nests on the ground in shrubby vegetation, usually at marsh edges; nests are built of a large mound of sticks in wet areas.

Vegetation removal could directly impact the northern harrier if they were nesting within the BSA during construction. Temporary noise-generating activities, such as paving and grading, could also result in temporary indirect impacts on the northern harrier if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all coastal salt and fresh-water marsh habitat that is suitable for northern harrier nesting within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the northern harrier. The project would not result in the loss of northern harrier habitat. But, vegetation removal and temporary noise-generating activities could result in temporary impacts to nesting behavior; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in substantial cumulatively considerable impacts on the northern harrier.
**Loggerheaded Shrike**

The loggerhead shrike is a CDFW species of special concern and is protected by the MBTA. This species is found in semi-open country with scattered shrubs, trees, posts, fences, utility lines, or other perches. The loggerhead shrike builds nests in dense and often thorny trees or shrubs usually 5 to 30 feet above ground level.

Tree and vegetation removal could directly impact the loggerhead shrike if they were nesting within the BSA during construction. Temporary noise-generating activities, such as paving and grading, could also result in temporary indirect impacts on the loggerhead shrike if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-1 through BIO-4.

The cumulative impact study area consists of all semi-open country containing scattered shrubs, trees, posts, fences, utility lines, or other perches that is suitable habitat for the loggerhead shrike within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the loggerhead shrike. The project would not result in the loss of loggerhead shrike habitat. Vegetation removal and temporary noise-generating activities could result in temporary impacts to nesting behavior; however, with implementation of avoidance and minimization measures BIO-1 through BIO-4, impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the loggerhead shrike.

**Northern Legless Lizard**

The northern legless lizard is a CDFW species of special concern. The species is found in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks and may also be found in Riversidean Alluvial Fan Sage Scrub. This species requires warm, loose soils with plant cover, and moisture is essential.

Northern legless lizards could be directly impacted by construction activities if they were to be crushed by heavy construction equipment. In addition, this species could be indirectly impacted by loss of habitat resulting from vegetation removal. Temporary noise-generating activities, such as paving and grading, could also result in temporary indirect impacts if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all area containing warm, loose soils with plant cover, and moisture that is suitable habitat for the northern legless lizard within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the northern legless lizard. The project would not result in the loss of northern legless lizard habitat. Vegetation removal, grading, and temporary noise-generating activities could result in temporary impacts on the northern legless lizard. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the northern legless lizard.
California Legless Lizard

The California legless lizard is a CDFW species of special concern. This species is found in a variety of habitats, generally in moist, loose soil. This species prefers soil with a high moisture content.

Construction activities could result in direct impacts on the California legless lizard if they were trampled or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the California legless lizard if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all area containing moist, loose soil that is suitable habitat for the California legless lizard within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the California legless lizard. The project would not result in the loss of California legless lizard habitat. Vegetation removal, grading, and temporary noise-generating activities could result in impacts on the California legless lizard. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. Therefore, the project would not be expected to result in cumulatively considerable impacts on the California legless lizard.

Coast Horned Lizard

The coast horned lizard is a CDFW species of special concern. This species is found in open areas of sandy soil and low vegetation in valleys, foothills, and semiarid mountains, and grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. Key habitat elements for the coast horned lizard are the presence of loose, fine soils, with high sand content; an abundance of ants; open areas for basking; and areas with low dense shrubs for refuge.

Construction activities could result in direct impacts on the coast horned lizard if they were trampled or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the coast horned lizard if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all areas containing loose, fine soils, with high sand content; an abundance of ants; open areas for basking; and areas with low dense shrubs for refuge that is suitable habitat for the coast horned lizard within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the coast horned lizard. The project would not result in the loss of coast horned lizard habitat. Vegetation removal, grading, and temporary noise-generating activities could result in impacts on the coast horned lizard. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the coast horned lizard.
Coastal Whiptail

The coastal whiptail is a CDFW species of special concern. This species is found primarily in hot and dry open areas with sparse foliage, including chaparral, woodland, and riparian areas. This species is also found in woodland and riparian areas where the ground may be firm soil, sandy, or rocky.

Construction activities could result in direct impacts on the coastal whiptail if they were trampled or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the coastal whiptail if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all hot and dry open habitat, as well as woodland and riparian habitat, that is suitable for the coastal whiptail within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the coastal whiptail. The project would not result in the loss of coastal whiptail habitat. Vegetation removal, grading, and temporary noise-generating activities could result in temporary impacts on the coastal whiptail. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the coastal whiptail.

California Glossy Snake

The California glossy snake is a CDFW species of special concern. This species is found in arid scrub, rocky washes, and chaparral habitat. This species is nocturnal and hides in burrows and underground during the day. The California glossy snake preys on sleeping diurnal lizards, small snakes, birds, and small mammals.

Construction activities could result in direct impacts on the California glossy snake if they were trampled or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the California glossy snake if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all arid scrub, rocky washes, and chaparral habitat that is suitable for the California glossy snake within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the California glossy snake. The project would not result in the loss of California glossy snake habitat. Vegetation removal, grading, and temporary noise-generating activities could result in temporary impacts on the California glossy snake. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the California glossy snake.
San Diego Black-Tailed Jackrabbit

The San Diego black-tailed jackrabbit is a CDFW species of special concern. This species is generally found in grasslands, agricultural fields, or areas of sparse coastal scrub. The San Diego black-tailed jackrabbit is typically found in high grass or dense brush. This species uses shallow depressions under bushes or shrubs and does not construct burrows or dens.

Construction activities could result in direct impacts on the San Diego black-tailed jackrabbit if they were trampled by construction equipment or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the San Diego black-tailed jackrabbit if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all areas containing grasslands, agricultural fields, or areas of sparse coastal scrub that is suitable habitat for the San Diego black-tailed jackrabbit within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the San Diego black-tailed jackrabbit. The project would not result in the loss of San Diego black-tailed jackrabbit habitat. Vegetation removal, grading, and temporary noise-generating activities could result in impacts on the San Diego black-tailed jackrabbit. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the San Diego black-tailed jackrabbit.

Southern Grasshopper Mouse

The southern grasshopper mouse is a CDFW species of special concern. This species is found in desert areas, especially scrub habitats with friable soils for digging. The southern grasshopper mouse prefers low to moderate shrub cover.

Construction activities could result in direct impacts on the southern grasshopper mouse if they were trampled by construction equipment or their habitat was destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the southern grasshopper mouse if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all scrub habitat that is suitable for the southern grasshopper mouse within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the southern grasshopper mouse. The project would not result in the loss of southern grasshopper mouse habitat. Vegetation removal, grading, and temporary noise-generating activities could result in impacts on the southern grasshopper mouse. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. Therefore, the project
would not be expected to result in cumulatively considerable impacts on the southern grasshopper mouse.

**Crotch Bumble Bee**

The Crotch bumble bee has a state rank of S1S2, meaning that it is an imperiled species with less than 1,000 to 3,000 individuals remaining. There is no state or federally protected status and no legal protection of this species. The Crotch bumble bee is found in open grasslands and scrub habitats in coastal California east to the Sierra-Cascade crest and south into Mexico, including the western edges of the deserts and the Central Valley. This species is not found in the mountains or cool north coastal areas of California. The Crotch bumble bee nests underground in abandoned rodent burrows or above ground in tufts of grass, old bird nests, rocks piles, or cavities in dead trees. Food plant genera for this species include *Antirrhinum* sp., *Phacelia* sp., *Clarkia* sp., *Dendromecon* sp., *Eschscholzia* sp., and *Eriogonum* sp.

Construction activities could directly impact the Crotch bumble bee if their nests were destroyed. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts if they were loud enough to result in disturbance. Impacts to this species would be less than significant; they would be further reduced through the implementation of avoidance and minimization measures BIO-5 through BIO-10.

The cumulative impact study area consists of all scrub habitat that is suitable for the Crotch bumble bee within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the Crotch bumble bee. Vegetation removal and grading could result in impacts on the Crotch bumble bee. Avoidance and minimization measures BIO-5 through BIO-10 would be implemented as part of the project. Other planned projects in the cumulative impact study area would be expected to include similar measures. The project would not be expected to result in cumulatively considerable impacts on the Crotch bumblebee.

**Burrowing Owl**

The burrowing owl is a CDFW species of special concern, a BLM sensitive species, and is protected by the MBTA. Burrowing owls can be found from California to Texas and into Mexico. In some cases, owls migrate into southern deserts during the winter. Burrowing owls are found in open, dry, annual, or perennial grasslands, agricultural and range lands, and desert habitats associated with burrowing animals. The burrowing owl is also common in disturbed areas, including roadsides, and may develop burrows in debris piles. This species typically nests in mammal burrows most notably of those, the California ground squirrel; however, they may also use manmade structures including culverts and debris piles. They exhibit strong nest site fidelity. Burrowing owls eat insects, small mammals, and reptiles.

Construction activities could result in direct impacts on the burrowing owl if burrows were trampled or destroyed during construction activities. Temporary noise-generating activities, such as paving and grading, could result in temporary indirect impacts on the burrowing owl if they were loud enough to result in disturbance. Avoidance and minimization measures BIO-11 through BIO-15 would be implemented as part of the project. Impacts on the burrowing owl are anticipated to be less than significant.
If the destruction of an unoccupied burrow is determined to be unavoidable during project construction, mitigation measures BIO-18 and BIO-19 would be implemented; impacts would be considered less than significant with mitigation.

The cumulative impact study area consists of all open, dry, annual, or perennial grasslands, agricultural and range lands, and desert habitat that is suitable for the burrowing owl within the Antelope Valley. Habitat removal from current and future development in the area is the biggest threat to the burrowing owl. The project would not result in the permanent loss of burrowing owl habitat. However, grading and temporary noise-generating activities could result in temporary impacts. With implementation of avoidance and minimization measures BIO-11 through BIO-15, adverse impacts are not anticipated. Other planned projects in the cumulative impact study area would be expected to include similar measures. Therefore, the project would not be expected to result in cumulative impacts on the burrowing owl.

Special-Status Plants:

No special-status plant species are anticipated to be in the project area. Avoidance and minimization measure BIO-16 would be implemented as part of the project. If it is determined that special status plants would be impacted as a result of the project, mitigation measure BIO-17 would be implemented. The project would have less than significant impacts on sensitive plant species with mitigation incorporated.

Avoidance and Minimization Measures:

**Tricolored Blackbird/Yellow-haired Blackbird/Le Conte’s Thrasher/Mountain Plover/Northern Harrier/Loggerhead Shrike**

**BIO-1:** Construction in areas that include trees or vegetation that may provide bird nesting habitat would be reduced to the maximum extent feasible.

**BIO-2:** Trimming and removal of vegetation and trees would be minimized and performed outside of the nesting season (typically February 1 to September 1) to the extent feasible.

**BIO-3:** If construction is scheduled to begin during bird nesting season (typically February 1 to September 1), nesting bird surveys would be completed no more than 48 hours prior to construction to determine if there are any nesting birds or active nests within or adjacent to the project. Surveys would be repeated if construction activities are suspended for five days or more.

**BIO-4:** If nesting birds are found adjacent to the BSA, appropriate buffers consisting of orange flagging/fencing or similar (typically 500 feet for raptors, 150 feet for songbirds) shall be installed and maintained until nesting activity has ended, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed. A qualified biologist must oversee bird nesting buffers and they may require increasing the buffer zone(s), if necessary, to prevent abandonment of the nest.

**Northern Legless Lizard/Coastal Horned Lizard/Coastal Whiptail/California Glossy Snake/San Diego Black-Tail Jackrabbit/Southern Grasshopper Mouse/Crotch Bumble Bee**

**BIO-5:** Vegetation removal would be reduced the extent feasible. Areas outside of the impacts area would be flagged with Temporary High Visibility Fence for protection.
**BIO-6:** Two weeks prior to construction a qualified biologist would rake leaf litter and sand under shrubs within suitable habitat (creek area) in the area to be disturbed to a minimum depth of two inches. In addition to raking, coverboards would be placed flat on the ground and checked at least twice per week during raking surveys. Size of coverboards, amount of coverboards, and placement shall be determined by a qualified biologist. Coverboards can consist of untreated lumber, sheet metal, corrugated steel, or other flat material used to survey for reptiles. Captured animals would be placed immediately into containers containing sand or moist paper towels and released in designated release areas either onsite or at a City approved off-site location no more than three hours after capture.

**BIO-7:** A qualified biologist would complete pre-construction surveys no more than 48 hours prior to construction to determine the presence or absence of ground-dwelling/nesting animals in the project area. Surveys would be repeated if construction activities are suspended for five days or more.

**BIO-8:** If ground-dwelling/nesting animals are observed within the project area, a qualified biologist would capture and relocate them to suitable habitat at least 100 feet outside of the construction area.

**BIO-9:** Grading in suitable habitat would be conducted in two consecutive 6-inch layers. With each lift, the biologist would check the areas for ground-dwelling/nesting animals. If any are found, they will be relocated to suitable habitat at least 100 feet from the construction area. Monitoring would be discontinued when grading reaches depths greater than 12 inches.

**BIO-10:** Temporarily disturbed areas would be restored following construction.

**Burrowing Owl**

**BIO-11:** Pre-construction surveys for the burrowing owl would be conducted by a qualified biologist. The surveys would be conducted not more than seven days prior to ground or vegetation disturbing activities and would include a thorough examination of all suitable habitat within the project area and vicinity for burrowing owl or its sign.

**BIO-12:** If the burrowing owl or its diagnostic signs are detected, the CDFW shall be consulted and a buffer of at least 300 feet around the natal burrow shall be established and maintained unless otherwise approved by a qualified biologist.

**BIO-13:** Passive relocation would be conducted only during the nonbreeding season. Occupied burrows would not be disturbed during the nesting season (February 1 through September 1), unless CDFW and a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or juveniles from the occupied burrows are foraging independently and are capable of independent flight.

**BIO-14:** If owls must be moved away from the disturbance area, passive relocation would be used to encourage owls to move from occupied burrows to alternate natural or artificial burrows more than 160 feet from the project area. Passive relocation would be conducted by a qualified biologist. The alternate or artificial burrows would be within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. A minimum of one week would be allowed for owls to move and acclimate to alternate burrows prior to disturbing any existing burrows. Once the biologist has confirmed that the owls have left the burrow, burrows would be excavated using hand tools and refilled to prevent
reoccupation. The area within 500 feet of excavated burrows would be monitored by a qualified biologist daily for one week and once per week for an additional two weeks to confirm that owls are not reoccupying the area.

**BIO-15:** If passive relocation efforts are not successful within one week, burrowing owls within the project area would be trapped and relocated away from the disturbance area. One alternate natural or artificial burrow would be provided for each burrow to be excavated in the project area. Relocation would not be conducted until approved by CDFW. A qualified biologist would monitor the relocated owls daily for one week and no less than three days per week for the following two weeks to confirm that they are using the relocation site. A report summarizing the results of the relocation and monitoring would be submitted to CDFW within 30 days following completion of the relocation and monitoring.

**Special-Status Plant Species**

**BIO-16:** Prior to construction, a qualified botanist would conduct rare plant surveys throughout the BSA. Surveys would be conducted during the appropriate blooming period to the extent feasible. In the event that special status species are found during surveys, or if surveys cannot be conducted within the appropriate blooming period, or if presence for any species cannot be ruled out for any other reason, avoidance measures would be implemented based on recommendations of a qualified botanist. Avoidance measures may include, but not be limited to, establishing environmentally sensitive area fencing surrounding areas with sensitive plant species and/or having a biological monitor present during construction activities within the vicinity of sensitive plant species. If avoidance is not feasible, appropriate mitigation (see **BIO-17**) would be developed and implemented.

**Mitigation Measures:**

*If it is determined that special status plants would be impacted by the project, the following measure will be implemented to mitigate impacts on special status plant species:*

**BIO-17:** If it is determined that special status plants would be impacted by the project, an on-site or off-site restoration plan shall be prepared by a qualified restoration ecologist. The restoration plan shall be implemented prior to the completion of the project. The plan shall include 1) success criteria, 2) implementation guidelines, 3) maintenance strategies, 4) monitoring methods, 5) restoration timeline, and 6) contingency measures. Annual monitoring for at least five years shall be required to ensure no-net-loss of acres of habitat for the species. The acreage ratio of lost special-status plant species habitat to habitat replace shall be no less than 1:1.

*If destruction of an unoccupied burrowing owl burrow is unavoidable, the following mitigation measures will be implemented:*

**BIO-18:** If destruction of an unoccupied burrowing owl burrow is unavoidable, existing burrows will be enhanced (enlarged or cleared of debris) or new burrows will be created (by installing artificial burrows) at a ratio of 1:1 in adjacent suitable habitat that is contiguous with the foraging habitat of the affected owls.

**BIO-19:** If destruction of an unoccupied burrow is unavoidable, a monitoring plan, which will include mitigation success criteria and a monitoring schedule, will be developed and
implemented. The plan will be submitted to the CDFW for review prior to construction, and an annual report will be submitted to the CDFW for five years after completion of construction or as otherwise determined by CDFW.

3.4(b) **No Impact.** Riparian habitat refers to trees, other vegetation, and physical features normally found on the banks and floodplains of rivers, streams, and other bodies of fresh water. Amargosa Creek is an ephemeral stream that flows within the BSA, but no riparian habitat or other sensitive natural communities are located in areas with any expected temporary or permanent impacts.

Construction of the NB on-ramp for Alternatives 1, 2, and 3 would result in approximately 0.02 acre of permanent impacts at the top of the bank of Amargosa Creek. However, no work would be required within the creek and there would be no permanent impacts on the creek or wetland areas. During construction, there is potential that exposed soils, construction debris, and other pollutants could enter storm water runoff that discharges into Amargosa Creek. In addition, there is potential for construction-related pollutants to be spilled, leaked, or transported into storm water runoff, which could enter into drainages adjacent to the project area, and could eventually reach downstream receiving waters. Temporary impacts would be less than significant; impacts would be further reduced with implementation of minimization measures BIO-20 through BIO-28. Although there is riparian habitat present within the BSA, it is outside of the project impact area; therefore, there would be no impacts to riparian habitat.

According to the CNDDB search performed for the project, the following six special-status natural communities have the potential to be in the BSA based on geographical location: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Riparian Scrub, Southern Willow Scrub, Valley Needlegrass Grassland, and Wildflower Field vegetation communities. The BSA includes Ruderal, Ornamental Landscaping, Disturbed Desert Scrub, Southern Willow Scrub, Coastal and Valley Freshwater Marsh, and Non-Native Grassland communities. Construction of the NB on-ramp, permanent vegetation removal, grading, and paving within the BSA for Alternatives 1 and 2 would result in approximately 1.56 acres of permanent impacts on Ornamental communities, approximately 9.52 acres of permanent impacts on Disturbed Desert Scrub, approximately 8.04 acres of permanent impacts on Non-Native Grassland, and approximately 3.83 acres of permanent impacts on Ruderal communities. Southern Willow Scrub and Coastal and Valley Freshwater Marsh are considered special-status natural communities by CDFW and could provide habitat for protected species. However, no permanent or temporary impacts would occur in areas with either of these communities. Alternatives 1 and 2 would not have a substantial adverse effect on any riparian habitat or other sensitive natural community, including Southern Willow Scrub and Coastal and Valley Freshwater Marsh.

Construction of the NB on-ramp, construction of the frontage road, permanent vegetation removal, grading, and paving within the BSA for Alternative 3 would result in approximately 1.94 acres of permanent impacts on Ornamental communities, approximately 9.57 acres of permanent impacts on Disturbed Desert Scrub, approximately 8.04 acres of permanent impacts on Non-Native Grassland, and approximately 4.16 acres of permanent impacts on Ruderal communities. Therefore, Alternative 3 would not have a substantial adverse
effect on any riparian habitat or other sensitive natural community, including Southern Willow Scrub and Coastal and Valley Freshwater Marsh.

Therefore, the project would result in no impacts on riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

**Avoidance and Minimization Measures:**

BIO-20: Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of any sensitive areas, including jurisdictional areas, as determined by a qualified biologist.

BIO-21: BMPs, such as silt fencing, fiber rolls, straw bales, or other measures would be implemented during construction to minimize dust, dirt, and construction debris from leaving the construction area.

BIO-22: All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, would be stabilized to control dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover, or vegetative ground cover.

BIO-23: Orange Temporary High Visibility Fencing would be installed by a qualified biologist along areas within the jurisdiction of the CDFW to prevent work in these areas and minimize dust, dirt, and construction debris from entering jurisdictional areas, including Amargosa Creek.

BIO-24: All unpaved access roads would be effectively stabilized to control dust emissions using water or chemical stabilizer/suppressant.

BIO-25: Appropriate hazardous material BMPs would be implemented to reduce the potential for chemical spills or contaminant releases into the wash, including any non-storm water discharge.

BIO-26: All equipment refueling and maintenance would be conducted in the staging area away from the creek per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.

BIO-27: Vegetation removed from the project area would be treated and disposed of in a manner following the recommendations of the California Invasive Plant Council to prevent the spread of invasive species on site or off site. BMPs may include, but are not limited to, identification of existing invasive species, avoidance of invasive species in erosion control, staff training, equipment cleaning when entering and exiting the project area, and monitoring.

BIO-28: Following project construction, disturbed areas would be restored to their pre-project conditions or better, and any re-vegetation or erosion control implemented would be completed using native species.

**3.4(c) No Impact.** The USACE and U.S. EPA define wetlands regulated under Section 404 of the Federal Clean Water Act (CWA) as "...areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal
circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Amargosa Creek is an ephemeral stream that flows within the BSA; however, the creek is not considered jurisdictional because it is an isolated, non-navigable waterway, and it is not a tributary to other navigable waters of the U.S. Therefore, the BSA does not contain any federally protected wetlands as defined by Section 404 of the CWA. The project would have no impact on federally protected wetlands as defined by Section 404 of the CWA.

3.4(d) **Less Than Significant Impact.** The BSA is within a highway corridor and is surrounded by undeveloped lands, industrial, residential, commercial, roadway, and freeway infrastructure. According to the CDFW BIOS Habitat Connectivity Viewer, the BSA is not within an essential connectivity area, and is not expected to be used as a regional wildlife movement corridor. The highway is a physical barrier to wildlife migration from the east to west, and no potential wildlife crossings were observed during the biological surveys. The project would not result in any additional permanent barriers to wildlife migration. However, because there are areas of vegetated, undeveloped land, the BSA is likely used for local wildlife movement and foraging. Temporary impacts on local wildlife movement could occur during construction. Impacts for the project would be less than significant.

3.4(e) **No Impact.** The project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, there would be no impacts on local biological ordinances or policies.

3.4(f) **Less Than Significant with Mitigation Incorporated.** The project area is located in an area that is heavily developed and urbanized. Lancaster is identified in the West Mojave Plan, a habitat conservation plan and federal land use plan amendment. The purpose of the West Mojave Plan is to develop comprehensive strategies for the conservation and protection of the desert tortoise, Mohave ground squirrel, and over 100 other sensitive plants and animals and the natural communities they belong to, including the Burrowing Owl (Bureau of Land Management, 2005). The project could result in temporary impacts on the burrowing owl and, although not likely, would require mitigation if an active burrow is destroyed. Avoidance, minimization, and mitigation measures BIO-11 through BIO-15, BIO-18, and BIO-19 would be included as part of the project and would ensure compliance with provisions of the West Mojave Plan. The project would result in less than significant impacts with mitigation incorporated.
3.5 Cultural Resources

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td>CULTURAL RESOURCES. Would the Project:</td>
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<tr>
<td>a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?</td>
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<tr>
<td>b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?</td>
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<tr>
<td>c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
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<td>d. Disturb any human remains, including those interred outside of formal cemeteries?</td>
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Technical studies were prepared for the project to evaluate cultural resources potentially impacted by the project. An Archeological Resource Survey (ASR) was completed for the project in August 2018 (Statistical Research, Inc., 2018). Additionally, a Paleontological Identification Report and Paleontological Evaluation Report (PIR/PER) was completed for the project in April 2018 (Paleo Environmental Associates, Inc., 2018). The results of these studies are included in the discussion below.

REGULATORY SETTING

State

California Code of Regulations Section 15064.5 (California Office of Historic Preservation, 2016)

a) For purposes of this section, the term “historical resources” includes the following:

1. A resource listed in or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (CRHR) (PRC § 5024.1, Title 14 California Code of Regulations (CCR), Section 4850 et seq.).

2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the
whole record. Generally, a resource is considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR (PRC § 5024.1, Title 14 CCR, Section 4852) including the following:

I. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

II. Is associated with the lives of persons important in our past;

III. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

IV. Has yielded, or may be likely to yield, information important in prehistory or history.

4. The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

1. Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

2. The significance of a historical resource is materially impaired when a project

   I. Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or

   II. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

   III. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

3. Generally, a project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior’s
Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Grimmer, 2017) shall be considered as mitigated to a level of less than a significant impact on the historical resource.

4. A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

5. When a project will affect state-owned historical resources, as described in PRC Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in PRC Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents.

c) CEQA applies to effects on archaeological sites.

1. When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subdivision (a).

2. If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the PRC, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the PRC do not apply.

3. If an archaeological site does not meet the criteria defined in subdivision (a) but does meet the definition of a unique archeological resource in Section 21083.2 of the PRC, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in PRC Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

4. If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the IS or Environmental Impact Report, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

d) When an IS identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission (NAHC) as provided in PRC Section 5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the NAHC. Action implementing such an agreement is exempt from:

1. The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).

2. The requirements of CEQA.
e) In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the following steps should be taken:

1. There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:

   I. The coroner of the county in which the remains are discovered must be contacted to determine that no investigation of the cause of death is required, and

   II. If the coroner determines the remains to be Native American:

      o The coroner shall contact the NAHC within 24 hours.

      o The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American.

      o The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his authorized representative 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.

   I. The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission.

   II. The descendant identified fails to make a recommendation; or

   III. The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

IV. As part of the objectives, criteria, and procedures required by Section 21082 of the PRC, a lead agency should make provisions for historical or unique archaeological resources accidentally discovered during construction. These provisions should include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place.
California Administrative Code, Section 4307

In California, paleontological resources are afforded protection by CEQA; California Administrative Code, Title 14, Section 4307 et seq.; and PRC Section 5097.5. CEQA requires that public agencies not approve a project as proposed if there is a feasible alternative or reasonable mitigation measures available that would substantially lessen the significant environmental effects of the project (Chapter 1, Section 21002). PRC 5097.5 protects vertebrate fossil localities situated on public land, including those localities that have produced fossilized footprints or any other paleontological feature. Typical California requirements for paleontological investigations and mitigation are outlined in the Caltrans (2011) Standard Environmental Reference (SER), Volume 1, Chapter 8—Paleontology.

Local

The City of Lancaster General Plan 2030 has recognized the rich tribal and cultural history of Lancaster and makes a strong effort to preserve and highlight the features that make Lancaster’s history unique (City of Lancaster, 2009a). The following goals and policies are identified in the plan and are related to the project.

Policy 12.1.1: Preserve features and sites of significant historical and cultural value consistent with their intrinsic and scientific values.

Specific Action 12.1.1(a): As part of the CEQA review process, require site-specific historical, archaeological, and/or paleontological studies when there exists a possibility that significant environmental impacts might result or when there is a lack of sufficient documentation on which to determine potential impacts.

AFFECTED ENVIRONMENT

Prehistoric Resources

Our understanding of prehistoric cultural systems in the western Mojave Desert has greatly expanded over the last two decades. Within the broad temporal periods defined for the western Mojave Desert are a number of cultural complexes, some of which span the transition between periods. The background provided below has been summarized from Sutton, Gardner & Allen (2007).

People have occupied the western Mojave Desert since the Pleistocene. Material used from 10,000 to 8000 B.C. have been found at Lake China, just to the north of Antelope Valley (Davis, 1978). More complex tools, such as biface and uniface projectile points, crescents, and other objects have been identified in the western Mojave Desert, including at Rosamond Lake (Sutton, Basgall, Gardner, & Allen, 2007).

The Pinto complex, generally dated to between 7000 and 3000 B.C., appears to be associated with upland habitats and has the most widespread expression of any of the early manifestations in the western Mojave Desert. Toward the end of the middle Holocene, the western Mojave Desert became hotter and drier. Evidence suggests a very low population during that time and possible abandonment of the area. By about 2000 B.C., precipitation increased, and the climate cooled (Rhode, 2001; Wigland & Rhode, 2002). During the Gypsum complex (2000 B.C to A.D. 200), there apparently was an increase in trade and social complexity and even ritual activities. Exploitation of animals, such as artiodactyls, lagomorphs, rodents, and tortoises, is evident from
a number of Gypsum complex sites, most notably those from Fort Irwin, in the central Mojave Desert.

Beginning about A.D. 200, cultural systems appear to have changed dramatically across the entire Mojave Desert, ushering in the Rose Spring complex, generally dated to between A.D. 200 and 1100. In the western Mojave Desert, there is strong evidence that lake levels (at least at Koehn Lake, in the Fremont Valley to the north) increased after about A.D. 1 (Gardner, 2007). There appears to have been a major population increase during this time (Gardner, 2002; 2007; Sutton, 1988; Sutton, 1996). New advanced objects were introduced into this area, including the bow and arrow, knives, drills, stone pipes, bone awls, various milling implements, marine-shell ornaments, and a large quantity of obsidian (Sutton, 1996; Warren & Crabtree, 1986).

A warming trend, known as the Medieval Climatic Anomaly, began about A.D. 800 and intensified for several hundred years. As lakes began to dry during the late Rose Spring complex, it seems that settlement patterns changed in association from permanent water sources to ephemeral ones. The increased hunting efficiency assumed for bow and arrow technology may have affected resource availability. After about A.D. 1100, new technologies were introduced, populations appear to have declined, and a number of separate cultural complexes believed to represent the prehistoric aspects of ethnographic groups emerged. Warren (1984) observed evidence of “strong regional developments” across the Mojave Desert during that time, including Anasazi interests in turquoise mining in the Mojave Trough, Patayan influence from the Colorado River, and the eastward spread of the Numic Paiute and Shoshone groups (the Numic expansion) from the western or northwestern Mojave Desert (Warren, 1984).

Late prehistoric occupation in the western Mojave Desert included a variety of site types, including major villages with associated cemeteries, special-purpose sites, and seasonal sites. Artifact assemblages consisted of Desert-series (Cottonwood Triangular and Desert Side-notched) projectile points, buff and brown ware ceramics, shell and steatite beads, slate pendants, incised stones, and a variety of milling stones (Sutton, 1996; Warren & Crabtree, 1986). Faunal remains typically consist of lagomorphs, deer, rodents, reptiles, and tortoise. Obsidian use dropped off significantly and flaked-stone-tool manufacture shifted to silicate stone.

**Historic Resources**

Spanish exploration expeditions are known to have traveled through the Lancaster region as part of military excursions and mission-building efforts during the late eighteenth century. Early Spanish explorers crossed the southern part of the area in about 1772, in search of deserters from the Spanish Army. A series of explorers led expeditions through the value in the early nineteenth century.

It was not until 1846 that Antelope Valley’s first settlement was established. Other early immigrant settlements, particularly Scottish and English, were established in the area during the late nineteenth century; however, devastating droughts resulted in the failure of most of those settlements. Additional settlers to the area came in the form of miners. Mineral discoveries in the southwestern portion of Antelope Valley prompted individuals to settle in that region during the 1850s and 1860s.

Although mineral deposits were discovered throughout the region, such as in Cerro Gordo, near the mountains of the Mojave Desert, development in Antelope Valley was largely due to the presence of the Southern Pacific Railroad (SPRR) line. Many of the towns that sprang up along the railroad line, often named by railroad officials, are still in existence, including Lancaster. The
SPRR built the railroad line through Tehachapi and Mojave in the 1860s. The presence of the railroad led to significant agricultural development of the area.

Established as an SPRR depot and water stop in 1884, the area known as Lancaster developed as a thriving town, not only because of the presence of the railroad but also because of the availability of water and the proximity to Los Angeles. Lancaster attracted many English farmers over the late twentieth century and eventually construction of the Los Angeles Aqueduct, as well as ongoing regional mining, brought many laborers to Lancaster during the early twentieth century.

Continued development resulted in the steady growth of Lancaster during the twentieth century. Paved highways connected the City to Los Angeles. Several social clubs were established within the City and public transportation provided two trips daily from Lancaster to Los Angeles. By 1930, Lancaster’s population had grown to 1,550, and the town’s population grew exponentially over the ensuing years. By 2010, the population had ballooned to 156,000 people.

