I-15 Express Lanes Project Southern Extension (ELPSE)

RIVERSIDE COUNTY, CALIFORNIA
DISTRICT 8 – RIV – 15 – 20.3/40.1
in the Cities of Lake Elsinore, Corona, and unincorporated Riverside County
EA 08-0J0820 / ID: 08-18000063

Draft Environmental Impact Report/Environmental Assessment

Prepared by the
State of California, Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

October 2024

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General Information about This Document

What's in this document:
The California Department of Transportation (Department), as assigned by the Federal Highway Administration (FHWA), has prepared this Environmental Impact Report/ Environmental Assessment (EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed Project located in Riverside County, California. The Department is the lead agency under the National Environmental Policy Act (NEPA). The Department is the lead agency under the California Environmental Quality Act (CEQA). The Riverside County Transportation Commission will be a CEQA responsible agency. The document tells you why the Project is being proposed, what alternatives we have considered for the Project, how the existing environment could be affected by the Project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and the related technical studies are available for review at:
    - Riverside County Transportation Commission
      4080 Lemon St. 3rd Floor
      P.O. Box 12008,
      Riverside, CA 92502
    - City of Lake Elsinore, 130 South Main Street, Lake Elsinore, California 92530 (Available for review Monday through Thursday from 8:00 a.m. to 5:00 p.m. and Friday from 8 a.m. to 4 p.m. Closed on holidays. Please call the City of Lake Elsinore at [951] 674-3124 to confirm availability of hard copies for review.)
    - Lake Elsinore Library, 600 West Graham, Lake Elsinore, California 92530 (Available for review Monday, Wednesday, and Thursday from 10:00 a.m. to 6:00 p.m., Tuesday from 11:00 a.m. to 7:00 p.m., Friday from 10:00 a.m. to 5:00 p.m., and Saturday 10:00 a.m. to 2:00 p.m. Closed on holidays. Please call the Lake Elsinore Library at [951] 674-4517 to confirm availability of hard copies for review.)
    - Corona Public Library, 650 S Main Street, Corona, CA 92882
      (Available Monday through Thursday 10:00 a.m. to 8:00 p.m., Friday 10:00 a.m. to 6:00 p.m., and Saturday 1:00 p.m. to 5 p.m. Closed on holidays. Please call the Corona Public Library at [951] 736-2381 to confirm availability of hard copies for review.)
- This document may be downloaded at the following website:
  https://www.rctc.org/projects/i15-express-southern-extension/

- Attend the public hearings on October 22, 23, and 29, 2024:

Temescal Valley
The Retreat
8007 Soft Winds Drive, Corona, California 92883
Public hearing will be held on:
- **Tuesday, October 22, 2024**
- **From 6 p.m. to 8 p.m.**

Lake Elsinore
Lake Elsinore Cultural Center
183 N Main Street
Lake Elsinore, California 92530
Public hearing will be held on:
- **Wednesday, October 23, 2024**
- **From 6 p.m. to 8 p.m.**

Corona
Eagle Glen Golf Club
1800 Eagle Glen Parkway
Corona, California 92883
Public hearing will be held on:
- **Tuesday, October 29, 2024**
- **From 6 p.m. to 8 p.m.**

- We'd like to hear what you think. If you have any comments about the proposed Project, please attend the Public Hearing and/or send your written comments via postal mail or email to the Department by the deadline, November 26, 2024.

  Send comments via postal mail to:
  Jeff Dietzler, Capital Projects Manager (Tolling)
  Riverside County Transportation Commission
  4080 Lemon Street, Third Floor
  P.O. Box 12008
  Riverside, CA 92501

- Send comments via email to: 15projectsouth@rctc.org
- Be sure to send comments by the deadline: November 26, 2024

What happens next:
After comments are received from the public and reviewing agencies, the Department, as assigned by the FHWA, may: (1) give environmental approval to the Project, (2) do additional environmental studies, or (3) abandon the Project. If the Project is given environmental approval and funding is obtained, the Department could design and construct all or part of the Project.

Alternative Formats:
For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Riverside County Transportation Commission (RCTC), Attn: Jeff Dietzler, Capital Projects Manager (Tolling), 4080 Lemon Street, 3rd Floor, Riverside, CA 92502; call (915) 787-7141 (voice); or use the California Relay Service, at California Relay Service 1 (800) 735-2929 (TTY English), 1 (800) 855-3000 (TTY Spanish), 1 (800) 735-2929 (Voice English), 1 (800) 855-3000 (Voice Spanish) or 711.

SCH# 2019100381
DISTRICT 8 – RIV – 15 – 20.3/40.1
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Construct new express lanes in both the northbound (NB) and southbound (SB) directions within the median of I-15 from State Route (SR-) 74 (Central Avenue) (post mile [PM] 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project would also add a SB auxiliary lane between both the Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately 1 mile). In addition, due to the SB express lanes access between the Cajalco Road Interchange and Weirick Road Interchange, the SB I-15 Weirick Road Off-Ramp would be configured as a dual lane exit.

Draft Environmental Impact Report/Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation
Responsible Agency: Riverside County Transportation Commission (RCTC)
Cooperating Agencies: US Fish and Wildlife Service and U.S. Army Corps of Engineers

October 3, 2024
Date

Shawn Oriaz
for Kurt Heidelberg
Deputy District Director, Environmental
District 8
California Department of Transportation
CEQA & NEPA Lead Agency

The following persons may be contacted for more information about this document:

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Summary

S.1 NEPA ASSIGNMENT

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 USC 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 USC 327 (NEPA Assignment MOU) with FHWA. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on May 27, 2022, for a term of ten years. In summary, the Department continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and the Department assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to the Department under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

S.2 PROJECT DESCRIPTION

The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans), is proposing to construct new lanes along I-15 between post mile (PM) 21.2 and PM 38.1 in Riverside County, California. The primary component of the I-15 Express Lanes Project Southern Extension (ELPSE) Project (Project) would be the addition of two tolled express lanes[1] in both the northbound (NB) and southbound (SB) directions within the median of Interstate (I-) 15 from State Route (SR-) 74 (Central Avenue) (PM 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project would also add a SB auxiliary lane between both the Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately 1 mile). Along with the lane additions, which would extend from PM 21.2 to PM 38.1, the Project would include widening of up to 15 bridges; potential construction of noise barriers, retaining walls, and drainage systems; and implementation of electronic toll collection equipment and signs. In addition, due to the SB express lanes access between the Cajalco Road and Weirick Road Interchanges, the SB I-15 Weirick Road Off-Ramp would be configured as a dual-lane exit. Associated improvements for the toll lanes, including advance signage and transition striping, would

[1] Express lanes are traffic lanes that are separated from general purpose lanes where users are charged a toll to use the lanes.

extend approximately 2 miles from each end of the express lane limits to PM 20.3 in the south and PM 40.1 in the north. The proposed lane additions and supporting infrastructure are expected to be constructed primarily within the existing State right of way. No new permanent right of way is expected to be required as part of this Project.

S.3 PROJECT AREA

The Project is in the Cities of Corona and Lake Elsinore and unincorporated Riverside County. The existing land uses that surround the Project consist of undeveloped land, light-industrial facilities, rural residences, residential developments, commercial retail facilities, and vacant lots.

S.4 PURPOSE AND NEED

S.4.1 Purpose

The purpose of the Project is to:

- Improve and manage traffic operations, throughput, and travel times along the corridor.
- Expand travel mode choice along the corridor.
- Provide an option for travel time reliability.
- Provide a cost-effective mobility solution.
- Expand and maintain compatibility with the express lane network in the region.

S.4.2 Need

Existing traffic volumes often exceed current highway capacity along several segments of I-15 between SR-74 (Central Avenue) and El Cerrito Road. Due to forecasted population growth and the continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline.

The recently adopted Southern California Association of Governments (SCAG) Connect SoCal (2024–2050 Regional Transportation Plan [RTP]/Sustainable Communities Strategy [SCS]) Growth Forecast estimates a 25.4-percent increase in population in Riverside County between 2019 and 2050, with the number of households and employment increasing by approximately 42.7 percent and 39.9 percent, respectively. In the City of Corona, the 2020–2045 RTP/SCS Growth Forecast estimates an 11.6-percent increase in population from 2016 to 2045 and an 11.7-percent increase in

households.[2] According to the same source, the City of Lake Elsinore is projected to see a 76.8-percent increase in population. This projected growth is expected to place a high demand on existing transportation facilities and services.

S.5 NO-BUILD ALTERNATIVE

Under the No-Build Alternative, the I-15 ELPSE would not be constructed. The No-Build Alternative would not meet the following four of the five purposes of the Project:

- Improve and manage traffic operations, throughput, and travel times along the corridor.
- Expand travel mode choice along the corridor.
- Provide an option for travel time reliability.
- Expand and maintain compatibility with the express lane network in the region.

However, it would not preclude the construction of future improvements or general maintenance activities along I-15. Describing and analyzing a no-build (no-action) alternative helps decisionmakers and the public compare the impacts of approving a project with the consequences of not approving a project.

S.6 BUILD ALTERNATIVE

The Build Alternative would include the addition of two tolled express lanes in both the NB and SB directions within the median of I-15 from SR-74 (Central Avenue) (PM 22.3) in the City of Lake Elsinore to El Cerrito Road (PM 38.1) in the City of Corona, a distance of approximately 15.8 miles. The Project would be constructed primarily within the existing State right of way. Sign modifications and the installation of new signs would also be included to support the new tolled express lanes. Advanced signage is required to be posted a minimum of 2 miles prior to the start of the tolled express lanes. Signage would be within the Project limits, between PM 20.3 and PM 40.1. Due to the SB express lanes access between the Cajalco Road Interchange and Weirick Road Interchange, the SB I-15 Weirick Road Off-Ramp would be configured as a dual lane exit. The Build Alternative would not improve any other existing ramps and would not add any new connections.

S.7 LEAD AGENCIES AND NEPA/CEQA DOCUMENTATION

The proposed Project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA), and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The Department is the lead agency

[2] Local growth projections for the City of Corona and the City of Lake Elsinore are not available in the recently adopted SCAG 2024–2050 RTP/SCS; however, the difference in rates when compared with 2050 are not anticipated to be substantial.

under NEPA. The Department is the lead agency under CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this Project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the Project as a whole, often a "lower level" document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. The Department may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the Project, a Notice of Determination will be published for compliance with CEQA, and the Department will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement (EIS) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

S.8 PROJECT IMPACTS

Table S-1 summarizes the impacts documented in the environmental analysis provided in Chapter 2 of this EIR/EA. The environmental commitments and measures to minimize harm are listed in each topical section of Chapter 2 and in the Environmental Commitments Record (ECR) in Appendix C. Table S-1 below summarizes the Project's impacts for the No Build and Build Alternative.

Table S-1 Proposed Project Impacts

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
Land Use and Consistency with State, Regional, and Local Plans and Programs	• No temporary or permanent impacts on existing or planned land uses or land use compatibility would occur. • Inconsistent with multiple goals and policies of most applicable state, regional, and local plans and programs.	• No temporary construction easements (TCEs) are anticipated to be required. • No permanent property acquisitions or relocations would be required. • No land use conversion would occur. • Consistent with state, regional, and/or local plans and policies, except for California's Assembly Bill (AB) 32 Climate Change Scoping Plan (2022), SCAG 2024–2050 RTP/SCS, and County of Riverside General Plan (2021).	• Avoidance and Minimization Measure **TE-4** ensures consistency with the Stephens' Kangaroo Rat Habitat Conservation Plan, including habitat monitoring and reporting to the U.S. Fish and Wildlife Service. • Standard Project Measure **EN-1**: The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)). • Standard Project Measure **AQ-4**: The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • *Mitigation Measures* **GHG-1** through **GHG-4** and **GHG-11** and **VMT-1** are expected to reduce construction greenhouse gas (GHG) emissions and potential climate change impacts from the Project.
Parks and Recreation Facilities	• There would be no temporary or permanent impacts or adverse effects related to parks and recreation facilities or Section 4(f) resources. • Continuance or worsening of congestion levels along I-15 could negatively affect the ability of the public to travel easily to recreational resources.	• Construction may cause temporary increased travel times for the public in accessing parks and recreation facilities; however, access would be maintained during construction. • Construction would not require temporary staging areas within or adjacent to any identified park or recreational facility. • There would be no temporary or permanent use of land from parks and recreational facilities. • There would be no substantial direct or indirect permanent impacts on any parks or recreational resources, including Section 4(f) resources.	• Standard Project Measure **TR-1**: A Transportation Management Plan (TMP) will be implemented to address short-term traffic circulation and access effects during construction. • Standard Project Measure **AQ-1:** Relates to fugitive dust emissions controls and other dust preventive measures, as specified in South Coast Air Quality Management District (SCAQMD) Rule 403. • Standard Project Measure **AQ-2:** Relates to construction equipment maintenance. • Standard Project Measure **AQ-3:** Relates to prevention of spills. • Standard Project Measure **AQ-4:** The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 A-weighted decibels (dBA) maximum noise level (Lmax) at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
Growth	• There would be no influence on the rate, type, or amount of growth.	• Implementation or operation would not induce substantial unplanned population growth, either directly or indirectly.	• None

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
	• Unplanned growth in the study area would not result.		
Community Character and Cohesion	• The continuance or worsening of congestion levels along I-15 could negatively affect the ability of the public to travel easily within Riverside County.	• Existing neighborhoods would not be divided. No barriers between existing communities would be created; rather, the Project would expand the already existing freeway with the addition of two tolled express lanes both in the NB and SB directions in the median of the existing I-15. • During construction, short-term noise and air quality impacts may affect populations within the community impact study area. • Although it is not anticipated, local travel times may increase during construction activities.	• Standard Project Measure **AQ-1:** Relates to fugitive dust emissions controls and other dust preventive measures, as specified in SCAQMD Rule 403. • Standard Project Measure **AQ-2:** Relates to construction equipment maintenance. • Standard Project Measure **AQ-3:** Relates to prevention of spills. • Standard Project Measure **AQ-4:** The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • Standard Project Measure **TR-1:** A TMP will be implemented to address short-term traffic circulation and access effects during construction. • Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
Relocations and Real Property Acquisition	• No property acquisitions or relocations would be required. • No TCEs would be required.	• No property acquisitions or relocations would be required. • No permanent easements would be required. If a TCE is needed outside public right of way, then the location would be environmentally cleared for the duration of use.	• None
Environmental Justice	• The I-15 would remain in its current condition and no improvements would be implemented. The continuance or worsening of congestion levels along I-15 could negatively affect the ability of the public to travel easily within Riverside County, which would affect environmental justice (EJ) communities. • Underserved populations would not be exposed to indirect temporary impacts on air quality or noise. • Access would allow for current commuting patterns to remain for underserved populations relying on I-15 alignment for their normal travel patterns and times.	• Construction activity as it relates to noise to sensitive noise receptors in EJ communities is expected to result in direct temporary impacts. • Business access would be maintained during and after construction; no permanent or direct temporary adverse effects on business activity would occur as a result of traffic delays. • The Project would maximize mobility in the region by improving operational reliability and efficiency through the provision of additional travel choices and creating a more cohesive express lane network within the region for EJ communities. • Once operational, throughput would be increased along the corridor as bottlenecks are shifted along I-15, thereby benefiting surrounding EJ communities.	• Standard Project Measure **TR-1:** A TMP will be implemented during Project construction to address short-term traffic circulation and access effects during construction. • Standard Project Measure **AQ-1:** Relates to fugitive dust emission controls and other dust preventive measures, as specified in SCAQMD Rule 403. • Standard Project Measure **AQ-2:** Relates to construction equipment maintenance. • Standard Project Measure **AQ-3:** Relates to prevention of spills. • Standard Project Measure **AQ-4:** The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02).

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• Once operational, a marginal increase in daily regional emissions due to capacity expansion and subsequent increases in vehicle miles traveled (VMT) and a minimal increase in GHG emissions would occur compared with existing conditions. However, other pollutants are expected to decrease due to improvements in vehicle engine technology, fuel efficiency, and turnover of older heavily polluting vehicles. Long-term effects or operation emissions would not result in disproportionately high adverse air quality effects on EJ populations.	• Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. • *Mitigation Measure* **VMT-1**: A Vehicle Miles Traveled Mitigation Program will be developed to reduce VMT and associated impacts.
Equity	• I-15 would remain in its current condition and no improvements would be implemented. • The continuance or worsening of congestion levels along I-15 could negatively affect the ability of the public to travel easily within Riverside County, which would cause equity impacts. • Access would allow for current commuting patterns to remain for underserved populations relying on I-15 alignment for their normal travel patterns and times.	• No acquisition of businesses or residences would occur; therefore, no personal property acquisitions in underserved communities would occur. • During construction, short-term changes in access, circulation, light/glare, noise, and air quality may occur. • Once operational, the Project is expected to improve traffic conditions for highway users and to improve transit performance. Members of underserved and disadvantaged communities that rely on transit would benefit, as free in-service transit vehicles would be able to use the express lanes. • Within the express lanes, traffic conditions are expected to improve for highway users. • Express lanes time savings from potential toll prices could be found attractive and therefore benefit low-income drivers.	• Standard Project Measure **TR-1**: A TMP will be implemented to address short-term traffic circulation and access effects during construction. • Standard Project Measure **AQ-1**: Relates to fugitive dust emissions controls and other dust preventive measures, as specified in SCAQMD Rule 403. • Standard Project Measure **AQ-2**: Relates to construction equipment maintenance. • Standard Project Measure **AQ-3**: Relates to prevention of spills. • Standard Project Measure **AQ-4**: The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • Avoidance and Minimization Measure **AES-1**: A Project Aesthetics and Landscape Master Plan shall be prepared. • Avoidance and Minimization Measure **AES-2**: Relates to aesthetic review of noise barriers and retaining walls. • Avoidance and Minimization Measure **AES-3**: Relates to landscape design. • Avoidance and Minimization Measure **AES-4**: Relates to signage and construction lighting. • Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. • *Mitigation Measure* **VMT-1**: A Vehicle Miles Traveled Mitigation Program will be developed to reduce VMT and associated impacts.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
Utilities/ Emergency Services	• There would be no temporary or permanent impacts associated with existing or future utilities or emergency services.	• No relocation or construction of new utility facilities would be required, and no substantial disruption of utility services would occur during construction. All utilities would be protected in place. • There are no anticipated permanent adverse effects on utility facilities and providers. • Construction is expected to result in temporary impacts on traffic circulation, including for emergency services.	• Avoidance and Minimization Measure **UT-1**: Avoid disruption of utility services during construction. • Avoidance and Minimization Measure **UT-2**: Contractor to notify Underground Service Alert (USA) at least 2 days prior to excavation. • Standard Project Measure **TR-1:** A TMP will be implemented to address short-term traffic circulation and access effects during construction. • Avoidance and Minimization Measure **FIRE-1:** Minimize risk of fires during construction.
Traffic and Transportation/ Pedestrian and Bicycle Facilities	• The existing lane configurations for I-15 would be maintained. • Existing traffic volumes often exceed current highway capacity along several segments of I-15 between SR-74 (Central Avenue) and El Cerrito Road. Because of forecasted population growth and the continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline. • Under Opening Year (2030) conditions, mainline segments, ramps, and express lanes on SB I-15—would operate at level of service (LOS) D or better during the AM peak hours. • During PM peak hours, under Opening Year (2030) conditions, the SB I-15 bottleneck at the Cajalco Road Interchange is expected to be amplified and is projected to create a 4.8-mile queue that would extend from the Cajalco Road On-Ramp to the eastbound SR-91 On-Ramp. It is projected that portions of the freeway in this area would operate at LOS F. • PM peak hour traffic on NB I-15 under Design Year (2050) conditions is projected to bottleneck at the westbound Magnolia Avenue On-Ramp and is expected to create a queue greater than 15 miles long that would extend past Main Street. Segments in the queue are expected to operate at LOS E or F. • All other mainline segments, ramps, and express lanes are projected to operate at LOS D or better during PM peak hour.	• Construction is expected to result in temporary impacts on traffic circulation, including for emergency services. • The Project is expected to improve LOS in Opening Year (2030) where the number of freeway mainline and ramp locations during the AM and PM peak hours, operating at LOS E or worse, would be reduced by approximately 8 percent when compared to the No-Build Alternative. This is expected to serve approximately 2,089 more vehicles during the peak period, particularly those making longer trips, and reduce overall vehicle delay within the traffic study limits by approximately 4.4 percent. When comparing the projected volume served and total distance traveled, it is expected that the Project would better serve trips with longer lengths than the No-Build Alternative. • In Design Year (2050), LOS is projected to degrade at approximately 14 percent of the freeway mainline and ramp locations during the AM and PM peak hours when compared to the No-Build Alternative. With the improvements that would be provided on the freeway system associated with the express lanes, more demand is expected to occur and to be served. The Project is also projected to serve longer trip lengths on the freeway , which is supported by the average trip lengths that are projected to increase by 1.6 miles between the No-Build Alternative and the Project. The delay within the traffic study area is expected to be reduced by 5.7 percent when accounting for local roadways. • The increased capacity on I-15 would estimate rerouting of traffic from both the local roadways and I-215 (via Community and Environmental	• Standard Project Measure **TR-1:** A TMP will be implemented to address short-term traffic circulation and access effects during construction. • *Mitigation Measure* **VMT-1**: A Vehicle Miles Traveled Mitigation Program will be developed to reduce VMT and associated impacts.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
	• The expected increase in congestion during AM and PM peak periods and worsening traffic conditions are expected to result in additional local and regional traffic congestion. Existing heavy peak-period congestion and traffic delays are expected to continue to negatively affect traffic operations along mainline I-15. • No permanent impacts related to pedestrian or bicycle facilities would occur.	Transportation Acceptability Process [CETAP-west] back to the I-15 freeway. This is shown on the freeway ramp volumes where the No-Build Alternative shows additional peak hour trips using the CETAP-west connection via Cajalco Road during the PM peak hour in this area as compared to the Project. It is estimated that 11,000 daily trips are displaced from local roadways over to I-15 due to the increased capacity on I-15. The static routing shows substantial traffic under this scenario stays on I-15. • The development of an extensive regional express lanes network is a key strategy in the 2024–2050 RTP/SCS that aims to improve travel time reliability, provide travel choice, and optimize existing freeway capacity within the SCAG region. Several tolled express lanes projects have already been completed in the Inland Empire, including the SR-91 Express Lanes in 2017 and the I-15 Express Lanes Project in 2021. The addition of the Project would extend the I-15 Express Lanes an additional 14.5 miles in the Inland Empire. • VMT is expected to increase for the Build Alternative in comparison to the No-Build Alternative for Design Year (2050); therefore, the Project is expected to increase VMT when compared to the No-Build Alternative. • The Project may temporarily affect existing pedestrian and bicycle facilities during the construction of bridge widenings, although this is not anticipated. • The Project does not include improvements to bicycle or pedestrian facilities. It would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	
Visual Aesthetics	• The visual character and quality of the Project site and vicinity would remain similar to the existing conditions. • No temporary or permanent impacts associated with visual/aesthetic resources would result.	• The Project is expected to result in minor temporary impacts on visual/aesthetic resources during construction. • Viewsheds containing identified visual resources are not expected to be affected.	• Avoidance and Minimization Measure **AES-1:** A Project Aesthetics and Landscape Master Plan shall be prepared. • Avoidance and Minimization Measure **AES-2:** Relates to aesthetic review of noise barriers and retaining walls.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• The Project would not substantially change the existing views of or from I-15, and impacts on visual quality are projected to be low or neutral.	• Avoidance and Minimization Measure **AES-3:** Relates to landscape design. • Avoidance and Minimization Measure **AES-4:** Relates to signage and construction lighting.
Cultural Resources	• No temporary or permanent impacts associated with cultural resources would result.	• There are seven historic properties (assumed eligible for the National Register of Historic Places) in the Project Area of Potential Effects. No effect is expected for any of the seven historic properties. • It is not anticipated that unknown cultural resources would be encountered during construction. • Impacts on historic resources are not expected.	• Standard Project Measure **CR-1**: Relates to discovery of cultural materials. • Standard Project Measure **CR-2**: Relates to discovery of human remains. • Standard Project Measure **CR-3**: Relates to the establishment of ESAs and barriers. • Standard Project Measure **CR-4**: Relates to archaeological monitoring.
Hydrology and Floodplain	• No construction activities would take place within any floodplain. Therefore, no impacts would occur on hydrology or floodplain resources.	• Federal Emergency Management Agency (FEMA)-designated 1-percent annual chance (100-year) floodplains are present at Arroyo del Toro, Stovepipe Canyon Wash, Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash. • The Project is considered low risk for impacts on the 1-percent annual chance (100-year) floodplain. • The Project may require pre-cast girders or temporary falsework. These would be minor structures that are not expected to substantially affect the floodplains in Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash, and they would be removed upon completion of construction. • The Project would not result in any potential risks to the natural and beneficial floodplain values or beneficial uses, as defined by the Santa Ana Regional Water Quality Control Board (RWQCB) Basin Plan. • A minimal increase in water surface elevation would not introduce additional risk for traffic disruptions or loss of life and property. • Regulatory permits from the U.S. Army Corps of Engineers (USACE [Section 404 Nationwide Permit]), Santa Ana RWQCB (Section 401 Water Quality Certification and Porter-Cologne Waste Discharge Requirements), and California Department of Fish and Wildlife (CDFW) (1602 Streambed Alteration Agreement) for improvements to Temescal Wash, Mayhew Wash, Coldwater	• None