**Paleontological Resources**

The project area is situated in Lancaster, northern Los Angeles County. The entire project area is in the highly urbanized portion of the City straddling SR-14 (SR-138). Most of the study area has been developed for residential, commercial, and industrial uses. The project area lies at elevations of 2,327–2,370 feet. Under the Build Alternatives, earth-moving activities would not start at elevations less than 2,340 feet or extend to depths greater than 15 feet below current grade (i.e., an elevation below 2,325 feet).

The project area is immediately underlain by flat-lying, undissected, and unconsolidated strata composed of clay silt, sand, and gravel of alluvial fan origin and late Quaternary (Pleistocene and Holocene) age. Such strata are usually referred to simply as younger, or Quaternary, alluvium. The Quaternary alluvium is locally of Holocene age and less than 10,000 years old at and very near the current ground surface but becomes progressively older and exceeds 10,000 years in age with increasing depth below the surface. Unfossiliferous historic artificial fill underlies just the SR-14 (SR-138) mainline and associated onramp and offramp ROWs.

Areas underlain by Quaternary Alluvium is considered of high paleontological importance, based on potential for occurrence of paleontological resources. Although no previously recorded fossil locality occurs in the Quaternary or younger alluvium of the project area, the literature review and archival searches conducted for the project did document fourteen such localities near the project area. Those localities have produced fossilized remains representing extinct and extant continental vertebrate species of Pleistocene and perhaps Holocene age.

Areas underlain by artificial fill is considered of low paleontological importance, based on potential for occurrence of paleontological resources. Correspondingly, the artificial fill of the project area has no potential for containing any scientifically important fossil remains that might be encountered by earth-moving activities in the project area.

**Archaeological Resources**

Based on information at the South Central Coastal Information Center (SCCIC) (part of the California Historical Resources Information System), in total, 63 previous studies have been conducted within one mile of the project area. Of these, nine examined land within the study area, whereas the other 54 examined land within the records-search buffer area. Of the 99.6 acres in the project area, 23 acres have been previously surveyed. In total, 70 previously recorded
resources have been identified within the one-mile records-search buffer, but no cultural resources are located within the project area. However, much of the project area is covered by modern development, including asphalt roads and parking areas, and buildings, and soils in parts of the project area were identified as sensitive for buried cultural resources, which may be present below the modern ground surface.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.5(a) **No Impact.** Although there are previously recorded cultural resources located within one mile of the project area, no cultural resources are located within the project area. Therefore, there would be no impacts to cultural resources.

3.5(b) **Less Than Significant Impact.** An archaeological resource is any material remains of human life or activities that are at least 100 years of age, and that are of archaeological interest (43 CFR Part 7). Construction of the project may require ground-disturbing activities that could unearth archaeological resources. However, the project is located in a heavily developed area that has already been highly disturbed.

On August 21, 2015, a records search was conducted at the SCCIC of the California Historical Resources Information System at California State University, Fullerton, for the entire project area as well as the surrounding one-mile buffer area. The records search also searched the SCCIC’s listings of the National Register of Historic Places (NRHP), the CRHR, California Historical Landmarks, and California Points of Historical Interest.

The records search revealed that no prehistoric or historical-period cultural resources are in the project area. However, the results of the records search indicated that 70 previously recorded cultural resources are known within a one-mile radius of the project area, including three prehistoric archaeological sites, one prehistoric isolated resource, 64 historical-period cultural resources, and two multicomponent archaeological sites that contain both prehistoric and historical-period elements.

The NAHC was contacted as a part of the records search for a list of traditional-use areas or sacred sites within the project area and for a list of specific Native American groups or individuals who could provide additional information on cultural resources within the project area. On August 19, 2015, a request for a Sacred Lands Files search was submitted to the NAHC. On September 29, 2015, the NAHC responded that the Sacred Lands Files search was completed, with negative results.

Additionally, between September 2 and September 4, 2015, an archaeological survey of the project area was conducted, but the boundaries of the project area subsequently changed. Therefore, in March 2017, another archaeological survey was conducted of the project area, consisting of 99.6 acres in size. This project area includes the SR-14 (SR-138)/Avenue J Interchange as well as a second, partial interchange located at Avenue J-8/20th Street West, less than one-half mile to the south. No prehistoric or historical-period cultural resources were identified within the project area during the survey. A buried-site-sensitivity model was created to identify areas where buried archaeological sites could be present within the project area.

The buried-site-sensitivity model also identified areas within the project area that have moderate to high potential to contain buried archaeological sites. These areas comprise...
approximately 37.7 percent of the project area. Following comments by Caltrans and the San Manuel Band of Mission Indians, revisions were made to the buried site sensitivity model to take into consideration previous construction disturbances in the project area.

The results of the revised buried-site-sensitivity model indicate that approximately seven percent of the project area is underlain by soils and sediments that are sensitive for buried archaeological resources. However, the construction of sewer and storm drains below Avenue J and 15th and 20th Streets has disturbed much of the native soil down to a depth of nine feet in this area. In situ archaeology is not expected above this depth within the project area. Well logs for the immediate area suggest that Holocene alluvial sands may be as much as 28 feet thick. Therefore, intact deposits below nine feet within the project area do have the potential to contain intact cultural resources. Additionally, areas south of Avenue J between 15th and 20th Streets, which are not in the project area, that have not experienced significant urban development and could contain buried archaeology at depths ranging from less than one to over 28 feet below the modern surface in areas characterized as containing Hesperia or Rosamond soil series.

During construction, the project has the potential to disturb previously unidentified archaeological resources. However, the project is not anticipated to cause a substantially adverse change in significance to an archeological resource, therefore the impact is less than significant. Avoidance and minimization measure CUL-1 would be implemented as part of the project. The project would result in less than significant impacts on archaeological resources.

Avoidance and Minimization Measures:

CUL-1: It is the policy of Caltrans to avoid cultural resources whenever possible. Further investigations may be needed if the site(s) cannot be avoided by the project. If previously unidentified cultural materials are encountered or unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the project limits change to include areas not previously surveyed.

3.5(c) Less Than Significant Impact. Paleontological resources include fossils, which are the preserved remains or traces of animals, plants, and other organisms from prehistoric time (i.e., the period before written records). Fossils and traces of fossils are preserved in sedimentary rock units (formed by the deposition of material at the Earth’s surface); and are more likely to be preserved subsurface, where they have not been damaged or destroyed by previous ground disturbance or natural causes, such as erosion by wind or water.

Construction-related earth-moving activities in the Quaternary alluvium, which underlies much of the project area, are considered to have a high potential for resulting in the disturbance or loss of scientifically important paleontological resources. Such activities would occur mostly in the area bounded by West 22nd Avenue on the west, Avenue J to the north, SR-14 (SR-138) on the east, and the eastward extension of Avenue J-3 to the south, but would also occur along at two sites along northern side of Avenue J on either side of SR-14 (SR-138).

Potentially affected resources might include currently unrecorded fossil remains and the respective fossil localities, associated specimen data and corresponding geologic and
geographic locality data, and the fossil-bearing strata. These activities have a high potential for encountering scientifically important paleontological resources. Therefore, it is required that a Paleontological Mitigation Plan (PMP) be prepared in support of the project (PAL-1). As appropriate, specific measures in the PMP would be implemented before, during, and/or after project construction. However, the impacts from the project would be less than significant. Implementation of the PMP will reduce impacts.

**Avoidance and Minimization Measures:**

**PAL-1:** A PMP will be prepared in compliance with paleontological mitigation guidelines in the SER and with Society of VertebratePaleontology standard procedures for mitigating construction-related impacts on scientifically important paleontological resources (Society of Vertebrate Paleontology, 2010). As such, the PMP will provide site-specific mitigation measures based on the types and magnitudes of earth-moving activities to be undertaken in those parts of the project area underlain by the Quaternary alluvium. No measure would be necessary where the project area was underlain by artificial fill unless and until Quaternary alluvium were to be encountered by such activities underneath the fill. The PMP will also address:

1. the timing, type, and location of paleontological construction monitoring, if needed,
2. standards for recording newly discovered fossil localities, data recovery and analysis, and reporting, and
3. instructions or requirements for transferring the fossil remains, associated specimen and locality data, and the Paleontological Mitigation Report to a paleontological or museum repository acceptable to Caltrans for permanent storage and maintenance of the fossil collection and associated data.

Lastly, the PMP will stipulate that a standard special provision for paleontological impact mitigation be included in the special provisions section construction contract and that the construction contractor be advised of the requirement to cooperate with paleontological salvage.

The PMP will be prepared by a qualified Principal Paleontologist approved by Caltrans during the Plans, Specification, and Estimate (PS&E) phase. The Paleontologist will have a M.S. or Ph.D. degree in paleontology or geology and be familiar with paleontological salvage or mitigation procedures and techniques.

The PMP will be implemented by a qualified Paleontological Contractor before project-related earth-moving activities have started and continue until just after such activities have been completed, as necessary.

By implementing appropriate mitigation measures, possibly including paleontological monitoring of project-related earth-moving activities, the project would comply with existing environmental statutes requiring the reduction of significant impacts on paleontological resources to a less than significant level.

The PMP would meet that requirement by providing for the recovery and thorough treatment of any scientifically important fossil remains exposed by such activities, the recording and archiving of associated specimen data and corresponding geographic and geologic locality data, and the transfer of the entire fossil collection to a regionally
appropriate museum repository and the archiving of associated data in the repository’s computerized databases.

3.5(d) Less Than Significant Impact. The project is located in a developed area that has already been disturbed; however, there are some vacant lands throughout the project area. Construction of the project would require ground-disturbing activities that could unearth human remains. All construction activities would cease, and the Los Angeles County Coroner would be contacted if any human remains are discovered, in accordance with 14 CCR Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the NAHC would be notified to determine the Most Likely Descendant (MLD) for the area. The MLD would make recommendations for the arrangements for the human remains per PRC Section 5097.98. Project impacts on human remains would be less than significant.

Avoidance and Minimization Measures:

CUL-2: In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, steps would be taken in compliance with the CCR Section 15064.5.

CUL-3: All construction activities would cease, and the Los Angeles County Coroner would be contacted if any human remains are discovered, in accordance with 14 CCR Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the NAHC would be notified to determine the MLD for the area. The MLD would make recommendations for the arrangements for the human remains per PRC Section 5097.98.
3.6 Geology and Soils

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GEOLOGY AND SOILS. Would the Project:</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>a. Have Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>ii. Strong seismic ground shaking?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>iii. Seismic-related ground failure, including liquefaction?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>iv. Landslides?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>b. Result in substantial soil erosion or the loss of topsoil?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>c. Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

Technical studies were prepared for the project to evaluate geology and soils underlain by the project area. Studies prepared for the project include a District Preliminary Geotechnical Report and a Structure Preliminary Geotechnical Report (Kimley-Horn & Associates, 2018a, 2018b).
REGULATORY SETTING

State

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Department’s Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see Caltrans Division of Engineering Services, Office of Earthquake Engineering, SDC.

AFFECTED ENVIRONMENT

As discussed in Section 3.5, regional surficial geologic mapping indicates that most of the southwestern margin of the Antelope Valley is underlain by Quaternary alluvium (Paleo Environmental Associates, Inc., 2018). Larger-scale mapping indicates that the project area contains consolidated, calcareous clay-rich silty fine-grained sand that constitutes younger alluvial fan deposits of the late Pleistocene and Holocene age; and unfossiliferous, historic artificial fill located under the SR-14 (SR-138) ROW.

There are no Alquist-Priolo Earthquake Fault Zones in the project area; however, there are several active earthquake faults in the surrounding area (California Department of Conservation, 1977). The nearest active Alquist-Priolo Earthquake Fault Zone is the San Andreas Fault Zone, located approximately nine miles southwest of the project area. According to California Geological Survey maps showing the earthquake shaking potential in California, there is potential for medium to high intensity ground shaking and damage in the project area from anticipated future earthquakes (California Geological Survey, 2003). The State of California Seismic Hazard Zones Map of the Lancaster West Quadrangle indicates that the project area is located within a liquefaction zone (California Department of Conservation, 2005).

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.6(a)(i) Less Than Significant Impact. The project would include the construction of ramps and other transportation structures that could be affected by strong ground motion from the movement along this fault zone. However, with no faults within the project area, the potential for fault rupture is considered low. Therefore, impacts from earthquake fault rupture would be less than significant.

3.6(a)(ii) Less Than Significant Impact. There is there is potential for medium to high intensity ground shaking and damage in the project area from anticipated future earthquakes (California Geological Survey, 2003). The project would include the construction of ramps and other transportation structures that could be affected by strong ground motion from the movement along this fault zone. However, the project would meet current seismic standards, and would not increase exposure to existing hazards in the project area. Impacts from strong seismic ground shaking would be less than significant.
3.6(a)(iii) Less Than Significant Impact. Soil liquefaction occurs when a saturated or partially saturated soil substantially loses strength and stiffness in response to an applied stress, usually earthquake shaking or other sudden change in stress condition, causing it to behave like a liquid. Other types of ground failure resulting from seismic activities include collapsible soils, subsidence (the gradual caving in or sinking of an area of land), landslides, and lateral spreading (landslides that commonly form on gentle slopes and that have rapid fluid-like flow movement).

The project site is underlain by a soil cover of sandy to clayey silt up to approximately 25 feet thick followed by fine-grained to medium grained sandy granular with variable amounts of fines and traces at gravel below 50 feet depth. Because groundwater is much deeper than 50 feet in the project area, and deep sand units below are dense in consistency, the project area is in an area identified as low liquefaction potential. Liquefaction potential confirmation would be required during the design phase, i.e. PS&E. The project would result in less than significant impacts on hazard risk of soil liquefaction.

Avoidance and Minimization Measures:

The project would include implementation of the following avoidance and minimization measure:

GEO-1: Site specific soil borings will be conducted during PS&E in order to confirm soil liquefaction potential. Since the project area is identified as low liquefaction potential, no further measures are anticipated.

3.6(a)(iv) No Impact. Landslides are the sliding down of a mass of earth or rock from a mountain or cliff. According to the most recent seismic hazards zones map, the project is not located in an earthquake-induced landslide zone (California Department of Conservation, 2005). Therefore, there would be no impacts.

3.6(b) Less Than Significant Impact. Erosion is the movement of rocks and soil from the Earth’s surface by wind, rain, or running water. Several factors influence erosion, such as the size of soil particles (larger particles are more prone to erosion), and vegetation cover, which prevents erosion. The project is located within the existing transportation corridor of SR-14 (SR-138), with surrounding land uses that include commercial, residential, and vacant land. The project area is predominantly paved with developed surfaces that would not be susceptible to erosion.

The project would require ground disturbance, including grading, utility relocations, and traffic signal installation; the maximum proposed ground disturbance is anticipated to be 14.6 acres. During project construction, large areas that would be exposed could be susceptible to erosion. Standard Caltrans BMPs would be implemented during construction to ensure that erosion or the loss of topsoil would not occur. Substantial soil erosion or loss of topsoil is not expected to occur during operation; therefore, impacts would be less than significant.

Avoidance and Minimization Measures:

The project would include implementation of the following avoidance and minimization measure:

GEO-2: Standard Caltrans BMPs would be implemented during construction to ensure that erosion or the loss of topsoil would not occur.
3.6(c) **Less Than Significant Impact.** See Responses 4.6(a)(iii)-(iv). The project area is not located in a landslide zone or area of high liquefaction potential. The project would replace existing transportation infrastructure and would not expose people to additional risks from existing hazards in the project area. Avoidance and minimization measure GEO-1 would be implemented as part of the project. Impacts on soil stability would be less than significant.

3.6(d) **No Impact.** Expansive soils are not known to be present in the project area (U.S. Geological Survey, 1989; United States Department of Agriculture, 2017). Therefore, there would be no impacts on expansive soils.

3.6(e) **No Impact.** The project would not include any facilities that require the use of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impacts on septic or waste disposal facilities.
3.7 Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</thead>
<tbody>
<tr>
<td><strong>GREENHOUSE GAS EMISSIONS. Would the Project:</strong></td>
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</tr>
<tr>
<td>a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
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<tr>
<td>b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td>
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</table>

Caltrans, as lead agency, conducted a quantitative analysis of operational greenhouse gas (GHG) emissions using project-specific traffic data and EMFAC2014. A summary of results is provided in Section 3.20, Climate Change.
3.8 Hazards and Hazardous Materials

<table>
<thead>
<tr>
<th>Threshold</th>
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<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</thead>
<tbody>
<tr>
<td>HAZARDS AND HAZARDOUS MATERIALS. Would the Project:</td>
<td></td>
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</tr>
<tr>
<td>a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
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<tr>
<td>e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
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<tr>
<td>g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
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<tr>
<td>h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
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</table>

A Phase I ISA, dated June 2018, was completed in general conformance with the scope of services and limitations of the American Society for Testing Materials (ASTM) E 1527-13 Standard Practice for the SR-14 (SR-138)/Avenue J Interchange project (Michael Baker International, 2018b). The results of this study are included in the discussion below.
**REGULATORY SETTING**

Hazardous materials are routinely transported through the City of Lancaster. The Union Pacific Railroad transports a variety of hazardous materials, while the Antelope Valley Freeway (SR-14) and Highway 138 are also used as routes to transport toxic and hazardous material (City of Lancaster, 2009a). The Lancaster General Plan 2030 identifies SR-14 as a corridor important to the transport of hazardous materials. The following objective and policy were developed by the plan to ensure the safe transport of such hazardous materials.

*Objective 4.5:* Protect life and property from the potential detrimental effects (short and long term) of the creation, transportation, storage, treatment, and disposal of hazardous materials and wastes within the City of Lancaster.

*Policy 4.5.1:* Ensure that activities within the City of Lancaster transport, use, store, and dispose of hazardous materials in a responsible manner which protects the public health and safety.

**AFFECTED ENVIRONMENT**

The project area consists of transportation uses and vacant land. Areas of the project area associated with proposed ROW acquisitions. Areas of acquisition include vacant land, land along Amargosa Creek, and portions of ornamental landscaping associated with commercial properties consist of vacant land. There are no habitable structures located within the project area. Proposed ROW acquisition consists of full acquisition of vacant land at APNs 3124-012-007, -008, -009, and -012, and partial acquisition at Amargosa Creek (APN 3122-038-900) and ornamental landscaping along commercial properties (APNs 3153-051-005 and -006). The project area has consisted of transportation uses prior to 1915. By the 1970s, the existing roadways of SR-14 (SR-138), 20th Street West, 25th Street West, Avenue J, and Avenue J-8 were fully constructed.

Hazardous substances or petroleum products are currently not associated with the project area. No chemical storage tanks, including aboveground storage tanks (AST) and underground storage tanks (UST) were observed in the project area. There was no evidence of any spills in the project area, and there was no indication of on-site solid waste disposal practices, such as landfills.

Typical aboveground and underground utilities and electrical utilities were identified throughout the project area. No staining or leakage was observed. Utilities include electrical, telephone cable, sewer, and water related utilities. Electrical utilities include powerlines, transformers, streetlights, and electrical boxes. Along Avenue J, multiple pole-mounted transformers and one pad-mounted transformer were observed; no staining or leaking was noted.

Storm drains were observed along Avenue J and Avenue J-8 within the project area. Drainage of the project area appeared to consist of sheet flow into the local storm drain system from curbs, gutters, and catch basins.

**3.8.1.1 LEAD-BASED PAINTS**

Lead-based paints (LBP) were commonly used in traffic striping materials before lead chromate pigment in traffic striping/marking materials and hot-melt Thermoplastic stripe materials were discontinued. These materials were discontinued in 1997 and 2006, respectively. Traffic striping has been observed along SR-14 (SR-138), 25th Street West, Avenue J, 20th Street West, and Avenue J-8. Although traffic striping in these areas were noted to be in good condition, LBPs may be present.
The U.S. Consumer Product Safety Commission phased out the sale and distribution of paint containing lead in 1978. Until then, many structures were treated with paint containing some amount of lead. The mere presence of lead in paint may not constitute a hazardous material. In poor condition, such as flaking or pealing, LBPs can create a potential health hazard for building occupants, especially children. There are six undercrossing structures within the project area, which were all built before 1972 and are in good condition. These undercrossing structures are unpainted concrete structures and include two Avenue J undercrossings, two 20th Street West undercrossings, and two Avenue J-8 undercrossings. Therefore, the potential for LBPs to be in the project area as part of the bridge structure is unlikely.

3.8.1.2 AERIALLY DEPOSITED LEAD

Aerially Deposited Lead (ADL) refers to lead deposited on highway shoulders from past leaded fuel vehicle emissions. Although leaded fuel has been prohibited in California since the 1980’s, ADL may still be in soils adjacent to highways in use prior to that time (California Department of Transportation, 2017). According to historical aerial photographs and topographic maps, the project area appears to have consisted of transportation (Avenue J and 20th Street West) and vacant land prior to 1915. SR-14 (SR-138), Avenue J-8, and 25th Street West were developed between 1933 and 1972. Although most of the roads in the project area appeared to be rural in nature and not heavily traveled, by 1972, SR-14 (SR-138) was constructed and has been heavily used since. Therefore, there is the potential for ADL to be in soils along SR-14 (SR-138).

3.8.1.3 ASBESTOS-CONTAINING MATERIAL

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products prior to the 1940s. If inhaled, asbestos fibers can result in serious health problems. Asbestos-containing materials (ACM) are commonly known to be used in building materials for bridge structures. ACMs may also be present in the on-site bridge structures as they were constructed prior to 1972. The on-site bridge structures are in fair condition, and there is no visible evidence to suggest the release of ACMs into the environment. The on-site bridge structures have not resulted in a recognized environmental condition (REC) on the project area as a result of ACMs. RECs occur in the presence, or likely presence, of any hazardous substances or petroleum products, in, on, or at a property, under three possible conditions: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. Development of the project would not involve the demolition or modification on any on-site bridge structures.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.8(a) Less Than Significant Impact. A hazardous material is any substance or material that could adversely affect the safety of the public, handlers, or transportation carriers. The project would improve capacity at the existing interchange and local roadway operations on Avenue J between 15th Street West and 25th Street West. The project would enhance operational capacity, reduce congestion on the local street network, improve way-finding, and improve the safety of the interchange and local streets. The project would not involve the routine transport of hazardous materials.

Project construction would require the use of construction materials that could be hazardous, such as paints, sealants, and cement; however, the transport, use, and disposal of these materials would be conducted in compliance with applicable federal,
state, and local laws pertaining to the safe handling, transport, and disposal of hazardous materials, including the Federal Resource Conservation and Recovery Act (RCRA), which includes requirements for hazardous solid waste management; the Department of Toxic Substances Control (DTSC) Environmental Health Standards for the Management of Hazardous Waste (CFR, Title 22, Division 4.5), which include standards for generators and transporters of hazardous waste; and the provisions of the Los Angeles County Fire Department, Hazardous Materials Unit, which include requirements for the use and storage of hazardous materials.

The use of hazardous materials during project construction and operation would be relatively minor. Any hazardous materials that are used for the project would be properly handled and contained. Therefore, impacts from the use of hazardous materials would be less than significant.

3.8(b) Less than Significant Impact. As discussed in Response 3.8 (a), construction and operation of the project may require the use of materials that could be hazardous, such as paints, sealants, and cements. However, the use of these materials would be relatively minor and subject to appropriate handling and containment. The project area consists of transportation uses, as well as vacant land. No habitable structures are located within the project area.

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products prior to the 1940s, and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. ACMs are commonly known to be used in building materials for bridge structures. ACMs may also be present in the on-site bridge structures as they were constructed prior to 1972. The on-site bridge structures are in fair condition and there is no visible evidence to suggest the release of ACMs into the environment. The on-site bridge structures have not resulted in a REC on the project area as a result of ACMs. Additionally, development of the project would not involve the demolition or modification of any on-site bridge structures.

LBPs were commonly used in traffic striping materials before the use of lead chromate pigment in traffic striping/marking materials and hot-melt thermoplastic stripe materials were discontinued. These materials were discontinued in 1996 and 2004, respectively. During a site visit in March 2017, traffic striping was observed along SR-14 (SR-138), Avenue J, Avenue J-8, 20th Street West, and 25th Street West. Traffic striping was noted to be in good condition; however, LBPs may be present within traffic striping. The existing on-site traffic striping along the roadways and freeway appear to be contained, and peeling or flaking are not evident. This would indicate that there is no visible evidence to suggest the release of LBPs into the environment. Therefore, the likely presence of LBPs in the traffic striping materials along on-site roadways and SR-14 (SR-138) have not resulted in a REC. However, site disturbance activities could disturb existing traffic striping materials.

There are four pole-mounted transformers and one pad-mounted transformer in the project area, along Avenue J and within the project area boundaries. There is no evidence of dielectric fluid or staining on-site. Therefore, the on-site transformers have not resulted in a REC. Notwithstanding, the project could relocate/disturb existing transformers and/or bare soils beneath transformers.
ADL refers to lead deposited on highway shoulders from past leaded fuel vehicle emissions. Although leaded fuel has been prohibited in California since the 1980s, ADL may still be present in soils adjacent to highways in use prior to that time (California Department of Transportation, 2017). According to historical aerial photographs and topographic maps, the project area appears to have consisted of transportation (Avenue J and 20th Street West) and vacant land prior to 1915. SR-14 (SR-138), Avenue J-8, and 25th Street West were developed between 1933 and 1972. Although most of the on-site roads appeared to be rural in nature and not heavily traveled, by 1972, SR-14 (SR-138) was constructed and has been heavily used since. Therefore, ADL in on-site surface soils is likely to be present along SR-14 (SR-138) within the project area. Therefore, ADL is considered an REC during site investigation for the ISA and related studies.

Further, the ISA completed for the project revealed the following properties as RECs in connection with the project area:

- 44402 Valley Central Way;
- 2033 Avenue J West;
- 44015 West 20th Street;
- 2343 West Avenue J; and
- 1354 West Avenue J.

Avoidance and minimization measures HAZ-1 through HAZ-5 would be implemented as part of the project. Impacts from the release of hazardous materials would be less than significant.

**Avoidance and Minimization Measures:**

The project would include implementation of the following avoidance and minimization measures:

**HAZ-1:** A Phase II/Site Characterization Specialist should conduct sampling within the SR-14 (SR-138) ROW within the project area to determine whether or not contamination exists in association with ADL, total petroleum hydrocarbons (TPH), and other constituents. Results of the sampling would indicate the level of remediation efforts that may be required, if necessary.

**HAZ-2:** The Phase I ISA determined that on-site transformers have not resulted in a REC on the project area; however, any transformer that would need to be relocated or removed during project construction and demolition should be conducted under the purview of the local purveyor to identify proper handling procedures regarding PCBs.

**HAZ-3:** Traffic striping materials would be sampled prior to disturbance to determine whether or not LBPs are present above regulatory thresholds. The Contractor would prepare a project specific lead compliance plan (LCP) to prevent or minimize worker exposure to lead while removing and handling the yellow traffic stripe residue and test residue prior to transport to and disposal at an appropriate disposal facility. The LCP would also acknowledge the prevention/minimization of worker exposure to lead while removing and handling white traffic stripe residue. All generated wastes would be disposed of at an appropriate, permitted disposal facility, as determined by a lead specialist.
HAZ-4: Phase II/Site Characterization Specialist would conduct sampling during the Plans, PS&E phase in order to determine whether or not contamination exists in association with the following properties:

- Vacant Properties Located at APNs 3124-012-007, -008, -009, and -012, and 3122-038-900 (Amargosa Creek);
- 44402 Valley Central Way;
- 44400 Valley Central Way;
- 2033 Avenue J West;
- 44015 West 20th Street;
- 2343 West Avenue J;
- 1354 West Avenue J;
- 2005 West Avenue J;
- 2020 West Avenue J / 44350 20th Street West; and
- 2010 West Avenue J.

Results of the sampling would indicate the level of remediation efforts that may be required, if necessary.

HAZ-5: The removal and disposal of treated wood waste would comply with the Department’s Standard Specifications Section 14-11.14 pertaining to the disposal of treated wood waste.

3.8(c) Less Than Significant Impact. There are multiple schools located within one-quarter mile of the project area. These schools include: Desert Sands Charter High School (less than 0.1 mile east of the project area), The Sonshine Factory (0.1 mile north of the project area), Inspire Charter School (0.2 mile north of the project area), and University of Phoenix – Lancaster Learning Center (0.2 mile east of the project area). There are four other schools located between one-quarter mile and one-half mile of the project area. These schools include: Desert Christian High School (0.3 mile west of the project area), Amargosa Creek Middle School (0.3 mile west of the project area), Los Angeles County Online High School (0.3 mile east of the project area), and Desert Christian Main Campus (0.4 mile north of the project area). However, project construction would require the transportation and use of construction materials that could be hazardous, such as paints, sealants, and cement. The Phase I ISA found that aerially deposited lead in the on-site surface soils are likely to be present along SR-14 (SR-138) within the project area. Avoidance and minimization measures HAZ-1 through HAZ-5 would be implemented as part of the project. Impacts on hazardous emission levels near an existing or proposed school would be less than significant.

3.8(d) No Impact. Government Code Section 65962.5 requires the California Environmental Protection Agency to compile the Hazardous Waste and Substances Sites List, also called the Cortese List. The following data sources were reviewed for information on hazardous materials sites in the project area (California Environmental Protection Agency, 2012):

- List of Hazardous Waste and Substances sites from DTSC EnviroStor database.
- List of Leaking Underground Storage Tank (LUST) Sites by County and Fiscal Year from State Water Resources Control Board (SWRCB) GeoTracker database.
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit.
• List of "active" cease and desist orders (CDO) and cleanup and abatement orders (CAO) from SWRCB.
• List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Based on the Phase I ISA, the project site, including properties proposed for ROW acquisition, are not listed on the Cortese List. Therefore, no impacts from hazardous materials sites would result from the project.

3.8(e) **No Impact.** The project area is not located in the airport influence areas (AIA) for the General William J. Fox Airfield and Palmdale Regional Airport, (Los Angeles County Airport Land Use Commission, 2004). The project area is also not located within two miles of a public airport or public use airport. Therefore, there would be no impacts.

3.8(f) **No Impact.** The project is not located within the vicinity of a private airstrip; there would be no safety hazard for people residing or working in the project area. Therefore, there would be no impacts.

3.8(g) **Less Than Significant Impact.** The Los Angeles County Sheriff’s Department-Lancaster Station provides is responsible for coordinating evacuations and establishing safe traffic routes (City of Lancaster, 2010a). The unpredictability of the impact of any disaster on existing streets and highways makes definite evacuation route designation impossible until a disaster actually occurs and the damage has been assessed (City of Lancaster, 2009b). The City has identified evacuation routes that assume major streets and freeways are functional during a disaster; these include SR-14 (SR-138), Avenue J, and 20th Street West. The County of Los Angeles has designated disaster routes that are used to bring emergency personnel, equipment, and supplies to impacted areas. The project area is located at SR-14 (SR-138), which is designated a primary disaster route (Los Angeles County Department of Public Works, 2012). Secondary disaster routes in the project area include Avenue J and 20th Street West.

Operation and construction of the project would not impact permanent access to the primary disaster route. During construction, access to the secondary disaster routes may temporarily be impacted. Impacts to the primary and secondary disaster routes during construction would be temporary. The Sheriff’s Department – Lancaster Station would be notified if coordination to redirect emergency response routing during construction of the project would be implemented during the project as part of avoidance measure, T-4. Impacts on emergency response plans or emergency evacuation plans would be less than significant.

3.8(h) **No Impact.** The project is located in a highly urbanized area that is not adjacent to wildlands and does not include residences that are intermixed with wildlands. Therefore, there would be no impacts.
### 3.9 Hydrology and Water Quality

HYDROLOGY AND WATER QUALITY. *Would the Project:*

| a. | Violate any water quality standards or waste discharge requirements? | ☐ | ☐ | ☒ | ☐ |
| b. | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)? | ☐ | ☐ | ☒ | ☐ |
| c. | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite? | ☐ | ☐ | ☒ | ☐ |
| d. | Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite? | ☐ | ☐ | ☒ | ☐ |
| e. | Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | ☐ | ☐ | ☒ | ☐ |
| f. | Otherwise substantially degrade water quality? | ☐ | ☐ | ☒ | ☐ |
| g. | Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | ☐ | ☐ | ☒ | ☐ |
| h. | Place within a 100-year flood hazard area structures that would impeded or redirect flood flows? | ☐ | ☐ | ☒ | ☐ |
| i. | Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam? | ☐ | ☐ | ☒ | ☐ |
A Water Quality Technical Memorandum was completed for the project in May 2018 (GPA Consulting, 2018c). The results of this study are included in the discussion below.