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		Wash, and Bedford Wash are anticipated to be required.	
Water Quality and Stormwater Runoff	• No temporary or permanent impacts associated with water quality resources would occur.	• The total Disturbed Surface Area is estimated to be 844 acres. • The Project could result in permanent impacts on water quality due to an increase in impervious surface areas (approximately 125 acres in total). This includes replacing approximately 43 acres of impervious surface and adding approximately 82 acres of new impervious surface. • The Project is not expected to violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	• Standard Project Measure **WQ-1**: Comply with construction general permit. • Standard Project Measure **WQ-2**: Prepare a Stormwater Pollution Prevention Plan. • Standard Project Measure **WQ-3**: Conduct water quality monitoring during construction. • Standard Project Measure **WQ-4**: Relates to batch plant or crushing plant. • Avoidance and Minimization Measure **WQ-5:** Comply with the requirements of a WDR dewatering permit and implement dewatering best management practices (BMPs). • Standard Project Measure **WQ-6:** Ensure approved treatment BMPs and trash capture devices will be implemented and will operate as designed. • Standard Project Measure **WQ-7:** Ensure that design pollution prevention BMPs are implemented. • Standard Project Measure **WQ-8:** Ensure that maintenance BMPs will be implemented.
Geology/Soils/Seismic/ Topography	• The area is within a seismically active region subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. • No Project construction would occur; therefore, no impacts related to geology, soils, seismicity, or topography would occur. • Construction workers or the traveling public would not be exposed to risks associated with seismic ground shaking. • The existing topography and soils would not be affected; however, sedimentation and erosion of existing embankment slopes and exposure to seismic activity and ground shaking could continue.	• The Project is within a seismically active region subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. • Construction workers or the traveling public would not be exposed to risks associated with seismic ground shaking as a result of construction or operation of the Project. • The Project site is not within a currently designated State of California or Riverside County Earthquake Fault Zone. There are no known active faults projecting toward or extending across the Project site. • The potential for lateral spreading or liquefaction to affect the Project is low. • There is a low risk level for landslides within the Project site. • Construction activities would require the temporary disturbance of soil.	• Standard Project Measure **GEO-1:** Under this measure a detailed geotechnical investigation will be conducted to assess the geotechnical conditions at the Project area. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Prepare Water Pollution and Erosion Control Plans. • Standard Project Measure **WQ-2**: Prepare a Stormwater Pollution Prevention Plan.
Paleontology	• No temporary or permanent adverse impacts related to paleontological resources would result.	• Geologic mapping and paleontological studies indicate the Project footprint is underlain, in part, by geologic units with high paleontological sensitivity.	• Avoidance and Minimization Measure **PAL-1:** Requires the development of a Paleontological Mitigation Plan.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
Hazardous Waste/Materials	• No change to the existing physical environment would occur, and no temporary or permanent impacts related to hazardous waste and materials would result.	• There is potential to encounter unexpected or unknown contaminants during soil disturbance activities. • No recognized environmental conditions have been identified within the Initial Site Assessment study area; however, aerially deposited lead, asbestos-containing material, lead based paint, including hazardous waste from treated wood and paint and thermoplastic striping, and construction-generated hazardous waste may be encountered during construction activities. • Up to 15 bridges may be widened. Asbestos-containing material and lead-based paint are present in locations where bridges would be widened.	• Standard Project Measure **HW-1:** Relates to asbestos-containing material and lead-based paint sampling of affected bridges. • Standard Project Measure **HW-2:** Relates to treated wood waste. • Standard Project Measure **HW-3:** Relates to proper handling of traffic striping and pavement materials. • Standard Project Measure **HW-4:** Relates to the handling, storage, and disposal of hazardous waste. • Avoidance and Minimization Measure **HW-5:** Prepare a Health and Safety Plan. • Standard Project Measure **HW-6:** Prepare a Contaminated Media Management Plan. • Avoidance and Minimization Measure **HW-7:** Prior to construction, prepare a Construction Contingency Plan. • Standard Project Measure **HW-8:** Prior to construction, prepare a Lead Compliance Plan. • Standard Project Measure **AQ-4:** Requires compliance with air-pollution-control rules, regulations, ordinances, and statutes, including SCAQMD Rule 1403. • Standard Project Measure **WQ-2**: Prepare a Stormwater Pollution Prevention Plan.
Air Quality	• There would be no change to the existing physical environment, and no temporary or permanent impacts related to air quality would result.	• During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust), particulate matter, construction equipment emissions, and other construction-related activities. • The Project is included in the SCAG 2024–2050 RTP/SCS under project number 3160001-RIV170901 and has been incorporated into the SCAG 2023 FTIP, which was approved by the FTA on December 16, 2022. • The project-level conformity requirements are not anticipated to worsen existing particulate matter violations and delay timely attainment of the standards. • The Project is not anticipated to cause or contribute to any new violation of the state and federal standards of the criteria pollutants. • Operation under Opening Year (2030) and Design Year (2050) conditions is expected to increase	• Standard Project Measure **AQ-1:** Relates to fugitive dust emissions controls and other dust preventive measures, as specified in SCAQMD Rule 403. • Standard Project Measure **AQ-2:** Relates to construction equipment maintenance. • Standard Project Measure **AQ-3:** Relates to prevention of spills. • Standard Project Measure **AQ-4:** The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • *Mitigation Measure* **VMT-1**: A Vehicle Miles Traveled Mitigation Program will be developed to reduce VMT and associated impacts.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		emissions of particulate matter 10 microns or less in diameter (PM_{10}) and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) when compared to both the existing and no-build conditions. As it is located within a nonattainment area for the state PM_{10} and $PM_{2.5}$ ambient air quality standards, the Project-related increase would be cumulatively considerable.	
Noise	• No temporary noise impacts would occur. • Existing and projected traffic congestion would continue to deteriorate. Eighty-two modeled locations representative of 54 Activity Category B receptors (single- and multi-family residences), 20 modeled locations representative of Activity Category C receptors (places of worship, a cemetery, medical facilities, a school, sports fields, and playgrounds), and eight modeled locations representative of Activity Category E receptors (exterior use areas for restaurant/bar, hotels, and offices) would approach or exceed the respective noise abatement criteria (67 dBA equivalent hourly noise level [Leq(h)]) for Categories B and C, and 72 dBA Leq[h] for Category E). • No abatement would be provided for impacts under the No-Build Alternative.	• Temporary construction noise impacts would occur at areas immediately adjacent to the Project construction activities. • Temporary increases in vibration would likely occur in some locations during construction. • The calculated worst-hour traffic noise levels for Design-year Build conditions are predicted to approach or exceed the noise abatement criteria (67 dBA Leq[h]) at residential and recreational land uses (Activity Categories B and C) in several Noise Analysis Areas throughout the alignment. Additionally, the calculated worst-hour traffic noise levels are predicted to approach or exceed the noise abatement criteria of 72 dBA Leq[h]) for Activity Category E land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, and E land uses within the study area. Accordingly, noise abatement must be considered at those locations. Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of noise barrier systems, although these may change: • SW1890A + SW1890B at the NB I-15 edge of shoulder and the NB I-15 Weirick Road On-Ramp edge of shoulder. • SW1890A + SW1890C at the NB I-15 edge of shoulder and at the right of way, east of the NB I-15 Weirick Road On-Ramp edge of shoulder.	• Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 dBA Lmax at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.
Energy	• No temporary impacts on energy would result. • No permanent adverse energy impacts would result.	• Energy use is estimated to result in a short-term increase during construction; however, construction design features would help conserve energy. The energy conservation features would be consistent with state and local policies to reduce energy consumption. Therefore, construction is not expected to result in the inefficient, wasteful, or unnecessary consumption of energy.	• Standard Project Measure **EN-1**: The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)). • Avoidance and Minimization Measure **EN-2:** Light fixtures and traffic signals will be replaced or installed with highly efficient light-emitting diodes (LEDs), including toll pricing signs.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• Long-term changes in energy use are due to the changes in volumes, speeds, and fuel economy of vehicles traveling in the region. There is expected to be an increase in regional VMT compared to the No-Build Alternative, resulting in increased energy consumption. • Over the long term, when compared to the Existing Conditions (2019), annual energy consumption is projected to increase by 17.8 percent in 2030 and by 5.7 percent in 2050. When compared to the Existing Conditions (2019), annual VMT is projected to increase by 62.0 percent in 2030 and by 67.4 percent by 2050. This disparity is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time; this would also include hybrid and all-electric vehicles. This increase is not substantial in the context of statewide consumption, as it would represent approximately 0.001 percent of statewide energy consumption. As such, operation is not expected to result in wasteful, inefficient, or unnecessary consumption of energy.	
Natural Communities	• No new or additional impacts on natural vegetation communities would occur beyond those that would be expected from operation of the existing facility.	• Construction is expected to temporarily disturb 128.58 acres of Riversidian sage scrub, 1.49 acres of Chaparral, 0.31 acre of Native Grasslands, 2.29 acres of Wildflower Fields, and 2.29 acres of Sensitive Riparian. These impacts would occur in Multiple Species Habitat Conservation Plan (MSHCP) criteria cells and cores and linkages, but no impacts on these sensitive natural communities would occur in conserved lands. However, this is a potentially significant impact under CEQA. • The potential exists for short-term, temporary, indirect effects from construction activities–including dust, increases in fire risks, introduction of invasive plant species, erosion and sedimentation, introduction of hazardous materials, and introduction of trash on sensitive natural communities adjacent to the limits of disturbance (LOD). • Construction activities are expected to occur primarily within the I-15 median and are not expected to sever existing connectivity of sensitive	• Avoidance and Minimization Measure **NC-1 (NES BIO-1)**: Vegetation clearing restrictions. • Avoidance and Minimization Measure **NC-2 (NES BIO-2)**: Dust control. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression. • Avoidance and Minimization Measure **NC-4 (NES BIO-4)**: Biological training. • Avoidance and Minimization Measure **NC-5 (NES BIO-5)**: Biological monitoring. • Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project limits. • Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment cleaning. • Avoidance and Minimization Measure **NC-9 (NES BIO-9)**: Minimizing disturbance. • Avoidance and Minimization Measure **NC-10 (NES BIO-10)**: Revegetation.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		natural communities from one side of the interstate to the other. • Permanent indirect shading effects on 0.07 acre of RSS and 0.18 acre of Sensitive Riparian, Chaparral, Native Grasslands, and Wildflower Fields would not experience shading effects. These impacts would occur in MSHCP criteria cells and cores and linkages, but no impacts on these sensitive natural communities would occur in conserved lands. Although these impacts could be considered a biologically substantial loss, the impacts on and loss of RSS, Chaparral, and Native Grasslands (totaling 133.78 acres) would not be considered substantial and would be covered under the MSHCP. However, this has a potentially significant impact under CEQA. • No evidence that vernal pools associated with the Wildflower Field habitat type was detected within the Biological Study Area (BSA) during field surveys; therefore, the loss of any Wildflower Fields would not be considered substantial and would be covered under the MSHCP. • Operation could have potential indirect effects on sensitive natural communities, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to normal operation or right of way maintenance. However, operation is not expected to differ appreciably from existing conditions. • Protected trees in the BSA include oak trees within both mapped Coast Live Oak Woodland and Forest and any other vegetation community containing oak trees. Other protected trees include trees within the right of way of the county highway. Removal of these trees could have a potentially significant impact under CEQA.	• Avoidance and Minimization Measure **NC-11 (NES BIO-11)**: Access. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Water Pollution and Erosion Control Plans. • Avoidance and Minimization Measure **NC-13 (NES BIO-13)**: LODs and ESAs. • Avoidance and Minimization Measure **NC-14 (NES BIO-14)**: MSHCP Covered Species Avoidance. • *Mitigation Measure* **NC-15 (NES BIO-15, DBESP)**: Mitigation for MSHCP riparian/riverine resources. Riparian/riverine policy. • *Mitigation Measure* **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**: Mitigation ratios for riparian resources, ephemeral drainages, and temporary impacts. • *Mitigation Measure* **NC-17 (BIO-17, Aquatic Resource Compensatory Mitigation)**. Purchase of mitigation bank credits. • Avoidance and Minimization Measure **NC-18 (NES BIO-20)**: Wildlife undercrossings. • Avoidance and Minimization Measure **NC-19 (NES BIO-24)**: Waste management. • *Mitigation Measure* **NC-20 (NES BIO-19)**: Oak Tree Management • Avoidance and Minimization Measure **WET-1 (NES BIO-22)**: Temescal Wash – biological monitoring. • Avoidance and Minimization Measure **AS-1 (NES BIO-18)**: Night lighting management. • Avoidance and Minimization Measure **AS-3 (NES BIO-26)**: Bat Management Plan. • Avoidance and Minimization Measure **AS-5 (NES BIO-28)**: Nesting Bird Management Plan. • Avoidance and Minimization Measure **TE-2 (NES BIO-21)**: Temescal Wash – nesting season noise requirements.
Wetlands and Other Waters	• No impacts on USACE/RWQCB wetland and non-wetland waters of the U.S. and CDFW streambed and associated riparian habitat would occur.	• Impacts on federal jurisdictional non-wetlands—including the permanent removal of 0.02 acre, temporary impacts on 2.02 acres, and shading impacts on 0.47 acre—would occur. A total of 0.03 acre of temporary impacts would occur on federal jurisdictional wetlands. There is anticipated to be 0.01 acre of permanent impacts and 0.19 acre of	• Avoidance and Minimization Measure **NC-2 (NES BIO-2)**: Dust control. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression. • Avoidance and Minimization Measure **NC-4 (NES BIO-4)**: Biological training.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		temporary impacts on potentially non-jurisdictional, non-wetland (constructed in uplands) RWQCB jurisdictional waters of the State. The RWQCB impacts on waters of the State are the same as those identified for the USACE wetland and non-wetland waters of the U.S. This is a potentially significant impact under CEQA. • Permanent removal of 0.10 acre, temporary impacts on 3.79 acres, and shading impacts on 1.00 acre of state streambeds would result. A total of 2.26 acres of CDFW riparian would be affected (<0.01 acre permanent, 1.80 acre temporary, and 0.46 acre shading effects). • During construction, there is an increased risk for indirect temporary impacts—such as changes in hydrology—on the adjacent jurisdictional waters and state streambeds. Indirect impacts on adjacent federal and state jurisdictional waters may include degradation of habitat through increased risk of fire, water pollution, litter, unintended loss of habitat, decreased water quality, and increased exposure to invasive plant species. • Operational effects could occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to right of way maintenance and roadside effects. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD.	• Avoidance and Minimization Measure **NC-5 (NES BIO-5)**: Biological monitoring. • Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project limits. • Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment cleaning. • Avoidance and Minimization Measure **NC-9 (NES BIO-9)**: Minimizing disturbance. • Avoidance and Minimization Measure **NC-10 (NES BIO-10)**: Revegetation. • Avoidance and Minimization Measure **NC-11 (NES BIO-11)**: Access. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Water pollution and erosion control plans. • Avoidance and Minimization Measure **NC-13 (NES BIO-13)**: LODs and ESAs. • *Mitigation Measure* **NC-15 (NES BIO-15, DBESP)**: Mitigation for MSHCP riparian/riverine resources. • *Mitigation Measure* **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**: Mitigation compensatory mitigation. • *Mitigation Measure* **NC-17 (BIO-17, Aquatic Resource Compensatory Mitigation)**. Purchase of mitigation bank credits. • Avoidance and Minimization Measure and **NC-19 (NES BIO-24)**: Waste Management. • Avoidance and Minimization Measure **WET-1 (NES BIO-22)**: Temescal Wash – biological monitoring.
Plant Species	• No impacts on non-MSHCP non-listed special-status plant species would occur.	• During rare plant focused surveys in 2020 and 2021, none of the Narrow Endemic Plant Species Survey Area 1 and 7 and Criteria Area Plant Species Survey Area 1 non-listed special-status plant species were observed. Therefore, no impacts on any of these species would occur. • Temporary indirect impacts on MSHCP non-listed special-status plant species could result from construction-related dust, erosion, runoff, and the introduction of invasive species on disturbed soils. No permanent impacts would occur on MSHCP non-listed species-status plants.	• Avoidance and Minimization Measure **NC-1 (NES BIO-1)**: Vegetation Clearing Restrictions. • Avoidance and Minimization Measure **NC-2 (NES BIO-2)**: Dust control. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression. • Avoidance and Minimization Measure **NC-4 (NES BIO-4)**: Biological training. • Avoidance and Minimization Measure **NC-5 (NES BIO-5)**: Biological monitoring. • Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project limits.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
			• Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment cleaning. • Avoidance and Minimization Measure **NC-9 (NES BIO-9)**: Minimizing disturbance. • Avoidance and Minimization Measure **NC-10 (NES BIO-10)**: Revegetation. • Avoidance and Minimization Measure **NC-11 (NES BIO-11)**: Access. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Water Pollution and Erosion Control Plans.
Animal Species	• No new or additional impacts on non-listed special-status animals or candidate species would occur beyond those that would be expected to occur from operation of the existing facility.	• Thirty-four non-listed special-status animal species have suitable habitat within the BSA that could be affected. • The Project may cause potential temporary impacts on burrowing owl and grasshopper sparrow, if the species are present, adjacent to, or in the vicinity of the LOD during construction. • The Project may have potential to temporarily affect bats and their roosting habitat, if the species are present during construction. • Shading effects would degrade suitable habitat and result in a permanent loss of habitat. The potential also exists for direct mortality and injury of individuals during vegetation clearing and grading or by predators attracted to the construction area. This would have a potentially significant impact under CEQA.	• Avoidance and Minimization Measure **NC-1 (NES BIO-1)**: Vegetation clearing restrictions. • Avoidance and Minimization Measure **NC-2 (NES BIO-2)**: Dust control. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression. • Avoidance and Minimization Measure **NC-4 (NES BIO-4)**: Biological training. • Avoidance and Minimization Measure **NC-5 (NES BIO-5)**: Biological monitoring. • Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project limits. • Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment cleaning. • Avoidance and Minimization Measure **NC-9 (NES BIO-9)**: Minimizing disturbance. • Avoidance and Minimization Measure **NC-10 (NES BIO-10)**: Revegetation. • Avoidance and Minimization Measure **NC-11 (NES BIO-11)**: Access. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Water Pollution and Erosion Control Plans. • Avoidance and Minimization Measure **NC-13 (NES BIO-13)**: LODs and ESAs. • Avoidance and Minimization Measure **NC-14 (NES BIO-14)**: MSHCP covered species avoidance. • *Mitigation Measure* **NC-15 (NES BIO-15, DBESP)**: Mitigation for MSHCP riparian/riverine resources.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
			• *Mitigation Measure* **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**: Mitigation ratios for riparian resources, ephemeral drainages, and temporary impacts. • *Mitigation Measure* **NC-17 (BIO-17, Aquatic Resource Compensatory Mitigation)**. Purchase of mitigation bank credits. • Avoidance and Minimization Measure **NC-18 (NES BIO-20)**: Wildlife undercrossings. • Avoidance and Minimization Measure and **NC-19 (NES BIO-24)**: Waste management. • Avoidance and Minimization Measure **AS-1 (NES BIO-18)**: Night Lighting management. • Avoidance and Minimization Measure **AS-2 (NES BIO-25)**: Burrowing Owl Management Plan. • Avoidance and Minimization Measure **AS-3 (NES BIO-26)**: Bat Management Plan. • Avoidance and Minimization Measure **AS-4 (NES BIO-27)**: Bat roosting habitat. • Avoidance and Minimization Measure **AS-5 (NES BIO-28)**: Nesting Bird Management Plan. • Avoidance and Minimization Measure **TE-2 (NES BIO-21)**: Temescal Wash – nesting season noise requirements.
Threatened and Endangered Species	• No new or additional impacts on threatened or endangered species would occur beyond those that would be expected to occur from current operation of the existing facility.	• Twenty listed species have potential to occur within the BSA and could be affected, with the exception of the San Diego fairy shrimp, monarch butterfly, and Crotch bumble bee, which are Covered Species under the MSHCP. • The Project may have permanent, temporary, and shading impacts on suitable habitat for nine listed species, should the species be present. • Temporary indirect effects during construction for listed species, should the species be present, include impacts on habitat, construction-related disturbances (e.g., noise, night lighting, increased human and equipment presence, opportunistic predators, increase in dust and wildfire risk, and vibration), and individual breeding occurring adjacent to the LOD. Operation and maintenance are not expected to differ measurably from existing operating conditions along I-15.	• Avoidance and Minimization Measure **NC-1 (NES BIO-1)**: Vegetation clearing restrictions. • Avoidance and Minimization Measure **NC-2 (NES BIO-2)**: Dust control. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression. • Avoidance and Minimization Measure **NC-4 (NES BIO-4)**: Biological training. • Avoidance and Minimization Measure **NC-5 (NES BIO-5)**: Biological monitoring. • Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project limits. • Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment cleaning. • Avoidance and Minimization Measure **NC-9 (NES BIO-9)**: Minimizing disturbance.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• While no direct impacts on least Bell's vireo (LBV) are anticipated, a measure has been included as a part of the Project to address direct construction impacts on LBV if LBV use areas were to occur within construction areas.	• Avoidance and Minimization Measure **NC-10 (NES BIO-10)**: Revegetation. • Avoidance and Minimization Measure **NC-11 (NES BIO-11)**: Access. • Avoidance and Minimization Measure **NC-12 (NES BIO-12)**: Water Pollution and Erosion Control Plans. • Avoidance and Minimization Measure **NC-13 (NES BIO-13)**: LODs and ESAs. • Avoidance and Minimization Measure **NC-14 (NES BIO-14)**: MSHCP covered species avoidance. • *Mitigation Measure* **NC-15 (NES BIO-15, DBESP)**: Mitigation for MSHCP riparian/riverine resources. • *Mitigation Measure* **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**: Mitigation ratios for riparian resources, ephemeral drainages, and temporary impacts. • *Mitigation Measure* **NC-17 (NES BIO-17)**: **Aquatic Resource Compensatory Mitigation**. • Avoidance and Minimization Measure **NC-18 (NES BIO-20)**: Wildlife undercrossings. • Avoidance and Minimization Measure and **NC-19 (NES BIO-24)**: Waste management. • Avoidance and Minimization Measure **AS-1 (NES BIO-18)**: Night lighting management. • Avoidance and Minimization Measure **AS-5 (NES BIO-28)**: Nesting Bird Management Plan. • Avoidance and Minimization Measure **TE-1 (NES BIO-29)**: Insect measures. • Avoidance and Minimization Measure **TE-2 (NES BIO-21)**: Temescal Wash – Nesting Season Noise Requirements. • *Mitigation Measure* **TE-3 (NES BIO-23)**: LBV Habitat Compensation – Temporary impacts would be compensated at no less than a 1:1 ratio. • Avoidance and Minimization Measure **TE-4**: ensures consistency with the Stephens' Kangaroo Rat Habitat Plan, including habitat monitoring and reporting to the U.S. Fish and Wildlife Service.
Invasive Species	• No new or additional impacts related to the introduction of invasive species to open space would occur, beyond those that would be expected to occur from the existing facility.	• The potential for spread of invasive species would not substantially increase during construction. • Potential permanent impacts related to invasive species would not be adverse.	• Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire Suppression – During construction, use appropriate equipment; take preventative actions to minimize the change of human-caused wildfires.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
			• Avoidance and Minimization Measure **NC-6 (NES BIO-6)**: Construction and Project Limits – Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the proposed LOD and designated staging areas and routes of travel. • Avoidance and Minimization Measure **NC-7 (NES BIO-7)**: Exotic Species – Proper handling of exotic plant species. • Avoidance and Minimization Measure **NC-8 (NES BIO-8)**: Equipment Cleaning – Construction equipment will be cleaned off site and cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected. • Avoidance and Minimization Measure **NC-9** (**NES BIO-9):** Minimizing Disturbance – Removal of native vegetation will be avoided and minimized. • Avoidance and Minimization Measure **NC-10** (**NES BIO-10):** Revegetation – Post-construction, hydro-seeded with a Caltrans-approved seed mix. This measure will comply with Avoidance and Minimization Measure **NC-7** (**NES BIO-7**), Exotic Species.
Wildfire	• No temporary or permanent impacts associated with wildfire would result.	• The alignment of I-15 would not be altered and the Project is unlikely to exacerbate wildfire risks or post-fire flooding/landslides. • The Project would not exacerbate wildfire risks in or near designated State Responsibility Areas, Local Responsibility Areas, or elsewhere due to slope, prevailing winds, or other factors. • Construction of the median into express lanes would extend the firebreak between the east and west sides of the I-15, which is a benefit. • Wildfire risks or exposure of pollutants to personnel from a wildfire or the uncontrolled spread of a wildfire is not expected to be exacerbated due to proper site design and compliance with standard and emergency county access requirements.	• Avoidance and Minimization Measure **FIRE-1:** Ensures that the construction activities avoid or minimize the risk of fires. • Avoidance and Minimization Measure **NC-3 (NES BIO-3)**: Fire suppression.
Climate Change	• Travel speeds and congestion would not increase over time. • When compared to the existing conditions, an increase in GHG emissions in both the opening year and horizon year would result, thereby conflicting with California's GHG goals.	• Travel speeds would increase, as would throughput, but operational GHG emissions would increase over time compared to existing conditions. This would conflict with California's AB 32 Climate Change Scoping Plan (2022), SCAG 2024–2050 RTP/SCS, and County of Riverside General Plan (2021).	• *Mitigation Measure* **GHG-1**: The contractor must comply with SCAQMD's rules, ordinances, and regulations regarding air quality restrictions. • *Mitigation Measure* **GHG-2**: The Project will incorporate the use of energy-efficient lighting.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• Impacts would remain significant and unavoidable under CEQA.	• *Mitigation Measure* **GHG-3**: Bids will be solicited that include use of energy and fuel-efficient fleets in accordance with current practices. • *Mitigation Measure* **GHG-4**: The Project will maintain equipment in proper tune and working condition. • *Mitigation Measure* **GHG-5**: Use water-efficient technologies for landscaping. • *Mitigation Measure* **GHG-6**: Select Project features that minimize the need for irrigation and nonnative plants. • *Mitigation Measure* **GHG-7**: Install urban planting/vegetation, especially canopy trees, to reduce “heat island” effects. • *Mitigation Measure* **GHG-8**: Incorporate native plants and vegetation to the Project design. Replace more vegetation than was removed to increase carbon sequestration. • *Mitigation Measure* **GHG-9**: Avoid an ultimate (new trees at projected maturity) net loss of tree canopy within the Project limits through a combination of preservation and new planting. • *Mitigation Measure* **GHG-10**: Include landscaping components such as mulch and compost application to improve carbon sequestration rates in soils and reduce organic waste. • *Mitigation Measure* **GHG-11**: Design and install long-life pavement structures to minimize life-cycle costs. • Standard Project Measure **EN-1**: The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)). • Standard Project Measure **AQ-4**: The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02). • *Mitigation Measure* **VMT-1**: A Vehicle Miles Traveled Mitigation Program will be developed to reduce VMT and associated impacts.
Cumulative Impacts	• No cumulative impacts anticipated.	• VMT would increase under the Build Alternative as compared to the No-Build Alternative, resulting in worsened congestion in some localized areas.	• Avoidance and Minimization Measure **AES-1** through **AES-4**: to reduce potential visual impacts. • Standard Project Measure **AQ-1** through **AQ-4:** to reduce or avoid air quality impacts.

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
		• When considered with the cumulative projects from Section 2.5, *Cumulative Impacts*, a VMT increase resulting in worsened congestion in some localized areas would be cumulatively considerable under NEPA or a significant cumulative impact under CEQA. • While the Project increases in air pollutant emissions detailed in Section 2.3.6, *Air Quality*, would individually not be considered substantial under NEPA, given the existing and future cumulative conditions described in the 2024–2050 RTP/SCS EIR, the Project's incremental increase in PM_{10} and $PM_{2.5}$ emissions would be cumulatively considerable under NEPA. In addition, as the Project increases in air pollutant emissions would be individually significant and unavoidable under CEQA, the Project's incremental increase in PM_{10} and $PM_{2.5}$ emissions would be a significant cumulative impact under CEQA.	• Standard Project Measure **TR-1:** A TMP will be implemented to address short-term traffic circulation and access effects during construction. • Standard Project Measure **N-1:** Relates to noise reduction measures to minimize temporary noise impacts in accordance with Caltrans Standard Specification 14-8.02 Noise Control: Control and monitor noise resulting from work activities. Do not exceed 86 dBA L_{max} at 50 feet from the job site from 9:00 p.m. to 6:00 a.m. • Standard Project Measures **CR-1** through **CR-4** would avoid or minimize potential impacts on cultural resources. • Standard Project Measures **WQ-1** through **WQ-4**, **WQ-6** through **WQ-8**, and Avoidance and Minimization Measure **WQ-5** to reduce potential water quality impacts. • Avoidance and Minimization Measure **PAL-1** to develop a paleontological mitigation plan. • Standard Project Measures **HW-1** through **HW-4**, **HW-6**, and **HW-8,** and Avoidance and Minimization Measures **HW-5** and **HW-7** to avoid or reduce potential hazardous waste impacts. • Standard Project Measure **EN-1** and Avoidance and Minimization Measure **EN-2** would be implemented to help conserve energy. • *Mitigation Measures* **GHG-1** through **GHG-4** and **GHG-11** and **VMT-1** are expected to reduce construction GHG emissions and potential climate change impacts from the Project. • Avoidance and Minimization Measure **NC-1 (NES BIO-1)** through **NC-14 (NES BIO-14).** • *Mitigation Measure* **NC-15 (NES BIO-15, DBESP)**: Mitigation for MSHCP riparian/riverine resources. Riparian/riverine policy. • *Mitigation Measure* **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**: Mitigation ratios for riparian resources, ephemeral drainages, and temporary impacts. • *Mitigation Measure* **NC-17 (BIO-17, Aquatic Resource Compensatory Mitigation)**. Purchase of mitigation bank credits. • Avoidance and Minimization Measure **NC-18 (NES BIO-20)** and **NC-19 (NES BIO-24).**

Environmental Issue	No-Build Alternative Impacts	Build Alternative Impacts	Avoidance, Minimization and/or Mitigation Measures
			• *Mitigation Measure* **NC-20 (NES BIO-19)**: Oak Tree Management • Avoidance and Minimization Measure **WET-1 (NES BIO-22)**: Temescal Wash – biological monitoring. • Avoidance and Minimization Measure **AS-1 (NES BIO-18) AS-5 (NES BIO 28).** • Avoidance and Minimization Measure **TE-1 (NES BIO-29), TE-2 (NES BIO-21)**, **and TE-4**. • *Mitigation Measure* **TE-3 (NES BIO-23)**: LBV Habitat Compensation – Temporary impacts would be compensated at no less than a 1:1 ratio.

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Table 1-9 in Chapter 1 lists the permits, licenses, agreements, and certifications required for construction of the Build Alternative. Permit applications would be submitted during the design phase.

Early and continuing coordination between the general public and public agencies has been and will continue to be an essential part of the environmental process in order to determine the scope of environmental documentation, the level of analysis, any potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this Project have been accomplished through a variety of formal and informal methods, public scoping meetings, and interagency coordination meetings. During the Notice of Preparation (NOP) public scoping meetings held for the Project, some of the key issues raised by agencies and the public included: the potential for air quality impacts; an assessment to include full biological habitat types within and adjacent to the Project; analysis of direct, indirect, and cumulative impacts on biological resources; discussion of a range of reasonable alternatives; the incorporation of mitigation measures for impacts on biological resources; analysis of Native American and Tribal Cultural Resources; local traffic in the Temescal Valley area; impacts on future development of the Temescal Valley area; noise impacts on area residences along I-15; consideration of reduced toll costs for senior citizens, disabled, and local area residents; transit service improvements for I-15 south and opportunities to link Lake Elsinore with Corona Metrolink facilities; and consistency with the Riverside County MSHCP. Chapter 4 summarizes the results of the efforts by Caltrans to fully identify, address, and resolve Project-related issues through early and continuing coordination.

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Chapter 1 Proposed Project

1.1 INTRODUCTION

The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans), is proposing to construct new lanes along Interstate (I-) 15 between post mile (PM) 21.2 and PM 38.1 in Riverside County, California for a total length of approximately 16.9 miles (see Figure 1-1, Regional Vicinity, and Figure 1-2, Project Location). The primary component of the I-15 Express Lanes Project Southern Extension (Project) would be the addition of two tolled express lanes[1] in both the northbound (NB) and southbound (SB) directions within the median of I-15 from State Route (SR-) 74 (Central Avenue) (PM 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project would also add a SB auxiliary lane between both the Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately 1 mile).

Caltrans, as assigned by the Federal Highway Administration (FHWA), is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). RCTC will be a CEQA responsible agency.

The I-15 Express Lanes Project Southern Extension is listed in the 2024–2050 Regional Transportation Plan (RTP), which was approved by the Southern California Association of Governments' (SCAG's) Regional Council in April 2024. It was also found to conform by FHWA and the Federal Transit Administration (FTA) on May 10, 2024, as Project ID 3160001. It is also included in SCAG's financially constrained 2023 Federal Transportation Improvement Program (FTIP) Amendment #23-27, adopted on April 25, 2024, and approved by FHWA and FTA on May 10, 2024, as Project ID RIV170901. The FTIP and RTP listings state the following:

> *IN WESTERN RIVERSIDE COUNTY - ON I-15, ADD 2 EXPRESS LANES IN EACH DIRECTION, GENERALLY IN THE MEDIAN, FROM SR-74 (CENTRAL AVENUE) IN THE CITY OF LAKE ELSINORE TO EL CERRITO ROAD IN THE CITY OF CORONA. CONSTRUCT SOUTHBOUND AUXILIARY LANE FROM MAIN STREET TO SR-74 (CENTRAL AVENUE) AND*

[1] Express lanes are traffic lanes that are separated from general purpose lanes; users are charged a toll to use the express lanes. As stated in the Toll Concept Report (Caltrans 2022a) for the Project, all transit agencies; motorcycles; operations and maintenance vehicles, including authorized Caltrans vehicles; tow trucks; and patrol response vehicles will be exempt from paying any toll fees for the I-15 Express Lanes. Operation and maintenance vehicles are also exempt from paying a toll for the Express Lanes. Currently, high-occupancy vehicle (HOV) 3+ vehicles are provided a discount of 100 percent for tolls, while zero emission vehicles displaying a Department of Motor Vehicles–issued Clean Air Vehicle decal defined in California Vehicle Code Section 5205.5 receive a 15 percent discount if they register their vehicle with a California Toll Operators Committee agency.

FROM SR-74 (CENTRAL AVENUE) TO NICHOLS ROAD. SIGNAGE AND TRANSITION STRIPING EXTENDS TO PM 20.3 TO THE SOUTH AND PM 40.1 TO THE NORTH. TC UTILIZATION FOR CMAQ, STBG, CRP, AND HIP(CPFCD)/EARMARK IN FY22/23.

1.1.2 Project Funding and Schedule

It has been determined that the Project is eligible for federal-aid funding. Funding is expected to be provided through a combination of funds that, while not yet committed, would likely include potential federal and state funding sources. Toll Credits were utilized as a match to several funding sources as mentioned in the SCAG description for the Project. Toll credits were used for project construction management services. Although subject to change, the following are target Project milestone dates:

- Spring 2024: Begin developing Progressive Design Builder (PDB) procurement documents
- Summer 2025: PDB Phase 1 preliminary design
- Summer 2025–Summer 2026: Preliminary design
- Summer 2026: PDB Phase 2 final design and construction
- Spring 2027: Begin construction
- Fall 2030: Complete construction

Figure 1-1
Regional Vicinity
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

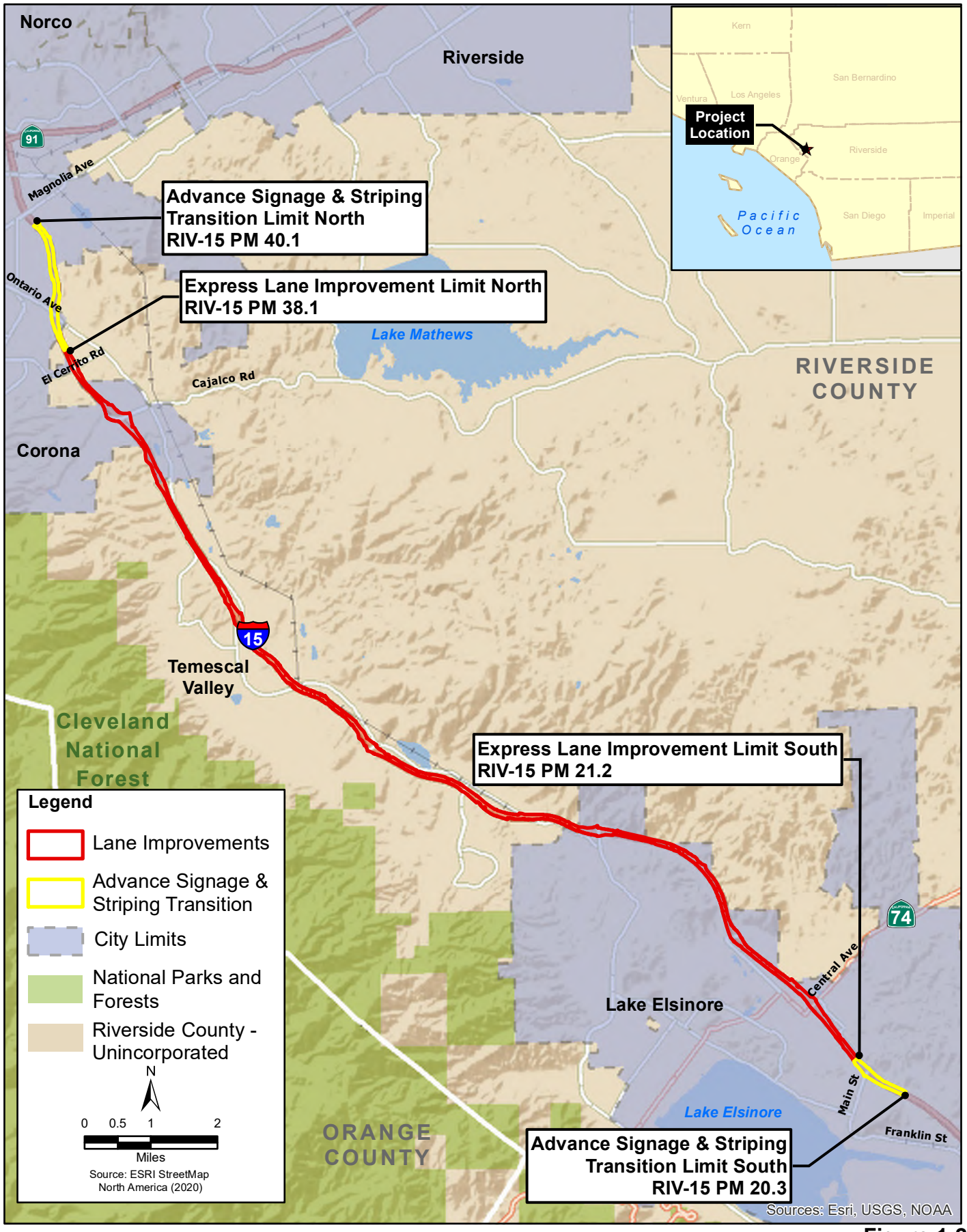

Figure 1-2
Project Location
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

1.1.3 Existing Facility

I-15 is a major truck and passenger route that begins at its junction with I-5 in San Diego, approximately 10 miles north of the United States (U.S.)/Mexico Border, and ends at the U.S./Canada Border. At the national level, I-15 is functionally classified as a Rural/Urban Principal Arterial and is part of the Freeway and Expressway System, the Single Interstate Routing System, the National Highway System, and the Strategic Highway Corridor Network of National Defense. I-15 serves as the primary North American Free Trade Agreement–related "CANAMEX" Corridor, between Canada and Mexico via the Mountain West. It is also a link to the main east-west freight routes (SR-60, I-10, I-40, I-70, and I-80) that connect Southern California with the Midwest and East Coast. I-15 has been identified by the U.S. Department of Transportation as one of the six "Corridors of the Future" within the U.S., which are vital to the long-term health and stability of the national economy.

I-15 is strategically located and is a vital interstate goods-movement corridor that links Southern California to the Inland Empire, Las Vegas, the Rocky Mountain states, and Canada. It is a primary link between major economic centers and geographic regions and is classified as a "High Emphasis" and "Gateway" route in the Interregional Road System. I-15 is a major truck route and is included in the National Network for Federal Surface Transportation Assistance Act for conventional combination trucks. Its main use is interstate and interregional movement of people and goods. I-15 is also part of the Intermodal Corridors of Economic Significance system of routes, which are significant transportation arteries that provide access to major sea or waterway ports, nationwide railway systems, airports, and interstate and intrastate highway systems. These routes serve as intermodal corridors of economic significance. Weekend and holiday recreational traffic on the route is exceptionally high, as it serves as a connection to Las Vegas and the Colorado River area via I-40.

Within the Project limits, I-15 traverses developed and undeveloped areas of the City of Lake Elsinore, unincorporated areas of Riverside County, and the City of Corona. It is a major regional connection between the southwest and northwest Riverside County communities. I-15 provides continuity for regular commuters traveling for work and school to Temecula and San Diego to the south, and Riverside, San Bernardino County, Los Angeles County, Orange County, and other destinations to the north.

1.1.3.1 Project Background

In 1988, Riverside County voters approved Measure A, a half-cent sales tax for transportation improvements, in response to growing congestion. The $1 billion raised by Measure A from 1989 to 2009 benefitted virtually every major roadway in the County, as well as commuter rail and public transit. In 2002, Measure A was extended by Riverside County voters through 2039; this 30-year extension included improvements to the I-15 corridor. The 2009–2039 Measure A extension plan was to add a lane in each direction on I-15 from SR-60 to the San Diego County Line. In the spring of 2006, RCTC assessed the feasibility of adding tolled express lanes on four freeway corridors in Riverside County and concluded that portions of the SR-91 and I-15 corridors were generally feasible to toll from a financial, traffic operation, and engineering standpoint.

Throughout 2006, engineering, Project scoping, and traffic and revenue study work were performed. A Project scope was developed to both meet the Measure A commitment to voters as well as to use the revenue from tolling to fund more congestion relief and build more improvements than would have otherwise been possible using Measure A funds and other traditional State and federal freeway funding sources. In December 2006, RCTC approved the 2009 Measure A Western Riverside County Highway 10-Year Delivery Plan to advance the development of the highest priority projects in the 30-year Measure A extension. The 10-Year Delivery Plan called for development of high occupancy toll lanes within the I-15 corridor. RCTC's approval of the 10-Year Delivery Plan also authorized staff to begin environmental and preliminary engineering studies for projects within the plan, including the I-15 corridor.

In 2014, RCTC moved forward with the initiation of the Project Approval and Environmental Document (PA&ED) phase of the I-15 Express Lanes Project (ELP) between Cajalco Road and SR-60, the northernmost 15-mile segment of the original 45-mile corridor within Riverside County, which included a direct connection to the express lanes on SR-91. A No-Build Alternative and a Build Alternative consisting of express lanes in both the NB and SB directions were evaluated for the I-15 ELP based on the recommendations from the Project Initiation Document study and limited funding options. PA&ED was completed in 2016, and project construction was completed April 2021, when the ELP opened for operation.

After the I-15 ELP opened to traffic in 2021, congestion was experienced in the City of Corona near the SB express lane terminus around Cajalco Road. To help improve traffic operations for the area, the I-15 Interim Corridor Operations Project (ICOP) was initiated by RCTC shortly after these express lanes opened. The I-15 ICOP added an auxiliary lane in the SB direction between Cajalco Road and Weirick Road. It opened to traffic in July 2022.

To further relieve congestion at the I-15 ELP SB express lane terminus, Caltrans initiated the Cajalco SB Lane Drop Extension Project, which includes eliminating the existing SB lane drop within the Cajalco Road interchange; extending the number four (or outside) general purpose lane to join the existing auxiliary lane, constructed by the ICOP; and creating a trap lane that will exit at the Weirick Road Off-Ramp. This Project plans to open to traffic in late 2024.

The Project is the next portion of the I-15 corridor improvements and is known as I-15 Express Lane Project Southern Extension (ELPSE), which would extend the ELP constructed express lanes for approximately 15.8 miles from El Cerrito Road to SR-74 (Central Avenue). It was initiated in December 2017 through the development of a Supplemental Project Study Report-Project Development Support (PSR-PDS)[2] Memorandum that was prepared to program funding for the Project. The I-15 ELPSE received State Transportation Improvement Program funding from the California

[2] The PSR serves as a project initiation document. It provides a well-defined statement of the purpose and need, proposed scope, cost, and schedule for a project. The development of a PSR-PDS project initiation document provides a key opportunity for Caltrans and involved regional and local agencies to achieve consensus on the purpose and need, scope, and schedule of a project.

Transportation Commission (CTC) in early 2018, which was followed by the release of the PA&ED Request for Qualifications in late 2018 and award of the contract in 2019.

1.2 PURPOSE AND NEED

1.2.1 Purpose

The purpose of the Project is to:

- Improve and manage traffic operations, throughput, and travel times along the corridor.
- Expand travel mode choice along the corridor.
- Provide an option for travel time reliability.
- Provide a cost-effective mobility solution.
- Expand and maintain compatibility with the express lane network in the region.

1.2.2 Need

Existing traffic volumes often exceed current highway capacity along several segments of I-15 between SR-74 (Central Avenue) and El Cerrito Road. Traffic congestion occurs primarily due to bottleneck conditions that limit throughput capacity upstream and downstream along the Project corridor. These bottlenecks can cause congestion at lower traffic volumes than those at which congestion would typically occur for a single freeway segment in isolation.[3] Due to forecasted population growth and the continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline.

Currently, north-south mobility options for motorists are limited through this portion of Riverside County. Besides local streets, the only parallel route for motorists is I-215, which is over 10 miles east of I-15 and generally serves a different region within Riverside County.

1.2.2.1 Capacity, Transportation Demand, and Safety

Roadway capacity is determined by the number of vehicles that can reasonably pass over a given section of roadway in a given period of time. The Highway Capacity Manual, prepared by the National Transportation Research Board, identifies travel speed, freedom to maneuver, and proximity to other vehicles as important factors in determining the level of service (LOS) on a roadway (National Transportation Research

[3] For additional discussion of how highway capacity and traffic throughput were analyzed for the Project, refer to Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

Board 2000). The ability of a highway to accommodate traffic is typically measured in terms of LOS. Traffic flow is classified by LOS, ranging from LOS A (free-flow traffic with low volumes and high speeds) to LOS F (traffic volume exceeds design capacity with forced flow and substantial delays). Daily traffic volumes are used to estimate the extent to which peak-hour traffic volumes equal or exceed the maximum desirable capacity of a roadway.

The following sections summarize the current and forecasted traffic volumes within the study area under Existing (2019) conditions, Opening Year (2030), and Design Year (2050) for I-15 traffic conditions. The study area is approximately 22 miles along I-15 and consists of roadway segments, I-15 mainline segments, and ramp junctions along I-15, generally between the Franklin Street Overcrossing (to the south) and Hidden Valley Interchange (to the north). The summary is based on the Project's Traffic Operations Analysis Report concurred with by Caltrans on February 22, 2021 (amended on April 7, 2022). The analysis looks at the AM and PM peak-hour periods of I-15 in both NB and SB directions. The peak period is the period of the day during which the maximum amount of travel occurs. The peak hour is the hour within the peak period when the maximum demand occurs. Peak-hour traffic estimates are used to approximate the amount of congestion experienced. In the study area, the morning peak hour is typically from 7:00 AM to 8:00 AM, and the afternoon peak hour is typically from 3:00 PM to 4:00 PM. Peak-hour congestion on I-15 and other highways in the study area is a pressing concern.

Existing (2019) Level of Service

Mainline Segments

A mainline segment is a segment of freeway between adjacent on- and off-ramps. Table 1-1 shows Existing (2019) peak-hour mainline operations in the SB direction of I-15. Under Existing (2019) conditions, all the freeway segments in the study area are currently operating at satisfactory LOSs (that is, LOS C or better) during AM peak hours (refer to Table 1-1). During Existing PM peak-hour mainline operation, various segments operate at LOS E or F, as shown in Table 1-2.

Table 1-1. Existing (2019) Peak Hour Freeway Mainline Operations, SB I-15

I-15 SB Segment	Facility Type	LOS / Density[4]	
		AM Peak Hour	PM Peak Hour
Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 17	C / 25
Hidden Valley Parkway On-Ramp	Merge	B / 11	B / 18
Hidden Valley Parkway On-Ramp to WB SR-91 Off-Ramp	Basic	B / 15	C / 21

[4] The LOS was calculated for each study facility based on density in number of passenger cars per mile per lane (pc/mi/ln) to evaluate traffic operations. If the volume-to-capacity ratio was greater than or equal to 1 (V/C ≥ 1), LOS was considered to be F.

I-15 SB Segment	Facility Type	LOS / Density[4]	
		AM Peak Hour	PM Peak Hour
WB SR-91 Off-Ramp	Basic	B / 15	C / 21
EB SR-91 Off-Ramp	Diverge	D / 26	D / 29
EB SR-91 Off-Ramp to On-Ramp	Basic	B / 13	C / 19
EB SR-91 On-Ramp	Merge	B / 15	C / 20
WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	Weave	B / 16	B / 18
Magnolia Avenue Off-Ramp to On-Ramp	Basic	B / 17	D / 34
Magnolia Avenue On-Ramp	Merge	B / 13	**F / DEC**
EB SR-91 Express Lane On-Ramp (Left)	Basic	B / 15	**F / DEC**
EB SR-91 Express Lane On-Ramp to Ontario Avenue Off-Ramp	Basic	B / 15	**F / DEC**
Ontario Avenue Off-Ramp	Basic	B / 15	**F / DEC**
Ontario Avenue Off-Ramp to On-Ramp	Basic	B / 16	**F / DEC**
Ontario Avenue On-Ramp	Merge	B / 13	**F / DEC**
El Cerrito Road Off-Ramp	Basic	C / 18	**F / DEC**
El Cerrito Road Off-Ramp to On-Ramp	Basic	C / 22	**F / DEC**
El Cerrito Road On-Ramp	Merge	C / 22	**F / DEC**
Cajalco Road Off-Ramp	Diverge	C / 25	**F / DEC**
Cajalco Road Off-Ramp to On-Ramp	Basic	C / 21	**F / DEC**
Cajalco Road On-Ramp	Merge	B / 18	**F / DEC**
Cajalco Road On-Ramp to Weirick Road/Dos Lagos Drive Off-Ramp	Basic	C / 22	**E / 42**
Weirick Road/Dos Lagos Drive Off-Ramp	Diverge	C / 23	**E / 42**
Weirick Road/Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 19	D / 30
Weirick Road/Dos Lagos Drive On-Ramp	Merge	B / 15	D / 26
Weirick Road/Dos Lagos Drive On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 20	D / 33
Temescal Canyon Road Off-Ramp	Diverge	C / 21	**E / 37**
Temescal Canyon Road Off-Ramp to On-Ramp	Basic	B / 18	D / 30
Temescal Canyon Road On-Ramp	Merge	B / 14	C / 24
Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 18	D / 32
Indian Truck Trail Off-Ramp	Diverge	C / 19	**E / 37**
Indian Truck Trail Off-Ramp to On-Ramp	Basic	B / 17	D / 28
Indian Truck Trail On-Ramp	Merge	B / 14	C / 23
Indian Truck Trail On-Ramp to Lake Street Off-Ramp	Basic	B / 18	D / 29

I-15 SB Segment	Facility Type	LOS / Density[4] AM Peak Hour	LOS / Density[4] PM Peak Hour
Lake Street Off-Ramp	Diverge	B / 18	D / 32
Lake Street Off-Ramp to On-Ramp	Basic	B / 17	C / 26
Lake Street On-Ramp	Merge	B / 14	C / 20
Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	C / 18	D / 27
Nichols Road Off-Ramp	Diverge	C / 18	D / 28
Nichols Road Off-Ramp to On-Ramp	Basic	B / 17	C / 25
Nichols Road On-Ramp	Merge	B / 16	C / 22
Nichols Road On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	C / 19	D / 27
SR-74 (Central Avenue) Off-Ramp	Diverge	C / 20	D / 29
SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 17	C / 23
SR-74 (Central Avenue) On-Ramp	Merge	C / 19	C / 24
SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	Basic	C / 22	D / 30
Main Street Off-Ramp	Diverge	C / 22	D / 30
Main Street Off-Ramp to On-Ramp	Basic	C / 21	D / 27
Main Street On-Ramp	Merge	C / 20	C / 24
Main Street On-Ramp to Franklin Street Overcrossing	Basic	C / 24	D / 30

Source: Caltrans 2022b.
Density reported in passenger cars per lane per mile.
Bold and underlined font indicate LOS E or F conditions. DEC = Demand Exceeds Capacity.

Table 1-2 displays existing (2019) NB freeway mainline segments for AM and PM peak hours along I-15. A total of 22 segments are currently operating at a poor LOS E or F for both AM and PM peak hours.

Table 1-2. Existing (2019) Peak Hour Freeway Mainline Operations, NB I-15

I-15 NB Segment	Facility Type	LOS / Density[5] AM Peak Hour	LOS / Density[5] PM Peak Hour
Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	C / 19	B / 13
Hidden Valley Parkway Off-Ramp	Diverge	C / 24	B / 17

[5] The LOS was calculated for each study facility based on density in number of passenger cars per mile per lane (pc/mi/ln) to evaluate traffic operations. If the volume-to-capacity ratio was greater than or equal to 1 (V/C ≥ 1), LOS was considered to be F.

I-15 NB Segment	Facility Type	LOS / Density[5]	
		AM Peak Hour	PM Peak Hour
EB SR-91 On-Ramp	Basic	C / 21	B / 16
WB SR-91 On-Ramp	Merge	C / 19	B / 12
EB & WB SR-91 Off-Ramp to WB SR-91 On-Ramp	Basic	B / 14	A / 10
EB & WB SR-91 Off-Ramp	Diverge	C / 23	D / 33
Magnolia Avenue On-Ramp	Merge	C / 20	**F / DEC**
Magnolia Avenue Loop On-Ramp	Basic	C / 20	**F / DEC**
Magnolia Avenue Off-Ramp to Loop On-Ramp	Basic	C / 22	**F / DEC**
Magnolia Avenue Off-Ramp	Diverge	B / 17	C / 26
WB SR-91 Express Lane Off-Ramp (Left)	Basic	C / 20	C / 20
Ontario Avenue On-Ramp to WB SR-91 Express Lane Off-Ramp	Basic	C / 20	B / 16
Ontario Avenue On-Ramp	Merge	B / 12	A / 10
Ontario Avenue Off-Ramp to On-Ramp (5 Lanes)	Basic	B / 15	B / 13
Ontario Avenue Off-Ramp to On-Ramp (4 Lanes)	Basic	C / 20	B / 16
Ontario Avenue Off-Ramp to On-Ramp (3 Lanes)	Basic	D / 29	C / 22
Ontario Avenue Off-Ramp	Diverge	**E / 38**	C / 24
El Cerrito Road On-Ramp	Merge	C / 25	B / 17
El Cerrito Road Off-Ramp to On-Ramp	Basic	C / 24	C / 22
El Cerrito Road Off-Ramp	Diverge	C / 25	C / 23
Cajalco Road On-Ramp to El Cerrito Road Off-Ramp	Basic	D / 27	C / 26
Cajalco Road On-Ramp	Merge	**F / DEC**	**F / DEC**
Cajalco Road Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**
Cajalco Road Off-Ramp	Diverge	**F / DEC**	**F / DEC**
Weirick Road/Dos Lagos Drive On-Ramp	Merge	**F / DEC**	**F / DEC**
Weirick Road/Dos Lagos Drive Off-Ramp to On-Ramp	Basic	**F / DEC**	C / 23
Weirick Road/Dos Lagos Drive Off-Ramp	Diverge	**F / DEC**	C / 20
Temescal Canyon Road On-Ramp to Weirick Road/Dos Lagos Drive Off-Ramp	Basic	**F / DEC**	C / 19
Temescal Canyon Road On-Ramp	Merge	**F / DEC**	B / 17
Temescal Canyon Road Off-Ramp to On-Ramp	Basic	**F / DEC**	B / 17

I-15 NB Segment	Facility Type	LOS / Density[5]	
		AM Peak Hour	PM Peak Hour
Temescal Canyon Road Off-Ramp	Diverge	**F / DEC**	C / 18
Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	**F / DEC**	B / 18
Indian Truck Trail On-Ramp	Merge	**F / DEC**	B / 15
Indian Truck Trail Off-Ramp to On-Ramp	Basic	**F / DEC**	B / 16
Indian Truck Trail Off-Ramp	Diverge	**F / DEC**	B / 17
Lake Street On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 23	B / 17
Lake Street On-Ramp	Merge	B / 16	B / 14
Lake Street Off-Ramp to On-Ramp	Basic	B / 16	B / 15
Lake Street Off-Ramp	Diverge	B / 18	B / 16
Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	B / 17	B / 16
Nichols Road On-Ramp	Merge	B / 14	B / 12
Nichols Road Off-Ramp to On-Ramp	Basic	B / 16	B / 15
Nichols Road Off-Ramp	Diverge	C / 19	B / 17
SR-74 (Central Avenue) On-Ramp to Nichols Road Off-Ramp	Basic	B / 18	B / 16
SR-74 (Central Avenue) On-Ramp	Merge	B / 15	B / 13
SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 14	B / 14
SR-74 (Central Avenue) Off-Ramp	Diverge	C / 22	C / 22
Main Street On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	C / 19	C / 20
Main Street On-Ramp	Merge	B / 15	B / 18
Main Street Off-Ramp to On-Ramp	Basic	C / 19	C / 19
Main Street Off-Ramp	Diverge	C / 24	C / 24
Franklin Street Overcrossing to Main Street Off-Ramp	Basic	C / 22	C / 22

Source: Caltrans 2022b.
Density reported in passenger cars per lane per mile.
Bold and underlined font indicate LOS E or F conditions. DEC = Demand Exceeds Capacity.

Projected Opening (2030) and Design (2050) Years Level of Service—No-Build Alternative, SB I-15

Table 1-3 displays the projected Opening Year (2030) and Design Year (2050) LOS for SB I-15 under the No-Build Alternative conditions. Under Opening Year (2030) conditions for the No-Build Alternative, all study locations—including mainline segments, ramps, and express lanes on SB I-15—would operate at LOS D or better during the AM peak hours (refer to Table 1-3). This is largely due to the completion of

the I-15 ELP in 2021, which eliminates a key morning bottleneck in the study area by adding express lanes and auxiliary lanes in segments of the study corridor from Cajalco Road to north of the study area.

During PM peak hours, under Opening Year (2030) conditions, the SB I-15 bottleneck at the Cajalco Road Interchange would be amplified with the termination of the ELP. As such, it would create a 4.8-mile queue that would extend from the Cajalco Road On-Ramp to the eastbound (EB) SR-91 On-Ramp. The bottlenecks would create segments in the queue that would operate at LOS F. In 2023, Caltrans removed the nonstandard lane-drop and extended the general-purpose lane to join with the auxiliary lane at Cajalco Road On-Ramp, which provided some throughput relief at the I-15 ELP bottleneck. However, the noted bottleneck still occurs, and segments in the queue are projected to operate at LOS F. The demand from EB SR-91 cannot be fully served during the peak hour and will spill back onto EB SR-91. Additionally, five various SB I-15 freeway segments between the Temescal Canyon On-Ramp and Lake Street Off-Ramp and two SB I-15 freeway segments near the Main Street Off-Ramp are projected to operate at LOS E. All other freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour (refer to Table 1-3 for SB I-15 peak hour operations).

Under Projected Design Year (2050) conditions for the No-Build Alternative, all freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the AM peak hour, with the exception of the segments listed below that would be expected to operate at LOS E or worse due to a new bottleneck at the Ontario Avenue Off-Ramp. The Ontario Avenue Off-Ramp bottleneck is anticipated to form in year 2044. This bottleneck would exist in the No-Build and Build Alternatives and would improve slightly with the Project. Please note that these bottlenecks are outside of the Project limits and are currently under study by Caltrans for future improvement identification.

- EB SR-91 Off-Ramp
- Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp
- Ontario Avenue Off-Ramp

During PM peak hours under Projected Design Year (2050) conditions for the No-Build Alternative on SB 1-15, the SB I-15 bottleneck at the Ontario Avenue Interchange would extend to the Magnolia Avenue Interchange with a queue length of approximately 1.5 miles. Due to the bottleneck, segments in the queue are projected to operate at LOS E or F. Downstream of Ontario Avenue, there would be slowdowns at each interchange ramp between El Cerrito and Horsethief Canyon where vehicles are navigating to and from the freeway on/off-ramps. As a result of these slowdowns, segments in the queue are projected to operate at LOS E or F. All other freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour (refer to Table 1-3) (Caltrans 2022b).