**REGULATORY SETTING**

*State*

*Porter-Cologne Water Quality Control Act*

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Federal CWA as amended in 1972 and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the CWA.

The SWRCB and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details regarding water quality standards in a project area are contained in the applicable RWQCB basin plan. In California, the RWQCBs designate beneficial uses for all water body segments in their jurisdictions, and then set criteria necessary to protect these uses. Consequently, the water quality standards developed for particular water segments are based on the designated use and vary depending on such use.

The SWRCB identifies waters failing to meet standards for specific pollutants, which are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-source point controls (National Pollutant Discharge Elimination System [NPDES] permits or Waste Discharge Requirements), the CWA requires the establishment of Total Maximum Daily Loads (TMDL). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

*State Water Resources Control Board and Regional Water Quality Control Boards*

The SWRCB determines water rights, sets water pollution control policy, issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving basin plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

*National Pollution Discharge Elimination System Program*

The RWQCB administers the NPDES stormwater permitting program, under Section 402(p) of the CWA. Under Section 402 of the CWA, a NPDES permit is required for any point source discharge of pollutants into waters of the U.S., and it establishes monitoring and reporting...
requirements. Construction activities that involve disturbance of one acre or more require compliance with the statewide NPDES construction storm water general permit for construction activities. Construction activity that results in soil disturbances of less than one acre is subject to this permit if there is potential for substantial water quality impairment resulting from the activity as determined by the RWQCB.

Regional

Basin Plans for the Lahontan Region

Section 13240 of the Porter-Cologne Water Quality Control Act requires each RWQCB to formulate and adopt water quality control plans, or basin plans, for all areas within the region. The project area is under the jurisdiction of the Lahontan RWQCB’s Victorville Office and is included in the planning area for the Water Quality Control Plan for the Lahontan Region (Lahontan RWQCB Basin Plan) (California Regional Water Quality Control Board, Lahontan Region, 1994).

The basin plans list the beneficial uses of surface waters and ground waters in the region. Beneficial uses are uses that may be protected against quality degradation. These uses include and are not limited to domestic, municipal, agricultural and industrial supply, power generation, recreation, aesthetic enjoyment, navigation, and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves. The beneficial uses of surface waters and ground waters in the basin are designated in the water quality control plans.

The basin plans also include water quality objectives, which are the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

AFFECTED ENVIRONMENT

The project area is located within the Antelope-Fremont Valleys Subbasin (Hydrologic Unit Code [HUC] 18090206), which encompasses approximately 2,160,639 acres. Some of the waterways located in the subbasin include: Amargosa Creek, Anaverde Creek, Little Rock Wash, and Big Rock Wash. Lancaster lies within the Antelope Valley Drainage Basin. The Antelope Valley represents a large topographic and groundwater basin in the western part of the Mojave Desert. The Antelope Valley is considered a “closed basin” system, which means that no river systems drain out of the Antelope Valley into other river systems, or to the ocean.

The project is located within the Upper Amargosa subwatershed (HUC 180902061406) of the Amargosa Creek watershed (HUC 1809020614). Within the project area, Amargosa Creek is an ephemeral stream that flows north from the San Gabriel Mountains and drains into Rosamond Dry Lake during large rainfall events. Flows into Amargosa Creek are intermittent and usually run during the winter rainy season or infrequently as a result of late summer monsoonal storms (Bloyd, 1967). During this time, heavy discharge and flooding is prevalent along this creek.

There is an unlined drainage in the project area approximately 1,100 feet south of Avenue J that merges with Amargosa Creek. Flows within this unlined drainage are the result of stormwater discharge and nuisance flow, including dry weather runoff. The Amargosa Creek drainage basin spans approximately 30 square miles in the Leona Valley along the San Andreas Fault zone in the eastern San Gabriel Mountains. The creek provides drainage from the Leona Valley, extending southeast from Leona Valley across the San Andreas Fault zone on the west side of Palmdale, and then turns north near Lancaster, terminating at Rosamond Dry Lake.
The creek and drainage have similar characteristics which include: channels that range from approximately 75 to 100 feet wide at the top of the banks; banks that range from approximately eight to 10 feet high with a slope ranging from five to 25 percent; and the banks mostly vegetated with a mix of native shrubs and weedy herbaceous species (GPA Consulting, 2018b). The ordinary high water mark is approximately one foot from the bottom of the main channel; the height of the banks, from bottom of channel to top of bank, is approximately eight to 10 feet.

Approximately 100 feet north of the Avenue J Overcrossing, is a concrete culvert that joins the creek from the west. Water from the concrete inlet structure flows approximately 300 feet until it dissipates or goes underground. Approximately 230 feet to the north of the Avenue J-8 Overcrossing, a 5-foot wide pipe enters the creek from the west. The water flows from the concrete inlet structure approximately 400 feet to the north until it dissipates or goes underground. Water flows from these culverts are a result of stormwater discharge and nuisance flow. The nuisance flow provides a perennial flow in the creek and drainage.

**Environmental Consequences, Avoidance, Minimization and/or Mitigation Measures**

3.9(a) *Less Than Significant Impact.* Water quality standards are provisions approved by the U.S. EPA that describe the desired condition of a water body. These standards include the designated uses of the water body (e.g., recreation, public drinking water supply), criteria to protect designated uses (e.g., maximum pollutant concentration levels permitted in a water body), antidegradation requirements to protect existing uses and high-quality waters, and general policies to address implementation issues (U.S. Environmental Protection Agency, 2015).

The project is in the County of Los Angeles and is regulated by the RWQCB Lahontan Region. Waste discharge requirements are issued by the SWRCB to regulate point source discharges that are exempt from Title 27, Section 20090 of CFR and are not subject to the CWA. Point source discharges are defined by the U.S. EPA as any single identifiable source of pollution from which pollutants are discharged, such as a pipe or ditch. Exempted point source discharges include discharges of domestic sewage or treated effluent, discharges of wastewater to land (e.g., from evaporation or percolation ponds), discharges of waste to wells by injection, cleanup of unintentional or unauthorized releases of waste or pollutants to the environment, discharges of gas condensate units, use of nonhazardous decomposable waste as a soil amendment, discharges of drilling mud and cuttings from well-drilling operations, recycling or reuse of materials salvaged from waste or produced by waste treatment, and waste treatment in fully enclosed facilities, such as tanks.

During project construction, there is potential that exposed soils, construction debris, and other pollutants could enter storm water runoff that discharges into the unlined drainage and Amargosa Creek. In addition, there is potential for construction-related pollutants to be spilled, leaked, or transported into storm water runoff, which could enter into drainages adjacent to the project area, and could eventually reach downstream receiving waters.

The project would include the construction of new interchange ramps, and depending on the alternative, a new collector road, which would increase impervious surface areas or result in changes in topography in the project area. However, the project would include the installation of permanent stormwater treatment facilities including bioinfiltration strips.
and bioinfiltration swales. Bioinfiltration strips are vegetated sections of land that capture sediment and pollutants as stormwater passes over them in sheet flows. Bioinfiltration swales are vegetated ditches with a layer of imported biofiltration soil underneath and a layer of permeable material with an underdrain further below, where storm water is directed in with a concentrated flow. The project would result in less than significant impacts on water quality standards and waste discharge requirements.

**Avoidance and Minimization Measures:**

**WQ-1:** The project would include the installation of permanent stormwater treatment facilities including bioinfiltration strips and bioinfiltration swales. Bioinfiltration strips are vegetated sections of land that capture sediment and pollutants as stormwater passes over them in sheet flows. Bioinfiltration swales are vegetated ditches with a layer of imported biofiltration soil underneath and a layer of permeable material with an underdrain further below, where storm water is directed in with a concentrated flow.

**3.9(b) Less Than Significant Impact.** Groundwater within the Antelope Valley is recharged through rainwater, and the depth to groundwater varies from approximately 49 to 298 feet below ground surface (bgs). Within the project area, the average depth to groundwater is approximately 246 feet bgs (California Department of Transportation, 2009).

Impervious surfaces can have an effect on local streams, both in water quality and streamflow and flooding characteristics. A substantial portion of rainfall is absorbed into soils (infiltration), is stored as ground water, and is slowly discharged to streams through seeps and springs. Flooding is less substantial in these conditions because some of the runoff during a storm is absorbed into the ground, thus lessening the amount of runoff into a stream during the storm. As watersheds are urbanized, much of the vegetation is replaced by impervious surfaces, reducing the area where infiltration to ground water can occur. Thus, more stormwater runoff occurs - runoff that must be collected by extensive drainage systems that combine curbs, storm sewers, and ditches to carry stormwater runoff directly to streams. In a developed watershed, much more water arrives into a stream much quicker, resulting in an increased likelihood of more frequent and more severe flooding (U.S. Geological Survey, 2016).

The project would increase the impervious surface area, including:

- Alternative 1 would result in an increase of approximately 3.0 acres of impervious surface area from the addition of the SB on-ramp and NB off-ramp at Avenue J;
- Alternative 2A would result in a net increase of approximately 1.4 acres of impervious surface area from addition of the SB on-ramp and NB off-ramp at Avenue J, and removal of impervious surface area from the SB loop on-ramp at Avenue J-8 and removal of impervious surface area from the NB off-ramp at 20th Street West;
- Alternative 2B would result in an increase of approximately 2.5 acres of impervious surface area from addition of the SB on-ramp and NB off-ramp at Avenue J, and removal of impervious surface area from the SB loop on-ramp at Avenue J-8; and
- Alternative 3 would result in an increase of approximately 3.8 acres of impervious surface area from addition of the SB on-ramp at Avenue J and addition of the frontage road between 20th Street West and Avenue J.
The project would result in an increase in impervious surface area. Drainage patterns in the project area would remain similar to existing conditions, and the project would be designed to accommodate anticipated runoff levels. Stormwater treatment facilities would be included as part of the project to help manage stormwater flow and infiltration per minimization measure WQ-1. Project impacts on groundwater supplies and recharge would be less than significant.

3.9(c) **Less Than Significant Impact.** Alterations in drainage patterns (i.e., the pattern in which storm water flows across the Earth’s surface) may result from changes in topography and impervious surfaces (e.g., steeper slopes and an increase in impervious surfaces may increase the velocity of storm water drainage). Erosion is the loosening and transportation of the upper layers of rock and soil from the Earth’s surface by wind, rain, or running water. Alterations in drainage patterns that increase the drainage velocity may result in increased erosion or siltation.

The project would include the construction of new interchange ramps and depending on the alternative, a new collector road, which would increase impervious surface areas or result in changes in topography in the project area. These changes could affect existing drainage patterns, or the rate or amount of surface runoff during project operation. Avoidance and minimization measure WQ-2 would be implemented as part of the project. Impacts from the project on drainage would be less than significant.

**Avoidance and Minimization Measures:**

**WQ-2:** Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-storm water discharges into water bodies in the project area, and to meet the requirements of the Lahontan RWQCB and project permits.

3.9(d) **Less Than Significant Impact.** See Response 3.9(c).

3.9(e) **Less Than Significant Impact.** The project would result in an increase in impervious surface area. However, drainage patterns in the project area would remain similar to existing conditions, and the project would be designed to accommodate anticipated runoff levels; therefore, impacts would be less than significant.

3.9(f) **Less than Significant Impact.** During construction, the project would have the potential to result in increased construction-related pollutants and turbidity within the creek and drainages in the project area, and eventually into receiving water bodies. In addition, the project would result in added impervious surface area. However, the project includes BMPs to reduce pollutants of concern from contaminating runoff leaving the study area, and the proposed storm drain system is sized to accommodate build-out of the project. Avoidance and minimization measures WQ-3 through WQ-11 would be implemented as part of the project. Future projects in the cumulative impact area, which is the Amargosa Watershed, would be expected to implement similar measures. Impacts from the project on water quality would be less than significant.
Avoidance and Minimization Measures:

**WQ-3:** The following avoidance and minimization measures will be implemented during construction:

- Soil Stabilization Measures
- Sediment Control Measures
- Tracking Control
- Non-Storm Water Management Measures
- General Construction Site Management
- Storm Water Sampling and Analysis
- Waste Management

**WQ-4:** Work areas in waterways would be reduced to the maximum extent feasible to minimize impacts.

**WQ-5:** Staging areas would be located outside waterways to reduce direct and indirect impacts on the creek and drainages in the project area.

**WQ-6:** Measures would be implemented during construction to minimize the potential for dust, debris, and construction materials to fall into the creek, or otherwise leave the construction area.

**WQ-7:** The contractor would implement appropriate hazardous material BMPs to reduce the potential for chemical spills or containment releases into water bodies, including any non-storm water discharge.

**WQ-8:** All equipment refueling and maintenance would be conducted in the upland staging area per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.

**WQ-9:** All trash and construction debris would be removed from channels and construction areas on a daily basis. All BMPs would be properly maintained during project construction and removed upon completion of construction activities. After completion of the project, all construction equipment and materials would be removed from the project area, and the project area would be returned to pre-project conditions.

**WQ-10:** Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-storm water discharges into water bodies in the project area, and to meet the requirements of the Lahontan RWQCB and project permits.

**WQ-11:** Vegetation removed from the project area would be treated and disposed in a manner that would prevent the spread of invasive species on- or off-site. If erosion control seed mixes are used, they would be composed of non-invasive species, and all erosion control would be conducted in a manner that would not result in the spread of invasive species.

3.9(g) **No Impact.** The project area is designated as AE and X on the Federal Emergency Management Agency’s (FEMA) Flood Insurance Rate Map (FIRM) Panel No. 420 (2008) (see Figure 3-1). The AE designation is a one percent annual chance, or 100-year flood event, and the X designation is a 0.2 percent annual chance, or a 500-year flood event.
However, the project would not include the construction of housing within a 100-year flood hazard area that would impede or redirect flood flows. Therefore, there would be no impact.

3.9(h) **No Impact.** According to the FEMA flood zone map (Federal Emergency Management Agency, 2008), the Avenue J Interchange is bordered by areas having a 0.2 percent annual chance of flooding to the west, and areas with the potential to result in minimal flooding to the east. The Avenue J Interchange is also adjacent to an area where the 100-year flood is contained in a channel (GPA Consulting, 2016c). However, the project would not include the construction of structures within a 100-year flood hazard area that would impede or redirect flood flows. Therefore, the project would result in no impacts on flood flows.

3.9(i) **No Impact.** The project is not located within the inundation area of any levees or dams. The project would not expose people or structure to a significant risk of loss, injury or death involving flooding as a result of the failure of a levee or dam. Therefore, there would be no impacts.

3.9(j) **No Impact.** A seiche is a temporary disturbance or oscillation in the water level of a lake or partially enclosed body of water. A tsunami is a long, high ocean wave caused by an earthquake, submarine landslide, or other disturbance. The project area is not in proximity to a lake or ocean, and is therefore not susceptible to seiche or tsunami. A mudflow is a fluid or hardened stream or avalanche of mud. Because the project area is predominately flat and paved, the project area is not susceptible to mudflows. Therefore, there would be no impacts.
FIGURE 3-1: FLOOD INSURANCE RATE MAP
SR-138(SR-14)/Avenue J Interchange Improvements Project
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3.10 Land Use and Planning

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<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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**LAND USE AND PLANNING. Would the Project:**

a. Physically divide an established community?

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

A Community Impact Assessment (CIA) was completed for this project in April 2018 (GPA Consulting, 2018d). Additionally, a Communities and Neighborhoods Existing Conditions Report was conducted for planned interchange improvement projects along SR-14 (SR-138) in March 2016 (GPA Consulting, 2016b). Results of these studies are included in the discussion below.

**REGULATORY SETTING**

**Local**

The *City of Lancaster General Plan 2030* describes several goals, objectives, policies, and actions that were developed to inform decisions regarding land use within Lancaster and the surrounding areas (*City of Lancaster, 2009a*). Below are specific land use goals and policies from the plan that are related to the project.

*Specific Action 17.1.1(a)*: Through the development review process, ensure that all proposed development is consistent with the General Plan text, land use map, and the intensity standards outlined in Table VIII-1.

*Specific Action 17.1.1(b)*: Periodically review the General Plan to assess the following:

- The appropriateness to the mix, location, and relationships between proposed land uses on the General Plan Land Use Map;
- Status of vacant land and land use absorption by type of proposed land use (see also Specific Action 17.1.1(c))
- The appropriateness to General Plan goals, objectives, and policies in relation to the Community Vision Priorities;
- Status of specific action undertaken to implement the General Plan; and
- Recommendations for revision to the General Plan.
Specific Action 17.1.1(c): Establish and maintain systematic procedures to monitor vacant land and the rate of land absorption by the type of proposed use.

Specific Action 17.1.1(d): Through the development review process, discourage premature fragmentation to minimize the need for parcel assembly for future significant land use development.

Specific Action 17.1.4(a): Periodically review and revise as necessary the municipal code pertaining to special performance standards for industrial uses regarding industrial odors, air pollution, noise pollution, vibration, dust, hours of operation, exterior storage, and other nuisances.

Objective 18.1: Prevent future discordant land uses, and where possible reconcile existing discordant land uses, by establishing appropriate interface among conflicting uses and functions.

Specific Action 18.1.1(a): Continue to monitor environmental assessments for project area within and adjacent to the study area to ensure that appropriate mitigation measures are applied to reduce potential land use conflicts.

Policy 18.1.3: Ensure that land use map designations are compatible with adjacent proposed land uses, surrounding developments, existing infrastructure, the roadway system, and Redevelopment Project Areas.

Policy 19.2.2: Create walkable, mixed-use, transit-accessible neighborhoods and commercial districts that provide opportunities for young and old to live, work, shop, and recreate.

Specific Action 19.2.2(a): Through the development review process, apply Community Design guidelines, implementing sustainable design principles in neighborhoods and commercial districts. These principles will provide a mix of uses, inviting gathering spaces, attractive architecture, and walkable streets.

Policy 19.2.5: Create a network of attractive paths and corridors that encourage a variety of modes of transportation within the City.

Specific Action 19.2.5(b): Through the development review process, in conformance with Community Design criteria the Master Plan of Trails, the transportation Master Plan and the Parks, Recreation, Open Space and Cultural Master Plan, create linkages between separate districts with bike paths, pedestrian trails, medians and parkway landscaping in connecting streets and other physical improvements.

Policy 19.3.1: Promote high quality development by facilitating innovation in architecture/building design, site planning, streetscapes, and signage.

Specific Action 19.3.1(c): Integrate appropriate landscape design in the site planning process that emphasizes aesthetics, function, and water conservation.

**Affected Environment**

The project area is located along an existing highway corridor and contains a variety of land uses. The project is largely located within the urban core of Lancaster and is surrounded by a mix of land uses, including: retail stores and restaurants to the northwest; undeveloped land, retail stores, and restaurants to the northeast and southeast; and undeveloped land and single-family...
homes to the southwest. Land uses directly in the project area are designated as Urban Residential (UR) to the west, Commercial (C) to the southwest, and Open Space (O) along the east of SR-14 (SR-138) (City of Lancaster, 2009c). Existing land uses directly adjacent to the project area includes Health Care (H), Multi-Residential (MR-1 and MR-2), Mixed Use (MU), Office Professional (OP), and Public Use (P).

Zoning designations within and surrounding the project area include Commercial Planned Development (CPD) to the northwest; CPD, Commercial (C), and Open Space (O) to the northeast; Single Family Residential on 7,000 Square Foot Lots (R-7000) to the southwest; and CPD and O to the southeast (City of Lancaster, n.d.)

**ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES**

3.10(a) **No Impact.** SR-14 (SR-138) serves as a physical barrier dividing communities surrounding the project area, and the proposed interchange improvements would not create a new barrier or further impede community cohesion. Therefore, there would be no impacts.

3.10(b) **No Impact.** The project would enhance operational capacity, reduce congestion, and improve the safety of the interchange and local streets. The project is consistent with plans and goals established by the City, including goals and policies outlined in the *City of Lancaster General Plan 2030*. The project is also consistent with the goals and policies of the following plans: SCAG 2008 Regional Comprehensive Plan; SCAG 2016-2040 RTP/SCS; and the City of Lancaster Master Plan for Trails and Bikeways. Therefore, there would be no impacts.

3.10(c) **Less Than Significant Impact.** The project area is located in an area that is heavily developed and urbanized. Lancaster is identified in the West Mojave Plan, a habitat conservation plan and federal land use plan amendment. The purpose of the West Mojave Plan is to develop comprehensive strategies for the conservation and protection of the desert tortoise, Mohave ground squirrel, and over 100 other sensitive plants and animals and the natural communities they belong to (U.S. Department of the Interior Bureau of Land Management, 2005). The Burrowing Owl is included in the Habitat Conservation Plan of the West Mojave Plan and there is potential for this species to be within the BSA. However, the project is not anticipated to result in significant impacts on this species. The project would not conflict with the West Mojave Plan and impacts would be less than significant.
### 3.11 Mineral Resources

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<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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**MINERAL RESOURCES. Would the Project:**

- a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?
  - [ ]
  - [ ]
  - [ ]
  - [X]

- b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?
  - [ ]
  - [ ]
  - [ ]
  - [X]

**Affected Environment**

Historically, the western Mojave Desert region has been an important source of both metallic and nonmetallic minerals and rocks (City of Lancaster, 2009b). However, the project is located in an urban residential, commercial, and open space area of Lancaster. The project area does not include any active mines, or locally-important mineral resources recovery sites delineated in the City of Lancaster General Plan 2030.

**Environmental Consequences, Avoidance, Minimization and/or Mitigation Measures**

3.11(a) *No Impact.* The project is located in an urban residential, commercial, and open space area of Lancaster. No mineral resources that would be of value to the region or residents of the state have been identified in the vicinity of the project area. Therefore, there would be no impacts.

3.11(b) *No Impact.* The project area does not include any active mines, or locally-important mineral resources recovery sites delineated in the City of Lancaster General Plan 2030. Therefore, there would be no impacts.
### 3.12 Noise

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOISE. Would the Project:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

A Noise Study Report (NSR) was completed for the project in April 2018 (Michael Baker International, 2018c). The results of this study are included in the discussion below.

**REGULATORY SETTING**

**State**

*California Environmental Quality Act*

A significant environmental effect under CEQA generally is defined as a substantial or potentially substantial adverse change in the physical environment.” The *Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (Protocol) directs a CEQA-only NSR to identify the relative increase in noise level between design-year build conditions and existing conditions. According to the Protocol, “Section 15125 of the State CEQA Guidelines states that this environmental setting normally will constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. Because CEQA focuses on comparisons to the existing conditions baseline, Caltrans determines the significance of noise impacts under CEQA based on a comparison of design-year with project conditions to
the existing conditions baseline. This approach is consistent with Chapter 7 (Approach to Assessing CEQA Noise Impacts) of the Protocol.

**Section 14-8.02, Noise Control, of Caltrans standard specifications**

Section 14-8.02 provides information that can be considered in determining whether construction would result in adverse noise impacts (California Department of Transportation, 2011). The specification states:

- Do not exceed 86 A-weighted decibels (dBA) at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Equip an internal combustion engine with the manufacturer recommended muffler. Do not operate an internal combustion engine on the job site without the appropriate muffler.

**Section 216 of the California Streets and Highways Code**

Section 216 relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under Section 216, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA-\(L_{eq}(h)\) in the interior of classrooms, libraries, multipurpose rooms, or spaces at public or private elementary or secondary schools.

**Regional**

Several policies and goals regarding noise are specified in the *City of Lancaster General Plan* (City of Lancaster, 2009a). The following items are relevant to the project.

**City of Lancaster Specific Action 4.3.1(f)**

Specific Action 4.3.1(f) is designed to minimize motor vehicle noise impacts from streets and highways through proper route location and sensitive roadway design. This can be achieved by considering the following:

- Consideration shall be given to the location of truck routes, effects of truck mix, and future motor vehicle volumes on noise levels adjacent to master planned roadways when improvements to the circulation system are planned.
- Traffic volumes and speed through residential neighborhoods shall be minimized.
- Street or street improvements that exceed the ultimate ROW width specified in the City of Lancaster Transportation Master Plan shall be required to evaluate potential noise impacts on existing and future land uses in the area.
- The City will work closely with Caltrans in the early stages of freeway improvements and design modifications to ensure that proper consideration is given to potential noise impacts on the City.

**City of Lancaster Specific Action 4.3.2(d)**

As a condition of approval, Specific Action 4.3.2(d) limits non-emergency construction activities to daylight hours between sunrise and 8:00 p.m.

**City of Lancaster Municipal Code 8.24.040**

Through the City’s Municipal Code 8.24.040, loud, unnecessary and unusual noises are prohibited during construction and building activities. The municipal code indicates that a person...
at any time on Sunday or any day between the hours of 8 p.m. and 7 a.m. shall not perform any construction or repair work of any kind upon any building or structure or perform any earth excavating, filling, or moving where any of the foregoing entails the use of loud equipment. This type of equipment includes: any air compressor; jack hammer; power-driven drill; riveting machine; excavator; diesel-powered truck; tractor or other earth-moving equipment; hard hammers on steel or iron; or any other machine tool, device or equipment which makes loud noises within 500 feet of an occupied dwelling, apartment, hotel, mobile home or other place of residence.

**AFFECTED ENVIRONMENT**

The following roadways are located within the project area:

- **SR-14 (SR-138):** A paved 6-lane highway, with three travel lanes in each direction, trending in a north/south direction. The NB and SB lanes appear to be constructed of concrete and asphalt, and are separated by an earthen center median that is approximately 60 feet wide.

- **Avenue J:** A paved 6-lane roadway, with three travel lanes and a pedestrian sidewalk in each direction, trending east to west. A concrete center median is located within the western portion of the project area. The Avenue J Undercrossing structures consist of two separate bridge structures, one for each direction of travel.

- **25th Street West:** A paved 4-lane roadway with two travel lanes in each direction, trending in a north/south direction, with pedestrian and bicycle facilities.

- **20th Street West:** A paved 6-lane roadway with three travel lanes in each direction, trending in a north to south direction with pedestrian sidewalks. The 20th Street West Undercrossing structures consist of two separate bridge structures, one per each direction of travel.

- **Avenue J-8:** A paved 4-lane roadway with two travel lanes in each direction, trending in an east/west direction with pedestrian and bicycle facilities. A median exists in the western portion of Avenue J-8 and has partial ornamental landscaping. The Avenue J-8 Undercrossing structures consist of two separate bridge structures, one per each direction of travel.

Short-term noise monitoring was conducted at five representative noise-sensitive receptor locations. These locations included both residential and commercial land uses. The primary source of noise in the project area is traffic along SR-14 (SR-138). The equivalent sound level ($L_{eq}$) represents an average of the sound energy occurring over a specified period. $L_{eq}$ is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The measured values in the five noise-sensitive receptor locations range from 55.4 to 63.5 $L_{eq}$. The results of the short-term noise monitoring are summarized in **Table 3-3, Summary of Short-Term Measurements.** **Figure 3-2:** Noise Measurement and Modeling Locations, illustrates the locations for where the measurements were taken.
Table 3-3: Summary of Short-Term Measurements

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Location 1</th>
<th>Area/Land Use</th>
<th>Start Time</th>
<th>Date</th>
<th>Duration (minutes)</th>
<th>Measured Leq</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST-1</td>
<td>Near Newgrove Street and El Domingo Circle intersection</td>
<td>B/Residential</td>
<td>9:37 a.m.</td>
<td>5/16/17</td>
<td>15</td>
<td>55.4</td>
</tr>
<tr>
<td>ST-2</td>
<td>Vacant lot along 20th Street West (north of Pep Boys), east of SR-14 (SR-138)</td>
<td>E/Commercial</td>
<td>10:02 a.m.</td>
<td>5/16/17</td>
<td>15</td>
<td>63.5</td>
</tr>
<tr>
<td>ST-3</td>
<td>Adjacent to pool at the Comfort Inn and Suites (1825 West Avenue J-12)</td>
<td>E/Commercial</td>
<td>10:27 a.m.</td>
<td>5/16/17</td>
<td>15</td>
<td>63.1</td>
</tr>
<tr>
<td>ST-4</td>
<td>In vacant lot adjacent to residential uses on Avenue J-4 and Georgia Court</td>
<td>B/Residential</td>
<td>10:54 a.m.</td>
<td>5/16/17</td>
<td>15</td>
<td>59.1</td>
</tr>
<tr>
<td>ST-5</td>
<td>Near residential uses along 22nd Street West</td>
<td>B/Residential</td>
<td>11:16 a.m.</td>
<td>5/16/17</td>
<td>15</td>
<td>57.9</td>
</tr>
</tbody>
</table>

Notes:
Refer to Figure 3-3: Noise Measurement and Modeling Locations.

The worst-case traffic volumes and posted vehicle speeds were modeled using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (TNM 2.5). Key inputs to the traffic noise model include: locations of roadways, shielding features (e.g., topography and buildings), noise barriers, ground type, and receptors. The existing traffic noise modeling is shown in Table 3-4, Existing Traffic Noise Levels.
### Table 3-4: Existing Traffic Noise Levels

<table>
<thead>
<tr>
<th>Receiver No.</th>
<th>Type of Land Use</th>
<th>Modeled Existing Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-1</td>
<td>Residential</td>
<td>72</td>
</tr>
<tr>
<td>M-2</td>
<td>Residential</td>
<td>70</td>
</tr>
<tr>
<td>M-3</td>
<td>Residential</td>
<td>68</td>
</tr>
<tr>
<td>M-4</td>
<td>Residential</td>
<td>68</td>
</tr>
<tr>
<td>M-5</td>
<td>Residential</td>
<td>64</td>
</tr>
<tr>
<td>M-6</td>
<td>Residential</td>
<td>65</td>
</tr>
<tr>
<td>M-7 (ST-5)</td>
<td>Residential</td>
<td>67</td>
</tr>
<tr>
<td>M-8</td>
<td>Residential</td>
<td>69</td>
</tr>
<tr>
<td>M-9</td>
<td>Residential</td>
<td>67</td>
</tr>
<tr>
<td>M-10</td>
<td>Residential</td>
<td>65</td>
</tr>
<tr>
<td>M-11</td>
<td>Residential</td>
<td>63</td>
</tr>
<tr>
<td>M-12</td>
<td>Residential</td>
<td>64</td>
</tr>
<tr>
<td>M-13</td>
<td>Residential</td>
<td>64</td>
</tr>
<tr>
<td>M-14</td>
<td>Residential</td>
<td>64</td>
</tr>
</tbody>
</table>
This page has been intentionally left blank.
FIGURE 3-2. NOISE FORECASTING
SR-14 (SR-138)/Avenue J Interchange Improvements Project
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ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.12(a) Less than Significant Impact. Noise criteria are established by municipalities to provide avoidance measures for noise impacts from noise-generating activity on the community. The City of Lancaster General Plan 2030 and City of Lancaster Municipal Code identifies objectives, policies, and specific actions designed to protect public health from potential noise impacts. Additionally, as discussed above, a noise impact would only occur if the project would result in a 12 dB increase at a sensitive receptor(s) under design-year with project conditions compared to existing baseline conditions.

The primary source of noise in the project area is from traffic along the surrounding roadways, including SR-14 (SR-138), Avenue J, and Avenue J-8. Five short-term noise level measurements were conducted at representative locations to document the existing noise environment and were used to calibrate the noise prediction model with concurrent traffic counts and measured vehicle speeds. Existing noise levels were measured between 55.4 and 63.5 dBA in the project area. A total of 14 representative sensitive receptors were modeled and evaluated for potential noise impacts resulting from traffic noise.

As indicated in Michael Baker International (2018c), under the “Future No Build” scenario, noise levels at nearby receptors would range from approximately 64 dBA to 73 dBA. The highest noise levels (73 dBA) under “Future No Build” conditions would occur at receptor M-1 along Georgia Court. Under the “Future Build” scenario, noise levels would range from approximately 64 dBA to 72 dBA. The highest noise levels occurring under these conditions would also occur at receptor M-1 along Georgia Court.