Table 1-3. Projected Year (2030 and 2050) Peak Hour General Purpose Lane Operations, SB I-15

I-15 SB Segment	Facility Type	LOS / Density[6]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 17	B / 17	C / 21	C / 22
Hidden Valley Parkway On-Ramp	Merge	B / 18	C / 19	C / 21	C / 24
Hidden Valley Parkway On-Ramp to WB SR-91 Off-Ramp	Basic	B / 16	B / 15	C / 21	C / 21
WB SR-91 Off-Ramp	Basic	B / 16	B / 15	C / 22	C / 21
EB SR-91 Off-Ramp	Diverge	D / 28	C / 23	**F / DEC**	D / 33
EB SR-91 Off-Ramp to On-Ramp	Basic	B / 15	C / 25	C / 19	C / 21
EB SR-91 On-Ramp	Merge	C / 18	**F / DEC**	D / 26	D / 29
WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	Weave	C / 19	**F / DEC**	C / 24	D / 30
Magnolia Avenue Off-Ramp to On-Ramp	Basic	C / 20	**F / DEC**	D / 27	**F / DEC**
Magnolia Avenue On-Ramp	Merge	B / 18	**F / DEC**	C / 25	**F / DEC**
Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp	Weave	B / 17	**F / DEC**	C / 24	**E / 41**
Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp	Basic	C / 23	**F / DEC**	**E / 38**	**F / DEC**
Ontario Avenue Off-Ramp	Diverge	C / 26	**F / DEC**	**F / DEC**	**F / DEC**
Ontario Avenue Off-Ramp to On-Ramp	Basic	C / 19	**F / DEC**	D / 27	**F / DEC**
Ontario Avenue On-Ramp	Merge	B/ 13	**F / DEC**	C / 20	**E / 37**
El Cerrito Road Off-Ramp	Basic	C / 21	**F / DEC**	D / 33	**F / DEC**
El Cerrito Road Off-Ramp to On-Ramp	Basic/ Weave	C / 25	**F / DEC**	D / 33	**F / DEC**
Express Lane (EL) On-Ramp at El Cerrito Road	Basic	C / 18	**F / DEC**	C / 24	**E / 36**
El Cerrito Road On-Ramp to Cajalco Road Off-Ramp	Weave	C / 20	**F / DEC**	C / 25	**E / 38**
EL On-Ramp Cajalco Road On-Ramp (4 Lane)	Basic	B / 17	**F / DEC**	C / 19	D / 30

[6] The LOS was calculated for each study facility based on density in number of passenger cars per mile per lane (pc/mi/ln) to evaluate traffic operations. If the volume-to-capacity ratio was greater than or equal to 1 (V/C ≥ 1), LOS was considered to be F.

I-15 SB Segment	Facility Type	LOS / Density[6]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Cajalco Road On-Ramp/Cajalco Road On-Ramp to Weirick Road/ Dos Lagos Drive Off-Ramp	Merge/ Weave	B / 13	**F / DEC**	B / 15	**F / DEC**
Cajalco Road On-Ramp to Weirick Road/Dos Lagos Drive Off-Ramp	Basic/ Weave	B/ 18	**F / DEC**	C / 21	**D / 35**
Weirick Road/Dos Lagos Drive Off-Ramp	Diverge	B / 18	**F/ DEC**	C / 21	**E / 35**
Weirick Road/Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 21	**F / DEC**	C / 24	**F / DEC**
Weirick Road/Dos Lagos Drive On-Ramp	Merge	B / 16	**F / DEC**	C / 18	**F / DEC**
Weirick Road/Dos Lagos Drive On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 22	**F / DEC**	C / 25	**E / 41**
Temescal Canyon Road Off-Ramp	Diverge	C / 21	**F / DEC**	C / 25	**F / DEC**
Temescal Canyon Road Off-Ramp to On-Ramp	Basic	C / 19	**F / DEC**	C / 22	**F / DEC**
Temescal Canyon Road On-Ramp	Merge	B / 14	**F / DEC**	B / 16	**F / DEC**
Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 21	**E / 42**	C / 23	**E / 42**
Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Weave	-	-	-	-
Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	-	-	-	-
Indian Truck Trail Off-Ramp	Diverge	C / 19	**E / 44**	C / 22	**F / DEC**
Indian Truck Trail Off-Ramp to On-Ramp	Basic	C / 19	**E / 35**	C / 21	D / 33
Indian Truck Trail On-Ramp	Merge	B / 15	D / 34	B / 16	D / 29
Indian Truck Trail On-Ramp to Lake Street Off-Ramp	Basic	C / 20	**E / 38**	-	-
Indian Truck Trail On-Ramp to Lake Street Off-Ramp	Weave	-	-	-	-
Indian Truck Trail On-Ramp to Horsethief Road Off-Ramp		-	-	C / 22	**E / 38**
Horsethief Road Off-Ramp		-	-	C / 22	**E / 45**
Horsethief Road Off-Ramp to On-Ramp		-	-	C / 19	D / 28

I-15 SB Segment	Facility Type	LOS / Density[6]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Horsethief Road On-Ramp		-	-	B / 15	D / 26
Horsethief Road On-Ramp to Lake Street Off-Ramp	Basic	-	-	C / 21	D / 33
Horsethief Road On-Ramp to Lake Street Off-Ramp	Weave	-	-	-	-
Lake Street Off-Ramp	Diverge	C / 19	**E / 41**	C/ 20	D / 34
Lake Street Off-Ramp to On-Ramp	Basic	C / 18	D / 31	C / 19	D / 28
Lake Street On-Ramp	Merge	B / 15	C / 25	B / 17	C / 21
Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	C / 20	D / 33	C / 22	D / 29
Lake Street On-Ramp to Nichols Road Off-Ramp (EL Egress)	Basic	-	-	-	-
Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	-	-	-	-
Nichols Road Off-Ramp	Diverge/ Basic	C / 19	D / 34	C / 21	C / 29
Nichols Road Off-Ramp to On-Ramp	Basic	C / 18	D / 31	C / 20	D / 27
Nichols Road On-Ramp	Merge	B / 16	D / 27	B / 18	C / 23
Nichols Road On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	C / 21	D / 34	C / 22	D / 29
SR-74 (Central Avenue) Off-Ramp	Diverge	B / 14	C / 22	B / 15	C / 20
SR-74 (Central Avenue) (EL Egress)	Basic	-	-	-	-
SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 17	D / 28	B / 17	C / 20
SR-74 (Central Avenue) On-Ramp	Merge	B / 17	D / 35	B / 18	C / 20
SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	Basic	C / 25	**E / 39**	C / 26	D / 28
Main Street Off-Ramp	Diverge	C / 23	**E / 36**	C / 24	D / 30
Main Street Off-Ramp to On-Ramp	Basic	C / 23	D / 31	C / 23	C / 23
Main Street On-Ramp	Merge	C / 21	D / 28	C / 22	C / 20
Main Street On-Ramp to Franklin Street Overcrossing	Basic	D / 26	D / 34	D / 27	C / 25

Source: Caltrans 2022b.
Density reported in passenger cars per lane per mile.

Bold and underlined font indicate LOS E or F conditions. DEC = Demand Exceeds Capacity.
Projected Opening (2030) and Design (2050) Years Level of Service—No-Build Alternative, NB I-15

Table 1-4 displays the projected Opening Year (2030) and Design Year (2050) LOS for NB I-15 under the No-Build Alternative conditions. Under Opening Year (2030) conditions, No-Build Alternative, all study locations—including mainline segments, ramps, and express lanes on NB I-15—would operate at LOS D or better during the AM peak hours (refer to Table 1-4).

During PM peak hours of operation for Opening Year (2030) on NB I-15, a bottleneck would happen on the WB Magnolia Avenue On-Ramp merge segment, which would create an approximately 10-mile queue extending to the Indian Truck Trail On-Ramp. This would create segments that would operate at LOS E or F. All other mainline segments, ramps, and express lanes would operate at LOS D or better during the PM peak hour (refer to Table 1-4).

Under Projected Design Year (2050) conditions for the No-Build Alternative, the AM peak hours for NB I-15 would bottleneck at the Weirick Road/Dos Lagos Drive On-Ramp merge segment. In turn, according to the traffic analysis, this would create a queue that would extend past Main Street with a queue length that would extend past the model limits and cannot be measured (Caltrans 2022b). The bottleneck would create segments in queue to operate at LOS F. Additionally, the El Cerrito Road On-ramp and Ontario Avenue Off-Ramp would operate at LOS E during the peak hour due to high serving volumes. All other mainline segments, ramps, and express lanes would operate at LOS D or better during the AM peak hour (refer to Table 1-4).

The PM peak hours on NB I-15 under the Projected Design Year (2050) conditions for the No-Build Alternative would bottleneck at the WB Magnolia Avenue On-Ramp merge segment and would create a queue that would extend past Main Street and the model limits. According to the traffic analysis, the queue cannot be measured or would be greater than 15 miles long (Caltrans 2022b). Segments in the queue would operate at LOS E or F from this queue. All other mainline segments, ramps, and express lanes would operate at LOS D or better during the PM peak hour.

Table 1-4. Projected Year (2030 and 2050) Peak Hour General Purpose Lane Operations, NB I-15

I-15 NB Segment	Facility Type	LOS / Density[7]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 12	B / 11	B / 14	B / 18
Hidden Valley Parkway Off-Ramp	Diverge	B / 16	B / 16	C / 19	C / 22
EB SR-91 On-Ramp	Merge	B / 16	B / 15	C / 19	C / 21
WB SR-91 On-Ramp	Merge	B / 17	B / 14	C / 21	C / 21
EB & WB SR-91 Off-Ramp to WB SR-91 On-Ramp	Basic	B / 12	B / 11	B / 16	C / 20
EB & WB SR-91 Off-Ramp	Diverge	C / 24	D / 29	D / 27	D / 32
Magnolia Avenue On-Ramp	Merge	C / 21	**F / DEC**	C / 26	**F / DEC**
Magnolia Avenue Loop On-Ramp	Basic	C / 19	**F / DEC**	C / 22	**F / DEC**
Magnolia Avenue Off-Ramp to Loop On-Ramp	Basic	C / 19	**F / DEC**	C / 24	**F / DEC**
Magnolia Avenue Off-Ramp	Diverge	B / 16	**F / DEC**	C / 21	**F / DEC**
Ontario Avenue to Magnolia Avenue	Weave	C / 19	**F / DEC**	C / 23	**F / DEC**
Ontario Avenue On-Ramp	Merge	B / 13	**F / DEC**	B / 17	**F / DEC**
Ontario Avenue Off-Ramp to On-Ramp (4 Lanes)	Basic	B / 13	**F / DEC**	B / 17	**F / DEC**
Ontario Avenue Off-Ramp to On-Ramp (3 Lanes)	Basic	B / 17	**F / DEC**	C / 26	**F / DEC**
Ontario Avenue Off-Ramp	Diverge	C / 24	**F / DEC**	**E / 44**	**F / DEC**
El Cerrito Road On-Ramp	Merge	C / 20	**F / DEC**	**E / 38**	**F / DEC**
Express Lane (EL) Access to El Cerrito Road On-Ramp	Basic	B / 15	**F / DEC**	C / 22	**F / DEC**
EL Access at El Cerrito Road	Basic/ Weave	B / 15	**F / DEC**	C / 23	**F / DEC**
Cajalco Road On-Ramp to El Cerrito Road Off-Ramp	Weave	B / 17	**F / DEC**	C / 24	**F / DEC**
Cajalco Road Loop On-Ramp	Merge	C / 18	**F / DEC**	C / 20	**F / DEC**

[7] The LOS was calculated for each study facility based on density in number of passenger cars per mile per lane (pc/mi/ln) to evaluate traffic operations. If the volume-to-capacity ratio was greater than or equal to 1 (V/C ≥ 1), LOS was considered to be F.

I-15 NB Segment	Facility Type	LOS / Density[7]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
EL Access at Cajalco Road/ El Ingress at Cajalco Road	Basic	C / 22	**F / DEC**	C / 19	**F / DEC**
Cajalco Road Off-Ramp to Loop On-Ramp	Basic	C / 24	**F / DEC**	C / 26	**F / DEC**
Cajalco Road Off-Ramp to EL Access	Basic	-	-	-	-
Cajalco Road Off-Ramp	Diverge	D / 27	**F / DEC**	**F / DEC**	**F / DEC**
Weirick Road/Dos Lagos Drive On-Ramp	Merge	C / 23	**F / DEC**	**F / DEC**	**F / DEC**
Weirick Road/Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 18	**F / DEC**	**F / DEC**	**F / DEC**
Weirick Road/Dos Lagos Drive Off-Ramp	Diverge	C / 19	**F / DEC**	**F / DEC**	**F / DEC**
Temescal Canyon Road On-Ramp to Weirick Road/Dos Lagos Drive Off-Ramp	Basic	C / 19	**F / DEC**	**F / DEC**	**F / DEC**
Temescal Canyon Road On-Ramp	Merge	B / 16	**F / DEC**	**F / DEC**	**F / DEC**
Temescal Canyon Road Off-Ramp to On-Ramp	Basic	B / 17	**F / DEC**	**F / DEC**	**F / DEC**
Temescal Canyon Road Off-Ramp	Diverge	C / 22	**F / DEC**	**F / DEC**	**F / DEC**
Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 20	**E / 36**	**F / DEC**	**F / DEC**
Indian Truck Trail On-ramp to Temescal Canyon Road Off-Ramp	Weave	-	-	-	-
Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	-	-	-	-
Indian Truck Trail On-Ramp	Merge	B / 16	B / 14	**F / DEC**	**F / DEC**
Indian Truck Trail Off-Ramp to On-Ramp	Basic	C / 18	B / 16	**F / DEC**	**F / DEC**
Indian Truck Trail Off-Ramp	Diverge	C / 21	B / 17	**F / DEC**	**F / DEC**
Horsethief Road On-Ramp to Indian Truck Trail Off-Ramp		-	-	**F / DEC**	**F / DEC**

I-15 NB Segment	Facility Type	LOS / Density[7]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Horsethief Road On-Ramp		-	-	**F / DEC**	**F / DEC**
Horsethief Road Off-Ramp to On-Ramp		-	-	**F / DEC**	**F / DEC**
Horsethief Road Off-Ramp		-	-	**F / DEC**	**F / DEC**
Lake Street On-Ramp to Horsethief Road Off-Ramp	Basic	-	-	**F / DEC**	**F / DEC**
Lake Street On-Ramp to Horsethief Road Off-Ramp	Weave	-	-	-	-
Lake Street On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 21	B / 16	-	-
Lake Street On-Ramp to Indian Truck Trail Off-Ramp	Weave	-	-	-	-
Lake Street On-Ramp	Merge	B / 18	B / 13	**F / DEC**	**F / DEC**
Lake Street Off-Ramp to On-Ramp	Basic	B / 16	B / 15	**F / DEC**	**F / DEC**
Lake Street Off-Ramp	Diverge	B / 18	B / 16	**F / DEC**	**F / DEC**
Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	B / 17	B / 16	**F / DEC**	**F / DEC**
Nichols Road On-Ramp to Lake Street Off-Ramp (EL Ingress)	Basic	-	-	-	-
Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	-	-	-	-
Nichols Road On-Ramp	Merge	B / 14	B / 12	**F / DEC**	**F / DEC**
Nichols Road Off-Ramp to On-Ramp	Basic	B / 16	B / 14	**F / DEC**	**F / DEC**
Nichols Road Off-Ramp	Diverge	C / 19	B / 17	**F / DEC**	**F / DEC**
Dexter Avenue/SR-74 (Central Avenue) On-Ramp to Nichols Road Off-Ramp	Merge	B / 15	B / 14	**F / DEC**	**F / DEC**
Dexter Avenue/SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 14	B / 13	**F / DEC**	**F / DEC**
Dexter Avenue/SR-74 (Central Avenue) Off-Ramp to On-ramp (EL Ingress)	Diverge	-	-	-	-
Dexter Avenue Off-Ramp	Diverge	B / 14	B / 14	**F / DEC**	**F / DEC**

I-15 NB Segment	Facility Type	LOS / Density[7]			
		2030		2050	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
WB SR-74 (Central Avenue) Off-Ramp	Basic	B / 14	B / 13	**F / DEC**	**F / DEC**
EB SR-74 (Central Avenue) Off-Ramp	Diverge	B / 16	B / 15	**F / DEC**	**F / DEC**
Main Street On-Ramp to Central Avenue (SR-74) Off-Ramp	Basic	C / 21	C / 20	**F / DEC**	**F / DEC**
Main Street On-Ramp	Merge	B / 18	B / 17	**F / DEC**	**F / DEC**
Main Street Off-Ramp to On-Ramp	Basic	C / 19	C / 18	**F / DEC**	**F / DEC**
Main Street Off-Ramp	Diverge	C / 25	C / 22	**F / DEC**	**F / DEC**
Franklin Street Overcrossing to Main Street Off-Ramp	Basic	C / 22	C / 20	**F / DEC**	**F / DEC**

Source: Caltrans 2022b.
Density reported in passenger cars per lane per mile.
Bold and underlined font indicate LOS E or F conditions. DEC = Demand Exceeds Capacity.

The expected increase in congestion during peak periods and worsening traffic conditions, particularly during AM and PM peak periods, are expected to result in additional local and regional traffic congestion. Existing heavy peak-period congestion and traffic delays, as evidenced by the poor LOS, are expected to continue to negatively affect traffic operations along mainline I-15.

1.2.2.2 Roadway Deficiencies

Currently, the deficiency that exists on I-15 is operational capacity due to the inadequate cross section given the current and future forecasted traffic demands. I-15 primarily consists of three conventional lanes in each direction within the Project area. The volume of traffic on the corridor significantly exceeds the capacity for the AM and PM peak periods. Under Existing (2019) Conditions, the AM peak direction is northbound, which experiences significant congestion (LOS F) due to heavy commute traffic. The NB bottleneck occurs at the Cajalco Road On-Ramp; it is active from 5:15 to 11:45 AM, with congested traffic in lanes that extends approximately 7 miles to the Indian Truck Trail Interchange during the peak hour and affects four interchanges. The PM peak direction is southbound, which experiences significant congestion (LOS F) due to a heavy evening commute. The SB bottleneck at the Cajalco Road On-Ramp is prevalent between 3:15 to 6:15 PM; it extends approximately 4.7 miles to the Magnolia Avenue Interchange during the peak hour and affects five interchanges. These major peak hour bottlenecks are examples of where restricted traffic flows due to an inadequate number of lanes creates operational deficiencies on critical segments of I-15 in Western Riverside County.

1.2.2.3 Social Demands or Economic Development

The Project is in the Cities of Corona and Lake Elsinore and unincorporated Riverside County. Existing land uses that surround the Project consist of commercial, residential, industrial, educational and public facilities, open space and recreation, and transportation communications and utilities facilities. SCAG's recently adopted Connect SoCal (2024–2050 RTP/Sustainable Communities Strategy [SCS]) Growth Forecast estimates a 25.4-percent increase in population in Riverside County between 2019 and 2050, with the number of households and employment increasing by approximately 42.7 percent and 39.9 percent, respectively. In the City of Corona, the 2020–2045 RTP/SCS Growth Forecast estimates an 11.6-percent increase in population from 2016 to 2045 and an 11.7-percent increase in households.[8] According to the same source, the City of Lake Elsinore is projected to see a 76.8-percent increase in population. This projected growth is expected to place a high demand on existing transportation facilities and services.

1.2.2.4 Legislation

The sections below are from the 2024 Draft Project Report (DPR) for the I-15 ELPSE, and they discuss the State, federal, and design-build toll-related legislation that provides the authority for RCTC and Caltrans to build and operate express lanes within the I-15 corridor.

State Tolling Authority

Assembly Bill (AB) 1467 established a statewide pilot program for tolled express lanes by authorizing four projects in California; two in Northern California and two in Southern California. This public partnership pilot program required a comprehensive application, a finding of eligibility by the CTC, and ratification of the CTC's finding by the State Legislature via statute. In December 2007, RCTC submitted an application under the public partnership pilot program. At its April 2008 meeting, the CTC found the Project eligible for the pilot program. Later that year, AB 1954 was signed into law, which ratified the CTC's April 2008 decision. The passage of AB 1954 provided RCTC the authority to build and operate two tolled express lanes in each direction within the I-15 corridor.

Federal Tolling Authority

In March 2008, RCTC submitted an expression of interest to FHWA as the first step in obtaining federal tolling authority for I-15. Based on the expression of interest, FHWA advised RCTC that the I-15 Corridor Improvement Project (CIP) would best fit under FHWA's Value Pricing Pilot Program, a program to support the development, operation, and evaluation of pilot tests of innovative road and parking pricing projects that achieve significant and lasting reductions in highway congestion (FHWA 2014). Interested public agencies would be eligible to apply for grants under the Value Pricing Pilot Program authorized by Section 1604(a) of the Safe, Accountable, Flexible, Efficient

[8] Local growth projections for the City of Corona and the City of Lake Elsinore are not available in the recently adopted SCAG 2024–2050 RTP/SCS; however, the difference in rates when compared with 2050 are not anticipated to be substantial.

Transportation Equity Act: A Legacy for Users. In July 2008, RCTC submitted an application for federal tolling authority to FHWA and in July 2009 entered into a cooperative agreement with Caltrans and FHWA that added the I-15 CIP to the Value Pricing Pilot Program authority Caltrans received from FHWA. This agreement provided RCTC the federal authority to build, operate, and maintain two tolled express lanes in each direction on the I-15 corridor in Riverside County. While the requirement for tolling agreements was eliminated in the Moving Ahead for Progress in the 21st Century Act, the Value Pricing Pilot Program agreements continue to remain in force. RCTC will build, operate, and maintain tolled express lanes on I-15 within Riverside County in accordance with all applicable requirements. Under the agreement, up to two lanes in each direction on I-15 may be tolled; toll revenues are to be used for constructing, operating, and maintaining the I-15 tolled express lanes, and for other projects eligible for assistance under the Federal-Aid Highways Code (23 United States Code [U.S.C.]); toll rates charged will be variable; and use of toll revenues is subject to audit. RCTC would be responsible for managing the day-to-day operations of the express lanes.

As stated in the RCTC/Caltrans/FHWA cooperative agreement, the Project "will utilize congestion pricing and enhanced technologies that are similar to those currently operating on existing toll facilities in Orange and San Diego counties, presenting the opportunity to create a regionally integrated and connected toll system" (FHWA, Caltrans, and RCTC 2009). It is anticipated that RCTC and Caltrans will enter into a toll facility agreement for operation of the express lane facility.

Design Build Authority

The Project is proposed to be delivered using a PDB method. RCTC is the local Project sponsor for funding and administering the Project development effort, and it has a cooperative agreement with Caltrans (Caltrans Agreement No. 08-1693) for the current PA&ED phase.

California Senate Bill 617 was approved on October 4, 2023, authorizing the use of PDB for local agency transportation projects. It is expected that RCTC and Caltrans will be entered into a cooperative agreement for the PDB phase of this Project and that RCTC will request approval to advertise, award, and administer the PDB contract(s). This approach would save considerable time, as it would allow overlap of design and construction activities.

1.2.2.5 Modal Interrelationships and System Linkages

The following sections below are based on the 2017 I-15 ELPSE PSR/PDS Supplemental Memorandum and the 2023 DPR for the I-15 ELPSE.

National Highway System Linkage

I-15 is a major truck/passenger route that begins at its junction with I-5 in San Diego, approximately 10 miles north of the U.S./Mexico Border, and ends at the U.S./Canada Border. I-15 is functionally classified at the federal level as a Rural/Urban Principal Arterial and is part of the Freeway and Expressway System, the Single Interstate Routing System, the National Highway System, and the Strategic Highway Corridor

Network of National Defense. I-15 serves as both the primary North American Free Trade Agreement–related “CANAMEX” Corridor between Canada and Mexico via the Mountain West. It is also a link to the main east-west freight routes (SR-60, I-10, I-40, I-70, and I-80) that connect Southern California with the Midwest and East Coast. Furthermore, I-15 has been identified by the U.S. Department of Transportation as one of the six “Corridors of the Future” within the U.S. that are vital to the long-term health and stability of the national economy.

I-15 is strategically located and is a vital interstate goods-movement corridor that links Southern California to the Inland Empire, Las Vegas, the Rocky Mountain States, and Canada. It is a primary link between major economic centers and geographic regions and is classified as a “High Emphasis” and “Gateway” route in the Interregional Road System. I-15 is a major truck route and is included in the National Network for Federal Surface Transportation Assistance Act for conventional combination trucks. Its main use is interstate/interregional movement of people and goods. I-15 is also part of the Intermodal Corridors of Economic Significance system of routes, which are significant transportation arteries that provide access to major sea or waterway ports, nationwide railway systems, airports, and interstate and intrastate highway systems, thereby serving as intermodal corridors of economic significance (State of California 2005). Weekend and holiday recreational traffic on the route is exceptionally high since it serves as a connection to Las Vegas and to the Colorado River area via I-40.

Regional System Linkage

The I-15 corridor provides an essential transportation and economic link for both Riverside and San Bernardino Counties and the State of California. The District 8 portion of I-15 starts at the Riverside/San Diego County Line and ends at the Nevada State Line. The total length of I-15 in District 8 is 239 miles, approximately 52 miles of which are within Riverside County (that is, from the Riverside/San Diego County Line to the SR-60 Junction). The route generally varies from four to eight lanes. I-15 is a major freeway linking to I-10, I-40, I-210, SR-60, SR-91, SR-58, and U.S. Route (US-) 395. It also connects with SR-18, SR-138, SR-74, SR-66, and SR-79. I-15 within Riverside and San Bernardino Counties currently has no HOV lanes.

Express Lanes Network

The express lanes network in both Riverside and San Bernardino Counties has been growing rapidly in response to the increased inter-county travel demand. Development of an extensive regional express lanes network is a key strategy in the 2024–2050 RTP/SCS that aims to improve travel time reliability, provide travel choices, and optimize existing freeway capacity within the SCAG region. In 2017, RCTC completed construction of the SR-91 Express Lanes in the City of Corona—the first express lanes constructed in Riverside County. RCTC’s I-15 ELP—which extends the SR-91 express lanes network north and south of SR-91 along I-15 through the Cities of Jurupa Valley, Eastvale, Norco, and Corona—opened to traffic in 2021. North of the I-15 ELP, in 2024 San Bernardino County Transportation Authority will break ground on the I-15 Corridor Project, which will construct express lanes in both directions along I-15 between Cantu-Galleano Ranch Road in the City of Jurupa Valley and Foothill Boulevard Road in the

City of Rancho Cucamonga. In addition to providing continuity of express lanes north of the I-15 ELP, the I-15 Corridor Project will connect to the I-10 Corridor Project (Phase 1), which is currently under construction and will add express lanes in each direction on I-10 between the Cities of Montclair and Upland. Once these projects are completed, the southern terminus of the express lanes network in the Inland Empire will be at Cajalco Road on I-15. (See Figure 1-3.)

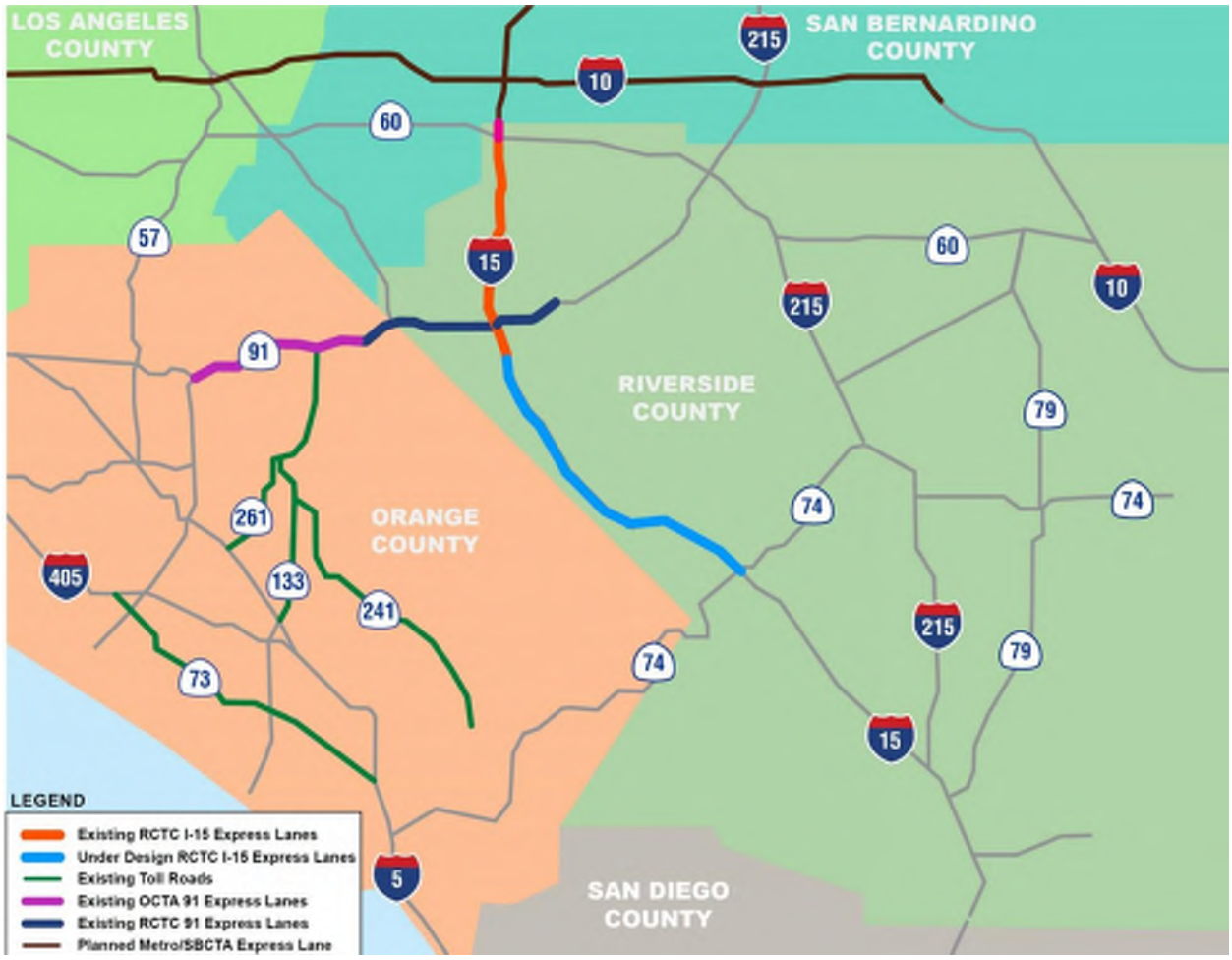

Figure 1-3. Existing and Planned Express Lanes

1.2.2.6 Air Quality Improvements

With respect to mobile-source air pollutant emissions, the California Air Resources Board (CARB) developed EMFAC emissions factor curves that demonstrate that, in general, the highest levels of grams per mile emissions occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour, with the highest emissions rates occurring at 0–25 miles per hour. To the extent that a project improves throughput by enhancing operations and improving travel times in high congestion travel corridors, mobile-source air pollutant emissions may be reduced.