Table 3-5: Future Traffic Noise Levels

<table>
<thead>
<tr>
<th>Receiver No.</th>
<th>Type of Land Use</th>
<th>Future No Build (dBA)</th>
<th>Future Build (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-1</td>
<td>Residential</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td>M-2</td>
<td>Residential</td>
<td>71</td>
<td>72</td>
</tr>
<tr>
<td>M-3</td>
<td>Residential</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>M-4</td>
<td>Residential</td>
<td>69</td>
<td>68</td>
</tr>
<tr>
<td>M-5</td>
<td>Residential</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>M-6</td>
<td>Residential</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>M-7 (ST-5)</td>
<td>Residential</td>
<td>68</td>
<td>69</td>
</tr>
<tr>
<td>M-8</td>
<td>Residential</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td>M-9</td>
<td>Residential</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>M-10</td>
<td>Residential</td>
<td>66</td>
<td>65</td>
</tr>
<tr>
<td>M-11</td>
<td>Residential</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>M-12</td>
<td>Residential</td>
<td>65</td>
<td>64</td>
</tr>
<tr>
<td>M-13</td>
<td>Residential</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>M-14</td>
<td>Residential</td>
<td>65</td>
<td>66</td>
</tr>
</tbody>
</table>

Source: Michael Baker International, 2018c
As shown in Michael Baker International (2018c), the project is not predicted to result in a substantial increase in noise (approximately between -2 and 2 dBA). Additionally, the project would not exceed standards set forth in the Section 14-8.02, Noise Control, of Caltrans standard specifications, Caltrans’ CEQA Protocol, Section 216 of the California Streets and Highways Code, and would be in compliance with noise requirements identified in the City of Lancaster General Plan and Municipal Code. Avoidance and mitigation measure NOI-1 and NOI-2 would be implemented as part of the project. The project would not result in a significant impact regarding noise level standards established in a local general plan or noise ordinance or applicable standards of other agencies.

**Avoidance and Minimization Measures:**

**NOI-1:** Implementing the following measures would reduce the temporary construction noise:

- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.
- The contractor shall implement appropriate additional noise measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources.

**NOI-2:** Project construction would comply with the City requirements including

- *City of Lancaster Municipal Code 8.24.040;*
- *City of Lancaster Specific Action 4.3.1(f); and*
- *City of Lancaster Specific Action 4.3.2(d).*

In cases of discrepancy between City and Caltrans standards, the more stringent would be applied unless an agreement between the City and Caltrans is made that allows otherwise.

**3.12(b) Less Than Significant Impact.** Groundborne vibration generated by road vehicles and by trains can have significant environmental impact on nearby buildings. Inhabitants perceive vibration either directly as motion in floors and walls or indirectly as reradiated noise. A third significant source of disturbance is due to movement of household objects, especially mirrors, or by the rattling of window panes and glassware. In all these cases, the problem of ground-borne vibration is important at frequencies typically up to 200 to 250 Hz. Vibration at higher frequencies is generally attenuated rapidly with distance along the transmission path through the ground. Vibration can travel long distances from its source. For a ground with soft clay or silt, groundborne vibration may produce annoyance to people in buildings more than 200 m away from tracks (Gateway Council of Governments, 2007).

According to the *City of Lancaster General Plan 2030 Noise Element*, the following table summarizes a general estimation of groundborne vibration from typical construction equipment at several distances based on methods specified in the Federal Transit Administration’s Transit Noise and Vibration Impact Assessment (City of Lancaster, 2009b).
### Table 3-6: Vibration and Construction Equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>PPV at 25 feet</th>
<th>PPV at 50 feet</th>
<th>PPV at 75 feet</th>
<th>PPV at 100 feet</th>
<th>PPV at 175 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pile Driver (sonic/vibratory)</td>
<td>0.734</td>
<td>0.2595</td>
<td>0.1413</td>
<td>0.0918</td>
<td>0.0396</td>
</tr>
<tr>
<td>Large Bulldozer</td>
<td>0.089</td>
<td>0.0315</td>
<td>0.0171</td>
<td>0.0111</td>
<td>0.0048</td>
</tr>
<tr>
<td>Loader Trucks</td>
<td>0.076</td>
<td>0.0269</td>
<td>0.0146</td>
<td>0.0095</td>
<td>0.0041</td>
</tr>
<tr>
<td>Jackhammer</td>
<td>0.035</td>
<td>0.0124</td>
<td>0.0067</td>
<td>0.0044</td>
<td>0.0019</td>
</tr>
<tr>
<td>Small Bulldozer</td>
<td>0.003</td>
<td>0.0011</td>
<td>0.0006</td>
<td>0.0004</td>
<td>0.0002</td>
</tr>
</tbody>
</table>

Peak Particle Velocity (PPV) - A measurement of ground vibration defined as the maximum speed (measured in inches per second) at which a particle in the ground is moving relative to its inactive state. PPV is usually expressed in inches/second.

Source: U.S. Department of Transportation, 2006

Temporary project construction activities would be subject to Caltrans’ Standard Specifications in Section 14-8.02 (Noise Control), as well as the noise and vibration regulations specified in the City of Lancaster Municipal Code in order to minimize construction noise. Following project construction, construction noise would cease and return to existing conditions. Impacts on groundborne vibration would be less than significant.

**3.12(c) Less than Significant Impact.** See Responses VII a) and b).

**3.12(d) Less than Significant Impact.** According to the City of Lancaster General Plan 2030, a project is considered to have a significant noise impact when it causes an adopted noise standard to be exceeded for the project area or for adjacent sensitive receptors. In addition to concerns regarding the absolute increase in noise level that might occur when a new source is introduced into an area, it is also important to consider the existing ambient noise environment.

If the ambient noise environment is quiet and the new noise source greatly increases the noise exposure, an impact may occur even though a criterion level might not be exceeded. Lacking adopted standards for evaluating such impacts, a general standard for community noise environments is that an increase of over 5 dBA, regardless of the ambient noise level without the project, is readily noticeable and is therefore considered a significant impact.

Based on acoustical industry standards and guidelines provided by Caltrans, in areas where the ambient noise level without the project is 60 dBA to 65 dBA, some individuals may notice an increase in the ambient noise level of greater than 3 dBA and any such increase would be a significant impact. In areas where the ambient noise level is greater than 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact because the increase would contribute to an existing noise deficiency (City of Lancaster, 2009b).

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Construction noise would result from the transport of construction workers and equipment and materials to
and from the project area, as well as from actual roadway construction activities. Construction noise is regulated by Caltrans Standard Specifications Section 14-8.02 (Noise Control), which states that noise levels generated during construction shall comply with applicable local, state, and federal regulations, and that all equipment shall be fitted with adequate mufflers according to the manufacturers’ specifications.

### Table 3-7: Construction Equipment Noise

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Maximum Noise Level (dBA at 25 Feet)</th>
<th>Maximum Noise Level (dBA at 50 Feet)</th>
<th>Maximum Noise Level (dBA at 100 Feet)</th>
<th>Maximum Noise Level (dBA at 600 Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrapers</td>
<td>95</td>
<td>89</td>
<td>83</td>
<td>67</td>
</tr>
<tr>
<td>Bulldozers</td>
<td>91</td>
<td>85</td>
<td>79</td>
<td>63</td>
</tr>
<tr>
<td>Heavy Trucks</td>
<td>94</td>
<td>88</td>
<td>82</td>
<td>66</td>
</tr>
<tr>
<td>Backhoe</td>
<td>86</td>
<td>80</td>
<td>74</td>
<td>58</td>
</tr>
<tr>
<td>Pneumatic Tools</td>
<td>91</td>
<td>85</td>
<td>79</td>
<td>63</td>
</tr>
<tr>
<td>Concrete Pump</td>
<td>88</td>
<td>82</td>
<td>76</td>
<td>30</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Transportation, 2006

Residences along SR-14 (SR-138) are the closest sensitive receptors to the project. These residential areas would be subject to short-term noise levels between 86 and 95 dBA $L_{\text{max}}$ generated by construction activities along the project alignment. However, no substantial noise increases from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications Section 14-8.02 and applicable local noise standards. Construction noise would be short-term and intermittent.

Predicted design-year traffic noise levels with the project are compared to existing conditions and to design-year without project conditions. Modeling results in the following table indicate that traffic noise levels under existing, design-year without-project conditions, and design-year Build conditions, noise levels would increase between -2 and 2 dBA.

Any noise barrier to be demolished must be replaced at the same height or higher at the new location. It is important to ensure the top of the wall is constructed at the same elevation as before or higher to maintain the effectiveness of providing noise reduction. Under CEQA, a substantial noise increase may result in the significant adverse environmental effect and, if so, must be mitigated or identified as a noise impact for which it is likely that no, or only partial abatement measures are available. This project is not predicted to result in an increase of 12 dB or more at any sensitive receptors in the project. Avoidance and minimization measures NOI-1 though NOI-3 would be implemented as part of the project. Impacts would be less than significant.
Table 3-8: Predicted Noise Levels

<table>
<thead>
<tr>
<th>Receptor Number</th>
<th>Land Use Type</th>
<th>Noise Abatement Category</th>
<th>Impact Criteria</th>
<th>Modeled Existing Noise Level</th>
<th>Future No Build</th>
<th>Future Build</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-1</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>72</td>
<td>73</td>
<td>72</td>
</tr>
<tr>
<td>M-2</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>70</td>
<td>71</td>
<td>72</td>
</tr>
<tr>
<td>M-3</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>68</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>M-4</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>68</td>
<td>69</td>
<td>68</td>
</tr>
<tr>
<td>M-5</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>64</td>
<td>65</td>
<td>63</td>
</tr>
<tr>
<td>M-6</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>65</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>M-7 (ST-5)</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>67</td>
<td>68</td>
<td>69</td>
</tr>
<tr>
<td>M-8</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>69</td>
<td>70</td>
<td>71</td>
</tr>
<tr>
<td>M-9</td>
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<td>B</td>
<td>67</td>
<td>67</td>
<td>68</td>
<td>66</td>
</tr>
<tr>
<td>M-10</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>65</td>
<td>66</td>
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<tr>
<td>M-11</td>
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<td>B</td>
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<td>63</td>
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<tr>
<td>M-12</td>
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<td>65</td>
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<td>M-13</td>
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<td>67</td>
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<tr>
<td>M-14</td>
<td>Residential</td>
<td>B</td>
<td>67</td>
<td>64</td>
<td>65</td>
<td>66</td>
</tr>
</tbody>
</table>

Notes:
Modeling results are round to the nearest decibel.
The modeled noise levels are based on traffic volumes within the Traffic Impact Assessment November 29, 2016.

Avoidance and Minimization Measures:

NOI-3: To minimize construction noise impacts on sensitive receptors adjacent to the project area, construction noise is regulated by the Caltrans’ Standard Specifications in Section 14-8.02 (Noise Control). Noise control shall conform to Section 14-8.02. In addition, the Contractor shall equip all internal combustion engines with the manufacturer-recommended muffler and shall not operate any internal combustion engine on the job site without the appropriate muffler.

3.12(e) No Impact. There are two airports located in the vicinity of the project area; however, they are not located within two miles of the project area. The project would not expose people residing or working in the project area to excessive noise levels. Therefore, there would be no impacts.

3.12(f) No Impact. Implementation of the project would not result in a safety hazard for people residing or working in the project area because the project area is not located within the vicinity of a private airstrip. Therefore, there would be no impacts.
### 3.13 Population and Housing

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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<tbody>
<tr>
<td><strong>POPULATION AND HOUSING. Would the Project:</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a. Induce substantial population growth in an area, either directly (e.g., proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
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</tr>
<tr>
<td>b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
</tr>
<tr>
<td>c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?</td>
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<td>☒</td>
</tr>
</tbody>
</table>

A CIA was completed for this project in April 2018 (GPA Consulting, 2018d). Additionally, a Communities and Neighborhoods Existing Conditions Report was conducted for planned interchange improvement projects along SR-14 (SR-138) in March 2016 (GPA Consulting, 2016b). Results of these studies are included in the discussion below.

**Regulatory Setting**

**State**

The CEQA also requires the analysis of a project’s potential to induce growth. The CEQA guidelines (Section 15126.2[d]) require that environmental documents “…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…”

**Affected Environment**

Lancaster is a medium sized city over 40 miles northeast of Downtown Los Angeles. Lancaster had an estimated population of 159,774 in 2015, making up only approximately 1.5 percent of the population of Los Angeles County. The City’s population increased by approximately 3,000 people from 2010 to 2015, about a 2 percent population increase over a 5-year period (United States Census Bureau, 2015). The City has been recognized as a city with great business development potential (City of Lancaster, 2017a). Several new developments, business and residential, have been initiated over the past year, although indicators suggest growth has slowed in general throughout Lancaster based on the number of development permits allocated over the past decade (GPA Consulting, 2018d).

**Environmental Consequences, Avoidance, Minimization and/or Mitigation Measures**

**3.13(a) Less Than Significant Impact.** The project would not result in the construction of new homes or businesses; however, the project would result in a realignment of the existing
SB off-ramp at Avenue J and the addition of a SB on-ramp. The project would also include bicycle and pedestrian facility improvements, including restriping the Avenue J Interchange to include bike lanes. Developers may be attracted to the project vicinity because of the proposed Avenue J Interchange Improvements, which would enhance the operational capacity, reduce congestion on the local street network, and improve the safety of the interchange and local streets. This increased access within and surrounding the project area could induce population growth in the area; however, any population growth resulting from the project would not be expected to be substantial because the project area is already densely developed. In addition, the project includes improvements to an existing interchange, which would enhance access, but would not add new access to the area. Therefore, impacts would be less than significant.

3.13(b) No Impact. In order to accommodate the proposed roadway improvements, the project would require partial ROW acquisition from portions of four parcels that are vacant land. The project would not displace any housing units, and the construction of replacement housing would not be required. Therefore, there would be no impacts.

3.13(c) No Impact. As described above in 3.13 a), the proposed roadway improvements would require the partial ROW acquisition of four parcels, all of which are vacant lands. The project would not result in the displacement of any people, and construction of replacement housing would not be required. Therefore, there would be no impacts.
3.14 Public Services

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<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

**PUBLIC SERVICES. Would the Project:**

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:

i. Fire Protection?

ii. Police Protection?

iii. Schools?

iv. Parks?

v. Other public facilities?

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**REGULATORY SETTING**

**Local**

The City of Lancaster General Plan 2030 addresses disaster preparedness for the future (City of Lancaster, 2009a). The following objectives, policies, and specific actions are applicable to the project and emergency services in the study area.

*Goal 5:* To provide a system of emergency services that will enable the City to act promptly with appropriate measures in the event of a natural or man-made disaster, to save lives, alleviate human suffering, minimize damage and maintain the capability to effectively continue City operations.

*Objective 5.1:* Maintain a level of preparedness to respond to emergency situations which will save lives, protect property, and facilitate recovery with a minimum of disruption.

*Policy 5.1.1:* Expand access to resource through the coordination and cooperation in planning and operations along multi agency and jurisdictional lines to ensure adequate public services during major emergencies.

*Specific Action 5.1.1(c):* Maintain ongoing coordination and cooperation with participation jurisdictions, and work closely with emergency responders, community partners and
residents to engage in comprehensive disaster planning to improve regional capabilities to respond to disaster situations.

Additionally, the City has prepared an Emergency Operations Plan (City of Lancaster, 2010b). The Emergency Operations Plan is a flexible, multi-hazard document that addresses the City of Lancaster’s planned response and short-term recovery to extraordinary emergency/disaster situations associated with natural disasters, technological incidents, and national security emergencies. The plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Instead, the operational concepts reflected in the plan focus on potential large-scale disasters that can generate unique situations requiring unusual responses. Los Angeles County also prepared an Operational Area Emergency Response Plan (Los Angeles County, 1998) to be implemented in the event of extraordinary emergency/disaster situations, including natural disasters, technological incidents, and national security emergencies.

**AFFECTED ENVIRONMENT**

The City of Lancaster contracts with the Los Angeles County Fire Department (LACFD) to receive fire and paramedic services (Los Angeles County Fire Department, n.d.). Emergency services include fire suppression, fire prevention, paramedic response, swift water rescue, hazardous materials response, and other types of emergency services.

There are no fire stations in the study area, but the following stations are the closest responders to the project area:

- Fire Station 33 at 44947 Date Avenue;
- Fire Station 129 at 42110 6th Street West;
- Fire Station 130 at 44558 40th Street West; and
- Fire Station 134 at 43225 North 25th Street West.

The Los Angeles County Sheriff’s Department-Antelope Valley Stations provide law enforcement services to Lancaster (Los Angeles County Sheriff’s Department, 2014). The Lancaster Sheriff’s station is in the study area:

- Los Angeles County Sheriff’s Department at 501 West Lancaster Boulevard.

The California Highway Patrol is a law enforcement agency that has jurisdiction over all California highways (California Highway Patrol, 2015). The following California Highway Patrol Station is Lancaster in the study area:

- California Highway Patrol at 2041 West Avenue I.

The following hospitals are in the study area:

- Antelope Valley Hospital at 1600 Avenue J; and
- City of Hope Medical Group at 44105 15th Street West.

The City has in place emergency operations plans and the Los Angeles County Operational Area Emergency Response Plan to be implemented in the event of emergency or disaster situations.
The Lancaster School District (LACSD) serves students in pre-school through 8th grade (Lancaster School District, 2015). The following LACSD schools are in the study area:

- Amargosa Creek Middle School at 44333 27th Street West; and
- Sunnydale Elementary School at 1233 West Avenue J-8.

The Antelope Valley Union High School District (AVUHSD) serves students in 9th through 12th grades (Antelope Valley Union High School District, n.d.). The following AVUHSD schools are in the study area:

- Los Angeles County Online High School at 1202 West Avenue J.

The following private schools are in the study area:

- Inspire Charter School at 44417 Valley Central Way;
- Sonshine Factory at 44514 20th Street West;
- Desert Christian Main Campus at 44662 15th Street West;
- University of Phoenix-Lancaster Learning Center (private university) at 1220 West Avenue J;
- Desert Sands Charter High School at 44130 20th Street West;
- Desert Christian High School at 2340 West Avenue J-8;
- iLead School at 254 East Avenue K-4; and
- Career Care Institute (vocational school) at 43770 15th Street West.

Generally, community facilities are locations where services are provided to the local community, or where people tend to congregate. Community facilities in Lancaster in the study area include the following:

- Los Angeles County Registrar-Recorder/County Clerk, Lancaster Branch Office at 44509 16th Street West;
- Lancaster Post Office at 1008 West Avenue J-2; and
- Lancaster Post Office at 43824 20th Street West.

The following religious facilities are in the study area:

- Houses of Light at 2330 Mall Loop Road;
- Living Word Worship Center at 44830 Valley Central Way;
- Growing Valley Baptist Church at 44818 20th Street West;
- Our Savior’s Lutheran Church at 1821 West Lancaster Boulevard;
- The Church of Jesus Christ of Latter-day Saints at 1701 West Lancaster Boulevard;
- Calvary Chapel Antelope Valley at 1661 West Lancaster Boulevard;
- Lancaster First Assembly Church of God at 44514 20th Street West;
God's Flock Evangelical Free Church at 44523 15th Street West;
Family History Center at Church of Jesus Christ of Latter-day Saints, 44330 27th Street West;
Kairos Community at 43807 15th Street West;
Church of Scientology Mission of Santa Clarita at 43759 15th Street West; and
Peoples AME Zion Church at 1832 West Avenue K.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.14(a)(i) No Impact. The City contracts with the LACFD for fire and paramedic services. There are currently six fire stations within the City of Lancaster, and one station in the unincorporated community of Antelope Acres (City of Lancaster, 2017c). LACFD’s goal is to have a fire station within 1.5 miles of all fully developed urban areas. The nationally recognized guideline is a five-minute response time in urban areas, which is usually achieved within a 1.5-mile distance (City of Lancaster, 2009b). The project is located within the jurisdiction for Fire Station 130, located at 44558 40th Street West, which is approximately two miles west of the SR-14 (SR-138)/Avenue J Interchange. Station Number 130 includes a 3-person engine company, 3-person Urban Search and Rescue, 5-person Hazardous Materials Task Force, and one Hazardous Materials Unit (City of Lancaster, 2009b). The project would not generate an increase in population, and would not generate additional need for fire protection that would require new or altered facilities. Additionally, through implementation of avoidance measure T-4, coordination between the City and local emergency services would be conducted prior to (pre-construction meeting) and during project construction to maintain emergency response times and ensure consistency with the City’s Emergency Operations Plan. Therefore, there would be no impacts related to the need for additional LACFD facilities.

3.14(a)(ii) No Impact. The Los Angeles County Sheriff’s Department-Lancaster Station provides law enforcement services to more than 150,000 residents in Lancaster, as well as several thousand more in the outlying unincorporated areas from Neenach to Lake Los Angeles and up to the Los Angeles/Kern County line (City of Lancaster, 2017b). The Lancaster Sheriff’s station is located at 501 West Lancaster Boulevard, which is outside of the 0.5-mile buffer for the project area. The California Highway Patrol is a law enforcement agency that has jurisdiction over all of California’s highways (California Highway Patrol, 2017a). The California Highway Patrol Antelope Valley Area is a part of the Southern Division and serves Northern Los Angeles County. This California Highway Patrol is responsible for patrolling approximately 30 miles of SR-14 (SR-138) and approximately 1,400 miles of unincorporated roadways throughout the Antelope Valley Area (California Highway Patrol, 2017b). The California Highway Patrol Antelope Valley Area Patrol Station is located in Lancaster at 2041 West Avenue I, which is approximately 1.5 miles north of the Avenue J Interchange. Through implementation of avoidance measure T-4, coordination between the City and local emergency services would be conducted prior to (pre-construction meeting) and during project construction to maintain emergency response times and ensure consistency with the City’s Emergency Operations Plan. The project would not generate an increase in population, and would not generate additional need for police
protection that would require new or altered facilities. Therefore, there would be no impacts.

3.14(a)(iii) **No Impact.** The project would not induce population growth directly or indirectly; therefore, the project would not increase the demand for schools that would require new or altered facilities. Therefore, there would be no impacts.

3.14(a)(iv) **No Impact.** The project area is primarily residential and commercial; the closest park is Lancaster Municipal Stadium (0.4-mile northwest of the project area). The project would not induce growth or directly or indirectly strain existing park services. Therefore, there would be no impacts.

3.14(a)(v) **No Impact.** Public facilities, including religious facilities and community facilities are located within the project area. The project would not result in an increase in the residential population that would require new or altered facilities. The Antelope Valley Hospital is located east of SR-14/ Avenue J within the project limits. Through implementation of avoidance measure T-4, coordination between the City and local emergency services would be conducted prior to (pre-construction meeting) and during project construction to maintain emergency response times and ensure consistency with the City’s Emergency Operations Plan. Therefore, there would be no impacts.
3.15 Recreation

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreation. Would the Project:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?</td>
<td>☐</td>
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</tr>
</tbody>
</table>

REGULATORY SETTING

Local

The City of Lancaster General Plan 2030 includes efforts to support and grow the existing parks and recreational facilities of Lancaster (City of Lancaster, 2009a). Below are specific land use goals and policies from the plan that are related to the project.

Objective 10.2: Through the adoption and implementation of a Master Plan of trails, establish and maintain a hierarchical system of trails (including equestrian, bicycle, and pedestrian trails) providing recreational opportunities and an alternative means of reaching schools, parks and natural areas, and planes of employment, and connecting to regional trail systems.

The Lancaster Parks, Recreation, Open Space, and Cultural Master Plan was developed through collaboration between staff, elected and agency officials, and community members (City of Lancaster, 2007). Adopted in 2007, it represents the first master plan developed for the Lancaster Department of Parks, Recreation and Arts. The plan has three major purposes: 1) Present a long-term vision and goals for the Parks Department and for the community for the next 20 to 25 years; 2) Describe current and future needs, interests, and community preferences for parks, recreation, arts programs, and facilities; and 3) Develop a process and priorities for managing the Parks Department’s commitments so that new requests and initiatives are considered in light of existing commitments.

The Lancaster Master Plan of Trails and Bikeways was developed in implementation of several policies and actions developed through the Parks, Recreation, Open Space and Cultural Master Plan (City of Lancaster, 2012). The Lancaster Master Plan of Trails and Bikeways includes goals, policies, and actions related to bicycle and pedestrian facilities and the user experience.

AFFECTED ENVIRONMENT

There are more than 450 acres of parkland and recreational facilities in Lancaster (City of Lancaster, 2017f). The study area includes one park, the Lancaster Municipal Stadium (Home of the Lancaster Jethawks). Located 0.4-mile northwest of the project area, the stadium hosts
approximately 70 minor league games each season, in addition to other events throughout the year (City of Lancaster, 2017d).

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.15(a) Less Than Significant Impact. The project would include improvements to the SR-14 (SR-138)/Avenue J Interchange infrastructure to enhance operational capacity, reduce congestion on the local street network, improve way-finding, and improve the safety of the interchange and local streets.

Project construction and staging could increase traffic congestion in the project area. Increased traffic congestion in the project area could disturb access to the Lancaster Municipal Stadium; however, construction would be temporary and normal access would resume following project completion. The project would also improve vehicular and pedestrian circulation, and reduce congestion in the area; however, it would not result in an increased demand for recreational facilities. Therefore, impacts on parks and recreational facilities would be less than significant.

3.15(b) No Impact. The project would not include recreational facilities and would not require the construction or expansion of recreational facilities. Therefore, there would be no impacts.
### 3.16 Transportation/Traffic

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<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
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</table>

**TRANSPORTATION/TRAFFIC. Would the Project:**

<table>
<thead>
<tr>
<th>a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?</th>
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<tr>
<th>b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?</th>
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<tr>
<th>c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</th>
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<tr>
<th>d. Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</th>
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<tr>
<th>e. Result in inadequate emergency access?</th>
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<tr>
<th>f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</th>
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A Transportation Analysis Report (TAR) was completed for this project in September 2017 (Fehr & Peers Transportation Consultants, 2017). The results of this study are included in the discussion below.

**Regulatory Setting**

**State**

Under CEQA, discussion on how the project would affect traffic and transportation/pedestrian and bicycle facilities, reflecting both existing and design-year (project open-to-traffic year plus 20
years) traffic, is required. A TAR was completed for the project that analyzed potential impacts resulting from the project (Fehr & Peers Transportation Consultants, 2017). The results are discussed below.

Local

A focus of the City of Lancaster General Plan 2030 was to “provide for a transportation and circulation system that ensures accessibility, mobility, and safety for all residents” (City of Lancaster, 2009a). This focus comes from resident feedback that stressed the importance of providing alternative modes of transportation and ease of access to the roadways systems. Residents expressed concern over the commuter congestion on the Antelope Valley Freeway (SR-14), identifying the freeway as one of the major challenges facing the City. The following goals and policies were identified in the plan and are related to the project.

Specific Action 10.2.4(a): Incorporate bicycle routes into the City roadway system as appropriate.

Specific Action 10.2.4(c): Design bicycle routes and pathways to allow access to local and regional transit stops and locations.

Policy 14.1.2: Maintain and improve the operation of the roadway network by adhering to the circulation system improvements of the Transportation Master Plan for the development and operation of the system, while providing the flexibility to allow consideration of innovative design solutions.

Policy 14.1.4: Encourage the design of roads and traffic controls to optimize safe traffic flow by minimizing turning movements, curb parking, uncontrolled access, and frequent stops.

Specific Action 14.1.6(d): Coordinate roadway system improvements and signalization, and operations with regional and jurisdictional transportation plans.

Objective 14.2: Promote a roadway system which balances the need to move vehicles while protecting environmental, aesthetic, and quality of life issues.

Policy 14.2.1: Support and improve a roadway network that is sensitive to environmental issues such as, biological, land, and water resources, as well as air quality, while permitting continued development within the study area.

Specific Action 14.2.1(a): Continue implementation of state environmental requirements mandated by the CEQA to mitigate, to the extent feasible, significant environmental impacts associated with traffic and circulation improvements.

Policy 14.2.2: Manage the City's roadway network so that it is aesthetically pleasing through the development and maintenance of streetscapes.

In June 2010, the City of Lancaster received a $240,000 grant from the Los Angeles County Department of Public Health’s Renewing Environments for Nutrition, Exercise and Wellness (RENEW) program (City of Lancaster, 2012). Lancaster developed the Lancaster Master Plan of Trails and Bikeways to improve the health of residents through preventative measures, such as encouraging active transportation and providing programming to support and encourage exercise. The plan includes goals, policies, and actions related to bicycle and pedestrian facilities and the user experience.
**AFFECTED ENVIRONMENT**

A traffic study was prepared for the project in September 2017 (Fehr & Peers Transportation Consultants, 2017). The traffic study area is generally bounded by Avenue J to the north, Avenue J-8 to the south, 30th Street West to the west, and 10th Street West to the east. The following provides a brief description of the key facilities identified in the traffic study.

**Roadways**

**State Route 14 (SR-14)** is a north/south inter-regional freeway connecting Interstate 5 near Granada Hills and US-395 near Inyokern. SR-14 and SR-138 fall on the same alignment, and overlap near the City of Palmdale, California. Within these project limits, SR–14 in each direction has three 12’ mixed-flow lanes with a 10’ outside shoulder and a 5’ inside shoulder. It is divided by a wide median with double thrie-beam barrier. At the Avenue J and J-8 interchanges, all entrance and exit ramps are single lane facilities at street-level. At the Avenue J interchange, the SB off-ramp widens to two lanes, including one left-turn lane and one right-turn lane at Avenue J. The NB on-ramp begins as two lanes at Avenue J and narrows to a single lane before joining the freeway. At the Avenue J-8 interchange, the SB on-ramp begins as two lanes at Avenue J-8 and narrows to a single lane before joining the freeway. The NB off-ramp widens to two lanes, including one left-turn lane and one right-turn lane at 20th Street West.

**Avenue J** is primarily a 6-lane conventional highway divided by raised median islands and center turn lanes within the project limits. Concrete curb and gutter with sidewalk were built on both sides of the street. On-street parking is prohibited in the study area. There are no bicycle facilities on Avenue J within the project limits.

Avenue J-8 is a 4-lane conventional highway between 30th Street West and 15th Street West, at which point it narrows to become a 2-lane residential street to 10th Street West, within the study area. Where it has four travel lanes, they are occasionally separated by raised median islands and occasionally by painted medians with center turn lanes at intersections. The speed limit is 45 mph through its wider sections and 30 mph where it narrows to two lanes. Concrete curb and gutter with sidewalk were built on both sides of the street, until it narrows to two lanes, at which point there is sidewalk constructed on the north side of the street only. There is a bike lane in each direction between 30th Street West and 20th Street West.

**20th Street West** is a 6-lane conventional highway divided by raised medians. Concrete curb and gutter with sidewalk are provided on both sides of the street. Protected left-turn lanes and right-turn pockets are provided at various locations. There are no bicycle facilities on 20th Street West.

**Freeway Interchanges**

The **SR-14/Avenue J Interchange** is a slip ramp interchange with access to NB freeway traffic only. For access to NB SR-14, there is a slip ramp from Avenue J at an unsignalized intersection. For access from SB SR-14, there is a slip ramp to Avenue J. The intersection is signalized.

The **SR-14/Avenue J-8 Interchange** is a partial cloverleaf interchange with access to SB freeway traffic only. For access to SB SR-14, there is a loop ramp from eastbound and westbound Avenue J-8 at an unsignalized intersection. For access from NB SR-14, there is a slip ramp to NB and SB 20th Street West. The intersection is signalized.
Intersection Traffic Conditions

Existing intersection lane configurations, and signal timings were used to calculate level of service (LOS) for the study intersections during the a.m. and p.m. peak hours for Existing Conditions. The results showed that all study intersections operate at LOS D or better during the a.m. and p.m. peak hours (see Table 3-9). The overall delay yields LOS B or better operations at all ramps to and from SR-14.

Table 3-9: Existing (2016) Conditions Peak Hour Intersection Operations

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
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<th>PM Peak Hour</th>
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<tbody>
<tr>
<td></td>
<td>Delay</td>
<td>LOS</td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>1 - 30th Street West/Avenue J</td>
<td>17.8</td>
<td>B</td>
<td>15.8</td>
<td>B</td>
</tr>
<tr>
<td>2 - 25th Street West/Avenue J</td>
<td>17.9</td>
<td>B</td>
<td>18.1</td>
<td>B</td>
</tr>
<tr>
<td>3 - Valley Central Way/Avenue J</td>
<td>4.9</td>
<td>A</td>
<td>10.7</td>
<td>B</td>
</tr>
<tr>
<td>4 - SR-14 SB Ramp/Avenue J</td>
<td>5.4</td>
<td>A</td>
<td>5.3</td>
<td>A</td>
</tr>
<tr>
<td>5 - SR-14 NB Ramp/Avenue J</td>
<td>0.5</td>
<td>A</td>
<td>0.4</td>
<td>A</td>
</tr>
<tr>
<td>6 - 20th Street West/Avenue J</td>
<td>29.2</td>
<td>C</td>
<td>37.6</td>
<td>D</td>
</tr>
<tr>
<td>7 - 15th Street West/Avenue J</td>
<td>25.1</td>
<td>C</td>
<td>31.4</td>
<td>C</td>
</tr>
<tr>
<td>8 - 10th Street West/Avenue J</td>
<td>18.3</td>
<td>B</td>
<td>23.7</td>
<td>C</td>
</tr>
<tr>
<td>9 - SR-14 NB Ramp/20th Street West</td>
<td>11.1</td>
<td>B</td>
<td>16.1</td>
<td>B</td>
</tr>
<tr>
<td>10 - 25th Street West/Avenue J-8</td>
<td>12.6</td>
<td>B</td>
<td>10.5</td>
<td>B</td>
</tr>
<tr>
<td>11 - SR-14 SB Ramp/Avenue J-8</td>
<td>2.0</td>
<td>A</td>
<td>1.0</td>
<td>A</td>
</tr>
<tr>
<td>12 - 20th Street West/Avenue J-8</td>
<td>17.0</td>
<td>B</td>
<td>23.2</td>
<td>C</td>
</tr>
<tr>
<td>13 - 15th Street West/Avenue J-8</td>
<td>20.3</td>
<td>C</td>
<td>19.6</td>
<td>B</td>
</tr>
</tbody>
</table>

Source: Fehr-Peers Transportation Consultants, 2017

Freeway Operations

Freeway operations were analyzed for the a.m. and p.m. peak hours. Results show freeway mainline segments operate at LOS C or better during both peak hours in Table 3-10.
Table 3-10: Existing (2016) Conditions Peak Hour Freeway Operations

<table>
<thead>
<tr>
<th>Intersection</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Delay</td>
<td>LOS</td>
</tr>
<tr>
<td>1 - Avenue K Northbound Loop On-Ramp (Eastbound)</td>
<td>15.1</td>
<td>B</td>
</tr>
<tr>
<td>2 - Avenue K Northbound Slip On-Ramp (Westbound)</td>
<td>16.5</td>
<td>B</td>
</tr>
<tr>
<td>3 - SR-14 Northbound between Avenue K and Avenue J-8</td>
<td>13.3</td>
<td>B</td>
</tr>
<tr>
<td>4 - Avenue J-8 Northbound Off-Ramp</td>
<td>19.2</td>
<td>B</td>
</tr>
<tr>
<td>5 - Avenue J Northbound Off-Ramp</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6 - Avenue J Northbound On-Ramp</td>
<td>14.7</td>
<td>B</td>
</tr>
<tr>
<td>7 - SR-14 Northbound between Avenue J and Avenue I</td>
<td>11.5</td>
<td>B</td>
</tr>
<tr>
<td>8 - SR-14 Southbound between Avenue I and Avenue J</td>
<td>9.8</td>
<td>A</td>
</tr>
<tr>
<td>9 - Avenue J Southbound Off-Ramp</td>
<td>15.5</td>
<td>B</td>
</tr>
<tr>
<td>10 - Avenue J Southbound On-Ramp</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>11 - Avenue J-8 Southbound On-Ramp</td>
<td>17.2</td>
<td>B</td>
</tr>
<tr>
<td>12 - SR-14 Southbound between Avenue J-8 and Avenue K</td>
<td>11.5</td>
<td>B</td>
</tr>
<tr>
<td>13 - Avenue K Southbound Off-Ramp</td>
<td>17.5</td>
<td>B</td>
</tr>
</tbody>
</table>

Source: Fehr-Peers Transportation Consultants, 2017

Transit Service and Facilities

Antelope Valley Transit Authority

Line 1 runs north/south along 10th Avenue West, with a stop at Avenue J. Line 1 connects to the Palmdale and Lancaster Metrolink Stations and has 20-minute headways during peak periods, and 30- to 60-minute headways during off-peak periods.

Line 7 runs east/west along Avenue J between 30th Street West and 10th Street West, in the study area. Line 7 connects to the Lancaster Metrolink Station and has 60-minute headways.

Line 11 north/south along 15th Street West within the study area, connecting Lancaster City Park with the Antelope Valley Hospital. Headways are 30 minutes between 6:00 a.m. and 6:00 p.m., and one hour between 6:00 and 11:00 p.m.

Line 12 runs north/south along 30th Street West and east/west along Avenue J between Lancaster City Park and Avenue J/20th Street East. Line 12 operates with 30-minute headways between 5:00 a.m. and 6:00 p.m., and 1-hour headways between 6:00 and 10:00 p.m.
Kern County Transit

Line 100 connects Lancaster with Bakersfield, running east/west along Avenue J, and north/south along SR-14, through the study area, using the SR-14/Avenue J interchange. From Lancaster, Line 100 runs three a.m. buses each, eastbound and westbound, and four p.m. buses each, eastbound and westbound, per day.

Line 250 connects Lancaster with California City, running north/south along 30th Street West, east/west along Avenue J, and north/south along SR-14, through the study area, using the SR-14/Avenue J interchange. Line 250 runs two a.m. buses each, NB and SB, and three PM buses each, NB and SB, per day.

Facilities

Within the study area, there are bus stops with shelters and benches at locations such as 25th Street West/Avenue J and 20th Street West/Avenue J. There are several other bus stops within the study area without benches or shelters.

Bicycle and Pedestrian Services

There are concrete sidewalks along both sides of Avenue J, 20th Street West, and most of Avenue J-8, within the study area.

The following intersections with crosswalks across all four legs are:

- Avenue J & 30th Street West
- Avenue J & 27th Street West
- Avenue J & 25th Street West
- Avenue J & 20th Street West
- Avenue J & 15th Street West
- Avenue J & 10th Street West
- Avenue J-8 & 15th Street West
- Avenue J-8 & 20th Street West
- Avenue J-8 & 25th Street West
- Avenue J-8 & 30th Street West

Other intersections within the study area have marked crosswalks at some locations.

The only bicycle facility in the study area is a bike lane on Avenue J-8 between west of 20th Street West to the edge of the study area.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.16(a) Less Than Significant Impact. The project would enhance operational capacity at the SR-14 (SR-138)/Avenue J Interchange, reduce congestion on the local street network, improve way-finding, and improve the safety of the interchange and local streets. The proposed improvements under the four build alternatives would not be expected to
increase traffic volume above existing conditions because the project would not increase roadway capacity in the project area. However, the project improvements could result in changes to traffic circulation within the project area, which could affect the surrounding intersections, the interchange ramps, and the freeway segments.

During the construction period, temporary lane closures are anticipated for approximately 18 months. Construction activities could affect access to surrounding commercial centers, schools, and hospitals, specifically businesses northwest of the Avenue J and SR-14 (SR-138) Intersection. Businesses and public buildings, as well as housing, schools, and hospitals, located along impacted roadways would be provided signage to alert vehicles about detours during construction (measure T-3). A traffic management plan would be prepared to implement detours and manage traffic flow during project construction (T-1). Access to local businesses, housing, schools, and hospitals would be improved following construction.

**Intersection Operations**

Traffic is analyzed using LOS. LOS is a measure of traffic operating conditions which varies from LOS A (indicating free-flow traffic conditions with little or no delay) to LOS F (representing over-saturated conditions where traffic flows exceed design capacity resulting in long queues and delays). These LOS ratings also represent the perspective of motorists and are an indication of the comfort and convenience associated with driving. LOS calculations include inputs, such as peak hour traffic volumes, lane configurations, and signal timing plans.

All intersections are expected to operate at acceptable LOS D or better during peak hours in Opening Year 2020, across all Build Alternatives. In Design Year 2040, 15th Street West and Avenue J-8 are expected to operate at LOS E in the PM peak hour under Alternatives 2A and 2B, while all other intersections are expected to operate at LOS D or better.

**Ramp Volumes**

As part of the project, freeway access would change. Changes in freeway access, would alter vehicle travel patterns and volumes on the various ramps within the project area. Construction of a full interchange at Avenue J would lead to a reduction in the number of vehicles using the existing ramp at Avenue J-8 and 20th Street West. Further, subsequent modifications to both partial interchanges, depending on which alternative is selected, would also result in changes to travel patterns within the project area.

**Freeway Operations**

The anticipated LOS for freeway segments would increase following project construction. Freeway segments would operate at LOS C or better in both peak hours by Opening Year 2020, for all build alternatives. By Design Year 2040, five of the analyzed segments on SR-14 (SR-138) would decrease to LOS D in at least one alternative.

The queuing at freeway off-ramps would not exceed storage capacity in Opening Year (2020) or Design Year (2040) for any of the Build Alternatives. However, the maximum ramp metering rate preferred by Caltrans would result in vehicle queuing exceeding the storage provided at the proposed Avenue J SB on-ramp under the following project alternatives:
Chapter 3 California Environmental Quality Act (CEQA) Checklist

- Alternatives 2A and 2B (Opening Year 2020, PM peak hour)
- All Build Alternatives (Design Year 2040, PM peak hour)

Keeping the SB on-ramp at Avenue J-8 (proposed under Alternatives 1 and 3), would alleviate the vehicle queuing under Opening Year 2020 conditions. In Design Year 2040, widening the on-ramp to two mixed-flow lanes would also alleviate anticipated queuing.

Bicycle and Pedestrian Facilities

The build alternatives would enhance pedestrian and bicycle facilities in the project area. Enhanced bicycle and pedestrian facilities, and additional signage to improve way-finding for freeway and local street access would be implemented.

The Institute of Transportation Engineers (ITE) published its Recommended Design Guidelines to Accommodate Pedestrians and Bicycles at Interchanges (RP-039A) in June 2015. The guidelines identify specific dimensions, safety features, signing, pavement markings, design geometries, and other treatments to improve safety and accessibility for pedestrians and bicyclists at interchanges. Potential alterations to the ramp designs that could improve comfort and safety for pedestrians and bicyclists include narrowing the entrances at on-ramps to only one vehicle lane to reduce crossing distance for pedestrians, extending the planned bicycle lane on Avenue J east of 20th Street, and enhancing the existing bicycle facilities on Avenue J-8. Each on-ramp has only one right-turn from local streets serving the on-ramp, and vehicular capacity would not be affected by narrowing the on-ramps. On-ramps would widen after the crossing to accommodate both a general travel lane and high-occupancy vehicle (HOV) lane.

Continuous sidewalks would be maintained along both sides of Avenue J. Existing crosswalks would be maintained at all signalized intersections. At the SR-14 (SR-138) SB off-ramp and Avenue J, new crosswalks would be added on the north, west, and south legs of the intersection, with the addition of the SB on-ramp. A traffic signal would also be added to the intersection of SR-14 (SR-138) NB ramps and Avenue J, where new crosswalks would be added on the north, east, and south legs of the intersection, with the addition of the NB off-ramp.

Public Transportation

Under the build alternatives, project construction and operation would not result in access reduction, displacement, or relocation of transit stops. Temporary lane closures during the construction period are anticipated to take approximately 18 months; however, the lane closures would not interfere with the Antelope Valley Transit Authority (AVTA) transit stops. Therefore, no impacts on public transportation would result from the project.

During the construction period, temporary lane closures are anticipated for approximately 18 months. Temporary road closures and traffic from project construction would be minimized through development of a traffic management plan, measure T-1. A temporary detour route would also be provided, which would ensure that vehicle, pedestrian, and bicycle access in the project area would not be substantially affected. Existing access to adjacent residences and businesses would resume following construction.

Conclusion
The project would not result in any changes in available parking, less than significant impacts on transportation, and overall improvements to access and circulation in the project area. Impacts on access, circulation, and parking would be less than significant.

**Avoidance, Minimization, and Mitigation Measures:**

**T-1:** Temporary road closures and traffic from project construction would be minimized through development of a traffic management plan.

**T-2:** Continuous sidewalks would be maintained along both sides of Avenue J. Existing crosswalks would be maintained at all signalized intersections. At the SR-14 (SR-138) SB off-ramp and Avenue J, new crosswalks would be added on the north, west, and south legs of the intersection, with the addition of the SB on-ramp. A traffic signal would also be added to the intersection of SR-14 (SR-138) NB ramps and Avenue J, where new crosswalks would be added on the north, east, and south legs of the intersection, with the addition of the NB off-ramp.

**T-3:** Signage will be provided to alert customers of traffic detours and access changes so that access to businesses along impacted roadways is not affected.

**3.16(b) Less Than Significant Impact.** It is recommended that LOS on roadways maintain LOS E or better; if they do not, the City must prepare a deficiency plan to bring the LOS back up to LOS E. Under the Construction Management Plan (CMP) legislation, once a roadway is entered into the CMP network it cannot be deleted, even if service levels are ultimately improved. A project that would trigger a regional trip analysis is one which contributes significant traffic to the regional network, decreasing its levels of service. The City is responsible for monitoring and reporting service levels on all CMP roadways.

All intersections are expected to operate at LOS D or better in Opening Year (2020) across the project alternatives. In Design Year (2040), 15th Street West & Avenue J-8 is expected operate at LOS E in the PM during under Alternatives 2 and 2B, while all other intersections are expected to operate at LOS D or better across the project alternatives.

The project would include demolition and development of new and existing roadway and pedestrian infrastructure. Access to surrounding major and secondary highways would be maintained during operation of the project. The project would promote multi-modal active transportation components, including linking to existing and future bicycle and pedestrian facilities. Other federally-funded projects in proximity to the project area have components which include intersection improvements for bicycles and pedestrians, landscaping features, and bicycle lanes in the project area. In addition, during construction, vehicles or equipment along the roadway may temporarily result in traffic congestion. Therefore, impacts would be less than significant.

**3.16(c) No Impact.** The project area is not located in the AIA for the General William J. Fox Airfield and Palmdale Regional Airport, which are under the jurisdiction of the Los Angeles County Airport Land Use Commission. The project would not result in any changes to air traffic patterns because the project would not affect air traffic levels or change the location of nearby airports or air operations; therefore, there would be no impacts.

**3.16(d) Less Than Significant Impact.** The project would comply with City standards, and would incorporate design elements that optimize safety (e.g., field lighting, roadway lighting, etc.).
During construction, potential safety hazards could result from construction vehicles and equipment either traveling or being staged along the roadway, which could result in potential conflicts with oncoming traffic. However, temporary traffic control measures and a construction staging plan would be implemented to minimize hazards from incompatible uses (e.g., construction equipment). Therefore, impacts related to design features or incompatible uses would be less than significant.

3.16(e) Less Than Significant Impact. The project area is surrounded by prominent streets listed in Response 3.16 a) that would provide access for emergency vehicles. Access to SR-14 (SR-138) from nearby interchanges would be maintained during operation of the project. During construction, emergency vehicles or personal vehicles travelling during an emergency may use segments of the roadway in the project area, which could conflict with construction vehicles and equipment that are traveling or being staged along the roadway for project construction. However, construction-related traffic impacts on emergency services or emergency evacuation routes would be minimized with implementation of traffic control measures, a construction staging plan, and coordination with emergency service providers to ensure that appropriate detour routes are provided, if necessary. Therefore, impacts would be less than significant.

Avoidance and Minimization Measures:

The following avoidance measure will be implemented as part of the project.

T-4: Coordination between the City and local emergency services, including Antelope Valley Hospital, would be conducted prior to (pre-construction meeting) and during project construction to maintain emergency response times and ensure consistency with the City’s Emergency Operations Plan.

3.16(f) Less Than Significant Impact. The project would promote multi-modal active transportation components, including linkages to existing and future bicycle and pedestrian facilities. The only bicycle facility in the study area is a bike lane on Avenue J-8 between west of 20th Street West to the edge of the project area. The project would also enhance pedestrian and bicycle facilities in the study area. Enhanced bicycle and pedestrian facilities, and additional signage to improve wayfinding for freeway and local street access would be implemented.

The ITE published its Recommended Design Guidelines to Accommodate Pedestrians and Bicycles at Interchanges (RP-039A) in June 2015. The guidelines identify specific dimensions, safety features, signing, pavement markings, design geometries, and other treatments to improve safety and accessibility for pedestrians and bicyclists at interchanges. Potential alterations to the ramp designs that could improve comfort and safety for pedestrians and bicyclists include narrowing the entrances at on-ramps to only one vehicle lane to reduce crossing distance for pedestrians, extending the planned bicycle lane on Avenue J east of 20th Street, and enhancing the existing bicycle facilities on Avenue J-8. Each on-ramp has only one right-turn from local streets serving the on-ramp, and vehicular capacity would not be affected by narrowing the on-ramps. On-ramps would widen after the crossing to accommodate both a general travel lane and high-occupancy vehicle (HOV) lane.

Continuous sidewalks would be maintained along both sides of Avenue J, and existing crosswalks would be maintained at all signalized intersections during and following
construction. At the SR-14 (SR-138) SB off-ramp and Avenue J, new crosswalks would be added on the north, west, and south legs of the intersection, with the addition of the SB on-ramp. A traffic signal would also be added to the intersection of SR-14 (SR-138) NB ramps and Avenue J, where new crosswalks would be added on the north, east, and south legs of the intersection, with the addition of the NB off-ramp.

The project would be consistent with adopted policies, plans, and programs supporting alternative transportation; therefore, impacts would be less than significant.
3.17 Tribal Cultural Resources

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIBAL CULTURAL RESOURCES. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.</td>
<td>☐</td>
<td>☐</td>
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<td>☐</td>
</tr>
</tbody>
</table>

An ASR was completed for the project in August 2018 (Statistical Research, Inc., 2018). Results of the study are included in the discussion below.

**REGULATORY SETTING**

**State**

The CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California PRC Section 5024.1 established the CRHR and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, AB 52 added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

**Local**

The *City of Lancaster General Plan 2030* has recognized the rich tribal and cultural history of Lancaster and makes a strong effort to preserve and highlight the features that make Lancaster’s history unique. The goals and policies identified in Section 3.5 are identified in the plan and are related to the project.
Chapter 3 California Environmental Quality Act (CEQA) Checklist

AFFECTED ENVIRONMENT

The NAHC was contacted for a list of traditional-use areas or sacred sites within the project area and for a list of specific Native American groups or individuals who could provide additional information on cultural resources within the project area. On August 19, 2015, a request for a Sacred Lands Files search was submitted to the NAHC. On September 29, 2015, the NAHC responded that the Sacred Lands Files search was completed, with negative results (Statistical Research, Inc., 2018).

The NAHC response letter included a list of four tribes with traditional lands or cultural places located within the boundaries of Los Angeles County who should be invited to consult on the project for the purpose of mitigating impacts to tribal cultural resources: the San Manuel Band of Mission Indians, the Fernandeño Tataviam Band of Mission Indians, the Kitanemuk and Yowlumne Tejon Indians, and the San Fernando Band of Mission Indians. On January 31, 2017, Statistical Research, Inc. sent a letter to each of these tribes, asking them to provide additional information on cultural resources within the project area under the requirements of AB 52. Statistical Research, Inc. then followed up with each of the four tribes with e-mails and phone calls. The San Manuel Band of Mission Indians responded and said that they request consultation with the City of Lancaster, and requested that archaeological and Native American monitoring occur during any ground-disturbing activities. The other tribes did not respond. Native American consultation documentation is available in Appendix B.

ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.17(a) No Impact. Lists of cultural resources were evaluated and reviewed for their eligibility for listing in the CRHR and the NRHP (Statistical Research, Inc., 2018). Sixty historical-period cultural resources were identified within the one-mile records search buffer area around the project area; however, none of these resources are identified as a tribal cultural resource. Additionally, NRHP reported that no traditional-use areas or sacred sites were identified within the project area. Therefore, there would be no impacts.

3.17(b) Less Than Significant Impact. There is low potential for the discovery of tribal cultural resources in the project area. On July 19, 2018, Sarah Mattiussi Gutierrez, Associate Environmental Planner (Archaeology), wrote to Lee Claus, Director of Cultural Resources Management for the San Manuel Band of Mission Indians, stating that based on the results of the geoarchaeological analysis presented in the latest ASR (Statistical Research, Inc., 2018), archaeological monitoring is not warranted within the area of potential effects (APE). This memorandum concluded the government-to-government consultation between Caltrans and the San Manuel Band of Mission Indians. Project impacts would be less than significant on cultural resources of California Native American tribes.

If human remains were discovered in the project area during project construction and the coroner determines that the human remains are of Native American origin, the Native American Heritage Commission (NAHC) would be notified to determine the MLD for the area per CUL-3.
## 3.18 Utilities and Service Systems

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UTILITIES AND SERVICE SYSTEMS. Would the Project:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f. Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>g. Comply with federal, state, and local statutes and regulations related to solid waste?</td>
<td>☐</td>
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</tbody>
</table>

A CIA was prepared for the project (GPA Consulting, 2018d). The results are discussed below.

**AFFECTED ENVIRONMENT**

**Water and Wastewater**

The City receives its water utility services through the Los Angeles County Water Works District No. 40, Antelope Valley, Regions 4 and 34. Approximately 55 percent of the water supplied by the district is treated or banked surface water, and the remaining 45 percent is groundwater extracted from district wells, as well as the Sacramento River/San Joaquin Delta via the State Water Project (Los Angeles County Waterworks Districts, 2015). Los Angeles County Water Works District No. 40, Antelope Valley, Regions 4 and 34 has 49,775 active municipal connections and has supplied 34,570 acre-feet of water annually as of 2015.
The Lancaster Water Reclamation Plant (WRP) is located at 1865 West Avenue D and occupies 554 acres east of SR-14 (SR-138). The Lancaster WRP provides tertiary treatment of up to 18 million gallons of wastewater per day (Sanitation Districts of Los Angeles County, n.d.). The Lancaster WRP serves a population of approximately 160,000 people. In addition to producing recycled water, the Lancaster WRP processes all wastewater solids generated at the plant. The wastewater solids are anaerobically digested, centrifugally dewatered, and further dried in drying beds. The dried biosolids are hauled away and beneficially used. Methane gas is produced during the digestion process and is used to heat the anaerobic digesters.

Electric Power and Natural Gas
As of May 13, 2014, the City elected to implement a Community Choice Aggregation (CCA) program for their local energy supply through AB 117. Through the Lancaster Community Choice Aggregation (LCCA) program, electricity would be obtained from competitive suppliers to meet the City’s retail electric service customers’ electricity demand while the electricity would continue to be delivered utilizing the SCE distribution grid (City of Lancaster, 2015). Participation in the CCA program is completely voluntary; energy consumers maintain the option to receive bundled retail electric service from SCE or an alternative provider. LCCA allows the City to utilize alternative fuels whenever possible to achieve energy goals. Energy goals include the State’s California Renewable Portfolio Standard requiring 25 percent of electricity used within the City to be provided by renewable generation by 2016 and 33 percent by 2020, and the City’s goal to become the first Zero Net Energy City.

LCCA selected two energy suppliers that provide energy for the program under an initial energy services contract. The first supplier, Constellation, is a leading competitive energy supplier in the United States, and is the customer-facing business of Exelon. Constellation provides retail and wholesale customers with electricity, natural gas, and renewable energy supply services, in addition to energy management services, which includes renewable energy development. The second supplier, Direct Energy, is one of North America’s largest competitive energy suppliers of electricity, natural gas and related services. Direct Energy is wholly owned by Centrica plc, one of the world’s leading integrated energy companies. The City continues to pursue and implement renewable energy solutions to supplement existing third-party energy supply, including development of a 20-acre, 5-megawatt Sierra SunTower solar farm planned for completion in 2018 (City of Lancaster, n.d.).

Solid Waste
Waste Management disposal provides trash collection services in Lancaster. The majority of the City’s waste is taken to the Lancaster Landfill and Recycling Center. The City currently disposes of nearly 2,500 tons of municipal solid waste to the landfill annually (City of Lancaster, 2016). The City identified several initiatives to reduce waste production in the City of Lancaster Climate Action Plan, published in June 2016.

Telecommunications Systems
Telecommunications companies that provide services to the project area include Verizon, CenturyLink Communications, AT&T, and Sprint.
ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES

3.18(a) No Impact. The project would not include any facilities that would require wastewater treatment. Therefore, there would be no impacts.

3.18(b) No Impact. The project would not require or result in the construction of a new water or wastewater treatment facility, or the expansion of an existing facility. Therefore, there would be no impacts.

3.18(c) Less Than Significant Impact. The project would include the construction of new interchange ramps and could include a new collector road (depending on the alternative chosen), which would increase impervious surface areas, or result in changes to topography in the project area. These modifications would affect existing drainage patterns, and the rate or amount of surface runoff during project operation. Project design features, including installation of a permanent stormwater treatment facility would be implemented as part of the project per avoidance and minimization WQ-1. Expansion of existing drainage facilities would not be required. Impacts on stormwater drainage facilities would be less than significant.

3.18(d) Less Than Significant Impact. The project is a roadway infrastructure improvements project that would include replacement and addition of landscaping. However, landscaping would consist of drought tolerant tree and plant species, native to the Mojave and Sonoran deserts or consistent with existing landscaping. Therefore, the project would not require additional water for landscape irrigation. Additional water could temporarily be required during the construction of the interchange. The amount of water needed would not necessitate any new or expanded entitlements. Impacts would be less than significant.

3.18(e) No Impact. The project would not require the need for wastewater treatment. Therefore, there would be no impacts.

3.18(f) Less Than Significant Impact. The Lancaster Landfill and Recycling Center services the City’s waste needs. The Lancaster Landfill and Recycling Center is located in an unincorporated area of Antelope Valley, in Los Angeles County. This facility is a Class III landfill and is not authorized to accept hazardous waste (California Environmental Protection Agency, 2016). The site currently encompasses 276 acres of land, where 209 acres are permitted for waste disposal (Waste Management, 2017). The 2014 average waste quantities disposed at this facility was 311 tons (County of Los Angeles Department of Public Works, 2015). As of 2014, the landfill’s remaining disposal capacity was approximately 12 million tons (County of Los Angeles Department of Public Works, 2015). The remaining life for this landfill, as of December 2014, is estimated to be approximately 27 years, and is based on land use/solid waste facility permit restrictions (County of Los Angeles Department of Public Works, 2015). Project construction would be short-term, and waste would be generated during the removal of structures. Because the Lancaster Landfill and Recycling Center’s remaining disposal capacity is 12 million tons, and the remaining life of the landfill is approximately 27 years, the landfill has sufficient capacity to accommodate temporary construction waste generated by the project. Therefore, impacts on receiving landfills would be less than significant.
3.18(g) **No Impact.** The project would not result in the long-term generation, or disposal of, solid waste during operation. The disposal of solid waste during construction would be short-term, and would be conducted in compliance with federal, state, and local statues and regulations related to solid waste. Therefore, there would be no impacts.
3.19 Mandatory Findings of Significance

<table>
<thead>
<tr>
<th>Threshold</th>
<th>Significant and Unavoidable Impact</th>
<th>Less Than Significant with Mitigation Incorporated</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

**MANDATORY FINDINGS OF SIGNIFICANCE. Would the Project:**

<p>| | | | |</p>
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b.</td>
<td>Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c.</td>
<td>Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL CONSEQUENCES, AVOIDANCE, MINIMIZATION AND/OR MITIGATION MEASURES**

3.19(a) **Less Than Significant with Mitigation Incorporated.** The project would replace and widen an existing roadway near the Amargosa Creek flood channel to improve capacity at the existing interchange and local roadway operations on Avenue J between 15th Street West and 25th Street West. The improvements at the SR-14 (SR-138)/Avenue J and Avenue J-8 interchanges would help reduce congestion, enhance operational capacity, improve local circulation of traffic, improve wayfinding, and provide multi-modal facilities in the form of bikeways and sidewalks.

The NES prepared for the project indicated that special-status animals may be present in the project area and could be impacted as a result of the project. Impacts would require mitigation as instructed in Section 3.4. The BSA was identified as potential habitat for several special-status species. If special status species are taken, or habitat is taken, mitigation would be required.

3.19(b) **Less Than Significant with Mitigation Incorporated.** The project could have potential impacts on biological resources. Therefore, the project could contribute to cumulative impacts on these resources. The geographic boundary for cumulative impacts is the
SCAG region. Other current and reasonably foreseeable transportation projects in the region are listed in the SCAG 2016-2040 RTP/SCS.

All of the project’s impacts would be less than significant or reduced to less than significant with implementation of mitigation measures. Therefore, with implementation of measures discussed in this IS, the project’s contribution to cumulative impacts would not be cumulatively considerable.

3.19(c) Less Than Significant Impact. The IS analysis shows that the project would not have environmental effects causing substantial adverse effects on human beings, directly or indirectly. Potential environmental effects on human beings that could result from the project would be less than significant as identified in Sections 3.1 through 3.18 of this IS.
3.20 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (1, 1, 1, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation.¹ In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.² The dominant GHG emitted is CO₂, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation”. “Greenhouse gas mitigation” is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. “Adaptation” refers to planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

REGULATORY SETTING

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The NEPA (42 United States Code [USC] Section 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The FHWA recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.³ This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”⁴ Program and project elements that foster

² https://www.arb.ca.gov/cc/inventory/data/data.htm
³ https://www.fhwa.dot.gov/environment/sustainability/resilience/
⁴ https://www.sustainablehighways.dot.gov/overview.aspx
sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and U.S. EPA’s assessment of the scientific evidence that form the basis for U.S. EPA’s regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010 and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory

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5 https://one.nhtsa.gov/Laws-(&-Regulations/CAFE-%E2%80%93-Fuel-Economy
obligations and the rules’ long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, U.S. EPA, and CARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the U.S. EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered U.S. EPA to reopen the review and reconsider the mileage target.6

NHTSA and U.S. EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO₂ emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

AB 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the CARB to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California’s GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of AB 32 in 2006 and Senate Bill 32 in 2016.

AB 32, Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that CARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.” The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least 10 percent by the year 2020. CARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

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6 http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256 and
Senate Bill 97, Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires CARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a Sustainable Communities Strategy (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

EO B-16-12 (March 2012) orders State entities under the direction of the Governor, including CARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e). Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

ENVIRONMENTAL SETTING

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required CARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by CARB in 2008 and must be updated every 5 years. The Scoping Plan was first approved by CARB in 2008 and must be updated every 5 years. The second updated plan, California’s 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and Senate Bill 32 (California Air Resources Board, 2018).

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, CARB released the GHG inventory for California. CARB is responsible for maintaining and updating California’s GHG Inventory per H&SC Section 39607.4. The associated

7 2018 Edition of the GHG Emission Inventory Released (July 2018):
https://www.arb.ca.gov/cc/inventory/data/data.htm
forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3-4 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists CARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO2e. The 2018 edition of the GHG emissions inventory found total California emissions of 429 MMTCO2e for 2016.

Figure 3-3: 2020 Business as Usual (BAU) Emissions Projection 2014 Edition

https://www.arb.ca.gov/cc/inventory/data/bau.htm

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 MMTCO2e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO2e.

PROJECT ANALYSIS

The following discussion incorporates findings from an Air Quality Analysis that was completed for the project in June 2018 (Michael Baker International, 2018a).

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8 The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4)
An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.\(^9\) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

**OPERATIONAL EMISSIONS**

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective all four strategies should be pursued concurrently.

FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that the state of California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO\(_2\) from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour (see Figure 3-4). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO\(_2\), may be reduced.

The SCAG 2016 RTP/SCS includes proposed transportation improvements to be integrated and coordinated with proposed land use changes that would lead to reduced congestion, reduced vehicle miles traveled (VMT), and increased transit, walking, and biking options. The RTP/SCS includes integrated transportation and land use strategies to promote active transportation opportunities, compact development, car sharing and ride sourcing, and technology in zero-emission vehicles and neighborhood electric vehicles. The Program Environmental Impact Report for the 2016 RTP/SCS determined that across the six counties in the SCAG region, the 2016 RTP/SCS would result in an approximately 24 percent decrease in GHG emissions by 2040. The 2016 RTP/SCS also includes land use strategies that seek to balance the region’s land use choices and transportation investments.

By 2040, the region’s population is expected to grow by more than 20 percent to 22 million people—an increase of 3.8 million people (since 2012). The quantitative analysis of GHG emissions that follows demonstrates that the improvements would reduce GHG emissions from

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\(^9\) This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).
existing levels in Opening Year (2020) and Horizon Year (2040), and thereby would be consistent with and contribute to achieving the RTP/SCS goal of 24 percent reduction in GHGs by 2040.

**Figure 3-4: Possible Use of Traffic Operation Strategies in Reducing On-Road CO₂ Emissions**

![Graph showing traffic operation strategies](image)

*Source: Barth & Boriboonsomsin, 2010*

Modal choice was considered during the early planning phases of the project. Transit-only alternatives were not considered for the project, because they would not meet the purpose and need of the project. However, the project proposes to improve operations and capacity both on the SR-14 mainline and local streets. Enhancing operations and capacity for vehicles will allow local transit services, such as AVTA, to operate with improved efficiency. The proposed bike lanes and sidewalk improvements encourage and provide multi-modal transportation options on Avenue J. The complete streets improvements provide the community with a variety of transportation options. The availability of multiple modes of transportation will further reduce congestion on local streets. The Antelope Valley Line is located approximately 1.5 miles east of the project and runs along Sierra Highway. The proposed improvements on SR-14 and local streets will positively impact existing transit infrastructure and create multiple transportation options for the community.