1.2.3 Independent Utility and Logical Termini

FHWA regulations (23 Code of Federal Regulations [CFR] 771.111 [f]) require that the action evaluated:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Logical termini should encompass an entire project. Cutting a larger project into smaller projects may be considered "improper segmentation." A project must have independent utility; that is, a project must be able to function on its own, without further improvements.

This Environmental Impact Report/Environmental Assessment (EIR/EA) assesses operational conditions on I-15 between PM 21.2 and PM 38.1, the proposed roadway improvement limits. The 16.9-mile Project begins in the City of Lake Elsinore at SR-74 (Central Avenue) and runs through the unincorporated Riverside County community of Temescal Valley to El Cerrito Road (PM 38.1) in the City of Corona.

The southern end of the ELPSE would terminate at SR-74, which serves as one of the few east–west cross county network connections, providing connectivity from I-15 to I-215 and also to I-5 in Orange County. Therefore, the significance of SR-74 serves as a logical point from a traffic perspective to terminate the southern end of the Project.

The north end of the Project terminates at El Cerrito Road, which is a logical termination as this is a local interchange that provides connectivity to roadways and freeway access to and from I-15 for local communities. In addition, at the northern end of the Project the improvements would match the I-15 ELP that has already been constructed, therefore establishing a logical northern terminus for the Project.

The Project is of sufficient length, and the Project termini, as described above, are logically placed to allow environmental issues to be addressed on a broad scope. The Project would result in improvements to the current traffic conditions along the I-15 corridor without any additional transportation improvements being made in the area. As such, the Project is considered to have independent utility. Furthermore, the Project would not restrict considerations of alternatives for other reasonably foreseeable transportation improvements.

1.3 PROJECT DESCRIPTION

This section describes the proposed action and the Project alternatives developed to meet the purpose and need of the Project, while avoiding or minimizing environmental impacts. The alternatives include the Build Alternative and the No-Build Alternative.

RCTC, in cooperation with Caltrans, is proposing to construct new lanes along I-15 between PM 21.2 and PM 38.1 in Riverside County, California (see Figure 1-1, Regional Vicinity, and Figure 1-2, Project Location). The primary component of the Project would be the addition of two tolled express lanes[9] in both the NB and SB directions within the median of I-15 from SR-74 (Central Avenue) (PM 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project would also add a SB auxiliary lane between both the Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately 1 mile). Along with the lane additions, which would extend from PM 21.2 to 38.1, the Project would include widening of up to 15 bridges; potential construction of noise barriers, retaining walls, drainage systems; and implementation of electronic toll collection equipment and signs. In addition, due to the SB express lanes access between the Cajalco Road and Weirick Road Interchanges, the SB I-15 Weirick Road Off-Ramp would be configured as a dual-lane exit. Associated improvements for the toll lanes, including advance signage and transition striping, would extend approximately 2 miles from each end of the express lane limits to PM 20.3 in the south and PM 40.1 in the north. The proposed lane additions and supporting infrastructure are expected to be constructed primarily within the existing State right of way (ROW). No new ROW is expected to be required as part of this Project.

As stated in Section 1.2.2, the purpose of the Project is to improve and manage traffic operations while expanding travel mode choices, including providing an option for travel time and reliability with the expansion of the express lane network within the region.

1.4 ALTERNATIVES

1.4.1 Build Alternative

The Build Alternative includes the addition of two tolled express lanes in both the NB and SB directions within the median of I-15 from SR-74 (Central Avenue) (PM 22.3) in the City of Lake Elsinore to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project is anticipated to be constructed within the existing State ROW. Sign modifications and the installation of new signs would also be included to support the new tolled express lanes. Advanced signage is required to be posted a minimum of 2 miles prior to the start of the tolled express lanes. Signage

[9] Express lanes are traffic lanes that are separated from general purpose lanes where users are charged a toll to use the lanes.

would be located within the Project limits between PM 20.3 and PM 40.1. Due to the SB express lanes access between the Cajalco Road Interchange and Weirick Road Interchange, the SB I-15 Weirick Road Off-Ramp would be configured as a dual lane exit. The Build Alternative would not add any new connections or ramps. The estimated cost of the Build Alternative would range from $554,000,000 to $649,000,000, depending on escalation, with $169 million toward Capital Outlay Support, and between $386 and 481 million for Capital Outlay Construction.

1.4.1.1 Additional Project Features

Other improvements associated with the Project include:

- Paving the median and widening up to 15 bridges to accommodate the express lanes.
- Adding SB auxiliary lanes from Nichols Road (PM 23.9) to SR-74 (Central Avenue) and from SR-74 to Main Street (PM 21.2).
- Perpetuating an auxiliary lane SB between Cajalco Road (PM 36.75) to Weirick Road/Dos Lagos Drive (PM 35.91).
- Reconfiguring the SB Weirick Road Off-Ramp to a dual exit configuration.
- Creating multiple express lane ingress and egress locations, including weave zones between the express lanes and general purpose lanes.
- Shifting the I-15 centerline 12 feet to the east between Cajalco Road (PM 36.75) and Weirick Road/Dos Lagos Drive (PM 35.91).
- Reconstructing portions of the Weirick Road/Dos Lagos Drive NB On-Ramp, Cajalco Road NB Off-Ramp, and Cajalco Road NB Loop On-Ramp.
- Constructing retaining walls.
- Constructing potential noise barriers.
- Installing ramp metering at the Nichols Road and Lake Street interchanges.
- Modifying existing drainage systems and incorporating stormwater treatment devices and trash capture devices.
- Installing gantries with electronic toll collection and monitoring equipment.
- Installing vehicle detection equipment.
- Installing roadside and overhead signs.
- Installing changeable message signs.

- Installing maintenance vehicle pullouts.
- Relocating an overhead telecommunication facility.
- Conducting geotechnical borings to support Project final design.
- Installing lane delineators between the express lanes and general purpose lanes.
- Installing emergency generators to support the toll collection equipment.

The Build Alternative would not add any new connections or ramps. No borrow or fill sites are anticipated to be required, and all planned construction staging areas would be within existing ROW. The Build Alternative is anticipated to be constructed primarily within the existing State ROW.

Caltrans guidance recommends the use of buffer separation between express lanes and general purpose lanes in order to provide a safe speed differential between both facilities. Per the guidance, the Project proposes to separate the express lanes and general purpose lanes with a buffer that consists of two solid white lane markings with an accommodation for channelizers, to deter illegal access. At access locations, the buffer that separates the general purpose lanes and express lanes transitions from two solid white lines to a single dashed white lane line.

The I-15 ELPSE evaluated six preliminary intermediate express lane access locations throughout the Project limits. The access points are located to provide access to all local street and system interchanges, and they are subject to adjustment, along with toll gantry locations, during the final design phase. Two types of access points are proposed: combined ingress/egress without a weave lane and ingress-only. Two optional express lane access locations are being considered in the SB direction between El Cerrito Road and Weirick Road. In addition to the features described above, the Build Alternative includes additional Project components such as retaining walls, stormwater runoff treatment devices, and bridge widening to accommodate the new tolled express lanes. Table 1-5 shows a list of the bridge widening improvements that are a component of the Project.

Table 1-5. Proposed Bridge Improvements

Existing Bridge	Proposed Improvement
Gavilan Wash	inside widening both left (Bridge No. 56-0726L) and right (Bridge No. 56-0726R) structures
Lake Street UC	inside widening both left (Bridge No. 56-0682L) and right (Bridge No. 56-0682R) structures
Temescal Canyon Road UC	inside widening both left (Bridge No. 56-0681L) and right (Bridge No. 56-0681R) structures
Temescal Wash	inside widening both left (Bridge No. 56-0680L) and right (Bridge No. 56-0680R) structures

Existing Bridge	Proposed Improvement
Horsethief Canyon Road UC	inside widening both left (Bridge No. 56-0679L) and right (Bridge No. 56-0679R) structures
Horsethief Canyon Wash	inside widening both left (Bridge No. 56-0678L) and right (Bridge No. 56-0678R) structures
Indian Wash	inside widening both left (Bridge No. 56-0677L) and right (Bridge No. 56-0677R) structures
Indian Truck Trail UC	inside widening both left (Bridge No. 56-0676L) and right (Bridge No. 56-0676R) structures
Temescal Canyon Road UC	inside widening both left (Bridge No. 56-0675L) and right (Bridge No. 56-0675R) structures
Mayhew Wash	inside widening both left (Bridge No. 0674L) and right (Bridge No. 0674R) structures
Coldwater Wash	inside widening both left (Bridge No. 56-0543L) and right (Bridge No. 56-0543R) structures
Temescal Canyon Road UC	inside widening both left (Bridge No. 56-0542L) and right (Bridge No. 56-0542R) structures
Brown Canyon Wash	inside widening both left (Bridge No. 56-0559L) and right (Bridge No. 56-0559R) structures
Weirick Road UC	inside widening both left (Bridge No. 56-0541L) and right (Bridge No. 56-0541R) structures
Bedford Wash	inside widening left (Bridge No. 56-0540L) structure/inside & outside widening right (Bridge No. 56-0540R) structure

UC = undercrossing

No new or revised access to I-15 would be provided as part of the Build Alternative, no borrow or fill sites are anticipated to be required, and all planned construction staging areas would be within existing ROW. The Build Alternative is anticipated to be constructed primarily within the existing ROW. The layouts and typical cross section of the proposed freeway are illustrated in Figure 1-4 and Figure 1-5, respectively.

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 1-4 - Sheet 1
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
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- Proposed Bridge Improvements
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- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 2
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
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- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 3
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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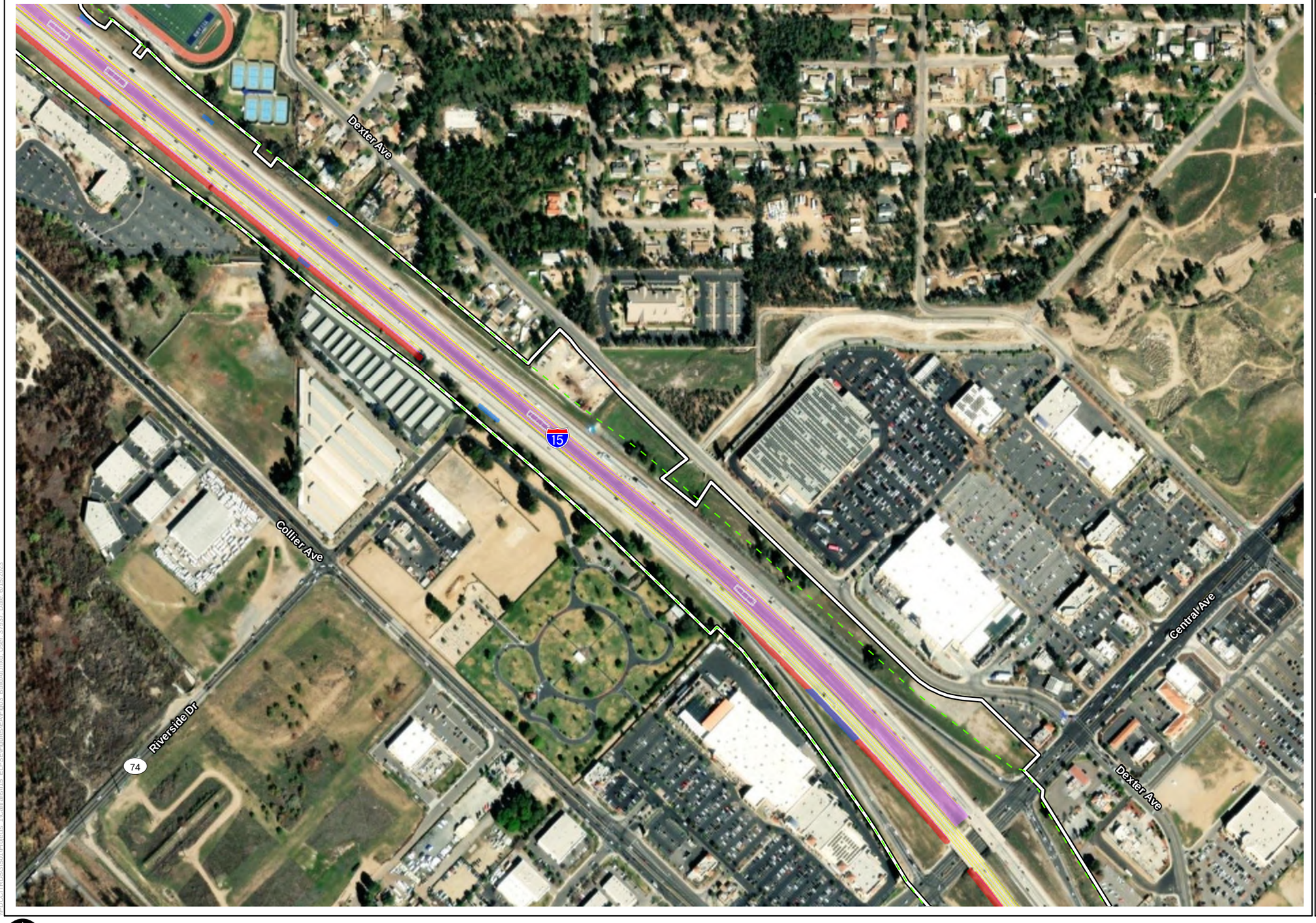

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 4
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 5
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
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- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 6
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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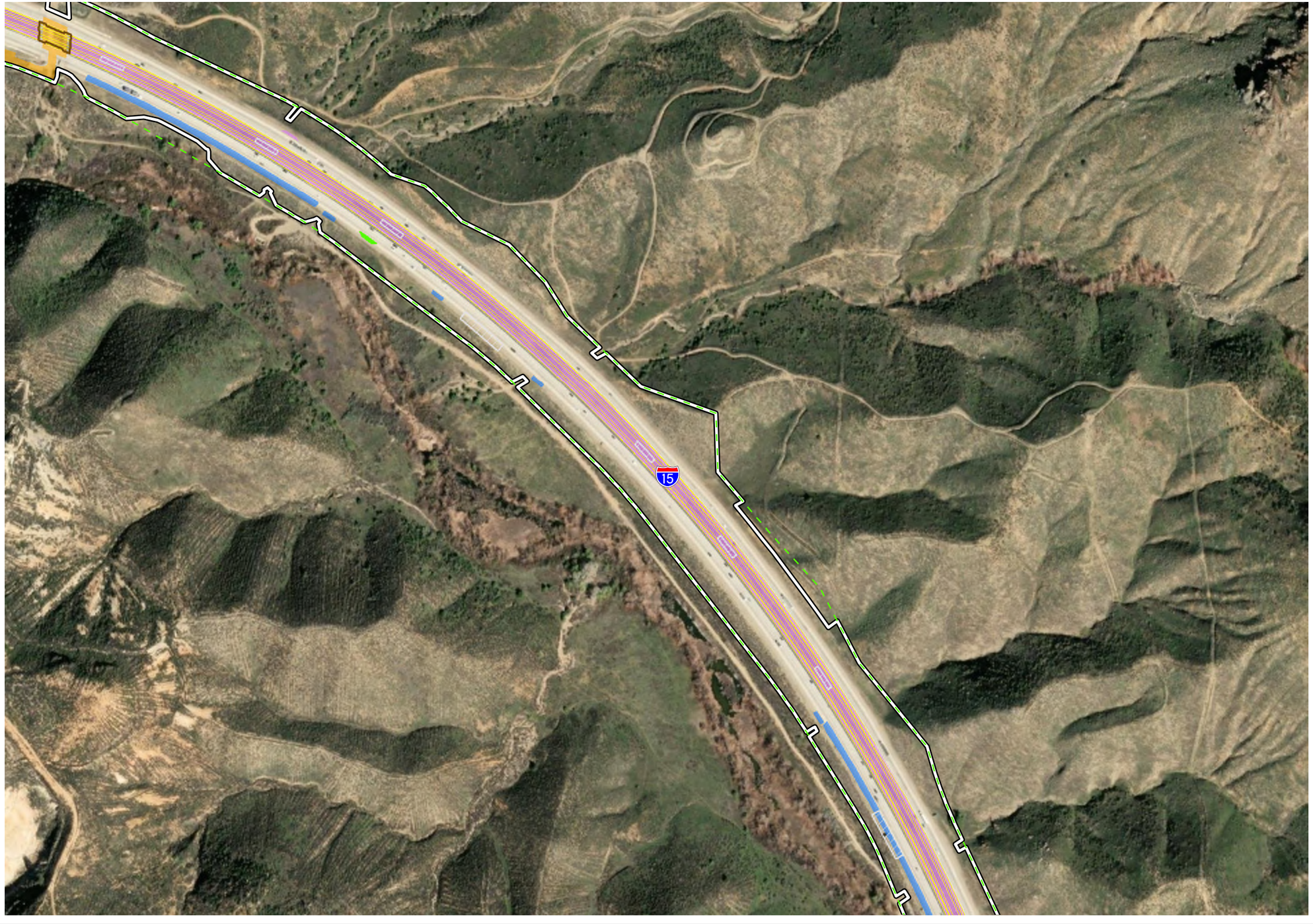

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
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- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 7
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 8
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 9
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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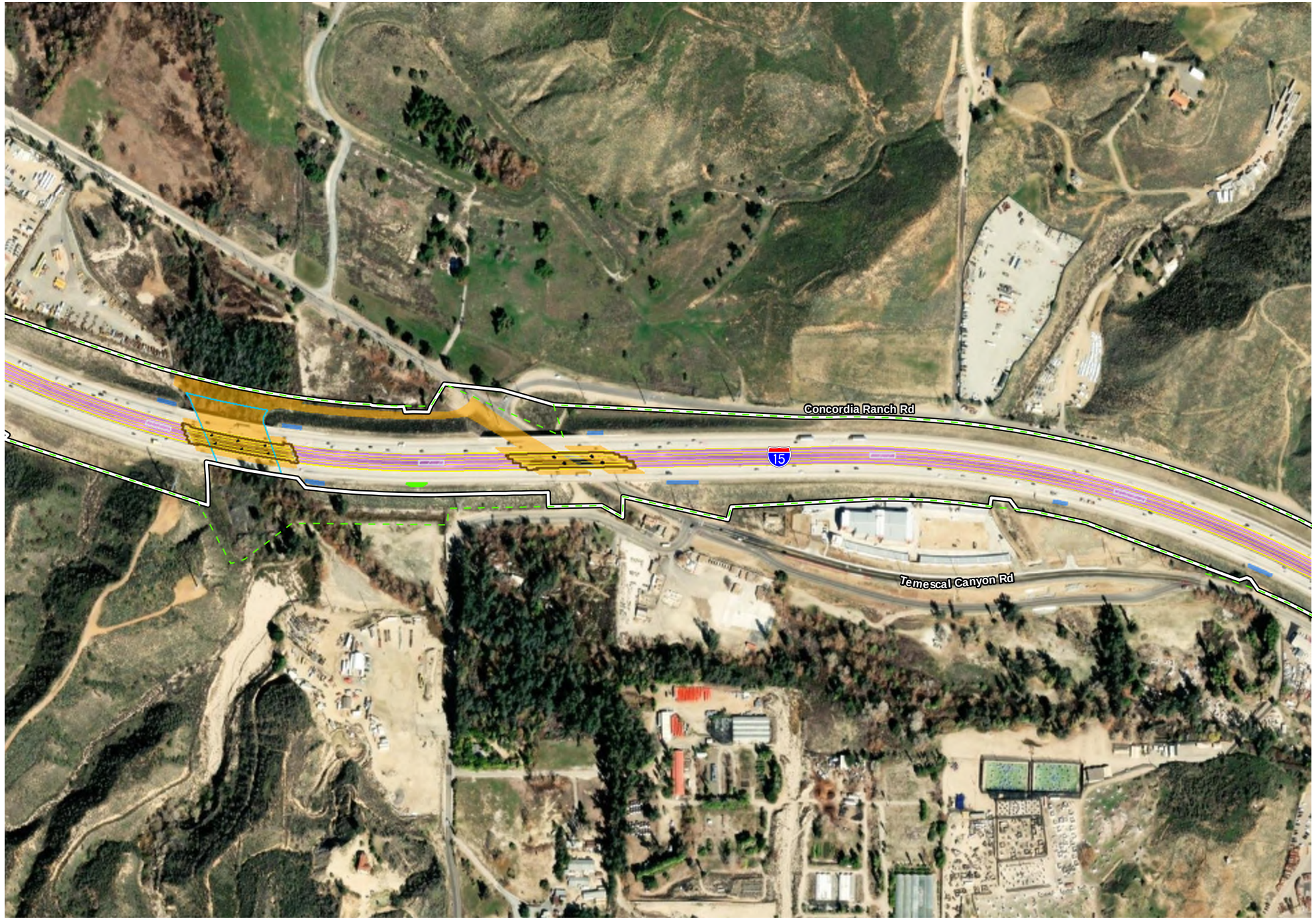

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 10
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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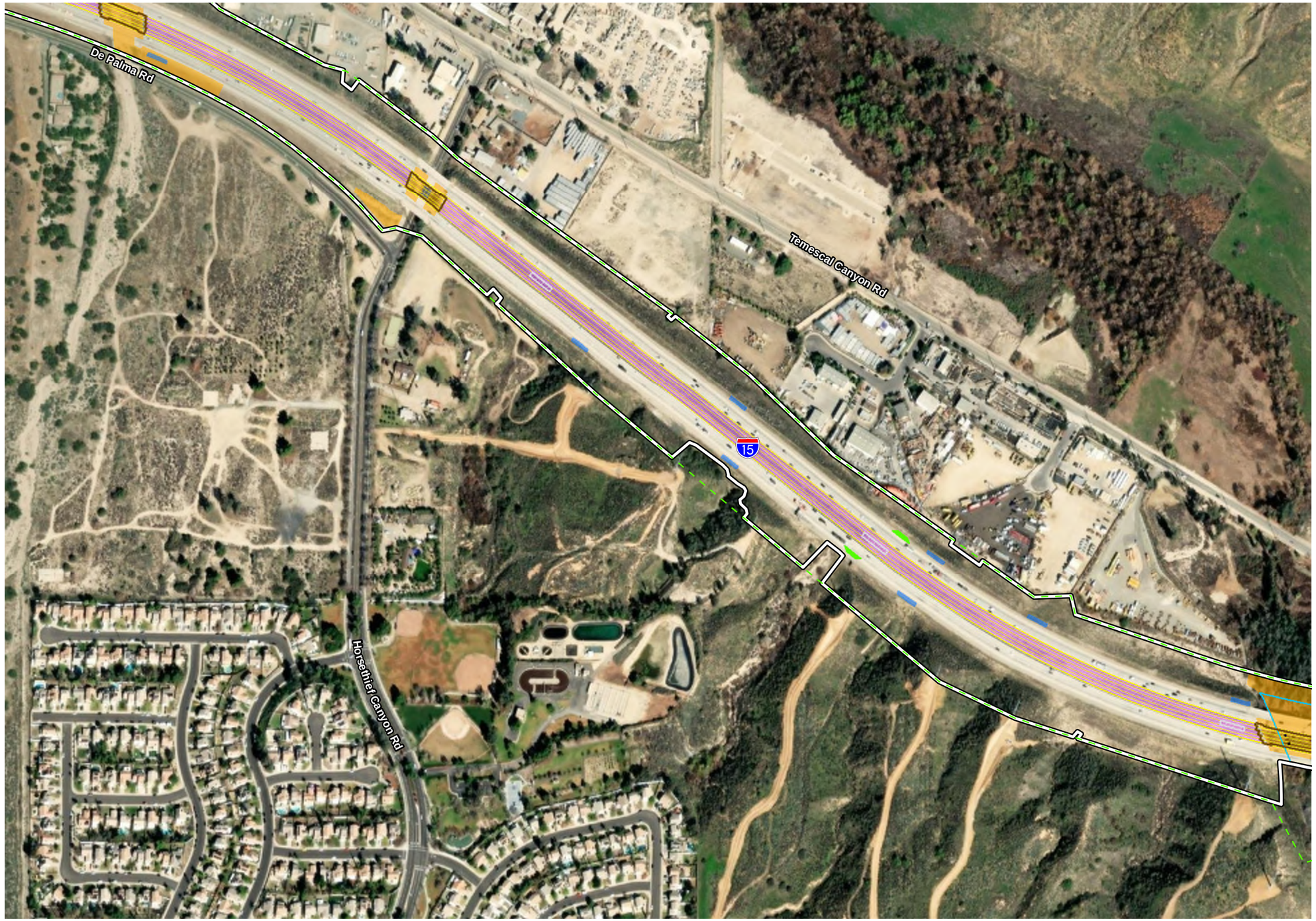

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 11
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 12
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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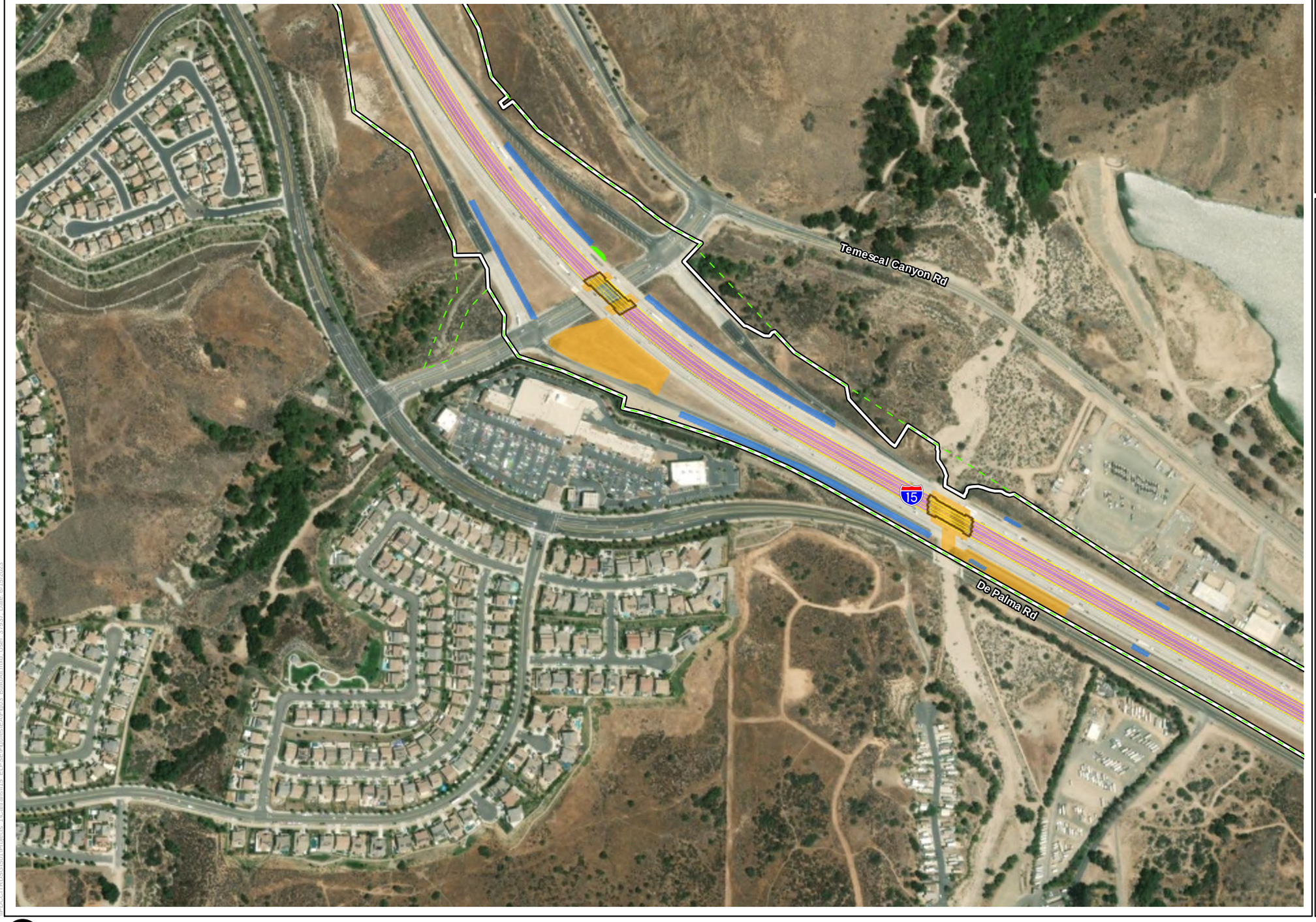

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Proposed Bridge Improvements
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- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 13
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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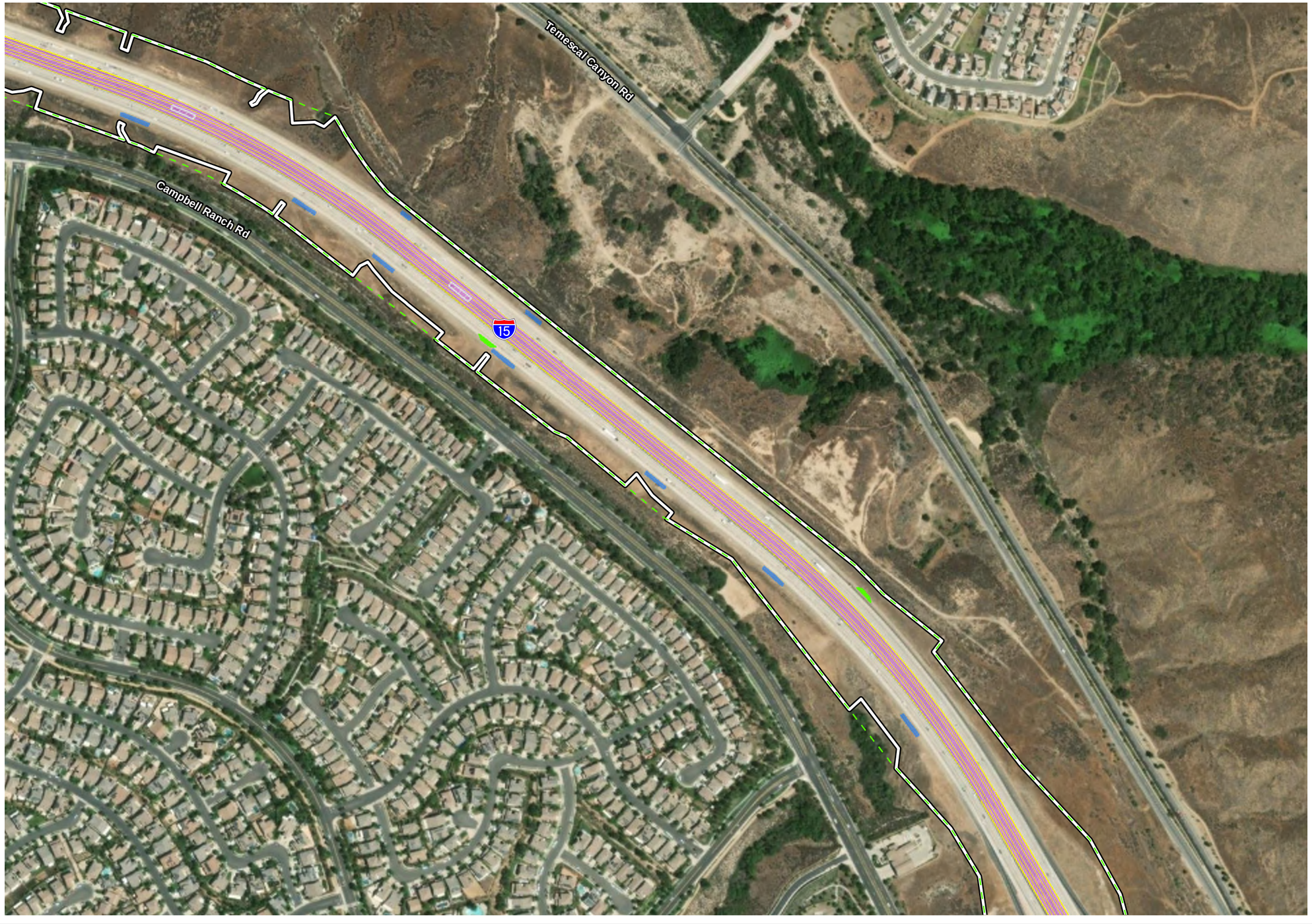

Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- Proposed Striping
- Proposed Pavement
- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 14
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 15
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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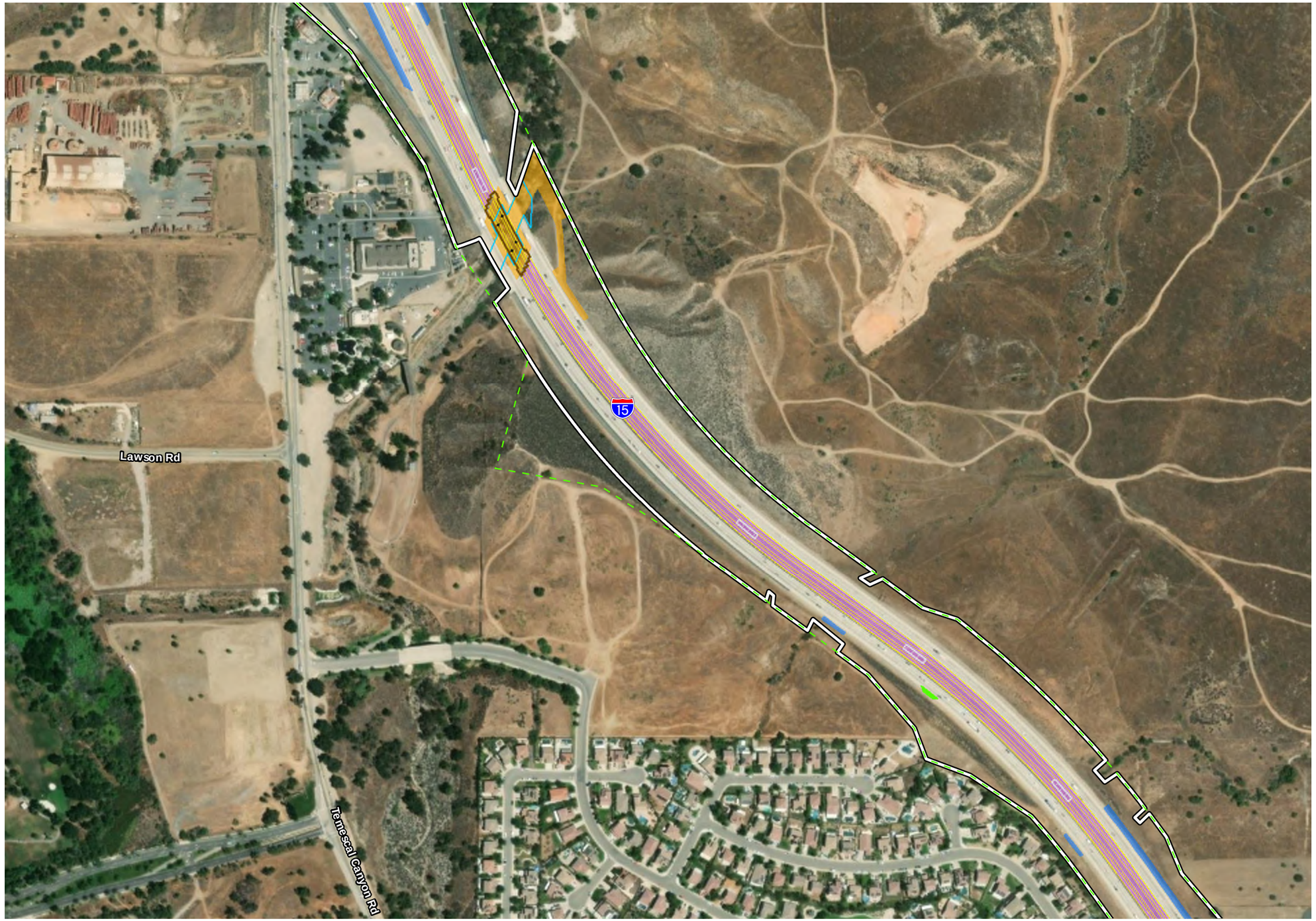

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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 16
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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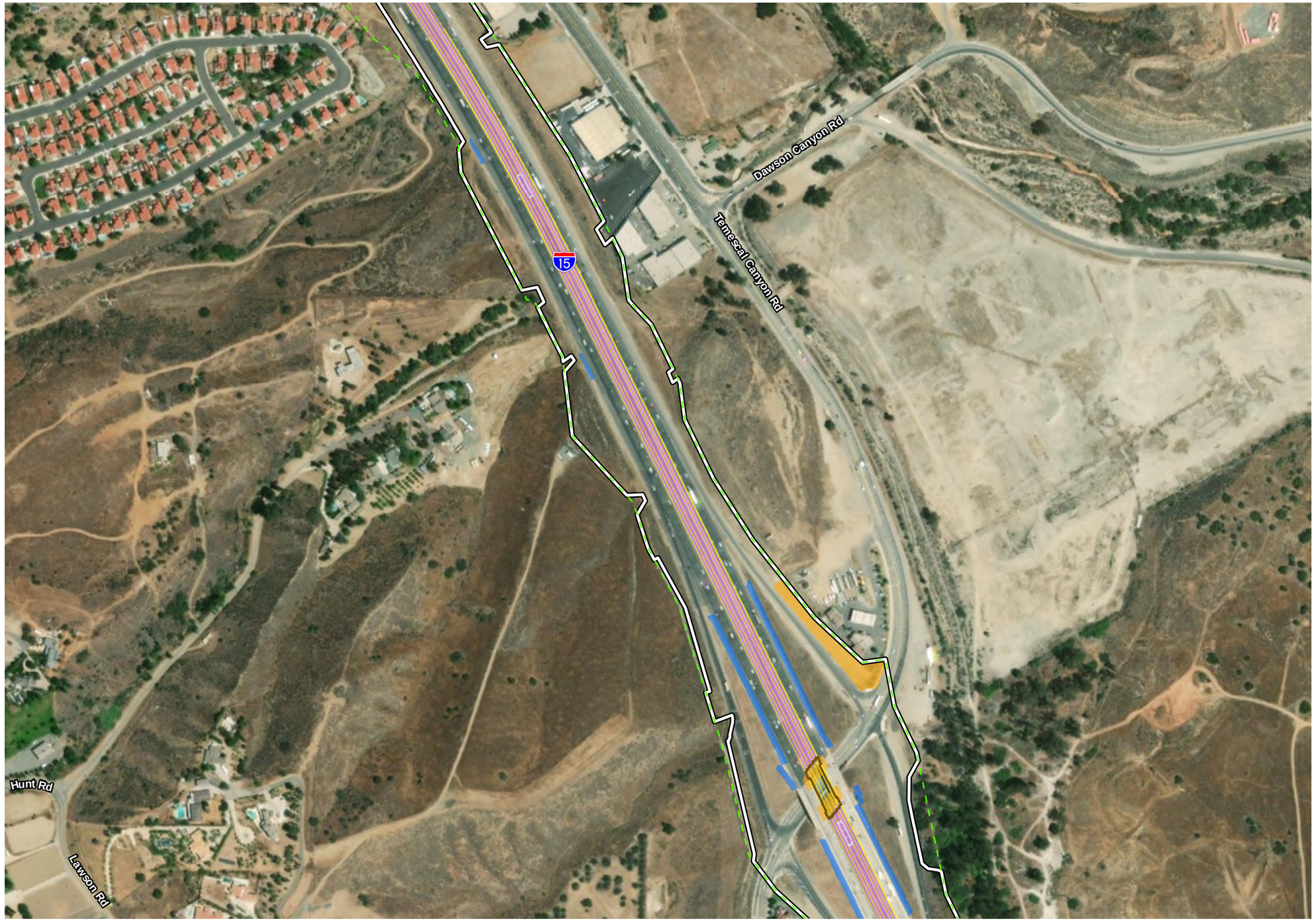

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- Project Limits
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- Limits of Disturbance (PM 21.2/38.1)
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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 17
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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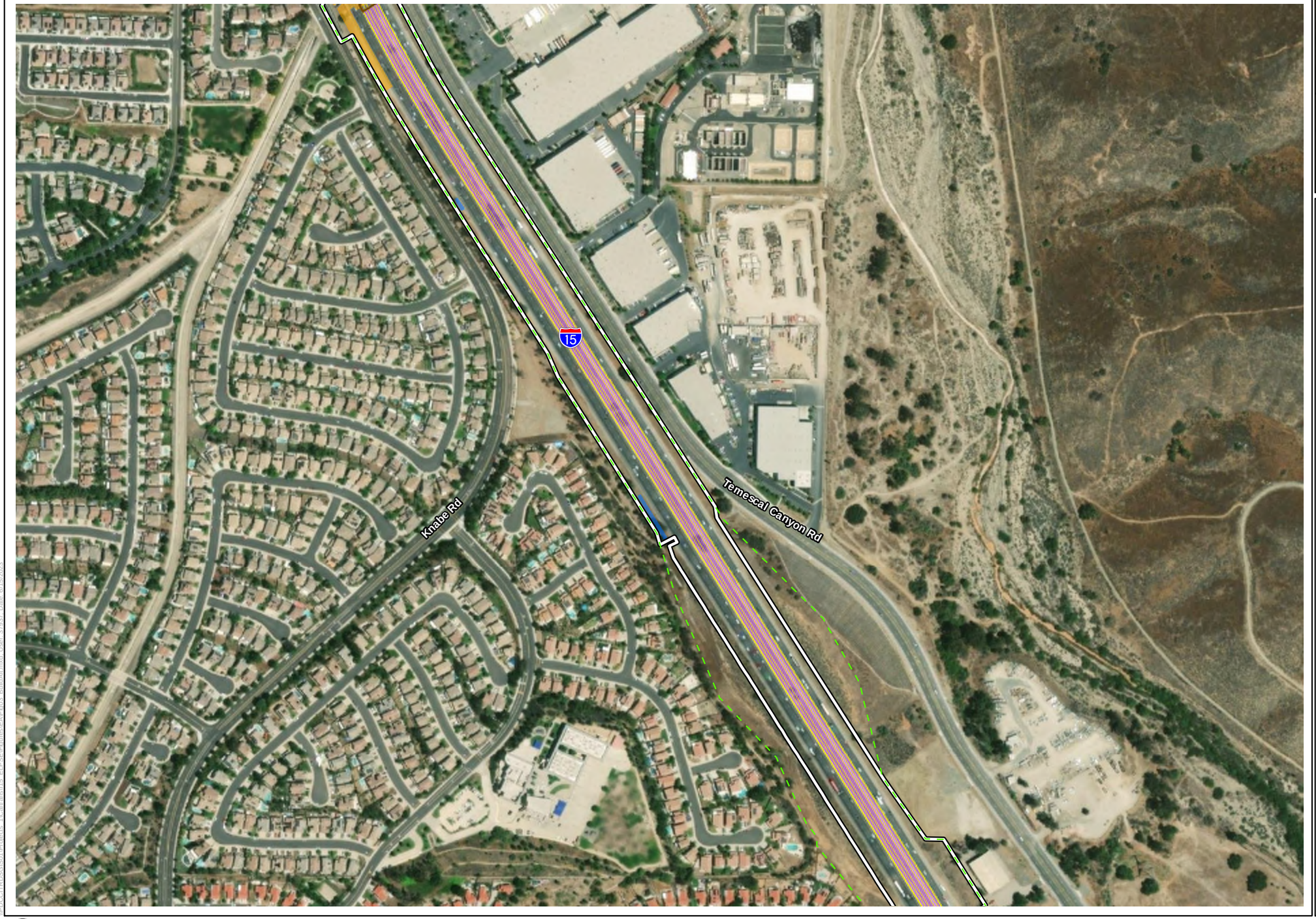

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- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 18
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Temporary Staging and Access
- Permanent Grading
- Potential BMP
- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 19
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
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- Permanent Grading
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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 20
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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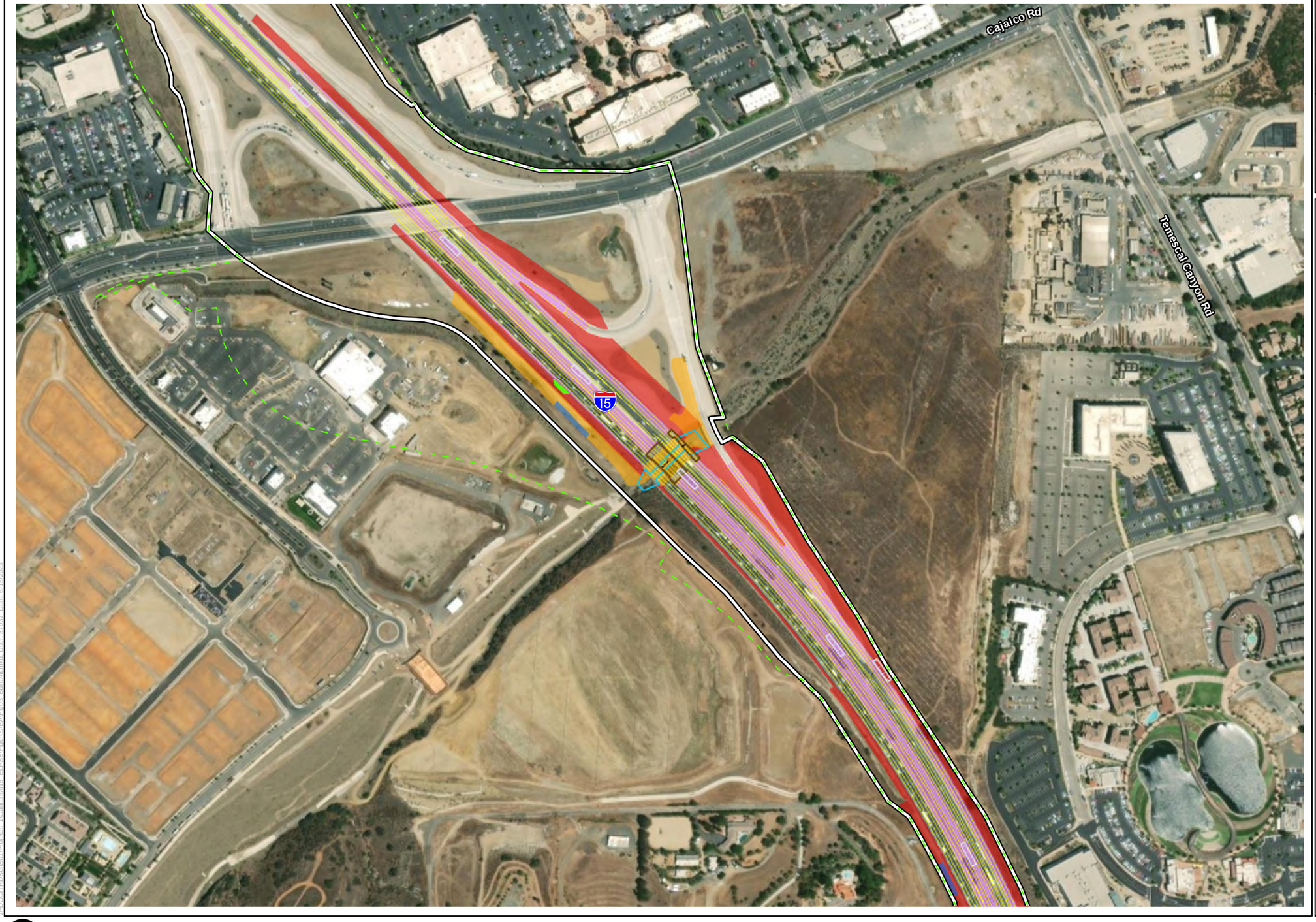

Legend

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- Project Limits
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- Proposed Bridge Improvements
- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 21
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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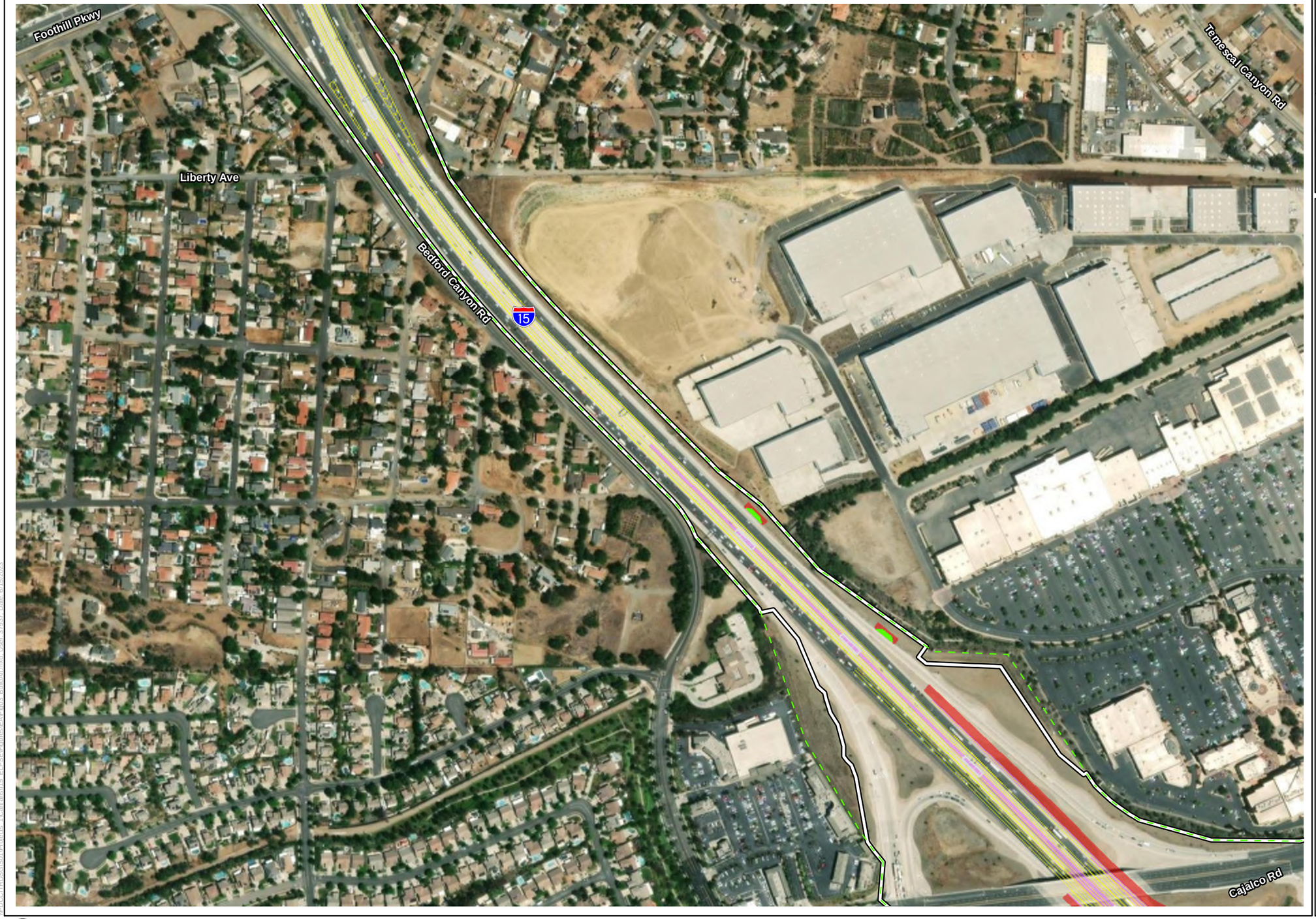

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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 22
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Existing Right-of-Way (2008)
- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
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- Potential Scour Protection
- Potential Sign Location
- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 23
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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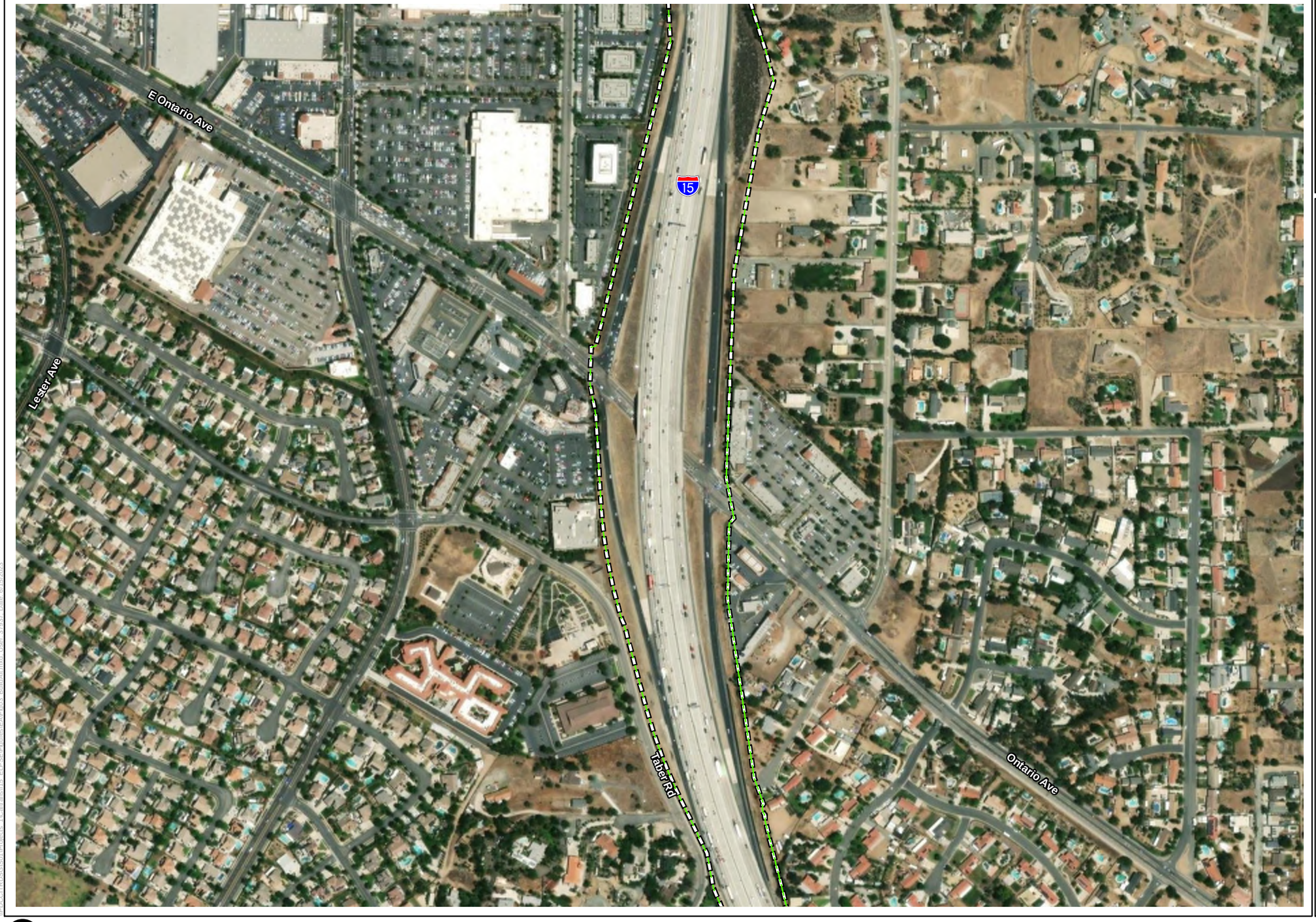