**Quantitative Analysis**

A quantitative analysis of VMT, vehicle hours traveled (VHT), and GHG emissions for all build alternatives and the No Build Alternative was conducted for the *Air Quality Assessment* (Michael Baker International, 2018a). The 20-year horizon applied is based on the 2040 projected volumes from the SCAG 2012 RTP SCS model based on a 2020 opening year scenario.

**Table 3-11** depicts the existing and future emissions from vehicles traveling in the project area. The projections conservatively assume that the additional ramps proposed by the project would attract traffic from the surrounding area. As shown, the existing traffic in the study area currently generates approximately 111.60 metric tons per year of CO₂ (MTCO₂) per year. CO₂ emissions would decrease to 104.94 MTCO₂ per year under the 2020 No Build scenario, 106.04 MTCO₂ under Alternative 1, 106.02 MTCO₂ under Alternative 2A, 106.05 MTCO₂ under Alternative 2B,
and 105.65 MTCO\textsubscript{2} under Alternative 3. During the 2040 No Build scenario, emissions are projected to be 90.18 MTCO\textsubscript{2} in the study area; 96.99 MTCO\textsubscript{2} under Alternative 1, 96.87 MTCO\textsubscript{2} under Alternative 2A, 97.03 MTCO\textsubscript{2} under Alternative 2B, and 94.50 MTCO\textsubscript{2} under Alternative 3.

Table 3-11: Annual Greenhouse Gas Emissions

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Vehicle Miles Traveled (VMT)</th>
<th>CO\textsubscript{2} (metric tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing (2016)</td>
<td>224,859</td>
<td>111.60</td>
</tr>
<tr>
<td><strong>2020 Emissions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Build (2020)</td>
<td>231,598</td>
<td>104.94</td>
</tr>
<tr>
<td>Alternative 1 (Full J Interchange) (2020)</td>
<td>234,020</td>
<td>106.04</td>
</tr>
<tr>
<td>Alternative 2A (Full J, no J-8 Interchange) (2020)</td>
<td>233,979</td>
<td>106.02</td>
</tr>
<tr>
<td>Alternative 2B (Full J, partial J-8) (2020)</td>
<td>234,035</td>
<td>106.05</td>
</tr>
<tr>
<td>Alternative 3 (Frontage Road) (2020)</td>
<td>233,153</td>
<td>105.65</td>
</tr>
<tr>
<td><strong>2040 Emissions</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Build (2040)</td>
<td>272,445</td>
<td>90.18</td>
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<tr>
<td>Alternative 1 (Full J Interchange) (2040)</td>
<td>293,023</td>
<td>96.99</td>
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<tr>
<td>Alternative 2A (Full J, no J-8 Interchange) (2040)</td>
<td>292,660</td>
<td>96.87</td>
</tr>
<tr>
<td>Alternative 2B (Full J, partial J-8) (2040)</td>
<td>293,151</td>
<td>97.03</td>
</tr>
<tr>
<td>Alternative 3 (Frontage Road) (2040)</td>
<td>285,503</td>
<td>94.50</td>
</tr>
</tbody>
</table>

*Note: Emissions calculated with EMFAC2014*  
*Source: Michael Baker International, 2018a*

Annual MTCO\textsubscript{2} emissions are expected to generally decrease in the future as a result of advances in vehicle technology. However, the proposed project is expected to attract traffic from the surrounding area, which would result in small increases in MTCO\textsubscript{2} emissions in the project area under the Build Alternatives (one percent by 2020 and seven percent by 2040), compared to the No Build scenario. It should be noted that the project would improve operational deficiencies and would not induce additional growth in the area.

**Limitations and Uncertainties with Modeling**

**EMFAC**

Although EMFAC can calculate CO\textsubscript{2} emissions from mobile sources, the model does have limitations when it comes to accurately reflecting changes in CO\textsubscript{2} emissions due to impacts on traffic. According to the National Cooperative Highway Research Program report, *Development of a Comprehensive Modal Emission Model* (April 2008) and a 2009 University of California study (Barth & Baroonsomsin, 2009) brief but rapid accelerations, such as those occurring during congestion, can contribute significantly to a vehicle's CO\textsubscript{2} emissions during a typical urban trip. Current emission-factor models do not distinguish the emission of such modal events (i.e., acceleration, deceleration) in the operation of a vehicle and instead estimate emissions by average trip speed. It is difficult to model this because the frequency and rate of acceleration or deceleration that drivers chose to operate their vehicles depend on each individual's human behavior, their reaction to other vehicles' movements around them, and their acceptable safety margins. Currently, the U.S. EPA and the CARB have not approved a modal emissions model that is capable of conducting such detailed modeling. This limitation is a factor to consider when
comparing the model’s estimated emissions for various project alternatives against a baseline value to determine impacts.

Other Variables

With the current understanding, project-level analysis of greenhouse gas emissions has limitations. Although a GHG analysis is included for this project, there are numerous external variables that could change during the design life of the proposed project and would thus change the projected CO₂ emissions.

First, vehicle fuel economy is increasing. The U.S. EPA’s annual report, “Light-Duty Automotive Technology and Fuel Economy Trends: 1975 through 2016,” which provides data on the fuel economy and technology characteristics of new light-duty vehicles including cars, minivans, sport utility vehicles, and pickup trucks, confirms that average fuel economy improves each year with a noticeable rate of change beginning in 2005. CAFE standards remained the same between model years 1995 and 2003, subsequently increasing to higher fuel economy standards for future vehicle model years. The U.S. EPA estimates that light duty fuel economy rose by 29 percent from model year 2004 to 2015, attributed to new technology that improved fuel economy while keeping vehicle weight relatively constant. Table 3-12 shows the increases in required fuel economy standards for cars and trucks between Model Years 2012 and 2025, from the National Highway Traffic Safety Administration for the 2012–2016 and 2017–2025 CAFE Standards.

### Table 3-12: Average Required Fuel Economy (mpg)

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Second, new lower-emission and zero-emission vehicles will come into the market within the expected design life of this project. According to the 2013 Annual Energy Outlook (AEO2013):

“LDVs [light duty vehicles] that use diesel, other alternative fuels, hybrid-electric, or all-electric systems play a significant role in meeting more stringent GHG emissions and CAFE standards over the projection period. Sales of such vehicles increase from 20 percent of all new LDV sales in 2011 to 49 percent in 2040 in the AEO2013 Reference case.”

The greater percentage of lower-emissions and zero-emissions vehicles on the road in the future will reduce overall GHG emissions as compared to scenarios in which vehicle technologies and fuel efficiencies do not change.

Third, California adopted a low-carbon transportation fuel standard in 2009 to reduce the carbon intensity of transportation fuels by 10 percent by 2020. The regulation became effective on January 12, 2010 (codified in Title 17, CCR, Sections 95480-95490). Beginning January 1, 2011,
transportation fuel producers and importers must meet specified average carbon intensity requirements for fuel in each calendar year.

CONSTRUCTION EMISSIONS

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can 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, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Based on the RCEM (Version 8.1.0) developed by the SMAQMD, GHG emissions associated with construction of the project would be 3,265.41 metric tons per year of carbon dioxide equivalent (MTCO2e) (Alternatives 1, 2A, and 2B) or 3,151.49 MTCO2e (Alternative 3) over a 16-month period, beginning in mid-2019.

Caltrans Standard Specification require all projects to comply with federal, state, and local rules, regulations, ordinances, and statutes, including those established by the CARB and regional or local air quality districts. Regulations that reduce vehicle emissions, such as idling restrictions, may also reduce GHG emissions. A traffic management plan will be implemented during construction to minimize construction-related detours and vehicle idling to the extent possible.

CEQA CONCLUSION

As Table 3-11 shows, GHG emissions are generally expected to decrease over the project lifetime compared to existing conditions, even as VMT grows. However, under any of the Build Alternatives, the increase of MTCO2 over the No Build Alternative in the study area would be approximately one percent for opening year 2020 and approximately seven percent for Horizon Year 2040. This emission increase under the Build Alternatives conservatively assumes that the additional ramps proposed by the project would attract traffic from the surrounding area. It should be noted that the project would improve operational deficiencies and accommodate future growth and would not induce additional growth in the area. As discussed above, there are also limitations within EMFAC and with assessing what a given CO2 emissions increase means for climate change. Therefore, it is Caltrans’ determination that in the absence of further regulatory or scientific information related to GHG emissions and significance, it is too speculative to make a determination regarding significance of the project’s direct impact and its contribution on the cumulative scale to climate change. However, Caltrans is firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the following section.

GREENHOUSE GAS REDUCTION STRATEGIES

Statewide Efforts

In an effort to further the vision of California’s GHG reduction targets outlined an AB 32 and Senate Bill 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today’s petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent
our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state’s climate adaptation strategy, Safeguarding California.

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown’s key pillars sets the ambitious goal of reducing today’s petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

**Caltrans Activities**

Caltrans continues to be involved on the Governor’s Climate Action Team as the CARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and Senate Bill 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets:

*California Transportation Plan (CTP 2040)*

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California’s future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

Senate Bill 391 requires the CTP to meet California’s climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state’s transportation needs. While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.
Figure 3-5: The Governor’s Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

![California Climate Strategy Diagram]

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans’ internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (California Department of Transportation, 2013).

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

*Caltrans Activities to Address Climate Change* (2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.
PROJECT-LEVEL GHG REDUCTION STRATEGIES

Measures identified in Sections 3.1 to 3.19 shall be implemented in the project to reduce GHG emissions and potential climate change impacts from the project. Project-level measures related to GHG include AQ-1 (requiring compliance with rules and regulations related to reducing short-term construction-related air pollutant emissions), AQ-2 (requiring maintenance of equipment engines to minimize ozone precursor emissions), AQ-4 (requiring adherence to Caltrans Standard Specifications for air pollution), AQ-5 (which requires all construction vehicles and equipment to be equipped with the state-mandated emission control devices), BIO-1, and BIO-2 (regarding preserving and protecting existing trees).

Additionally, the City is in a water-use restricted area, and drought resistant plants would be incorporated in landscaping areas (GHG-1). Although the existing project area does not include an abundance of plants, existing trees would remain and continue to be maintained (BIO-1 and BIO-2). Trees absorb CO₂ and their shade helps reduce warming.

The proposed traffic signals on Avenue J would be integrated with the existing signals along the corridor to optimize the traffic system (GHG-2). By reducing congestion on both SR-14 (SR-138) and local streets, providing multi-modal facilities, the project will contribute to reducing GHG emissions.

GHG-1: Drought resistant plants would be incorporated in landscaping areas. Minimizing water need reduces energy used for irrigation.
GHG-2: The proposed traffic signals on Avenue J would be integrated with the existing signals along the corridor to optimize the traffic system. Smoother-flowing traffic reduces tailpipe emissions.
GHG-3: Use cement blended with the maximum feasible amount of fly ash or other materials that reduce GHG emissions from cement production.
GHG-4: Reduce construction waste and re-use or recycle construction and demolition waste to maximum extent feasible.
GHG-5: Avoid removal of shade trees in or near construction. If removal of shade occurs, it must be replaced to pre-project or better conditions.

Adaptation Strategies

“Adaptation strategies” refer to how Caltrans and others can plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the Council on Environmental Quality (CEQ), the Office of Science and Technology Policy, and the National Oceanic and Atmospheric Administration, released its interagency task force progress report on
October 28, 2011\textsuperscript{12}, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

The U.S. Department of Transportation (DOT) issued \textit{U.S. DOT Policy Statement on Climate Adaptation} in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”\textsuperscript{13}

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (\textit{Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events}).\textsuperscript{14} This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation's transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.\textsuperscript{15}

\textbf{State Efforts}

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, \textit{Sea-Level Rise for the Coasts of California, Oregon, and Washington} (Sea-Level Rise Assessment Report)\textsuperscript{16} was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise

\textsuperscript{12}https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience
\textsuperscript{13}https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm
\textsuperscript{14}https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm
\textsuperscript{15}https://www.fhwa.dot.gov/environment/sustainability/resilience/
impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 2009), 17 which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document*, produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to [sea-level rise]." 18

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

The proposed project is outside the coastal zone and not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

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17 http://www.climatechange.ca.gov/adaptation/strategy/index.html
Chapter 4  COMMENTS AND COORDINATION

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, Project Development Team (PDT) meetings, interagency coordination meetings, and a public hearing. This chapter summarizes the results of the Department’s efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

A Notice of Availability will be published local newspapers (La Opinion and Antelope Valley Press) inviting the public to comment on the proposed project and environmental document and offering the opportunity to request that a public hearing be conducted. In addition, the IS/Proposed Mitigated Negative Declaration and Draft Project Report will be made available for public review at Caltrans District 7, 100 South Main Street, Los Angeles, California; the Lancaster City Hall, 44933 North Fern Avenue, Lancaster, California; the Lancaster Public Library, 601 W Lancaster Boulevard, Lancaster, California; and the County of Los Angeles Library, 5040 West Avenue M-2, Quartz Hill, California 93536.

The IS/Proposed Mitigated Negative Declaration will be circulated for 30 days for public comment. If a public hearing is held, the City will also prepare and publish public notices of the hearing 30 and 15 days before the hearing date. These hearing notices are subject to Caltrans review prior to publication. The City will receive any public comments and transmit them to Caltrans with the finalized copy of the Final Initial Study/Mitigated Negative Declaration (IS/MND). The City will then prepare and submit a Notice of Completion to the California State Clearinghouse and Caltrans. Barring substantial new information requiring additional environmental review, Caltrans will approve the Final IS/MND.

Additionally, continued consultation and coordination between public agencies has occurred throughout preparation of the IS. These efforts are outlined below:

- January 31, 2017: San Manuel Band of Mission Indians, the Fernandeño Tataviam Band of Mission Indians, the Kitanemuk and Yowumne Tejon Indians, and the San Fernando Band of Mission Indians. Copies of letters can be found in Appendix B.
- April 18, 2018: a copy of the latest ASR draft was sent to the San Manuel Band of Mission Indians for their review and input. Caltrans requested comments by the tribe to be received by April 30th, 2018.
- April 30, 2018: San Manuel Band of Mission Indians responded with comments and requested to have a meeting with Caltrans District 7 Cultural staff to further discuss how to better approach monitoring areas of high sensitivity.
- May 23, 2018: Caltrans District 7 Archaeologist Sarah Mattiussi Gutierrez and District 7 Native American Coordinator Mariam Dahdul talked to San Manuel Band of Mission Indians’ Director of Cultural Resources Management Lee Clauss. Ms. Clauss has concerns on how to best approach monitoring of areas of the project that appeared to have a high potential for buried resources. Caltrans stated that those potentially sensitive
areas appeared to be outside of the Project Area Limits (PAL), but it was agreed that additional information needed to be gathered with regards to construction activities in the areas in question. Once the additional information is gathered, it will be determined whether monitoring is necessary. Additional comments to the report were pointed out as well. Caltrans staff will be addressing these comments with the consultant (Statistical Research, Inc.) and will be contacting Ms. Clauss once the comments have been addressed.

- July 19, 2018: Sarah Mattiussi Gutierrez, Associate Environmental Planner (Archaeology), wrote to Lee Claus, Director of Cultural Resources Management for the San Manuel Band of Mission Indians, stating that based on the results of the geoarchaeological analysis presented in the latest ASR (Statistical Research, Inc., 2018), archaeological monitoring is not warranted within the APE. This memorandum concluded the government-to-government consultation between Caltrans and the San Manuel Band of Mission Indians.
Chapter 5  LIST OF PREPARERS

The following staff assisted in the preparation of this document:

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Laura Comstock, Associate Environmental Planner  
Danielle Thayer, Associate Environmental Planner  
Alen Estrada-Rodas, Environmental Planner
# Chapter 6 DISTRIBUTION LIST

## LOCATIONS WHERE THE INITIAL STUDY WILL BE DISTRIBUTED

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## MAILING LIST

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#### Federal

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<tr>
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<tr>
<td>Senator Kamala Harris</td>
<td>312 N. Spring St. Suite 1748</td>
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<tr>
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<td>4100 Empire Drive</td>
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<td>Congressman Steve Knight</td>
<td>1008 West Avenue M-14, Suite E</td>
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<td>(25th Congressional District)</td>
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#### State

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<td>Assemblymember Tom Lackey</td>
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<tr>
<td>(36th Assembly District)</td>
<td>Palmdale, CA 93551</td>
</tr>
<tr>
<td>State Senator - Vacant</td>
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<tr>
<td>(21st State Senate District)</td>
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# Chapter 6 Distribution List

## County

| Supervisor Kathryn Barger | 42455 10th Street West, Suite 104 Lancaster, CA 93534 |

## City of Lancaster

| City Manager Mark V. Bozigian | 44933 Fern Ave Lancaster, CA 93534 |
| Deputy City Manager Jason Caudle | 44933 North Fern Avenue Lancaster, CA 93534 |
| City Clerk Geri Bryan | 44933 North Fern Avenue Lancaster, CA 93534 |
| Mayor R. Rex Parris | 44933 Fern Avenue Lancaster, CA 93534 |
| Vice Mayor Marvin Crist | 44933 Fern Avenue Lancaster, CA 93534 |
| Councilmember Raj Malhi | 44933 Fern Avenue Lancaster, CA 93534 |
| Councilmember Angela Underwood-Jacobs | 44933 Fern Avenue Lancaster, CA 93534 |
| Councilmember Ken Mann | 44933 Fern Avenue Lancaster, CA 93534 |

## GOVERNMENTAL AGENCIES

### Federal Agencies

| Advisory Council on Historic Preservation | 401 F St. NW, Suite 308 Washington, DC 20001-2637 |
| Native American Heritage Commission | 915 Capitol Mall, Room 364 Sacramento, CA 95814 |
| National Oceanic and Atmospheric Administration (NOAA) Fisheries | West Coast Region 501 W. Ocean Boulevard, Suite 4200 Long Beach, CA 90802-4213 |
| **U.S. Army Corps of Engineers** | 915 Wilshire Boulevard, Suite 980  
| | Los Angeles, CA 90017 |
| **U.S. Environmental Protection Agency** | 600 Wilshire Boulevard, Suite 1460  
| | Los Angeles, CA 90017 |
| **U.S. Environmental Protection Agency** | Region 9, Environmental Review Office  
| | 75 Hawthorne Street, (ENF-4-2)  
| | San Francisco, CA 94105 |
| **U.S. Fish and Wildlife Service** | 2177 Salk Avenue, Suite 250  
| | Carlsbad, CA 92008 |
| **U.S. Department of Interior, National Park Service** | 333 Bush Street, Suite 500  
| | San Francisco, CA 94104-2828 |
| **U.S. Department of Transportation** | US Department of Transportation, Federal Highway Administration, California Division  
| | 888 S. Figueroa Street, Suite 750  
| | Los Angeles, CA 90017 |
| **U.S. Federal Emergency Management Agency** | 1111 Broadway, Suite 1200  
| | Oakland, CA 94607-4052 |
| **U.S. Department of Commerce - National Oceanic and Atmospheric Administration** | 1315 East West Highway  
| | Silver Spring, MD 20910 |

**State Agencies**

| **California Air Resources Board** | Air Quality Science and Planning Division  
| | P.O. Box 2815  
| | Sacramento, CA 95812 |
| **California Department of Fish and Wildlife** | South Coast Region  
| | 3883 Ruffin Road  
| | San Diego, CA 92123 |
| **California Department of Parks and Recreation** | 1416 9th Street  
| | Sacramento, CA 95814 |
### Chapter 6 Distribution List

| California Department of Toxic Substances Control | P.O. Box 806  
Sacramento, CA 95812-0806 |
|---|---|
| California Department of Transportation | Division of Environmental Analysis  
P.O. Box 942874, MS-27  
Sacramento, CA 94274-0001 |
| California Department of Water Resources | P.O. Box 942836  
Sacramento, CA 94236 |
| California Environmental Protection Agency | 1001 I Street, P.O. Box 2815  
Sacramento, CA 95812 |
| California Highway Patrol | Antelope Valley  
2041 West Avenue ‘I’  
Lancaster, CA 93534 |
| California Natural Resources Agency | 1416 Ninth Street, Suite 1311  
Sacramento, CA 95814 |
| California Regional Water Quality Control Board | Lahontan Region (Region 6)  
15095 Amargosa Road, Building 2 - Suite 210  
Victorville, CA 92394 |
| California State Historic Preservation Officer | 1725 23rd St., Ste. 100  
Sacramento, CA 95816 |
| California Transportation Commission | 1120 N Street, Room 2221, MS-52  
Sacramento, CA 95814 |
| Governor’s Office of Planning and Research, State Clearinghouse | P.O. Box 3044  
Sacramento, CA 95812-3044 |

### Regional Agencies

| LA County Waterworks Districts #40 Lancaster Office | Antelope Valley Office  
260 East Avenue K-8  
Lancaster, CA 93535 |
|---|---|
| Los Angeles County Metropolitan Transportation Authority | One Gateway Plaza  
Los Angeles, CA 90012-2952 |
| South Coast Air Quality Management District | Flood Control District  
21865 Copley Drive  
Diamond Bar, CA 91765 |
|---|---|
| Southern California Association of Governments | 818 West 7th Street, 12th Floor  
Los Angeles, CA 90017 |
| **Los Angeles County Agencies** | |
| County of Los Angeles, Antelope Valley - Division Headquarters Fire Station #129 | 42110 6th Street West  
Lancaster CA 93534 |
| County of Los Angeles, Department of Public Works | 900 S. Fremont Avenue  
Alhambra, CA 91803 |
| County of Los Angeles, Department of Regional Planning | 320 West Temple Street, 13th Floor  
Los Angeles, California 90012 |
| County of Los Angeles, Sheriff’s Department Lancaster Station | 501 W. Lancaster Blvd  
Lancaster, CA 93534 |
| Los Angeles County Fire Department, Fire Chief Ralph Terrazas | 200 N. Main Street, 16th floor  
Los Angeles, CA 90012 |
| **City of Lancaster Agencies** | |
| Antelope Valley Union High School District | 44811 North Sierra Highway  
Lancaster, CA 93534 |
| City of Lancaster, City Manager | 44933 Fern Avenue  
Lancaster, CA 93534 |
| City of Lancaster, Department of Housing and Revitalization | 44933 Fern Avenue  
Lancaster, CA 93534 |
| City of Lancaster, Deputy City Manager | 44933 Fern Avenue  
Lancaster, CA 93534 |
| City of Lancaster, Development Services Department | 44933 Fern Avenue Lancaster, CA 93534 |
| City of Lancaster, Parks, Recreation & Arts Department | 44933 Fern Avenue Lancaster, CA 93534 |
| City of Lancaster, Planning Department | 44933 Fern Avenue Lancaster, CA 93534 |
| City of Lancaster, Public Safety Department | 44933 Fern Avenue Lancaster, CA 93534 |
| Lancaster School District | 44711 N. Cedar Avenue Lancaster, CA 93534 |
| Southern California Edison Company | SCE Corp P.O. Box 800 Rosemead, CA 91770 |

**PUBLIC STAKEHOLDERS**

| Amargosa Creek Middle School | 44333 27th Street West Lancaster, CA 93536 |
| Sunnydale Elementary School | 1233 West Avenue J-8 Lancaster, CA 93534 |
| Los Angeles County Online High School | 1202 West Avenue J Lancaster, CA 93534 |
| Inspire Charter School | 44417 Valley Central Way Lancaster, CA 93536 |
| Sonshine Factory | 44514 20th Street West Lancaster, CA 93534 |
| Desert Christian Main Campus | 44662 15th Street West Lancaster, CA 93534 |
| University of Phoenix-Lancaster Learning Center | 1220 West Avenue J Lancaster, CA 93534 |
| Desert Sands Charter High School | 44130 20th Street West Lancaster, CA 93534 |
| Desert Christian High School | 2340 West Avenue J-8 Lancaster, CA 93536 |
| iLead School | 254 East Avenue K-4 Lancaster, CA 93535 |
A list of property owners identified within 1,000 feet of the project area are included in **Appendix E**.

| Career Care Institute       | 43770 15th Street West  |
|                            | Lancaster, CA 93534     |
| Antelope Valley Hospital,  | 1600 W Avenue J         |
| Community Relations         | Lancaster, CA 93534     |
Chapter 7  REFERENCES


California Department of Transportation. (2009). *Avenue I at State Route 14 Interchange Improvements Initial Study Proposed Mitigated Negative Declaration*.


Appendix A:

Avoidance, Minimization, and/or Mitigation Summary
AVOIDANCE, MINIMIZATION, AND/OR MITIGATION
SUMMARY

In order to ensure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following ECR is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented.