Legend

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Source: ESRI USA Imagery

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Figure 1-4 - Sheet 24
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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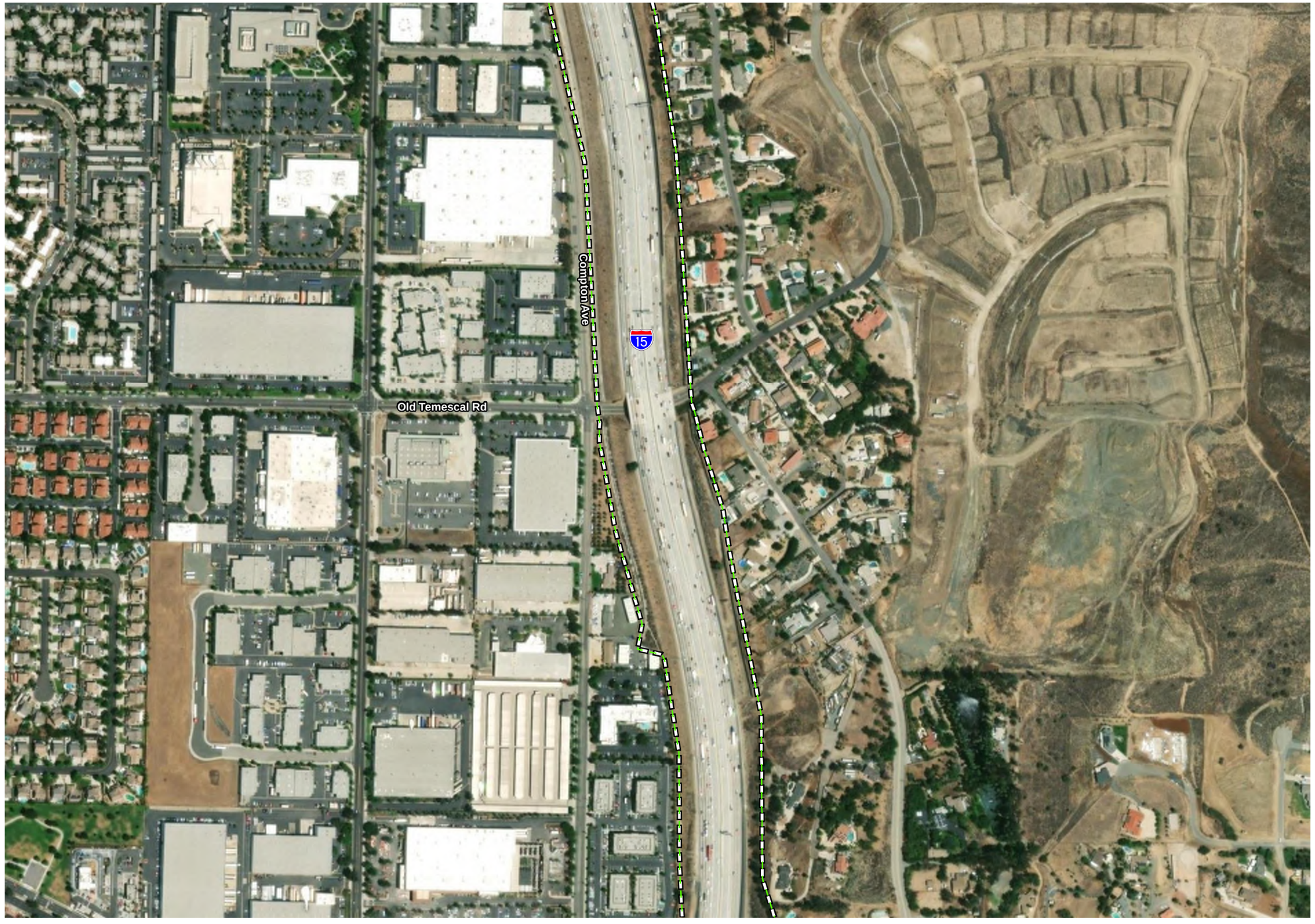

Legend

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- Proposed Column
- Potential Maintenance Vehicle Pullout

Source: ESRI USA Imagery

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Figure 1-4 - Sheet 25
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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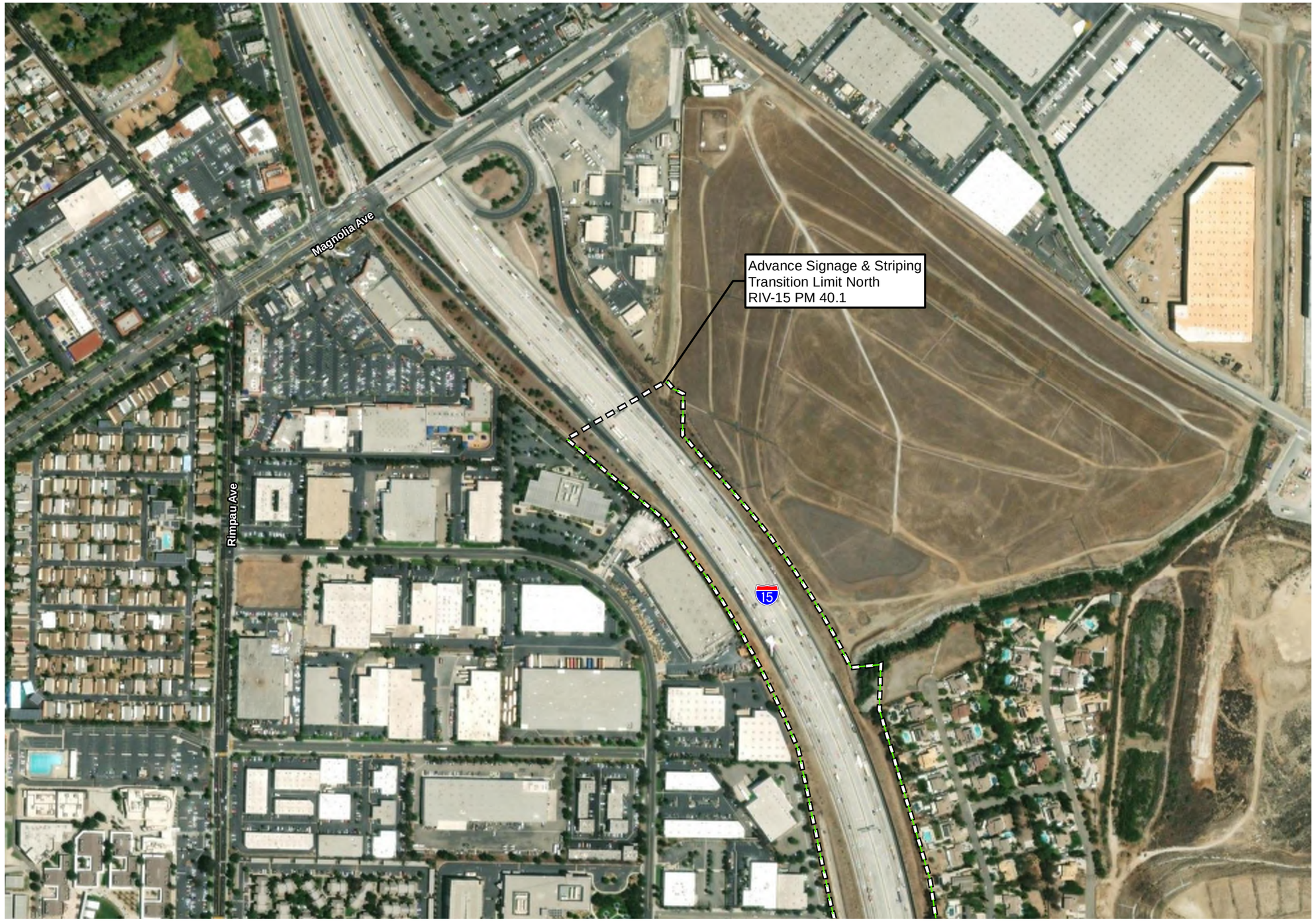

Legend

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Source: ESRI USA Imagery

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Figure 1-4 - Sheet 26
Build Alternative Map
Interstate 15 Express Lanes Project Southern Extension

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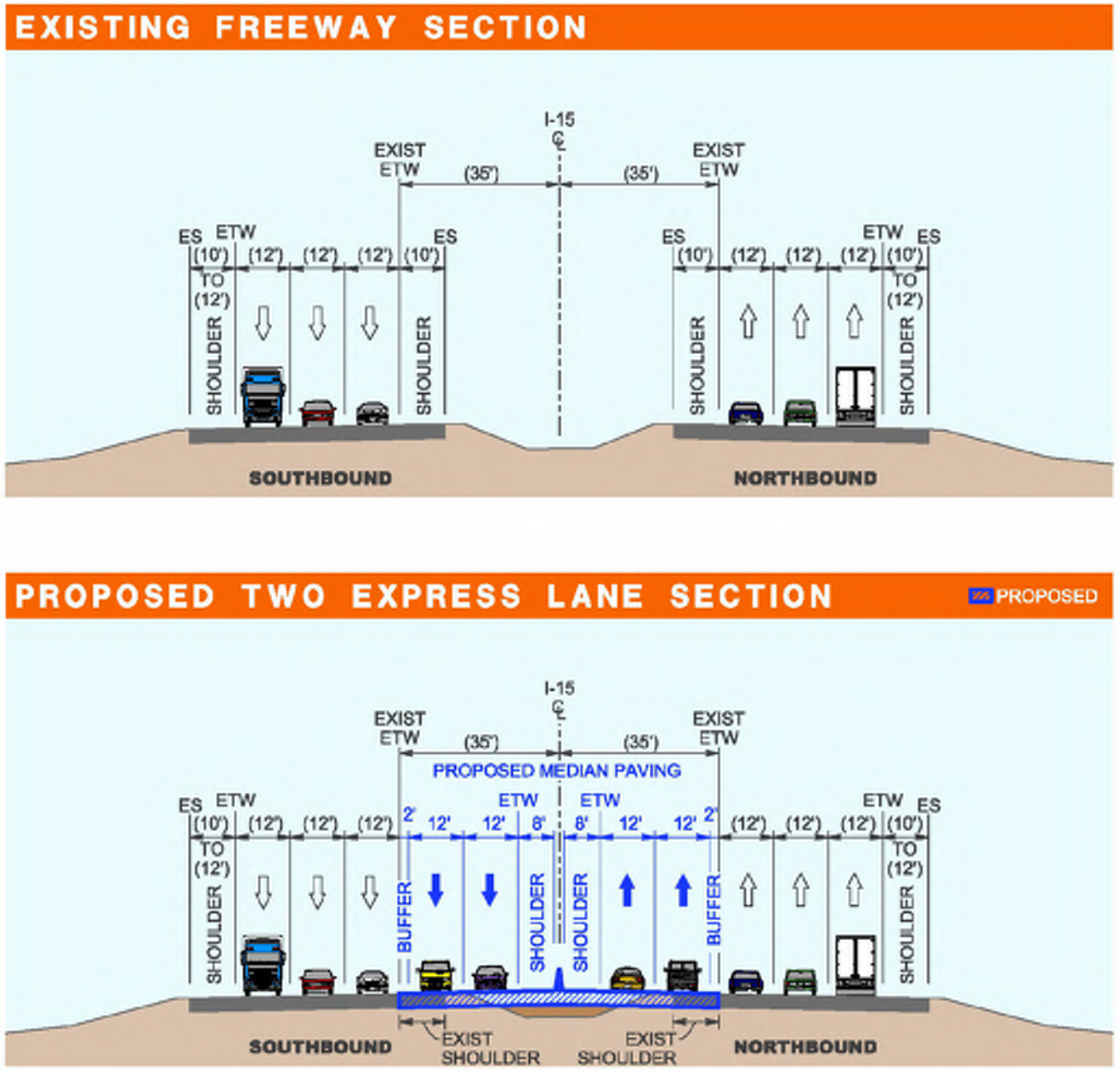

Figure 1-5
Typical Cross Sections
Interstate 15 Express Lanes Project Southern Extension

1.4.1.2 Electronic Tolling Equipment

The toll collection system would be within “toll zones” or “toll gantry” along the express lanes. Each toll zone would include all systems related to toll collection, photographic enforcement for violations, vehicle classification detection, enforcement personnel observation locations, and equipment to support the toll system integrator, including all hardware, software, and electrical and communications equipment to facilitate toll collection. Equipment serving the toll collection and violation enforcement systems would generally include an overhead gantry, antenna, toll reader, vehicle sensor, pole-mounted camera, enforcement beacons, a hardened and protected utility cabinet on a concrete pad, and protected pavement areas to support enforcement and maintenance personnel.

The primary means of toll collection on the express lanes would be automatic collection from registered motorists who carry in-vehicle-mounted FasTrak® transponders. These transponders are interoperative with all toll roads and express lanes in California. The amount of the toll charged at the time the express lanes are used would be deducted from the vehicle owner’s pre-paid account maintained by the agency that issued the transponder. License Plate Recognition cameras would capture license plate images of vehicles that do not display a recognizable toll transponder. Although the use of License Plate Recognition and toll transponders would automate toll violation, this automated enforcement would be supplemented by manual enforcement of routine traffic violations by California Highway Patrol (CHP) field personnel. CHP would be responsible for enforcement of traffic violations on the express lanes, as in the general purpose lanes. RCTC will need to work with CHP and local law enforcement to coordinate speed enforcement, illegal access or egress (“lane diving”), and unauthorized vehicles.

1.4.1.3 Design Exceptions

The Highway Design Manual (HDM) provides uniform policies and procedures for carrying out state highway design functions. The HDM index indicates where this information and guidance can be found in the HDM. Design exceptions are a documented decision of a deviation in design such that the design does not comply with the prevailing requirements. They are intended to confirm that sound engineering decisions are made for a project when design options may be limited.

Exceptions to design standards are being requested to minimize environmental or ROW impacts and to avoid added Project costs. Nonstandard boldface and underlined design standards would need to be approved prior to construction for incorporation in the Project design. Table 1-6 summarizes the nondelegated boldface design features requiring approval. Table 1-7 summarizes the expected underline design features requiring approval.

Table 1-6. Summary of Nondelegated Boldface Design Features Requiring Approval

Feature	HDM Index	Standard	Proposed Exception
Stopping Sight Distance (SSD)	201.1	For V = 80 miles per hour, SSD = 930 feet.	Provide SSD less than design speed of 80 miles per hour.
Standards for Superelevation	202.2(1)	Superelevation rates from Table 202.2 shall be used within the given range of curve radii.	Maintain existing mainline superelevation rate.
Stopping Sight Distance	203.1	Horizontal alignment shall provide at least the minimum SSD.	Provide SSD less than posted speed of 65 miles per hour.
Lane Width	301.1	Minimum lane width shall be 12 feet.	Provide 11-foot lanes.
Shoulder Width	302.1	Shoulder widths from Table 302.1 should be a minimum of 10 feet.	Provide shoulder widths between 2 and 10 feet.
Median Standard Widths	305.1(3)(a)	In areas where restrictive conditions prevail the minimum median width shall be 22 feet.	Provide median between 18 and 22 feet.
Horizontal Clearances	309.1(1)	Horizontal clearances shall be provided to meet horizontal sight distance requirements.	Provide SSD less than design speed of 80 miles per hour.
Horizontal Clearances	309.1(3)(a)	Minimum horizontal clearance shall be equal to the standard shoulder width (10 feet).	Provide horizontal clearances between 2 and 10 feet.
Interchange Spacing	501.3	Minimum interchange spacing shall be 1 mile in urban areas and 2 miles between freeway-to-freeway interchanges and other interchanges.	Maintain existing interchange spacing.

Table 1-7. Summary of Underlined Design Features Requiring Approval

Feature	HDM Index	Standard	Proposed Exception
Decision Sight Distance	201.7	Decision sight distances shown in Table 201.7 should be used at off-ramp noses to interchanges.	Provide decision sight distance less than design speed of 80 miles per hour.
Superelevation Transition	202.5(1)	Superelevation transition should be designed as shown on Figure 202.5A.	Not per Figure 202.5A, match existing superelevation transition.
Superelevation Runoff	202.5(2)	Two-thirds of the superelevation runoff should be on the tangent and one-third within the curve.	Two-thirds of superelevation runoff not in the tangent.
Single Lane Ramps	504.3(5)	Provide passing lane on single lane ramps that exceed 1,000 feet.	Provide a 1,510-foot single lane ramp.

1.4.1.4 Stage Construction

The Project is anticipated to be built with more than one construction package or in multiple construction phases. This section discusses a broad scoped staging concept that represents a general approach to construction. A detailed construction staging plan would be developed during the final design phase to demonstrate that existing lanes of traffic are maintained throughout the construction of the I-15 ELPSE improvements. The majority of the Project improvements would be confined to the median and include pavement widening, concrete barriers, retaining walls, installation of drainage features, and construction of overhead signage and tolling infrastructure. It is expected that most of these improvements would be completed in the first stage.

Stage 1

During Stage 1, the travel lanes would be shifted to the outside to maintain existing lanes of traffic. It is anticipated that the existing shoulder would require temporary repair for strengthening and to remove the existing rumble strips prior to the traffic shift. This traffic shift would allow the contractor to build the inside median. Stage 1 would allow the median to be fully paved for the overall limits of the Project. The portion of the median that was constructed with the I-15 ELP would be maintained in its current configuration to maintain the I-15 express lanes and the designated ingress/egress locations just north of Cajalco Road. While the traffic is shifted toward the outside, the bridge widening for the new express lanes in the median would be constructed. The median improvements constructed in Stage 1 are also anticipated to include median drainage improvements, median retaining walls and barriers, and toll infrastructure and signage. There are no anticipated long-term closures or detours needed for this stage of

the Project. During this stage there would be no inside shoulder and the traffic would be separated from the construction zone by temporary concrete barriers to provide a defined working zone. Construction access openings, as defined by the contractor, would be provided periodically in the temporary barrier to facilitate construction vehicle access to and from the existing I-15 lanes.

Although the majority of the Project would be confined within the median and could be built in a single stage, at locations where outside widening occurs, additional stages would need to be completed as summarized below.

Stage 2

During Stage 2, the travel lanes would be shifted to the inside on the newly paved median to accommodate the construction on the outside portion of the freeway. These improvements include but are not limited to: mainline pavement widening, ramp construction, retaining walls, noise barriers, drainage systems, and water quality treatment best management practices (BMPs).

Temporary 55-hour closures may be needed to complete the ramp improvements at the following locations:

- SB SR-74 (Central Avenue) On-Ramp
- SB Nichols Road Off-Ramp
- NB Weirick Road On-Ramp
- NB Cajalco Road Off-Ramp
- NB Cajalco Road Loop On-Ramp
- SB Weirick Road Off-Ramp

Stage 3

Stage 3 would complete construction that was not able to be completed in the previous stages. Final bridge construction, walls, drainage, and other minor items such as BMPs would be constructed. Also, work required to finalize the ramp connections affected with outside widening, such as the construction of the gore areas, would be completed. Final sign panels would be installed and express lane testing could be performed.

Standard Project Measures

This Project contains a number of standardized Project measures that are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the Project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

Caltrans Standard Specifications (SSs) are comprehensive guidelines that outline the requirements for construction projects in California and provide a uniform framework for construction practices, ensuring consistency and quality across projects. These standardized or pre-existing measures allow little discretion regarding their implementation and are not specific to the circumstances of a particular project. Caltrans Standard Special Provisions (SSPs) are tailored modifications or additions to the SSs for specific projects based on project-specific requirements or unique conditions.

The following standardized measures are taken from the 2023 Caltrans Specifications Book and are included as part of the Build Alternative's Standard Project Measures. These current specifications would be included in the Project plans and/or specifications and should be utilized during Project construction in order to reduce environmental impacts.

Air Quality

- Caltrans SS Section 14-9.02: Specifications related to compliance with air-pollution control rules regulations, ordinances, and statutes that apply to work performed under the contract, including those provided in Government Code § 11017 (Public Contract Code § 10231) (Standard Project Measure **AQ-4**).

Cultural

- Caltrans SS Section 14-1.02: Specifications related to environmentally sensitive areas (Standard Project Measure **CR-1** and **CR-3**)

- Caltrans SS Section 14-2.03A: Specifications related to discovery of unanticipated cultural materials or human remains (Standard Project Measures **CR-1** and **CR-2**)

- Caltrans SS Section 14-2.03B: Specifications related to archaeological monitoring areas (Standard Project Measure **CR-4**)

- Caltrans SS Section 16-2.03: Specifications related to temporary high-visibility fences (Standard Project Measure **CR-3** and **CR-4**)

Biological

- Caltrans SS Section 14-6.03B: Specifications related to the discovery of nesting and migratory birds (Avoidance and Minimization Measures **AS-5 [NES BIO-28]** and **NC-1 [NES BIO-1]**)

Energy

- Caltrans SS Section 14-10: Specifications related to solid waste disposal and recycling (Standard Project Measure **EN-1**)

- Caltrans SS Section 14-11.13B(6): Specifications related to disposal documentation from receiving landfill or recycling facilities within 5 business days of disposal (Standard Project Measure **EN-1**)

Hazardous Waste

- Caltrans SS Section 14-11: Specifications that ensures all hazardous waste generated during construction will be handled, stored, and disposed of in accordance with 22 California Code of Regulations Division 4.5 (Standard Project Measures **HW-4** and **HW-6**)

- Caltrans SS Section 14-11.12: Specifications for removing yellow traffic stripe and pavement markings with hazardous waste residue and pavement marking containing lead (Standard Project Measure **HW-3**)

- Caltrans SS Section 14-11.13: Specifications to ensure activities that disturb paint systems on bridges, which containing heavy metals, are done so in compliance with 8 California Code of Regulations § 1537. This SS also ensures that this debris is handled, stored, transported, and disposed of under applicable federal, state, and local hazardous waste laws (Standard Project Measures **HW-4** and **HW-6**).

- Caltrans SSP Section 14-11.14: Specifications for wood waste treatment (Standard Project Measure **HW-2**)

- Caltrans SSP Section 14-11.16: Specifications for asbestos-containing construction materials in bridges (Standard Project Measure **HW-1**)

- Caltrans SSP Section 36-4: Specifications for performing work involving residue from grinding or cold planing that contains lead from paint and thermoplastic (Standard Project Measure **HW-3**)

- Caltrans SSP Section 7-1.02K(6)(j)(iii): Specifications for handling, removing, and disposing of earth material containing lead (Standard Project Measure **HW-8**)

Noise

- Caltrans SS Section 14-8.02: Specifications for noise control and monitoring during construction. Noise shall not exceed 86 A-weighted decibels maximum noise level at 50 feet from the job site from 9:00 p.m. to 6:00 a.m.

Paleontology

- Caltrans SS Section 14-7.04: Specifications for Paleontological Resources Mitigation (Avoidance and Minimization Measure **PAL-1**).

Traffic

- Caltrans SS Section 12-4: The Transportation Management Plan will detail a plan for the umbrella standard specification of 12-4, Maintaining Traffic, and any applicable sections (e.g., 12-4.01, General; 12-4.02, Traffic Control Systems; 12-4.03, Falsework Openings; 12-4.04, Pedestrian Facilities) (Standard Project Measure **TR-1**)

Water Quality and Stormwater Runoff

- Caltrans SS Section 13-1.01D(2): Specifications requiring compliance with Caltrans general permit order issued by the State Water Resources Control Board (SWRCB) for NPDES No. CAS000003, National Pollutant Discharge Elimination System (NPDES) Statewide Storm Water Permit and Waste Discharge Requirements (Standard Project Measure **WQ-1**). Additionally, this specification requires that discharges from manufacturing facilities, such as batch plants and crushing plants, must comply with the discharge requirements in the NPDES General Permit for Storm Water Discharges Associated with Industrial Activities Order; CAS000001 (Industrial General Permit), issued by the SWRCB (Standard Project Measure **WQ-4**).

- Caltrans SS Section 13-3.01C(2): Specifications that ensure the Project has a Stormwater Pollution Prevention Plan (SWPPP) that has been prepared and implemented during construction (Standard Project Measure **WQ-2**).

- Caltrans SS Sections 13-3.01C(2)(b) and 13-3.01C(2)(b)(ii): Specifications that require water quality monitoring and reporting during construction (Standard Project Measure **WQ-3**).

Wildfire

- Caltrans SS Section 7-1.02M(2): Mandates fire prevention procedures during construction, including a fire prevention plan

In addition to the 2023 Caltrans SSs described above, other Standard Project Measures that are standard for all applicable Caltrans projects include the following:

- Standard Project Measure **AQ-1** requires that during clearing, grading, earthmoving, or excavation operations, fugitive dust emissions be controlled by regular watering or other dust-preventive measures using the following procedures, as specified in South Coast Air Quality Management District Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

The areas disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in Project specifications. Visible dust beyond the property line emanating from the Project will be prevented to the maximum extent feasible during clearing, grading, earthmoving, or excavation operations, fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in South Coast Air Quality Management District Rule 403.

- Standard Project Measure **AQ-2** requires that Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.

- Standard Project Measure **AQ-3** requires all trucks that are to haul excavated or graded material on site will 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.

- Standard Project Measure **GEO-1** requires a detailed geotechnical investigation be conducted by a qualified geotechnical personnel to assess the geotechnical conditions at the Project area.

- Standard Project Measure **WQ-6** requires that approved BMPs will be implemented consistent with the NPDES permit.

- Standard Project Measure **WQ-7** requires that design pollution prevention BMPs are implemented during construction.

- Standard Project Measure **WQ-8** ensures that maintenance BMPs will be implemented.

1.4.2 No-Build (No-Action) Alternative

Under the No-Build Alternative, the I-15 ELPSE would not be constructed. The No-Build Alternative would not meet the purpose of the Project, as it would not improve existing and future traffic operations and mainline travel times, expand travel choice, increase travel time reliability, or expand the tolled express lane network. In addition, the No-Build Alternative would not address the existing and projected congestion and operational deficiencies within the Project limits. Although the No-Build Alternative does not meet the Project's purpose and need, it would not preclude the construction of other future improvements or general maintenance activities.

1.4.3 Transportation System Management and Transportation Demand Management Alternatives

Transportation System Management (TSM) strategies increase the efficiency of existing facilities; they are actions that increase the number of vehicle trips a facility can carry without increasing the number of through lanes. Examples of TSM strategies include ramp metering, auxiliary lanes, turning lanes, reversible lanes, and traffic signal coordination. TSM also encourages automobile, public and private transit, ridesharing program, and bicycle and pedestrian improvements as elements of a unified urban transportation system. Modal alternatives integrate multiple forms of transportation modes, such as pedestrian, bicycle, automobile, rail, and mass transit. Generally, TSM focuses on low capital, environmentally responsive improvements that reflect the architecture and natural environment, which will maximize the efficiency of existing facilities.

Although TSM measures alone could not satisfy the purpose and need of the Project, the following TSM measures have been incorporated into the Build Alternatives for this Project. The tolled express lanes serve as a TSM strategy by providing more efficient operation of I-15 within the Project limits. The addition of the added express lanes is expected to maximize the use of I-15 and, once operational within the Project limits, be considered consistent with TSM goals.

Transportation Demand Management (TDM) alternatives encourage regional strategies to improve congestion through a reduction in the number of vehicle trips, reductions in vehicle miles traveled (VMT), and the construction of roadway facilities with higher vehicle occupancy. TDM alternatives may include providing quality transportation choices for travelers to improve methods, costs, routes available, and travel time.

The incorporation of TDM alternatives generally reduces the number of single-occupancy vehicle trips by contributing monetarily to regional agencies that promote ridesharing. Mass transit and non-motorized alternatives are examples of approaches to promoting ridesharing.

The Build Alternative would construct two tolled express lanes (two in each direction) from SR-74 (Central Avenue) to El Cerrito Road. The express lanes option would provide choices for drivers that are not currently available, such as congestion-free travel for a fee, carpooling for three or more vehicles at reduced rates, and expanded opportunities for existing and future regional express bus operations. This ridesharing incentive is a TDM measure that would be implemented under the Build Alternative and expected to increase the occupancy rate on I-15 and reduce traffic demand.

1.4.4 Value Analysis

A 4-day Value Engineering (VE) Study was conducted in February 2022 for the Project. The VE team generated various ideas for the Project, which are described in the Final VE Study Report (October 2022). These concepts were compared against the baseline

developed by the Project team. The concepts that resulted in improved performance were further developed by the VE team and resulted in 11 recommendations. Table 1-8 summarizes the individual recommendations.

Table 1-8. Value Engineering Study Recommendations

VE Topic No.	Recommendation Description	Cost Savings/ < Cost Added > ($M)	Performance Change
VE-1	Utilize V2X technologies and equipment.	$0.36	+16%
VE-2	Engage toll system integrator now to improve design.	Not quantified	+16%
VE-3	Reduce toll price signage.	$14.00	+16%
VE-4	Utilize occupancy detection system.	< $0.93 >	+16%
VE-5	Advance geotechnical work early.	Not quantified	+16%
VE-6	Justify a modified asphalt section.	$21.23	+16%
VE-7	Use modified high-mast lighting for toll illumination.	$0.98	+16%
VE-8	Extend the SB general purpose lane into the auxiliary lane at the southern terminus.	< $0.17 >	N/A
VE-9	Realign roadway to reduce retaining wall.	$12.00	N/A
VE-10	Repurpose existing Portland cement concrete pavement and bridges.	$126.23	+16%
VE-11	Install tolling infrastructure for two lanes.	Not quantified	+16%

Of these recommendations, four will be implemented into the Project, as discussed in more detail below.

VE-3 Reduce Toll Price Signage

The Project will implement this recommendation and propose one Toll Rate Dynamic Message Sign (TRDMS) per tolling segment. This recommendation is consistent with I-15 ELP toll policies and the infrastructure currently operating along the I-15 corridor.

VE-7 Use Modified High-Mast Lighting for Toll Illumination

The Project will utilize high-mast lighting for illumination of required toll systems. This recommendation is consistent with the recent improvements on the I-15 corridor and has received Caltrans approval by District 8. It is currently operational within the I-15 ELP tolling infrastructure.

VE-8 Extend the SB General Purpose Lane into the Auxiliary Lane at the Southern Terminus

The Project will implement this recommendation and extend the SB #4 general purpose lane into the auxiliary lane established at the SB SR-74 (Central Avenue) On-Ramp. Caltrans indicated that, based on lessons learned from the I-15 ELP SB terminus and the observed congestion due to the lane drop occurring within the interchange at Cajalco Road, it is the Caltrans Traffic Operations group's position to implement this VE recommendation, thereby extending the SB #4 general purpose lane past the I-15/SR-74 Interchange and connecting with the auxiliary lane established at the SB SR-74 (Central Avenue) On-Ramp.

VE-9 Realign Roadway to Reduce Retaining Wall

The Project will implement this recommendation and incorporate a horizontal lane shift to the east on I-15 between the Weirick Road Interchange and Cajalco Road Interchange to avoid reconstruction of the two large existing retaining walls west of the existing SB roadbed.