Note: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Type</th>
<th>Phase</th>
<th>Responsible Party</th>
<th>Completion Date</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>AQ-1:</td>
<td>Prior to the issuance of grading permits or approval of grading plans, a dust control plan shall be a part of the construction contract standard specifications, which shall include measures to meet the requirements of AVAQMD Rules 402 (Nuisance) and 403 (Fugitive Dust). Such measures may include, but are not limited to, the following:</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/ Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td></td>
<td>(a) Attempt to phase and schedule activities to avoid high-ozone days and first-stage smog alerts.</td>
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<td>(b) Discontinue operation during second-stage smog alerts.</td>
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<td>(c) All haul trucks shall be covered prior to leaving the site to prevent dust from impacting the surrounding areas.</td>
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<td></td>
<td>(d) Comply with AVAQMD Rule 403, particularly to minimize fugitive dust to surrounding areas. AVAQMD Rule 403, should be adhered to, ensuring the cleanup of the construction-related dirt on approach routes to the site, and the application of water and/or chemical dust retardants that solidify loose soils, should be implemented for construction vehicle access, as directed by the Resident Engineer.</td>
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<td>(e) Maintain soil each day prior to commencing grading to depth of soil cut.</td>
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<td>(f) Water exposed surfaces at least twice a day under calm conditions, and as often as needed on windy days or during very dry weather in order to maintain a surface crust and minimize the release of visible emissions from the construction site.</td>
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<td>(g) Treat any area that will be exposed for extended periods with a soil conditioner to stabilize soil or temporarily plant with vegetation.</td>
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<td>(h) Wash mud-covered tires and under carriages of trucks leaving construction sites.</td>
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<td>(i) Provide for street sweeping, as needed, on adjacent roadways to remove dirt dropped by construction vehicles or mud that would otherwise be carried off by trucks departing project sites.</td>
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<td>(j) Securely cover all loads of fill coming to the site with a tight-fitting tarp.</td>
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<td>(k) Cease grading during periods when winds exceed 25 mph.</td>
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<td>(l) Provide for permanent sealing of all graded areas, as applicable, at the earliest practicable time after soil disturbance.</td>
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<td>(m) Maintain construction equipment in peak operating condition so as to reduce operating emissions.</td>
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<td>(n) Use low-sulfur diesel fuel in all equipment.</td>
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<td>(o) Use electric equipment whenever practicable/shut off engines when not in use.</td>
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<td>AQ-2:</td>
<td>Project grading plans shall show the duration of construction. Ozone precursor emissions from construction equipment vehicles shall be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer’s specifications, to the satisfaction of the Resident Engineer, which may include</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/ Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Measure</td>
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<td>periodic inspections of construction equipment.</td>
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<td>AQ-3:</td>
<td>All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(f), (e)(2) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>AQ-5:</td>
<td>In order to further minimize construction-related emissions, all construction vehicles and construction equipment would be required to be equipped with the State-mandated emission control devices pursuant to State emission regulations and standard construction practices.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>VIS-1:</td>
<td>A staging area is proposed within the undeveloped parcel adjacent to the location of the new SB on-ramp. Staging areas would be fenced to reduce visibility and would be kept lean and orderly. Soil and debris piles would be covered when not in active use. Fencing of staging areas would reduce visibility of equipment and materials from the residential properties along 22nd Street West. This measure would be used for all build alternatives.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>VIS-2:</td>
<td>Vegetation removal would be minimized to the extent feasible. Vegetated areas temporarily disturbed by the project, including surface roadways and freeway ramps, would be re-landscaped following project construction using a context sensitive design. For new slopes steeper than 4:1, Rolled Erosion Control (Netting) Product made with coir fiber would be installed with seeds to provide long-term vegetation and protection from surface erosion. Landscaping would consist of drought tolerant tree and plant species, native to the Mojave and Sonoran deserts. Landscape design within Caltrans right of way would be coordinated with, and approved by, a Caltrans Landscape Architect. Vegetation removal at the location of the SB on-ramp removal at West Avenue J-B (Alternative 2A and Alternative 2B), and off-ramp removal at 20th Street (Alternative 2A) would be limited to the area directly adjacent to the paved ramp and would be replaced with planting consistent with the existing vegetation. Landscaping proposed along the frontage road would consist of native desert species and would integrate with the existing vegetation along the highway berm.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Professional Engineer/ Landscape Architect</td>
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<td>VIS-3:</td>
<td>Retaining walls and other hardscape elements used for the new ramps and streetscaping elements would be designed using materials and aesthetic treatments that fit into Lancaster’s desert environment.</td>
<td>Avoidance &amp; Minimization</td>
<td>Design</td>
<td>Caltrans/ Registered Engineer/ Landscape Architect</td>
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<td>Measure</td>
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<td>BIO-1</td>
<td>Construction in areas that include trees or vegetation that may provide bird nesting habitat would be reduced to the maximum extent feasible.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>BIO-2</td>
<td>Trimming and removal of vegetation and trees would be minimized and performed outside of the nesting season (typically February 1 to September 1) to the extent feasible.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>BIO-3</td>
<td>If construction is scheduled to begin during bird nesting season (typically February 1 to September 1), nesting bird surveys would be completed no more than 48 hours prior to construction to determine if there are any nesting birds or active nests within or adjacent to the project. Surveys would be repeated if construction activities are suspended for five days or more.</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>BIO-4</td>
<td>If nesting birds are found adjacent to the BSA, appropriate buffers consisting of orange flagging/fencing or similar (typically 500 feet for raptors, 150 feet for songbirds) shall be installed and maintained until nesting activity has ended, in coordination with the appropriate resource agencies, to ensure that the birds and/or their nests are not harmed. A qualified biologist must oversee bird nesting buffers and they may require increasing the buffer zone(s), if necessary, to prevent abandonment of the nest.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>BIO-5</td>
<td>Vegetation removal would be reduced to the extent feasible. Areas outside of the impacts area would be flagged with Temporary High Visibility Fence for protection.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>BIO-6</td>
<td>Two weeks prior to construction a qualified biologist would rake leaf litter and sand under shrubs within suitable habitat (creek area) in the area to be disturbed to a minimum depth of two inches. In addition to raking, coverboards would be placed flat on the ground and checked at least twice per week during raking surveys. Size of coverboards, amount of coverboards, and placement shall be determined by a qualified biologist. Coverboards can consist of untreated lumber, sheet metal, corrugated steel, or other flat material used to survey for reptiles. Captured animals would be placed immediately into containers containing sand or moist paper towels and released in designated release areas either onsite or at a City approved off-site location no more than three hours after capture.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>Measure</td>
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<td>BIO-7:</td>
<td>A qualified biologist would complete pre-construction surveys no more than 48 hours prior to construction to determine the presence or absence of the ground-dwelling/nesting animals in the project area. Surveys would be repeated if construction activities are suspended for five days or more.</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-8:</td>
<td>If ground-dwelling/nesting animals are observed within the project area, a qualified biologist would capture and relocate them to suitable habitat at least 100 feet outside of the construction area.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-9:</td>
<td>Grading in suitable habitat would be conducted in two consecutive 6-inch layers. With each lift, the biologist would check the areas for ground-dwelling/nesting animals. If any are found, they will be relocated to suitable habitat at least 100 feet from the construction area. Monitoring would be discontinued when grading reaches depths greater than 12 inches.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-10:</td>
<td>Temporarily disturbed areas would be restored following construction.</td>
<td>Avoidance &amp; Minimization</td>
<td>Post Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-11:</td>
<td>Pre-construction surveys for the burrowing owl would be conducted by a qualified biologist. The surveys would be conducted not more than seven days prior to ground or vegetation disturbing activities, and would include a thorough examination of all suitable habitat within the project area and vicinity for burrowing owl or its sign.</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-12:</td>
<td>If the burrowing owl or its diagnostic signs are detected, the CDFW shall be consulted and a buffer of at least 300 feet around the natal burrow would shall be established and maintained unless otherwise approved by a qualified biologist.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-13:</td>
<td>Passive relocation would be conducted only during the nonbreeding season. Occupied burrows would not be disturbed during the nesting season (February 1 through September 1), unless CDFW and a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or juveniles from the occupied burrows are foraging independently and are capable of independent flight.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>BIO-14:</td>
<td>If owls must be moved away from the disturbance area, passive relocation would be used to encourage owls to move from occupied burrows to alternate natural or artificial burrows more than 160 feet from the project area. Passive relocation would be conducted by a qualified biologist. The alternate or artificial burrows would be within or contiguous to a minimum of 6.5 acres of foraging habitat for each pair of relocated owls. A minimum of one week would be allowed for owls to move and acclimate to the new location.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Biologist</td>
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<td>Measure</td>
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<td>alternate burrows prior to disturbing any existing burrows. Once the biologist has confirmed that the owls have left the burrow, burrows would be excavated using hand tools and refilled to prevent reoccupation. The area within 500 feet of excavated burrows would be monitored by a qualified biologist daily for one week and once per week for an additional two weeks to confirm that owls are not reoccupying the area.</td>
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<td>BIO-15: If passive relocation efforts are not successful within one week, burrowing owls within the project area would be trapped and relocated away from the disturbance area. One alternate natural or artificial burrow would be provided for each burrow to be excavated in the project area. Relocation would not be conducted until approved by CDFW. A qualified biologist would monitor the relocated owls daily for one week and no less than three days per week for the following two weeks to confirm that they are using the relocation site. A report summarizing the results of the relocation and monitoring would be submitted to CDFW within 30 days following completion of the relocation and monitoring.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Biologist</td>
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<td>BIO-16: Prior to construction, a qualified botanist would conduct rare plant surveys throughout the BSA. Surveys would be conducted during the appropriate blooming period to the extent feasible. In the event that special status species are found during surveys, or if surveys cannot be conducted within the appropriate blooming period, or if presence for any species cannot be ruled out for any other reason, avoidance measures would be implemented based on recommendations of a qualified botanist. Avoidance measures may include, but not be limited to, establishing environmentally sensitive area (ESA) fencing surrounding areas with sensitive plant species and/or having a biological monitor present during construction activities within the vicinity of sensitive plant species. If avoidance is not feasible, appropriate mitigation (see BIO-17) would be developed and implemented.</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction</td>
<td>Caltrans/ Biologist</td>
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<td>BIO-17: If it is determined that special status plants would be impacted as a result of the project, an on-site or off-site restoration plan shall be prepared by a qualified restoration ecologist. The restoration plan shall be implemented prior to the completion of the project. The plan shall include 1) success criteria, 2) implementation guidelines, 3) maintenance strategies, 4) monitoring methods, 5) restoration timeline, and 6) contingency measures. Annual monitoring for at least five years shall be required to ensure no-net-loss of acres of habitat for the species. The acreage ratio of lost special-status plant species habitat to habitat replace shall be no less than 1:1.</td>
<td>Mitigation</td>
<td>Preconstruction/Construction</td>
<td>Caltrans/ Biologist</td>
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<td>BIO-18: Existing burrows will be enhanced (enlarged or cleared of debris) or new burrows will be created (by installing artificial burrows) at a ratio of 1:1 in adjacent suitable habitat that is contiguous with the foraging habitat of the affected owls.</td>
<td>Mitigation</td>
<td>Post Construction</td>
<td>Caltrans/ Biologist</td>
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<td>Measure</td>
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<td>BIO-19:</td>
<td>Mitigation</td>
<td>Post Construction</td>
<td>Caltrans/ Biologist</td>
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<td>If destruction of an unoccupied burrow is unavoidable, a monitoring plan, which will include mitigation success criteria and a monitoring schedule, will be developed and implemented. The plan will be submitted to the CDFW for review prior to construction, and an annual report will be submitted to the CDFW for five years after completion of construction or as otherwise determined by CDFW.</td>
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<td>BIO-20:</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<td>Work areas would be reduced to the maximum extent feasible, and staging areas would be along the roadway and outside of any sensitive areas, including jurisdictional areas, as determined by a qualified biologist.</td>
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<td>BIO-21:</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Best management practices (BMP), such as silt fencing, fiber rolls, straw bales, or other measures would be implemented during construction to minimize dust, dirt, and construction debris from leaving the construction area.</td>
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<td>BIO-22:</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, would be stabilized to control dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover, or vegetative ground cover.</td>
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<td>BIO-23:</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Orange Temporary High Visibility Fencing would be installed by a qualified biologist along areas within the jurisdiction of the California Department of Fish and Wildlife to prevent work in these areas and minimize dust, dirt, and construction debris from entering jurisdictional areas, including Amargosa Creek.</td>
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<td>BIO-24:</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/Biologist</td>
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<td>All unpaved access roads would be effectively stabilized to control dust emissions using water or chemical stabilizer/suppressant.</td>
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<td>BIO-25:</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction/ Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Appropriate hazardous material BMPs would be implemented to reduce the potential for chemical spills or contaminant releases into the wash, including any non-storm water discharge</td>
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<td>BIO-26:</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>All equipment refueling and maintenance would be conducted in the staging area away from the creek per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.</td>
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<td>BIO-27:</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Vegetation removed from the project area would be treated and disposed of in a manner following the recommendations of the California Invasive Plant Council to prevent the spread of invasive species on site or off site. BMPs may include, but are not limited to, identification of existing invasive species, avoidance of invasive species in erosion control, staff training, equipment cleaning when entering and exiting the project area, and monitoring.</td>
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<tr>
<td>BIO-28:</td>
<td>Avoidance &amp; Minimization</td>
<td>Post Construction</td>
<td>Caltrans/ Registered Engineer</td>
<td></td>
<td>Following project construction, disturbed areas would be restored to their pre-project conditions or better, and any re-vegetation or stabilization of disturbed areas would be undertaken to improve or maintain site conditions before closure.</td>
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<td>Measure</td>
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<td>Responsible Party</td>
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<td>erosion control implemented would be completed using native species.</td>
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<td>CUL-1: It is the policy of Caltrans to avoid cultural resources whenever possible. Further investigations may be needed if the site(s) cannot be avoided by the project. If previously unidentified cultural materials are encountered or unearthed during construction, it is Caltrans’ policy that work be halted in that area until a qualified archaeologist can assess the nature and significance of the find. Additional surveys would be required if the project limits change to include areas not previously surveyed.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Cultural</td>
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<tr>
<td>CUL-2: In the event of the accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, steps would be taken in compliance with the California Code of Regulations Section 15064.5.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>CUL-3: All construction activities would cease and the Los Angeles County Coroner would be contacted if any human remains are discovered, in accordance with 14 CCR Section 15064.5(e). If the coroner determines that the human remains are of Native American origin, the Native American Heritage Commission (NAHC) would be notified to determine the Most Likely Descendent (MLD) for the area. The MLD would make recommendations for the arrangements for the human remains per Public Resources Code (PRC) Section 5097.98.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Cultural</td>
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<tr>
<td>PAL-1: A Paleontological Mitigation Plan (PMP) will be prepared in compliance with paleontological mitigation guidelines in the SER and with Society of Vertebrate Paleontology (2010) standard procedures for mitigating construction-related impacts on scientifically important paleontological resources. As such, it will provide site-specific mitigation measures based on the types and magnitudes of earth-moving activities to be undertaken in those parts of the project area underlain by the Quaternary alluvium. No measure would be necessary where the project area was underlain by artificial fill unless and until Quaternary alluvium were to be encountered by such activities underneath the fill. The PMP will also address:</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction</td>
<td>Caltrans/ Registered Engineer/ Cultural</td>
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<td>(1) the timing, type, and location of paleontological construction monitoring, if needed,</td>
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<td>(2) standards for recording newly discovered fossil localities, data recovery and analysis, and reporting, and</td>
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<td>(3) instructions or requirements for transferring the fossil remains, associated specimen and locality data, and the Paleontological Mitigation Report to a paleontological or museum repository acceptable to Caltrans for permanent storage and maintenance of the fossil collection and associated data.</td>
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<td>Lastly, the PMP will stipulate that a standard special provision for paleontological impact mitigation be included in the special</td>
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<td>Measure</td>
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<td>provisions section construction contract and that the construction contractor be advised of the requirement to cooperate with paleontological salvage. The PMP will be prepared by a qualified Principal Paleontologist approved by Caltrans during the PS&amp;E phase. The Paleontologist will have a M.S. or Ph.D. degree in paleontology or geology and be familiar with paleontological salvage or mitigation procedures and techniques. The PMP will be implemented by a qualified Paleontological Contractor before project-related earth-moving activities have started and continue until just after such activities have been completed, as necessary. By implementing appropriate mitigation measures, possibly including paleontological monitoring of project-related earth-moving activities, Caltrans would ensure project compliance with existing environmental statutes requiring the reduction of significant impacts on paleontological resources to a less than significant level. The PMP would meet that requirement by providing for the recovery and thorough treatment of any scientifically important fossil remains exposed by such activities, the recording and archiving of associated specimen data and corresponding geographic and geologic locality data, and the transfer of the entire fossil collection to the Caltrans-designated museum repository and the archiving of associated data in the repository’s computerized databases.</td>
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<td>GEO-1: Site specific soil borings will be conducted during PS&amp;E in order to confirm soil liquefaction potential. Since the project area is identified as low liquefaction potential, no further measures are anticipated.</td>
<td>Avoidance &amp; Minimization</td>
<td>PS&amp;E</td>
<td>Professional Engineer</td>
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<tr>
<td>GEO-2: Standard Caltrans BMPs would be implemented during construction to ensure that erosion or the loss of topsoil would not occur.</td>
<td>Avoidance &amp; Minimization</td>
<td>PS&amp;E</td>
<td>Professional Engineer</td>
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<tr>
<td>HAZ-1: A Phase II/Site Characterization Specialist should conduct sampling within the SR-14 (SR-138) ROW within the project area to determine whether or not contamination exists in association with ADL, total petroleum hydrocarbons (TPH), and other constituents. Results of the sampling would indicate the level of remediation efforts that may be required, if necessary.</td>
<td>Avoidance &amp; Minimization</td>
<td>PS&amp;E</td>
<td>Caltrans/ Registered Engineer/ Hazardous Waste</td>
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<tr>
<td>HAZ-2: The Phase I Initial Site Assessment determined that on-site transformers have not resulted in a REC on the project area; however, any transformer that would need to be relocated or removed during project construction and demolition should be conducted under the purview of the local purveyor to identify proper handling procedures regarding PCBs.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>HAZ-3: Traffic striping materials would be sampled prior to disturbance to</td>
<td>Avoidance &amp; Minimization</td>
<td>PS&amp;E</td>
<td>Caltrans/ Registered</td>
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SR-14 (SR-138)/Avenue J Interchange Improvements Project
Initial Study/Proposed Mitigated Negative Declaration
City of Lancaster
September 2018
<table>
<thead>
<tr>
<th>Measure</th>
<th>Type</th>
<th>Phase</th>
<th>Responsible Party</th>
<th>Completion Date</th>
<th>Comments</th>
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<td></td>
<td>determine whether or not LBPs are present above regulatory thresholds. The Contractor would prepare a project specific lead compliance plan (LCP) to prevent or minimize worker exposure to lead while removing and handling the yellow traffic stripe residue and test residue prior to transport to and disposal at an appropriate disposal facility. The LCP would also acknowledge the prevention/minimization of worker exposure to lead while removing and handling white traffic stripe residue. All generated wastes would be disposed of at an appropriate, permitted disposal facility, as determined by a lead specialist.</td>
<td></td>
<td>Engineer/ Hazardous Waste</td>
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</tbody>
</table>
| HAZ-4   | Phase II/Site Characterization Specialist would conduct sampling during the Plans, PS&E phase in order to determine whether or not contamination exists in association with the following properties:  
- Vacant Properties Located at APNs 3124-012-007, -008, -009, and -012, and 3122-038-900 (Amargosa Creek);  
- 44402 Valley Central Way;  
- 44400 Valley Central Way;  
- 2033 Avenue J West;  
- 44015 West 20th Street;  
- 2343 West Avenue J;  
- 1354 West Avenue J;  
- 2005 West Avenue J;  
- 2020 West Avenue J / 44350 20th Street West; and  
- 2010 West Avenue J.  
Results of the sampling would indicate the level of remediation efforts that may be required, if necessary. | Avoidance & Minimization | PS&E | Caltrans/ Registered Engineer/ Hazardous Waste         |                 |         |
<p>| HAZ-5   | The removal and disposal of treated wood waste would comply with the Department's Standard Specifications Section 14-11.14 pertaining to the disposal of treated wood waste. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer                           |                 |         |
| WQ-1    | The project would include the installation of permanent stormwater treatment facilities including bioinfiltration strips and bioinfiltration swales. Bioinfiltration strips are vegetated sections of land that capture sediment and pollutants as stormwater passes over them in sheet flows. Bioinfiltration swales are vegetated ditches with a layer of imported biofiltration soil underneath and a layer of permeable material with an underdrain further below, where storm water is directed in with a concentrated flow. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer                           |                 |         |
| WQ-2    | Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-storm water discharges into water bodies in the project area, and to meet the requirements of the Lahontan RWQCB and project permits. | Avoidance &amp; Minimization | Post Construction | Caltrans/ Registered Engineer                          |                 |         |
| WQ-3    | The following avoidance and minimization measures will be implemented during construction: | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer |                 |         |</p>
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<th>Measure</th>
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<th>Phase</th>
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<tr>
<td>Soil Stabilization Measures</td>
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<td>Sediment Control Measures</td>
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<td>Tracking Control</td>
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<td>Non-Storm Water Management Measures</td>
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<td>General Construction Site Management</td>
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<td>Storm Water Sampling and Analysis</td>
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<td>Waste Management</td>
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<td>WQ:4: Work areas in waterways would be reduced to the maximum extent feasible to minimize impacts.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>WQ:5: Staging areas would be located outside waterways to reduce direct and indirect impacts on the creek and drainages in the project area.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Biologist</td>
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<tr>
<td>WQ:6: Measures would be implemented during construction to minimize the potential for dust, debris, and construction materials to fall into the creek, or otherwise leave the construction area.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>WQ:7: The contractor would implement appropriate hazardous material BMPs to reduce the potential for chemical spills or containment releases into water bodies, including any non-storm water discharge.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>WQ:8: All equipment refueling and maintenance would be conducted in the upland staging area per standard specifications and regulatory permits. In addition, vehicles and equipment would be checked daily for fluid and fuel leaks, and drip pans would be placed under all equipment that is parked and not in operation.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>WQ:9: All trash and construction debris would be removed from channels and construction areas on a daily basis. All BMPs would be properly maintained during project construction and removed upon completion of construction activities. After completion of the project, all construction equipment and materials would be removed from the project area, and the project area would be returned to pre-project conditions.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction / Post Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>WQ:10: Following completion of construction activities, appropriate erosion control measures would be implemented to ensure that soils disturbed by construction are stabilized, to minimize non-storm water discharges into water bodies in the project area, and to meet the requirements of the Lahontan RWQCB and project permits.</td>
<td>Avoidance &amp; Minimization</td>
<td>Post Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>WQ:11: Vegetation removed from the project area would be treated and disposed in a manner that would prevent the spread of invasive species on- or off-site. If erosion control seed mixes are used, they would be composed of non-invasive species, and all erosion control would be conducted in a manner that would not result in the spread of invasive species.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>Measure</td>
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| NOI-1:  | Implementation of the following measures would reduce the temporary noise from construction:  
- All equipment shall have sound-control devices that are no less effective than those provided on the original equipment. No equipment shall have an unmuffled exhaust.  
- The contractor shall implement appropriate additional noise measures, including changing the location of stationary construction equipment, turning off idling equipment, rescheduling construction activity, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources. | Avoidance & Minimization | Construction | Caltrans/ Registered Engineer |          |
| NOI-2:  | Project construction would comply with the City requirements including  
- City of Lancaster Municipal Code 8.24.040;  
- City of Lancaster Specific Action 4.3.1(f); and  
- City of Lancaster Specific Action 4.3.2(d). In cases of discrepancy between City and Caltrans standards, the more stringent would be applied unless an agreement between the City and Caltrans is made that allows otherwise. | Avoidance & Minimization | Construction | Caltrans/ Registered Engineer |          |
<p>| NOI-3:  | To minimize construction noise impacts on sensitive receptors adjacent to the project area, construction noise is regulated by the Caltrans’ Standard Specifications in Section 14-8.02 (Noise Control). Noise control shall conform to SSP 14-8.02. In addition, the Contractor shall equip all internal combustion engines with the manufacturer-recommended muffler and shall not operate any internal combustion engine on the job site without the appropriate muffler. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer |          |
| T-1:    | Temporary road closures and traffic from project construction would be minimized through development of a traffic management plan. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer |          |
| T-2:    | Continuous sidewalks would be maintained along both sides of Avenue J. Existing crosswalks would be maintained at all signalized intersections. At the SR-14 (SR-138) SB off-ramp and Avenue J, new crosswalks would be added on the north, west, and south legs of the intersection, with the addition of the SB on-ramp. A traffic signal would also be added to the intersection of SR-14 (SR-138) NB ramps and Avenue J, where new crosswalks would be added on the north, east, and south legs of the intersection, with the addition of the NB off-ramp. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer |          |
| T-3:    | Signage will be provided to alert customers of traffic detours and access changes so that access to businesses along impacted roadways is not affected. | Avoidance &amp; Minimization | Construction | Caltrans/ Registered Engineer |          |</p>
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<th>Measure</th>
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<th>Responsible Party</th>
<th>Completion Date</th>
<th>Comments</th>
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<tr>
<td>T-4: Coordination between the City and local emergency services, including Antelope Valley Hospital, would be conducted prior to (pre-construction meeting) and during project construction to maintain emergency response times and ensure consistency with the City’s Emergency Operations Plan.</td>
<td>Avoidance &amp; Minimization</td>
<td>Preconstruction &amp; Construction</td>
<td>City/ Emergency Services</td>
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<tr>
<td>TCR-1: During ground disturbance activities, a Native American monitor from the San Manuel Band of Mission Indians shall be retained to observe and monitor sub-surface activities. Prior to issuance of a grading or building permit that involves sub-surface activities, evidence shall be provided for placement in the project file that a Native American monitor has been retained.</td>
<td>Avoidance &amp; Minimization</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>GHG-1: Drought resistant plants would be incorporated in landscaping areas. Minimizing water need reduces energy used for irrigation.</td>
<td>Greenhouse Gas Reduction Strategy</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Landscape</td>
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<tr>
<td>GHG-2: The proposed traffic signals on Avenue J would be integrated with the existing signals along the corridor to optimize the traffic system. Smoother-flowing traffic reduces tailpipe emissions.</td>
<td>Project Feature</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer/ Landscape</td>
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<td>GHG-3: Use cement blended with the maximum feasible amount of fly ash or other materials that reduce GHG emissions from cement production.</td>
<td>Greenhouse Gas Reduction Strategy</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<td>GHG-4: Reduce construction waste and re-use or recycle construction and demolition waste to maximum extent feasible.</td>
<td>Greenhouse Gas Reduction Strategy</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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<tr>
<td>GHG-5: Avoid removal of shade trees in or near construction. If removal of shade occurs, it must be replaced to pre-project or better conditions.</td>
<td>Greenhouse Gas Reduction Strategy</td>
<td>Construction</td>
<td>Caltrans/ Registered Engineer</td>
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Appendix B: Native American Consultation Documentation
Subject: City Measure R “Highway Equity” (Measure R) Program, Lancaster and Palmdale, Los Angeles County, California.

Dear Ms. Sanchez,

The City of Lancaster, in cooperation with the California Department of Transportation (Caltrans) and the Metropolitan Transit Authority MTA, is planning to modify five interchanges along SR-138/SR-14 through the City Measure R “Highway Equity” (Measure R) Program (Figures 1–3). These intersections include the following:

- SR-138/SR-14 and Avenue G Interchange
- SR-138/SR-14 and Avenue J Interchange
- SR-138/SR-14 and Avenue K Interchange
- SR-138/SR-14 and Avenue L Interchange
- SR-138/SR-14 and Avenue M Interchange

Galvin Preservation Associates, on behalf of the City of Lancaster, has contracted with Statistical Research, Inc. (SRI) to conduct a cultural resource study of the areas affected by the Measure R Program.

Improvements will include interchange modifications and modifications to local intersecting roadways up to a mile east and west of the interchanges. Modifications will include widening overcrossings over the existing SR-138/SR-14, interchange, geometric enhancements, traffic signals or other traffic control improvements, landscaping, pedestrian and cycling improvements, and other context sensitive solutions.

The proposed project involves land that falls within multiple jurisdictions, including the City of Lancaster, County of Los Angeles, Caltrans, and the City of Palmdale. Caltrans has been identified as the California Environmental Quality Act (CEQA) lead agency for the interchange improvements.

The project area is located on the Lancaster West 7.5 minute USGS Quadrangle maps in Los Angeles County. Township, range and sections that include portions of the project area are listed in Table 1. Recent aerial photographs show the project area is a mix of open land and dense urban developments.

The purpose of our study is to prepare the relevant cultural resource documents for California Environmental Quality Act (CEQA) compliance. The City of Lancaster will be the CEQA Lead Agency. Our scope of work includes Native American coordination to identify and assess the potential effect of the proposed project on Native American sacred sites or other traditional
Our scope of work includes Native American coordination to identify and assess the potential effect of the proposed project on Native American sacred sites or other traditional cultural properties (TCPs). We request a review of your Sacred Lands Inventory for areas within and adjacent to the project area, as well as your recommendations for Native American tribes, groups, and individuals we should consult with for additional information.

Thank you very much for your assistance. I look forward to hearing from you at your earliest convenience. If you would like further information, please call me at (909) 335-1896 or contact me by email at kbecker@sricrm.com.

Sincerely,

Patrick B. Stanton
Project Director
Table 1. Sections that Include Portions of the Project Area

<table>
<thead>
<tr>
<th>County</th>
<th>USGS 7.5' Quad</th>
<th>Township and Range</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles</td>
<td>Lancaster West</td>
<td>6N 12W</td>
<td>3, 4, 5</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Lancaster West</td>
<td>7N 12W</td>
<td>3, 4, 5, 16, 17, 20, 21, 22, 27, 28, 29, 32, 33, 34</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>Lancaster West</td>
<td>8N 12W</td>
<td>32, 33, 34</td>
</tr>
</tbody>
</table>
Figure 1. Project vicinity map.
Figure 2. Project location map, north portion.
Figure 3. Project location map, south portion.
September 29, 2015

Patrick B. Stanton  
Statistical Research, Inc.  
21 W. Stuart Ave  
P.O. Box 390  
Redlands, CA 92373-1896  

Sent by Email: kbecker@sricrm.com  
Number of Pages: 3

RE: Measure R "Highway Equity" Program, Lancaster and Palmdale area, Los Angeles County

Dear Mr. Stanton:

Attached is a consultation list of tribes with traditional lands or cultural places located within the boundaries of the above referenced counties. Please note that the intent above reference codes is to mitigate impacts to tribal cultural resources, as defined, for California Environmental Quality Act (CEQA) projects.

As of July 1, 2015, Public Resources Code Sections 21080.1, 21080.3.1 and 21080.3.2 require public agencies to consult with California Native American tribes identified by the Native American Heritage Commission (NAHC) for the purpose mitigating impacts to tribal cultural resources:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section. (Public Resources Code Section 21080.1(d))

The law does not preclude agencies from initiating consultation with the tribes that are culturally and traditionally affiliated with their jurisdictions. The NAHC believes that in fact that this is the best practice to ensure that tribes are consulted commensurate with the intent of the law.

In accordance with Public Resources Code Section 21080.1(d), formal notification must include a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation. The NAHC believes that agencies should also include with their notification letters information regarding any cultural resources assessment that has been completed on the APE, such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:
   
   - A listing of any and all known cultural resources have already been recorded on or adjacent to the APE;
   - Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
   - If the probability is low, moderate, or high that cultural resources are located in the APE.
   - Whether the records search indicates a low, moderate or high probability that unrecorded cultural resources are located in the potential APE; and
2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

   All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code Section 6254.10.

3. The results of any Sacred Lands File (SFL) check conducted through Native American Heritage Commission. A SFL search was completed with negative results.

4. Any ethnographic studies conducted for any area including all or part of the potential APE; and

5. Any geotechnical reports regarding all or part of the potential APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS is not exhaustive, and a negative response to these searches does not preclude the existence of a cultural place. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the case that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance we are able to assure that our consultation list contains current information.

If you have any questions, please contact me at my email address: rob.wood@nahc.ca.gov.

Sincerely,

Rob Wood
Associate Governmental Program Analyst
Native American Heritage Commission
Tribal Consultation List
Los Angeles County
September 29, 2015

San Manuel Band of Mission Indians
Lynn Valbuena, Chairwoman
26569 Community Center Serrano
Highland , CA 92346
(909) 864-8933

Fernandeno Tataviam Band of Mission Indians
Rudy Ortega Jr., President
1019 2nd Street Fernandeno
San Fernando , CA 91340 Tataviam
(818) 837-0794 Office

Kitanemuk & Yowlimne Tejon Indians
Delia Dominguez, Chairperson
115 Radio Street Yowlimne
Bakersfield , CA 93305 Kitanemuk
deedominguez@juno.com
(626) 339-6785

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 Fernandeño
Newhall , CA 91322 Tataviam
tsen2u@hotmail.com Serrano
(661) 753-9833 Office Vanyume
(760) 885-0955 Cell Kitanemuk

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.9 of the Public Resources Code and Section 5097.98 of the Public Resources Code.
This list applicable only for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Measure R "Highway Equity" Program, Lancaster and Palmdale area, Los Angeles County.
January 31, 2017

Name
Affiliation
Address

Subject: Cultural Resources Information Request for the SR-138 (SR-14)/Avenue J Interchange Improvements Project, Lancaster, California

Dear Mr./Ms. Chair:

Statistical Research, Inc. (SRI), is gathering information to identify cultural resources for the SR-138 (SR-14)/Avenue J Interchange Improvements Project pursuant to the California Environmental Quality Act, on behalf of the project applicant, Caltrans. The purpose of the project is to enhance the operational capacity at the interchange, reduce local street congestion, and improve way finding. The project is located at the SR-138 (SR-14)/Avenue J Interchange within the city of Lancaster, California as well as at a second partial interchange located at Avenue J-8/20th Street West, less than 0.5 mile to the south (Attachment 1). Except for the highway right-of-way and small parcels of the land, the project area is developed. Four alternatives have been developed for this project. Attachments 2–4 present Alternatives 1, 2, and 3; Alternative 4 is the No-Build Alternative.

This project stems from Lancaster State Route 14 Interchanges Improvement Project for which SRI conducted a cultural resources existing conditions survey in September 2015 (Statistical Research 2015). For this project, SRI conducted the cultural resources assessment for the project area, which includes a records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton; contacted the Native American Heritage Commission (NAHC) regarding sacred resources within the project area; and engaged in an intensive field survey of the project’s area of potential effects.

The results of this records-search identified four previously recorded archaeological sites and one isolated resource within the project area. The archaeological sites include a historical-period refuse scatter, a historical-period agricultural site with associated refuse, a prehistoric lithic scatter, and a multicomponent artifact concentration. The multicomponent site consists of numerous flaked stone and ground stone artifacts, fire-affected rocks, and faunal bone as well as numerous cans and fragments of glass. The isolated resource consists of a mano fragment. Both historical-period sites were relocated during the survey. The prehistoric lithic scatter, the multicomponent artifact concentration, and the prehistoric isolate were not relocated during the project and appear to have been destroyed by previous development in the area.

We request your assistance in identifying Native American cultural resources within the project area of potential effects. If you know of any cultural resources that could be affected by the project, please contact me so that the resources are properly considered during the planning process. This request is not part of government-to-government consultation between Native American Tribes and the lead agency required under the California Environmental Quality Act.
If you would like further information, please call me at (909) 335-1896 or contact me by email at kbecker@srcrm.com. Thank you very much for your assistance. We look forward to hearing from you at your earliest convenience.

Sincerely,

Kenneth M. Becker, M.A., RPA
Principal Investigator

References

Statistical Research

Attachment 1. Vicinity Map
Attachment 2. SR-138 (SR-14)/Avenue J Interchange Improvements Project, Alternative 1
Attachment 3 SR-138 (SR-14)/Avenue J Interchange Improvements Project, Alternative 2
Attachment 4 SR-138 (SR-14)/Avenue J Interchange Improvements Project, Alternative 3
Figure 1. Location map.
### Notes from the Native American Coordination Efforts

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<tr>
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<th>Response to Letter</th>
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<td>San Manuel Band of Mission Indians</td>
<td>Serrano</td>
<td>certified mail on January 31, 2017</td>
<td>e-mail from Joan Schneider on March 3, 2017</td>
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<td>Rudy Ortega, Jr., President</td>
<td>Fernandeño Tataviam Band of Mission Indians</td>
<td>Fernandeño, Tataviam</td>
<td>certified mail on January 31, 2017</td>
<td>none</td>
<td>no e-mail address provided by the NAHC</td>
<td>March 21, 2017, at 10:37 a.m.</td>
<td>spoke with Rudy Ortega on March 31, 2017, who said that he would refer my request to Kimya</td>
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<td>Kitanemuk and Yowlumme Tejon Indians</td>
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<td>March 21, 2017</td>
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<td>San Fernando Band of Mission Indians</td>
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<td>March 21, 2017</td>
<td>March 21, 2017, at 11:00 a.m.</td>
<td>left a phone message on March 21, 2017, requesting that Mr. Valenzuela call back regarding this project</td>
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**Key:** NAHC = Native American Heritage Commission.
March 1, 2017

Re: SR 138 (SR-14)/Avenue J Interchange Improvements Project, Lancaster, CA

Dear Mr. Becker (Ken),

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project(s). SMBMI appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on February 7, 2017. By this e-mail, SMBMI requests to consult with the City of Lancaster pursuant to CEQA (as amended, 2015) and CA PRC 21080.3.1. The proposed project area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe. In review of the documents sent to SMBMI by Statistical Research, Inc., SMBMI is aware that this particular area is documented as highly culturally sensitive to Tribe. Although there is substantial development within the project area and the residential site that had previously been documented at the location was not relocated, the project area remains of concern to SMBMI. As such, Tribe will be closely following the further planning for this project as well as its implementation and would like to receive all information under the requirements of SB 18 and AB 52.

At the appropriate time, please inform the City of Lancaster that SMBMI will be requesting both archaeological and Native American monitoring when there is any ground-disturbing activity during the implementation of this project. Should Statistical Research, Inc. plan or anticipate any test excavations prior to the actual project start, please plan to include Native American monitor/participants from SMBMI. In addition, SMBMI respectfully informs SRI and the City of Lancaster that specific language needs to be included in any environmental documents and mitigation measures to ensure protection of Cultural and Tribal Cultural Resources upon discovery, should this occur.

Please understand that receipt of this letter does not constitute “meaningful” tribal consultation nor does it conclude the consultation process. This letter is merely intended to initiate consultation between the Tribe and lead agency, which may be followed up with additional emails, phone calls or face-to-face consultation if deemed necessary. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI with respect to this project.

Respectfully,

Joan S. Schneider, PhD
San Manuel Band of Mission Indians
Cultural Resource Management Department
Consulting Archaeologist
jschneider@sanmanuel-nsn.gov
26569 Community Center Drive
Highland, CA 92346
THIS MESSAGE IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination or copying of this communication is strictly prohibited. If you have received this electronic transmission in error, please delete it from your system without copying it and notify the sender by reply e-mail so that the email address record can be corrected. Thank You
July 19, 2018

Lee Clauss
Director, Cultural Resources Management
San Manuel Band of Mission Indians
26569 Community Center Drive,
Highland, California 92346

Dear Ms. Clauss:

This letter is to follow up on your concerns regarding the SR-14 (SR-138)/Avenue J Interchange Improvements Project, located in the City of Lancaster, California. Specifically, the comments made on an email sent to the California Department of Transportation (Caltrans) dated April 30, 2018. We had a conference call on May 23, 2018 to further discuss your concerns, which included how to best approach monitoring areas of the project that appeared to have a high potential for buried resources.

During our call, Caltrans pointed out that the revised Archaeological Survey Report (ASR) appeared to indicate that no monitoring is warranted for the project because of the degree of disturbance to the project’s Project Area Limits (PAL). We did agree that this information was not very clear and, as a result, you requested that additional information regarding the construction activities in the areas in question be incorporated into the ASR, as well as the additional comments mentioned in the April email.

In order to address your concerns and determine the need for monitoring, Caltrans asked Statistical Research, Inc. (SRI) to conduct additional background research for the project, including more extensive review of ethnographic and ethnohistoric literature for the area and more focused analysis of the previous disturbance to the areas in question along with more information on construction elements for those areas.

Examination of historical aerials photos and maps as well as As-Built Plans indicate that the project area has been disturbed by freeway and road construction, utility construction, agriculture, and other historical land uses. The focused analysis of the As-Built Plans further indicates that much of the existing soil disturbances in the areas in question have depths ranging from 8 to 10 feet below the street level along the entire length of Avenue J within the proposed project area. Because the placement of sewer and storm drains requires a significant amount of excavation, little native soil remains below the relatively narrow project area along Avenue J between 15th and 25th
Ms. Clauss  
July 19, 2018  
Page 2

Streets. Based on these findings, fill and/or disturbed native soils make up a significant portion of the sediments underlying this portion of the project area down to a depth of 8-9 feet. Intact soils are likely present below 8 feet; however, project construction will not reach these depths.

These findings are provided in more detail in the enclosed final ASR. Based on these results, Caltrans has determined that archaeological and Native American monitoring are not warranted for this project.

Please feel free to contact me should you have any further questions or concerns. You can reach me by email at sarah.mattiussi-gutierrez@dot.ca.gov or by phone at (213) 897 9872.

Sincerely,

Sarah Mattiussi Gutierrez  
Associate Environmental Planner (Archaeology)

c: Mariam Dahdul, Associate Environmental Planner (Archaeology), District Native American Coordinator  
Kelly Ewing-Toledo, Environmental Branch Chief, Caltrans District 7, Division of Environmental Planning

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"
Appendix C: Title VI
April 2018

NON-DISCRIMINATION
POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Related federal statutes and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone (916) 324-8379, TTY 711, email Title.VI@dot.ca.gov, or visit the website www.dot.ca.gov.

Laurie Berman
Director
Appendix D:

Hazardous Materials Parcel Impacts
Appendix E:
Property Owners (Within 1,000 Feet of the Project Area)
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<td>526 28TH AVE</td>
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<td>SAN FRANCISCO CA 94121</td>
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<td>3815 SPICE ST</td>
<td>39723 GOLFERS DR</td>
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<td>1111 W 127TH ST</td>
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<td>1237 W AVENUE J</td>
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<td>8665 E HARTFORD DR #200</td>
<td>6725 GERALD AVE</td>
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<tr>
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<td>44028 GALION AVE</td>
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APN 3122-026-016
LOREE A JOHNSON
1601 PACIFIC COAST HWY #290
HERMOSA BEACH CA 90254

APN 3122-026-017
ANDREW & ALNAKOULA SALLI LABIB
34643 BRANDON THOMAS WAY
LANCASTER CA 93536

APN 3122-026-018
JONATHAN SILVA
41642 47TH ST W
QUARTZ HILL CA 93536

APN 3122-026-019
FAZELI MOHSEN
26634 PURPLE MARTIN CT
CANYON COUNTRY CA 91351

APN 3122-026-020
BRENT M & SUZANNE STENSETH
44414 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-021
JOHNNY L & CAROLYN A SCOTT
44420 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-022
GRACE M ERICKSON
615 STONEGATE DR
GRAND JUNCTION CO 81504

APN 3122-026-023
MARY A STANFORD
44432 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-024
CRAIG & MARIANNE MIERAU
44310 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-025
RICHARD TORREZ
44444 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-026
ROBERT C & DEBORAH L AGNO
44504 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-027
MICHAELE E & YOLANDA P HEIM
44528 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-028
CODY ZINDLER
4550 W AVENUE K1
LANCASTER CA 93536

APN 3122-026-029
JOYCE M COLLINS
44427 LOWTREE AVE
LANCASTER CA 93534

APN 3122-026-030
RYAN W & VERONICA N ROSE
44504 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-031
PHEBE M GILLILAND
4811 W AVENUE M6
LANCASTER CA 93536

APN 3122-026-032
RAFAEL & MARIA T ALEJANDRE
1310 CAREN CT
LANCASTER CA 93534

APN 3122-026-033
KYLE P SPINDLER
44516 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-034
ANDERSON & ALTIERI
44516 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-035
ANASTASIA T PLOURDE
44522 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-036
EARLEEN MESSER
44528 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-037
BRIAN & SHIRLEY GRIFFITHS
44670 LOWTREE AVE
LANCASTER CA 93534

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RAFAEL & MARIA T ALEJANDRE
1310 CAREN CT
LANCASTER CA 93534

APN 3122-026-039
EARLEEN MESSER
44528 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-026-040
BRIAN & SHIRLEY GRIFFITHS
44670 LOWTREE AVE
LANCASTER CA 93534

APN 3122-026-041
RAFAEL & MARIA T ALEJANDRE
1310 CAREN CT
LANCASTER CA 93534

APN 3122-026-042
TERRY R & CAROLE D SANFORD
44535 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-026-043
CLIFFORD T HURD
PO BOX 507
LANCASTER CA 93534

APN 3122-026-044
SYLVIA A MUNOZ-SOSA
3815 VISTA CIRCLE DR
LANCASTER CA 93536
APN 3122-027-018
KATHY A NOBLE
44517 LEATHERWOOD AVE
LANCASTER CA 93534

APN 3122-027-019
RCC PROPERTIES INC
44811 DATE AVE #A
LANCASTER CA 93534

APN 3122-027-020
MARK S & EDA HOWARD
2012 BOOTH CIR
LINCOLN NE 68521

APN 3122-027-021
MARK & DANYEL LYNCH
41754 STRATFORD CIR
PALMDALE CA 93551

APN 3122-028-001
DAVID & MARNE EDMONDSON
44548 15TH ST W
LANCASTER CA 93534

APN 3122-028-002
JEANETTE STAFFORD
44554 15TH ST W
LANCASTER CA 93534

APN 3122-028-003
MICHAEL C KNAPP
8535 OAK PARK AVE
NORTHRIDGE CA 91325

APN 3122-028-004
BETTY J ZIARNICK
39476 BEACON LN
PALMDALE CA 93551

APN 3122-028-005
NOLAN & MARY R PRICE
44555 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-028-006
BRIAN H & KRISTINE K DUMKE
2346 E KILDARE ST
LANCASTER CA 93535

APN 3122-028-007
JEFFREY E & JEANNA R WILLIAMS
1774 6TH ST
LA VERNE CA 91750

APN 3122-028-008
LORRAINE VHERU
44508 15TH ST W
LANCASTER CA 93534

APN 3122-028-009
LAURIE L LAPHAM
44516 15TH ST W
LANCASTER CA 93534

APN 3122-028-010
ANTHONY A TIMINERI
44522 15TH ST W
LANCASTER CA 93534

APN 3122-028-011
CHARLES W ABBOTT
44528 15TH ST W
LANCASTER CA 93534

APN 3122-028-012
CHRISTOPHER P & NANCY E REIMAN
44534 15TH ST W
LANCASTER CA 93534

APN 3122-028-013
CHRISTOPHER P & NANCY E REIMAN
44542 15TH ST W
LANCASTER CA 93534

APN 3122-028-014
BETTY J WILSON
44543 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-028-015
MELODY L MILLER
44535 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-028-016
RAFAEL & MARIA ALEJANDRE
1310 CAREN CT
LANCASTER CA 93534

APN 3122-028-017
RAFAEL & MARIA T ALEJANDRE
1310 CAREN CT
LANCASTER CA 93534

APN 3122-028-018
ROBERT & LOLY LARA
44517 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-028-019
BETTY J ZIARNICK
39476 BEACON LN
PALMDALE CA 93551

APN 3122-028-020
JORGE A CHAVEZ LOPEZ
44505 LOSTWOOD AVE
LANCASTER CA 93534

APN 3122-029-001
ANTHONY A TIMINERI
2346 E KILDARE ST
LANCASTER CA 93535

APN 3122-029-002
SEAN R HELLMAN
41 S WAKE FOREST AVE #6762
VENTURA CA 93003

APN 3122-029-003
WALID ELASSAAD
PO BOX 151711
SAN DIEGO CA 92175

APN 3122-029-004
IRENE J GREENE
1332 W PILLSBURY ST
LANCASTER CA 93534

APN 3122-029-005
IRENE J GREENE
49141 80TH ST W
LANCASTER CA 93536

APN 3122-029-006
JOHN B RECA
2717 W AVENUE O4
PALMDALE CA 93551
GERARDO SALCEDO  
2019 W MILLING ST  
LANCASTER CA 93536

ROLAND & MARY YOUNG  
2025 W MILLING ST  
LANCASTER CA 93536

WILLIAM M & DEE A JONES  
37605 EAGLES LANDING DR  
PALMDALE CA 93550

ERNEST & ROSALINDA PAEZ  
2037 W MILLING ST  
LANCASTER CA 93536

STEVE A WILSON  
2045 W MILLING ST  
LANCASTER CA 93536

FASACK INVESTMENTS LLC  
2904 MANAGUA PL  
CARLSBAD CA 92009

EDWIN C & DONNA L EMRY  
44650 21ST ST W  
LANCASTER CA 93536

MARTHA E OSORIO  
44640 21ST ST W  
LANCASTER CA 93536

GEORGE S BESHAY  
2038 W MILLING ST  
LANCASTER CA 93536

HOWARD NEHDAR  
32129 LINDERO CANYON RD #109  
WESTLAKE VILLAGE CA 91361

RICARDO BECERRA  
2024 W MILLING ST  
LANCASTER CA 93536

SALVADOR C LOPEZ  
1890 N GARFIELD AVE  
PASADENA CA 91104

RICHARD J VASQUEZ  
2010 W MILLING ST  
LANCASTER CA 93536

RAFAELA P DEBOLANOS  
2004 W MILLING ST  
LANCASTER CA 93536

KIMNEE LIM  
32425 AQUA VISTA DR  
RANCHO PALOS VERD CA 90275

RCC PROPERTIES INC  
44811 DATE AVE #A  
LANCASTER CA 93534

RALIFF BURR  
2027 MINFORD ST  
LANCASTER CA 93536

MISAEL F MEZA  
2033 MINFORD ST  
LANCASTER CA 93536

SHANNON JAMES  
44632 21ST ST W  
LANCASTER CA 93536

DANIEL A & BETTIE Y NEGRETE  
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MARIA G BAROCIO  
2019 MINFORD ST  
LANCASTER CA 93536

ARNOLDO PALACIOS  
44616 21ST ST W  
LANCASTER CA 93536

HECTOR A BUSTAMANTE  
2034 MINFORD ST  
LANCASTER CA 93536

SUSANA BANUELOS  
2026 MINFORD ST  
LANCASTER CA 93536

ROBERTO & EVETTE A REYES  
2018 MINFORD ST  
LANCASTER CA 93536

N D J LLC  
10901 WINNETKA AVE  
CHATSWORTH CA 91311

KIMNEE LIM  
32425 AQUA VISTA DR  
RANCHO PALOS VERD CA 90275

GREGORIO & LETICIA C HERNANDEZ  
2005 W NEWGROVE ST  
LANCASTER CA 93536

SALVADOR & ANNABELLE GOMEZ  
1568 HALF PINT LOOP  
FORT MILL SC 29708

ANDREW W & ANN M FISHER  
2109 W AVENUE L12  
LANCASTER CA 93536
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NASSIM LLC  BILLY L WILKINS  ROBERT H FISHER
PO BOX 6645  2010 W OLDFIELD ST  2020 W OLDFIELD ST
LANCASTER CA 93539  LANCASTER CA 93536  LANCASTER CA 93536

APN 3122-036-017  APN 3122-036-018  APN 3122-036-019
BERNARD HABEL  JESSE WILKINS  ROBERT & DIANNA Y MARTINEZ
PO BOX 2805  2036 W OLDFIELD ST  1758 HAMILTON ST
LANCASTER CA 93539  LANCASTER CA 93536  SIMI VALLEY CA 93065

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DANNY & JOSEPHINE SANTOS  ROLE LANCASTER LLC  REYNALDO S DELEON
44467 21ST ST W  PO BOX 48169  43460 YEW ST
LANCASTER CA 93536  LOS ANGELES CA 90048  LANCASTER CA 93536

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STARLITE MGMT VIII LP  JEFFERY & CHERYLANN FITCH  FLAVITAS LLC
4900 SANTA ANITA AVE #2C  645 STEPHEN RD  41928 CALLE CALIFORNIOS
EL MONTE CA 91731  BURBANK CA 91504  LANCASTER CA 93536

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FOUAD MARKOS  ANGLESEY SONIA Y DECED EST OF  GAIL K & KATHLEEN L NICKEL
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GARY A & PATTY M PEACEMAKER  NATHAN W & MAUREEN VOLK  MANUEL J & MARGARITA MORA
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ROBERT & MYNTIE OBERDIN  JUAN & MARTHA FLORES  EDWIN J BAXTER
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CARLOS A & MARGARITA GARIBAY  OSKAR DEKTYAR  SCOTT M DOUGLAS
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EVA R KETCHUM  LINDA M STONE  ENRIQUE OSORIO
3427 MENTONE AVE #5  1549 N OGDEN DR  44707 21ST ST W
LOS ANGELES CA 90034  LOS ANGELES CA 90046  LANCASTER CA 93536

APN 3122-037-022  APN 3122-037-023  APN 3122-037-024
MAYRA Y ESPINOZA  GRICELDA & MANUEL LINARES  WEI HUANG
44713 21ST ST W  44719 21ST ST W  2190 COURTLAND AVE
LANCASTER CA 93536  LANCASTER CA 93536  SAN MARINO CA 91108
APN 3122-041-041
SHAHIN S FATEMIAN
209 13TH ST #C
HUNTINGTON BEACH CA 92648

APN 3122-041-049
MARTHA R SANTOS
44521 17TH ST W
LANCASTER CA 93534

APN 3122-041-052
RODRIGO VALENCIA
44503 17TH ST W
LANCASTER CA 93534

APN 3122-041-055
SUSANA CRUZ
44516 CAMOLIN AVE
LANCASTER CA 93534

APN 3122-041-058
TOMMY & HILLARI GOMEZ
44540 CAMOLIN AVE
LANCASTER CA 93534

APN 3123-001-028
SPTMNR PROPERTIES TRUST
PO BOX 3525
MCKINNEY TX 75070

APN 3123-001-062
HD DEVELOPMENT OF MARYLAND INC
PO BOX 105842
ATLANTA GA 30348

APN 3123-001-904
ANTELOPE VALLEY HOSPITAL DIST
VAC/VIC 17TH STW/AVE J4
LANCASTER CA 93534

APN 3123-001-914
ANTELOPE VALLEY HOSPITAL DIST
1640 W AVENUE J
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ANTELOPE VALLEY HOSPITAL DIST
1600 W AVENUE J
LANCASTER CA 93534

APN 3122-041-042
ERNESTO ACOSTA
44521 16TH ST W
LANCASTER CA 93534

APN 3122-041-050
GARY C & CHRISTINA D COMBS
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LANCASTER CA 93534

APN 3122-041-053
STEFANY J YUNKA
44510 CAMOLIN LN
LANCASTER CA 93534

APN 3122-041-056
GLADYS R & FRANK D CLAYPOLE
44522 CAMOLIN AVE
LANCASTER CA 93534

APN 3123-001-004
WEST VALLEY MEDICAL PLAZA LLC
1650 W AVENUE J
LANCASTER CA 93534

APN 3123-001-042
CZERWINSKI LIMITED PARTNERSHIP
44301 LORIMER AVE
LANCASTER CA 93534

APN 3123-001-068
COATE LORNA CO TR
PO BOX 1159
DEERFIELD IL 60015

APN 3123-001-094
ANTELOPE VALLEY HOSPITAL DIST
VAC/VIC 17TH STW/AVE J4
LANCASTER CA 93534

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APN 3123-001-048
KEVIN M & LESLIE E COX
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LANCASTER CA 93534

APN 3122-041-051
REYNA L RODAS
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LANCASTER CA 93534

APN 3122-041-054
DAVID R & LISA A KNAUSS
44512 CAMOLIN LN
LANCASTER CA 93534

APN 3122-041-057
MYRNA K & MAURICIO R MADRID
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LANCASTER CA 93534

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MYRNA K & MAURICIO R MADRID
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<td>HENRY L &amp; LINDA L CULVER 5109 CANTLEWOOD DR PALMDALE CA 93552</td>
<td>BRUCE D ORMSTON 1341 W AVENUE J4 #102 LANCASTER CA 93534</td>
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EDUARDO LUNA
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SARAH P PAYNE
1341 W AVENUE J4 #201
LANCASTER CA 93534

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CHRISTOPHER A LEWIS
27614 NUGGET DR #5
SANTA CLARITA CA 91387

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PETER & EVA CAMACHO
719 TENDER LN
FOSTER CITY CA 94404

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ALISYN M WEBB
1341 W AVENUE J4 107
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RICHARD T & HA BURKE
PO BOX 5532
BUENA PARK CA 90622

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EDUARDO LUNA
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GERARDO TOPETE
2545 BALTIC AVE
LONG BEACH CA 90810

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MARY B STEEN
PO BOX 191224
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CATALINA D CHACON
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ARTHUR DU YIP  
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WILMAR T & PATRICIA I KAHLER  
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LINDA ECKERT  
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TYLER C MOORE  
3400 15TH ST W #60  
ROSAMOND CA 93560

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JUAN JIMENEZ  
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RONALD J & JILL A LOHNES  
5381 STAMPEDE LN  
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DAVID L & KATHLEEN M WUTSCH  
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PETALUMA CA 94954

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NOEMI ROMERO  
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THERESA ROBLES  
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ROGER W HINZE  
8746 1/4 WYNGATE ST  
SUNLAND CA 91040

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MARIO MELCHOR  
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JEFF UDAGER  
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MICHAEL A TAUVAR  
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JAMES P & BRANA FLYNN
44327 FENNER AVE
LANCASTER CA 93536

APN 3124-016-040
GARY J & LIANA M GEVORKIAN
520 N SUNSET CANYON DR
BURBANK CA 91501

APN 3124-016-041
RANDY J & YOLANDA A HUTCHINSON
44315 FENNER AVE
LANCASTER CA 93536

APN 3124-016-042
MORTINA S WELLS
44322 SOFT AVE
LANCASTER CA 93536

APN 3124-016-043
BETTY A CABANILLA MEDINA
2546 W AVENUE J2
LANCASTER CA 93536

APN 3124-016-044
ELAINE CHANG
2554 W AVENUE J2
LANCASTER CA 93536

APN 3124-016-045
TOMMY W & CAROL L HAWKINS
2521 LAWRENCE AVE
LANCASTER CA 93536

APN 3124-016-046
DAVID E BODO
2527 LAWRENCE AVE
LANCASTER CA 93536

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ARTHUR & PRISCILLA CAMPOS
2533 LAWRENCE AVE
LANCASTER CA 93536

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DIETRA F JACKSON
2537 LAWRENCE AVE
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JOSHUA M & RACHEL D LINDER
2543 LAWRENCE AVE
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APN 3124-016-050
MICHAEL J & KIYOKO RELJA
44253 SOFT AVE
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ANGEL E & STEPHANIE A JEFFERSON
44356 27TH ST W
LANCASTER CA 93536

APN 3124-016-052
ADALIA J DINIO
44348 27TH ST W
LANCASTER CA 93536

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DEREK HOWARTH
6130 FIRESTONE DR
FONTANA CA 92336

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SANDRA SAMPSON
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CYNTHIA F COHENS
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JOHN E GARNER
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ANTHONY REDA
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ERIK & CRYSTAL GIFFORD
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RHODA M WILLIAMS
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KURT A BIRRER
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ERIK FIGUEROA
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KAREN E RIEWALD
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ERIKA FIGUEROA
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BONNIE R SHOOK
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KEVIN & DENISE CHAPMAN
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KENNETH & DIANE TAPOLA
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245 N ALMONT DR #202
BEVERLY HILLS CA 90211

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DEWAN H RASHID
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VICTOR M GARCIA
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NATHAN & KAREN J GILMORE
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IVONNE & WILLIAM E SANCHEZ
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JOSE HERRERA
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DAVID & JENNIFER DURRETT
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APN 3124-016-084
AMBER DUPLECHAN
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BILLIE K BABER
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RANDOLPH THOMPSON
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DAVID R & LAURIE L DAME
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PALMDALE CA 93551

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MICHAEL E SIEGEL
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ALAN D & DIANA J KREPS
44827 12TH ST W
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 Suspension

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DAVID BORMAN
44229 HALCOM AVE
LANCASTER CA 93536

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MICHAEL E & VERA M HIGH
2252 W AVENUE J3
LANCASTER CA 93536

APN 3124-020-032
RODERICK HUNTER
2246 W AVENUE J3
LANCASTER CA 93536

APN 3124-020-033
MARIYL M BELL
2240 W AVENUE J3
LANCASTER CA 93536

APN 3124-020-034
INTEF W & BETTY R WESER
556 S FAIR OAKS AVE
PASADENA CA 91105

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DORIAN T & PATRICIA A FRANK
2228 W AVENUE J3
LANCASTER CA 93536

APN 3124-020-036
RODERICK HUNTER
2246 W AVENUE J3
LANCASTER CA 93536

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FADEL T & NAJAT S HANNOUN
2830 VAHAN CT
LANCASTER CA 93536

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TIMOTHY D & DIANA T VAN HORN
2210 W AVENUE J3
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APN 3124-020-039
MARILYN M BELL
2240 W AVENUE J3
LANCASTER CA 93536

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MARIA E LOPEZ
2203 W AVENUE J4
LANCASTER CA 93536

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PHILLIP M KOCUREK
2209 W AVENUE J4
LANCASTER CA 93536

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MICHAEL DEMAREST
4656 PASEO FORTUNA
PALMDALE CA 93551

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DAVID A & WENDY RICHMAN
2221 W AVENUE J4
LANCASTER CA 93536

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MIGUEL LOPEZ
2227 W AVENUE J4
LANCASTER CA 93536

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ANDRE D SKIDMORE
2204 W AVENUE J3
LANCASTER CA 93536

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MARIA E LOPEZ
2203 W AVENUE J4
LANCASTER CA 93536

APN 3124-020-047
PHILLIP M KOCUREK
2209 W AVENUE J4
LANCASTER CA 93536

APN 3124-020-048
RAUL E & CLAUDIA C MOYA
2222 W AVENUE J3
LANCASTER CA 93536

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FADEL T & NAJAT S HANNOUN
2830 VAHAN CT
LANCASTER CA 93536

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TIMOTHY D & DIANA T VAN HORN
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MARILYN M BELL
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APN 3124-020-052
MARIA E LOPEZ
2203 W AVENUE J4
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PHILLIP M KOCUREK
2209 W AVENUE J4
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ANDRE D SKIDMORE
2204 W AVENUE J3
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DAVID A & WENDY RICHMAN
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APN 3124-020-056
MIGUEL LOPEZ
2227 W AVENUE J4
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APN 3124-020-057
JIAN & NAIJUN Y HUANG
11041 CAMINO ABROJO
SAN DIEGO CA 92127

APN 3124-020-058
HOWARD M PRESSMAN
44225 ALBECK AVE
LANCASTER CA 93536

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ANTHELOPE VALLEY RESID
ENTIAL HOLDINGS DE LLC
42231 6TH ST W #204
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ALEX & ADELA ANDRADE
44214 LIVELY AVE
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DORIAN T & PATRICIA A FRANK
2228 W AVENUE J3
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TIMOTHY D & DIANA T VAN HORN
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MIGUEL LOPEZ
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JIAN & NAIJUN Y HUANG
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LANCASTER CA 93534

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44214 LIVELY AVE
LANCASTER CA 93536

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44214 LIVELY AVE
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DAVID K & JANET S FRITSINGER  
2069 W JANET DR  
LANCASTER CA 93534

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ANTHONY CLARK  
2011 W AVENUE J5  
LANCASTER CA 93536

APN 3124-021-029  
DALE E & VIRGINIA M ORR  
2025 W AVENUE J5  
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JOSHUA A HARRIS  
2063 W AVENUE J5  
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WILLIAM B & LISA M ENOS  
2103 W AVENUE J5  
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THOMAS G RIPLEY  
2072 JANET DR  
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APN 3124-021-042  
GERALD W WILLIAMS  
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REBECCA UHLAR  
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SHAN SIVAKUMAR  
44121 GEORGIA CT  
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CHARLIE & DOROTHY WILLIAMS  
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SANDRA J MAY
5131 GEORGETOWN COVE CT
LAS VEGAS NV 89131

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CARRIE MCBRYANT
43836 GENERATION AVE
LANCASTER CA 93536

APN 3129-029-051
GLENN MACDONALD
43925 GENERATION AVE
LANCASTER CA 93536

APN 3129-030-011
MICHAEL R & MARIA O MARTIN
43826 GENERATION AVE
LANCASTER CA 93536
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MGP IX PROPERTIES LLC
425 CALIFORNIA ST 11THFL
SAN FRANCISCO CA 94104

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VALLEY CENTRAL L P
1040 OLD PHILLIPS RD
GLENDALE CA 91207

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425 CALIFORNIA ST 11THFL
SAN FRANCISCO CA 94104

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ELAINE BROWNE
2530 STILLWATER DR
LANCASTER CA 93536

APN 3153-053-006
WALTER BLANCO
2548 STILLWATER DR
LANCASTER CA 93536

APN 3153-053-009
JIMMY M & CHIEH I MA
31130 ELECTRIC AVE
NUEVO CA 92567

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THIAGARAJAH FAMILY LP
3333 CAMINO DEL SUR
LANCASTER CA 93536

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WEI HUANG
2190 COURTLAND AVE
SAN MARINO CA 91108

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DONALD J & SUSAN C FIELDS
44428 TARRAGON DR
LANCASTER CA 93536

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VINH X DO
10246 BROOKE AVE
CHATSWORTH CA 91311

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MEGAN A OLEARY
2521 OVERLAND AVE
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APN 3153-053-004
CARMEN R SANTACROCE
2536 STILLWATER DR
LANCASTER CA 93536

APN 3153-053-007
NORMAN J WILLIS
2554 STILLWATER DR
LANCASTER CA 93536

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ANGELA BURNS
44441 STILLWATER DR
LANCASTER CA 93536

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ALMA E SOLIS
44511 STILLWATER DR
LANCASTER CA 93536

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JOSE A HORTA
44440 TARRAGON DR
LANCASTER CA 93536

APN 3153-053-019
HELEN D NGUYEN
1130 N BRANDTFOID ST
ANAHEIM CA 92805

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SLADE A LOHMAN
530 COMMERCIAVE #B
PALMDALE CA 93551
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IRMA GONZALES
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FOREST PERSON
2609 W OLDFIELD ST
LANCASTER CA 93536
VINCENT C WHITE
2603 W OLDFIELD ST
LANCASTER CA 93536

APN 3153-054-017
APN 3153-054-018
APN 3153-054-019
OMAR A BENITEZ
2553 W OLDFIELD ST
LANCASTER CA 93536
ELENA R & EVINE SMITH
2547 W OLDFIELD ST
LANCASTER CA 93536
KRISTIAN D LINDSEY
2541 W OLDFIELD ST
LANCASTER CA 93536

APN 3153-054-020
APN 3153-054-021
APN 3153-054-022
ELPIDIO & SONIA HERNANDEZ
5237 NORTH RIDGE DR
PALMDALE CA 93551
RAYMOND T & JOYCE YOUNG
PO BOX 2094
LANCASTER CA 93539
HARRY T & NANCY YOUNG
PO BOX 2094
LANCASTER CA 93539

APN 3153-054-023
APN 3153-054-024
APN 3153-054-025
RENE & FELICITAS CONTRERAS
44554 TARRAGON DR
LANCASTER CA 93536
JEFFREY E & ANGELA BENNETT
PO BOX 761
PALMDALE CA 93551
FLORENCE BRYANT
44540 TARRAGON DR
LANCASTER CA 93536

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APN 3153-054-028
ELVIR SOSA
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THOMAS D & KIMBERLY S PAULEY
44528 TARRAGON DR
LANCASTER CA 93536
JOEL MCDONALD
44543 TARRAGON DR
LANCASTER CA 93536

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APN 3153-054-031
KENNETH N & JAMIA R BANKHEAD
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GERARDO LANDEROS
44531 TARRAGON DR
LANCASTER CA 93536
MICHAEL S & SUSAN J MATTA
44523 TARRAGON DR
LANCASTER CA 93536

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SCOTT A & MELISSA M COUPER
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YUSHAN LUO
5102 VIA ALAMITOS
NEWBURY PARK CA 91320
MOHAMMAD A HAMEED
44461 TARRAGON DR
LANCASTER CA 93536

APN 3153-054-035
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APN 3153-054-037
DORAN & MONICA BOBADILLA
44915 LOGUE AVE
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LEONCIO GONZALEZ
2531 STILLWATER DR
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RUBEN & TERESA G SALMAN
2537 STILLWATER DR
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TONCIE BLACKWELL
2545 STILLWATER DR
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FARZANA SHAHID
8630 CAVEL ST
DOWNEY CA 90242
ELVIR S SOSA
2565 STILLWATER DR
LANCASTER CA 93536

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DAVID R NORRIS
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LANCASTER CA 93536
SEBE D & KIMBERLY J FRANCISCO
44452 STILLWATER DR
LANCASTER CA 93536
LUIS F & ALAN AMEZCUA
2614 W OLDFIELD ST
LANCASTER CA 93536
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JARIYA C DOREMUS
2608 W OLDFIELD ST
LANCASTER CA 93536

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GENARO V & MICHELE G RIOS
2558 W OLD FIELD ST
LANCASTER CA 93536

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BJORN K SACK
44533 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-047
MARK A & RANDI S MOORE
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LANCASTER CA 93536

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DON L & FEDERITA L JOHNSON
44519 STONEBRIDGE LN
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LORINA N MOAWAD
44513 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-050
JUSTIN FLY
44507 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-051
HARRY & LAURIE FORMENTERA
44506 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-052
LUIS DE LOS SANTOS
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LANCASTER CA 93536

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ELMASRI DAOUD
44520 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-054
ANDRE C & MARIA C OLEGINE
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LANCASTER CA 93536

APN 3153-054-055
SUSANA M AGUILAR
44534 STONEBRIDGE LN
LANCASTER CA 93536

APN 3153-054-056
ROBERT & JOSIE MARGY
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APN 3153-054-057
FELIMON S & ADORACION H RABE
44508 TARRAGON DR
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APN 3153-054-058
RICHARD L PERALTA
44502 TARRAGON DR
LANCASTER CA 93536

APN 3153-054-059
JUVENTINO T & JUNIPERO T VILLANUEVA
44462 TARRAGON DR
LANCASTER CA 93536

APN 3153-054-060
ALFRED F SALAZAR
44454 TARRAGON DR
LANCASTER CA 93536

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ANNE M & DARBY L CAMPBELL
44509 OVERLAND AVE
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DANIEL L & CLAUDIA E STEWART
44512 OVERLAND AVE
LANCASTER CA 93536

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MARIA R HERNANDEZ
2663 W PONDERA ST
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ANTONIO S SALAZAR
44433 SHADOWCREST DR
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44442 SHADOWCREST DR
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ROGER H & JUNE C BISCHOFF
44436 SHADOWCREST DR
LANCASTER CA 93536

APN 3153-058-034
DAN O OGI
PO BOX 7757
TORRANCE CA 90504

APN 3153-058-040
ALTISOURCE RESIDENTIAL LP
1661 WORTHINGTON RD #100
WEST PALM BEACH FL 33409

APN 3153-058-041
MARIA E BARBER
4108 LARKSPUR ST
LAKE ELSINORE CA 92530

APN 3153-058-042
SECURITY TITLE LLC TR
3053 RANCHO VISTA BLVD #H373
PALMDALE CA 93551

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GABRIEL MAESTAS
2650 W PONDERA ST
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Simulation #1

Source: GPA Consulting, 2018

Source: Kimley-Horn Associates, 2018
Simulation #2

Before

Source: GPA Consulting, 2018

After

Source: Kimley-Horn Associates, 2018
Simulation #3

Source: GPA Consulting, 2018

Source: Kimley-Horn Associates, 2018
Appendix G: Threatened and Endangered Species List
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SR-14 Avenue J Interchange
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Record Count: 50
Appendix H: Technical Studies
Technical Studies

The following studies were prepared for this environmental document:

1. GPA Consulting, *Natural Environment Study for the SR-14 (SR-138)/Avenue J Interchange Improvements Project*, June 2018


6. GPA Consulting, *Historical Resources Compliance Report*, August 2018