1.4.5 Study Recommendations Deferred to Final Design

The Project will defer the following recommendations for further evaluation in the final design phase:

- VE-1 Utilize V2X Technologies and Equipment
- VE-2 Engage Toll System Integrator Now to Improve Design
- VE-4 Utilize Occupancy Detection System
- VE-11 Install Tolling Infrastructure for Two Lanes

These toll infrastructure–related recommendations are not included in the existing I-15 ELP tolling infrastructure, which will rely upon the latest tolling technology, as influenced by the Toll System Provider selected at a later stage of the Project.

1.4.6 Final Decision-Making Process

After the public circulation period, all comments will be considered, and Caltrans will identify a preferred alternative and make the final determination of the Project's effect on the environment. Under CEQA, Caltrans will certify that the Project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to Project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the Project will have significant impacts, if mitigation measures were included as conditions of Project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by the FHWA, determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No

Significant Impact (FONSI). If it is determined that the Project is likely to have a significant effect on the environment, an Environmental Impact Statement (EIS) will be prepared.

1.4.7 Alternatives Considered but Eliminated from Further Discussion

As part of the development and design of the Build Alternative, one additional alternative was considered:

1. Add an HOV lane in each direction along I-15 between SR-74 (Central Avenue) and Cajalco Road.

Future traffic volumes within the I-15 corridor were projected to increase so much that the addition of a single HOV lane in each direction would not have met the purpose and need of the Project based on the projected traffic demands. Based on a review of anticipated future funding for projects in Riverside County, it was determined that funding of an additional lane on I-15 from SR-74 (Central Avenue) to Cajalco Road could only be reasonably accomplished through the construction of a tolled facility along I-15. Because the HOV alternative did not meet the Project's purpose and need and was not financially feasible (the cost was estimated to be approximately $330 million), the HOV alternative was dropped from further consideration.

1.5 PERMITS AND APPROVALS NEEDED

Table 1-9 lists the permits, licenses, agreements, and certifications that are required for Project construction.

Table 1-9. Permits and Approvals Needed

Agency	Permit/Approval	Status
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act Section 7 consultation/ Joint Project Review (JPR) for Multiple Species Habitat Conservation Plan (MSHCP) consistency.	To provide request to USFWS for MSHCP consistency review.
U.S. Army Corps of Engineers (USACE)	Section 404 Nationwide Permit and Section 408 NEPA Compliance.	To be submitted after approval of Project Report and Final Environmental Document.
California Department of Fish	1602 Agreement for Streambed Alteration.	Application to be submitted during the Plans, Specifications, and Estimates (PS&E) phase.

Agency	Permit/Approval	Status
and Wildlife (CDFW)	JPR for MSHCP consistency.	To provide request to CDFW for concurrence with MSHCP consistency prior to final approval of the EIR/EA.
Federal Highway Administration (FHWA)	Air Quality conformity determination.	Prior to approval of Final Environmental Document.
Regional Water Quality Control Board (RWQCB)	Porter-Cologne Act and Clean Water Act Section 401 Water Quality Certification.	To be submitted after approval of Project Report and Final Environmental Document.
Regional Conservation Authority (RCA)	JPR for MSHCP consistency.	To provide request to RCA for MSHCP consistency determination prior to final approval of the EIR/EA.
California State Water Resources Control Board (SWRCB)	Clean Water Act Section 402—A SWPPP required by the General NPDES Construction Permit would be prepared and is expected to provide all the necessary temporary pollution and erosion control measures required during construction. Post construction BMPs are required by Caltrans' NPDES permit and would be incorporated into PS&E package.	SWPPP would be submitted to Stormwater Multiple Application and Report Tracking System 30 days prior to construction, and post construction BMPs would be incorporated into construction documents.
Riverside County Flood Control and Water Conservation District	Encroachment Permit.	From construction of bridge widening discussion, application to be submitted after approval of Final Environmental Document.
California Public Utility Commission (CPUC)	Authorization obtained via the process prescribed under CPUC General Order 88-B.	Process to begin after approval of Final Environmental Document.
Caltrans	Caltrans Construction Encroachment Permit	To be submitted according to Oversight Project and PDB Project policies

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

2.1 TOPICS CONSIDERED BUT DETERMINED NOT TO BE RELEVANT

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

2.1.2 Coastal Zone

There would be no effects on coastal resources because the Project is not within the coastal zone.

2.1.3 Wild and Scenic Rivers

There would be no effects on wild and scenic rivers, as there are no wild and scenic rivers within the Project limits or the area surrounding the Project limits.

2.1.4 Farmlands

There would be no effects on farmlands, as there are no farmlands within the Project limits or the area immediately surrounding the Project limits.

2.1.5 Timberlands

There would be no effects on timberlands, as there are no timberlands within the Project limits or the area immediately surrounding the Project limits.

2.1.6 National Marine Fisheries Service Jurisdiction

This Project is outside of National Marine Fisheries Service jurisdiction; therefore, a National Marine Fisheries Service species list is not required and no effects on National Marine Fisheries Service species are anticipated.

2.1.7 Real Estate and Property Acquisitions

There would be no effects on real estate and property acquisitions, as the Project would not acquire any real estate or properties.

2.2 HUMAN ENVIRONMENT

2.2.1 Existing and Future Land Use

The Project is within Riverside County and runs along Interstate (I-) 15, which connects various communities within the county. This section describes the existing and future local and regional land use in the immediate Project area and surrounding vicinity. The following section is based on the *Community Impact Assessment* (Caltrans 2024a) prepared for the Project.

For the purposes of this analysis, the "Project area" and the "community impact study area" are defined as:

- **Project area:** The area that would be physically affected by primary or direct impacts during the construction period. The Project area is coterminous with the maximum disturbance limits for the Build Alternative.

- **Community impact study area:** The communities surrounding the Project area in which secondary or indirect impacts could occur. Impacts typically decrease in magnitude as the distance from a project site increases. Therefore, the community impact study area includes those areas within 0.5 mile of the Project area.

2.2.1.1 Affected Environment

Existing Land Use

The Project travels through the City of Corona, City of Lake Elsinore, and unincorporated areas of the County and would improve a 15.8-mile stretch of I-15. Based on information obtained from the Southern California Association of Governments (SCAG), the County of Riverside Assessor, and aerial mapping, the existing land uses that surround the Project area are described in Table 2.2.1-1.

Table 2.2.1-1. Existing Land Use Definitions

Land Use	Definition
Commercial and Services	This designation includes areas used predominantly for business or the sale of products and their associated services, as well as non-commercial uses such as government and public service offices. This class does not include industrial activities.
General Office	This designation allows for office buildings usually used for financial, personnel, business, medical, and other professional services.
Under Construction	This designation includes facilities that were under construction at the time of field verification. Structure use and/or extent cannot be or is difficult to determine. Pad platforms or foundations may be visible. Partly constructed structures may also be visible.

Land Use	Definition
Facilities	This designation includes government offices and other public service facilities, major healthcare facilities, religious facilities, and public and private educational facilities. This category also includes associated facilities and parking areas.
Education	This designation includes all levels of public and private schools, colleges, universities, seminaries, and training centers. Includes buildings, open space, dormitories, and parking areas. Also included are all athletic facilities such as ball fields, stadiums, soccer fields, swimming pools, and tennis courts.
Industrial	This designation includes areas where manufacturing, assembly, processing, packaging, or storage of products takes place.
Single-Family Residential	This designation is in an urban or suburban setting and is typically made up of detached dwellings where each structure houses a single family. These residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police, and fire stations.
Multifamily Residential	This designation includes attached residences, apartments, condominiums, and townhouses. Multifamily residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police and fire stations. This designation also includes senior citizen apartment buildings and off-campus university housing.
Mobile Homes and Trailer Parks	This designation includes residential units composed of mobile homes, trailers, and prefabricated housing that are either stationary with foundations or on wheels and capable of being moved. Included are vacant and occupied spaces and associated storage facilities for the complex. Mobile homes and trailer parks are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities, such as schools, parks, police, and fire stations.
Mixed Residential	This designation includes areas where there is a combination of single-family detached and multifamily dwellings of any type occurring together. Typically, these are in older neighborhoods where duplexes, triplexes, and apartment buildings occur among single-family houses.
Rural Residential	This designation includes rural residential units such as ranches, farmsteads, single mobile homes, and residences in a rural setting.
Mixed Commercial and Industrial	This designation includes commercial and industrial land uses as combined uses or uses in close proximity. This land use contains a mixture of light-industrial use, offices, warehouse/distribution use, retailing, and personal services. These complexes usually

Land Use	Definition
	contain one or more rectangular buildings with minimal landscaping.
Agriculture	This designation includes land used primarily for the production of food, fiber, and livestock. Included in these classes are associated structures and facilities.
Open Space and Recreation	This designation includes developed open areas within urban settings and urban and non-urban open areas developed for recreational activities.
Water	This designation includes open water bodies[1] that are greater than 2.5 acres in size.
Transportation, Communications, and Utilities	This designation includes major structures and facilities associated with forms of transportation, communication, and utilities.
Other	This designation includes lands used as highways and roads.

Sources: SCAG 2017, 2021
[1] As defined by SCAG, open water bodies include oceans, seas, lakes, reservoirs, ponds, rivers, estuaries, and channels devoid of nearby islands or other obstructions.

Existing land use types within the Project area are shown on Figure 2.2.1-1 and described below.

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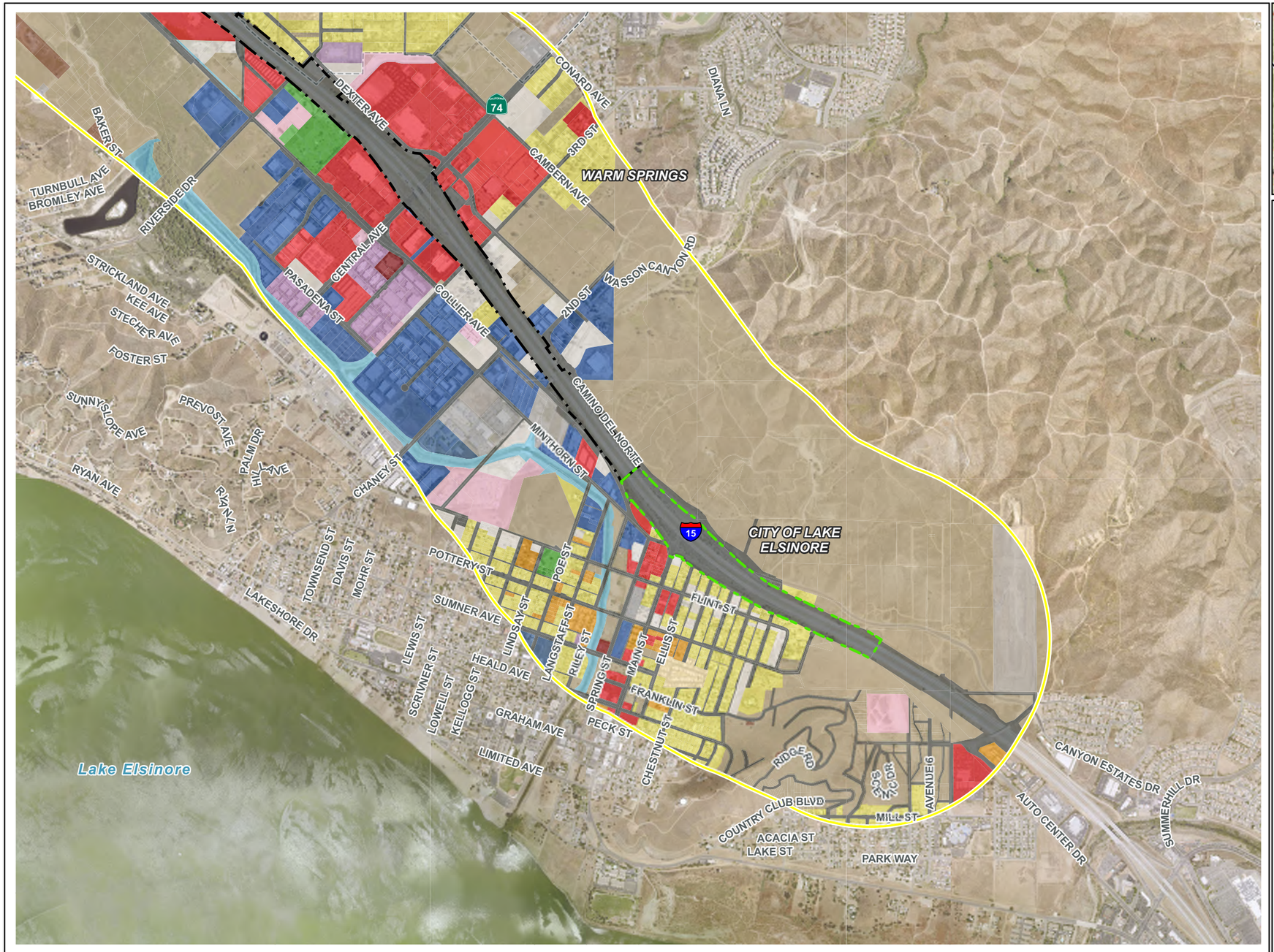

Figure 2.2.1-1 (Sheet 1 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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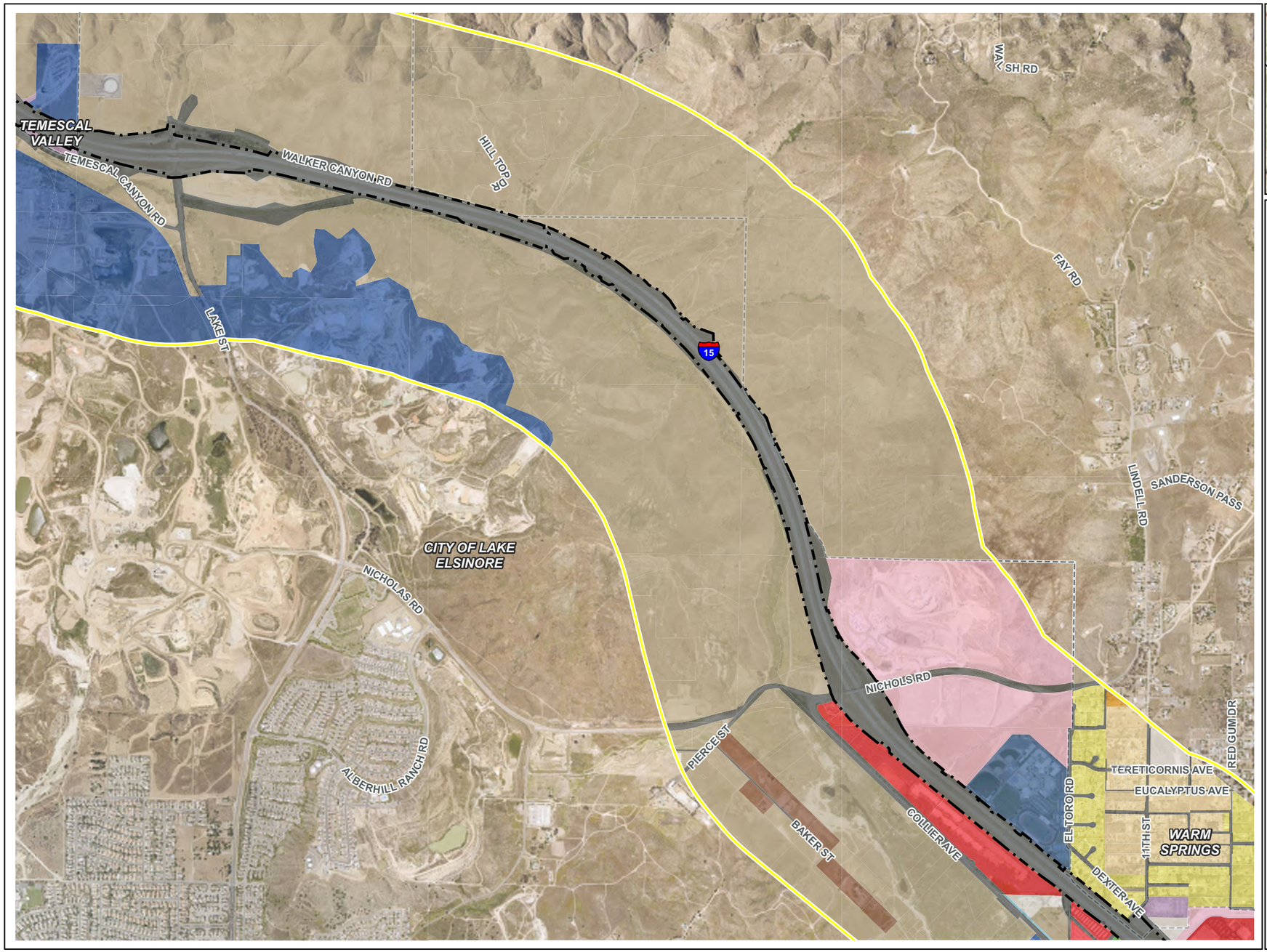

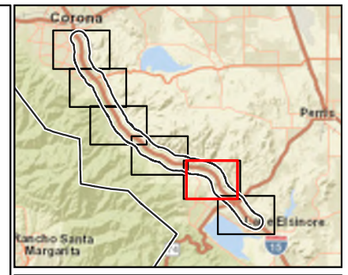

Legend

Project Limits
- Limits of Disturbance
- Advance Signage & Striping Transition

Study Area
- Section 4(f) Study Area
- City/County Boundary

Existing Land Use
- Commercial and Services
- Under Construction
- Facilities
- Education
- Industrial
- Single Family Residential
- Multi-Family Residential
- Mobile Homes and Trailer Parks
- Rural Residential
- Open Space and Recreation
- Water
- Transportation, Communications, and Utilities
- Other
- Undeveloped
- Vacant

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.1-1 (Sheet 2 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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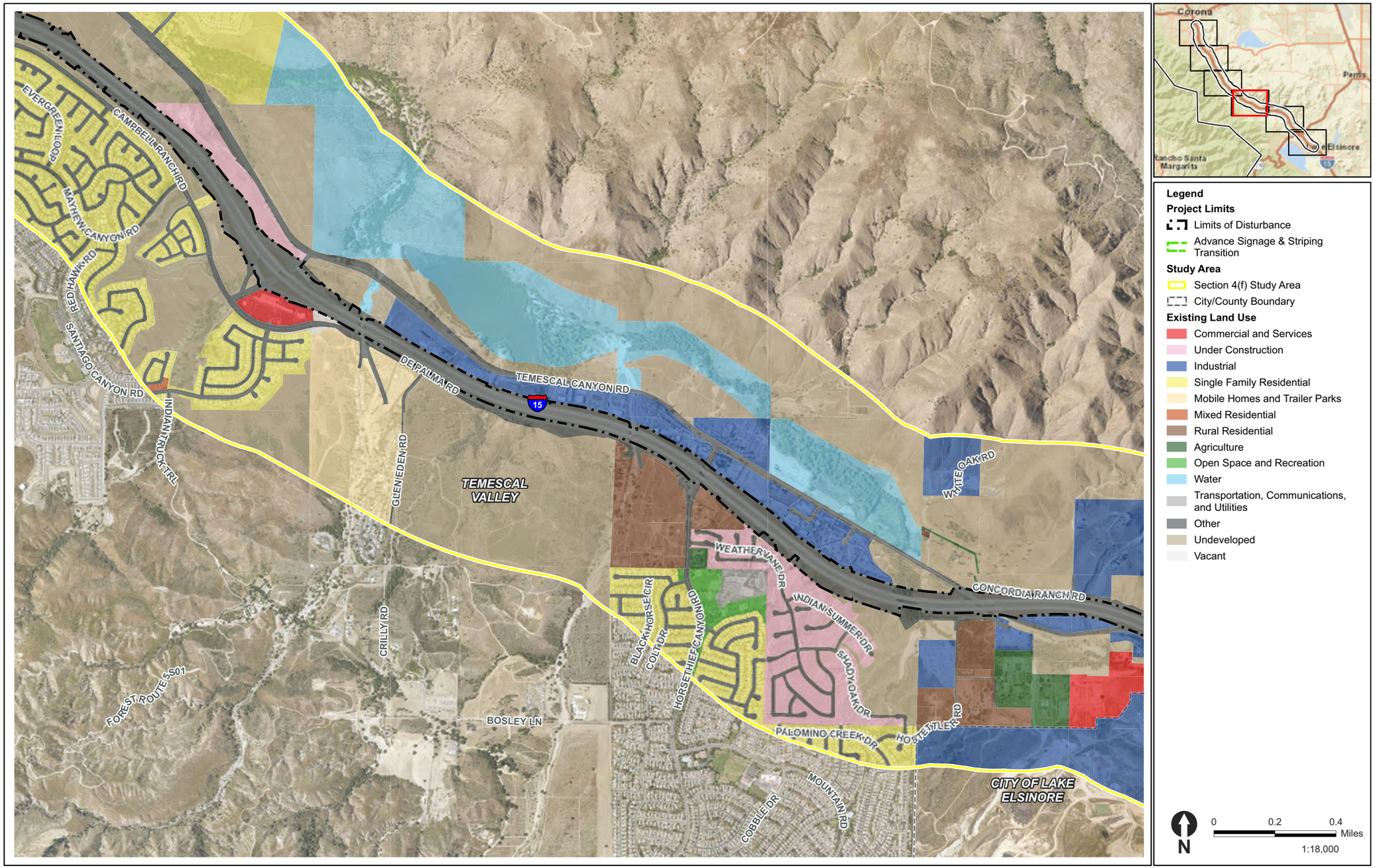

Figure 2.2.1-1 (Sheet 3 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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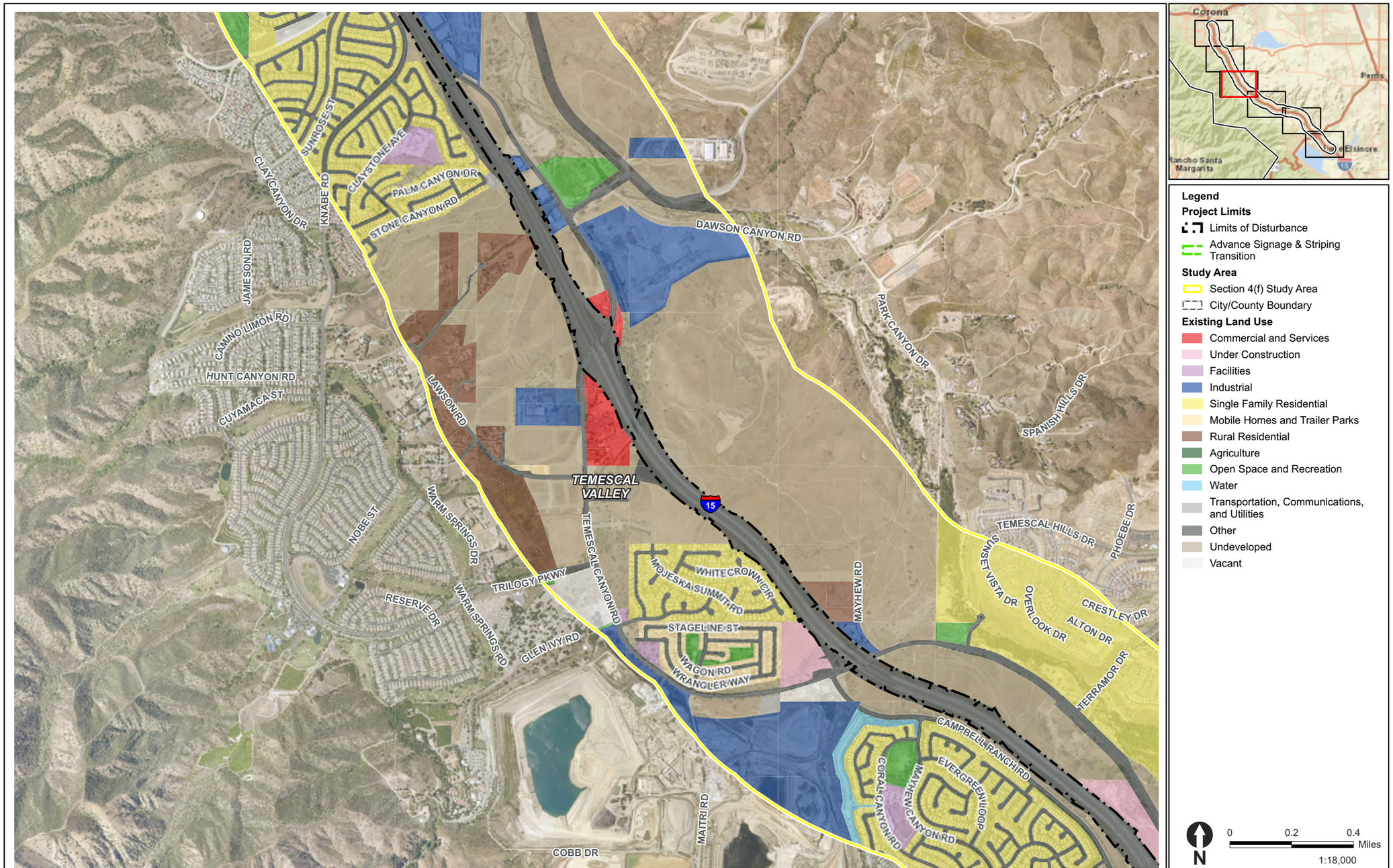

Figure 2.2.1-1 (Sheet 4 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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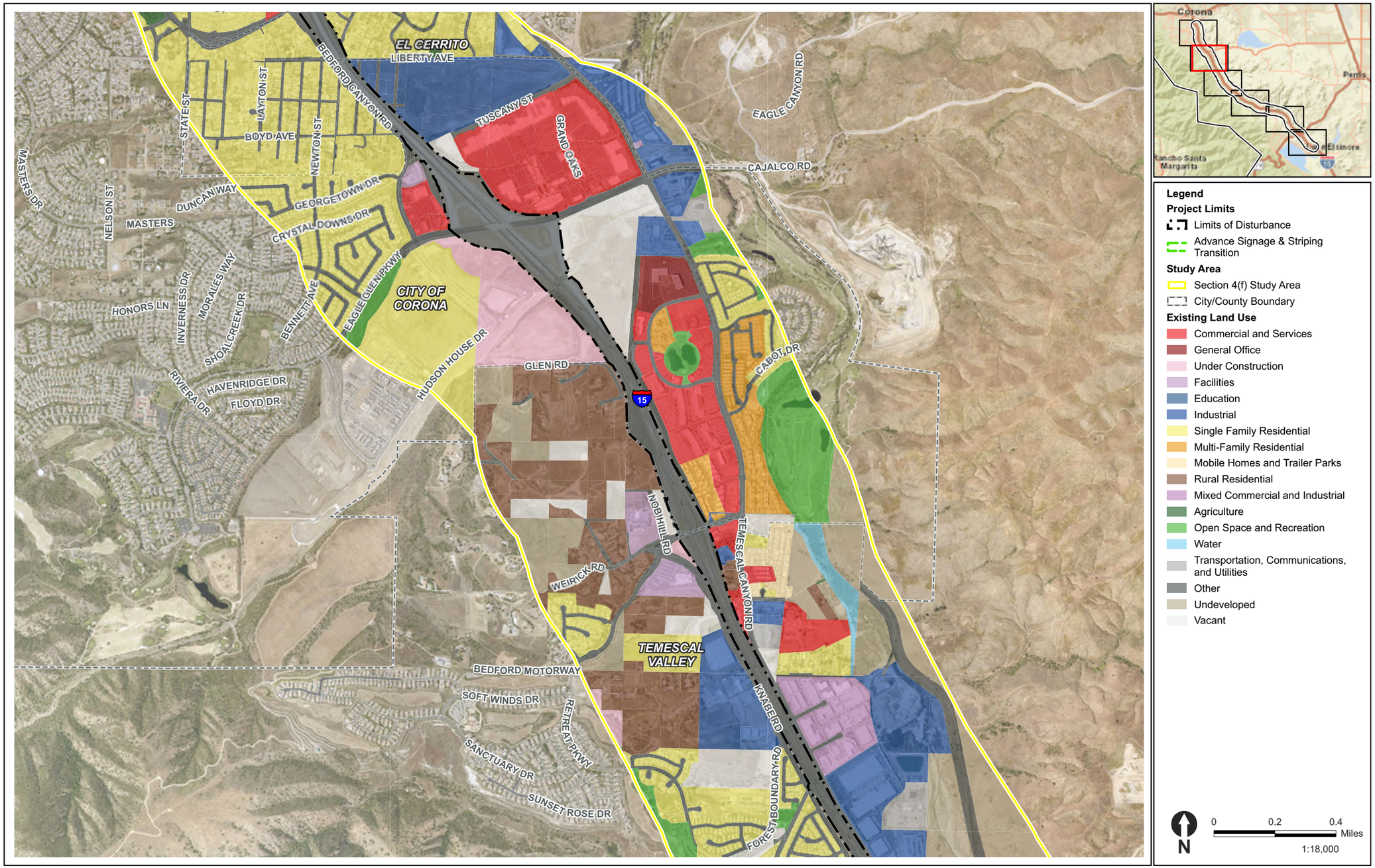

Figure 2.2.1-1 (Sheet 5 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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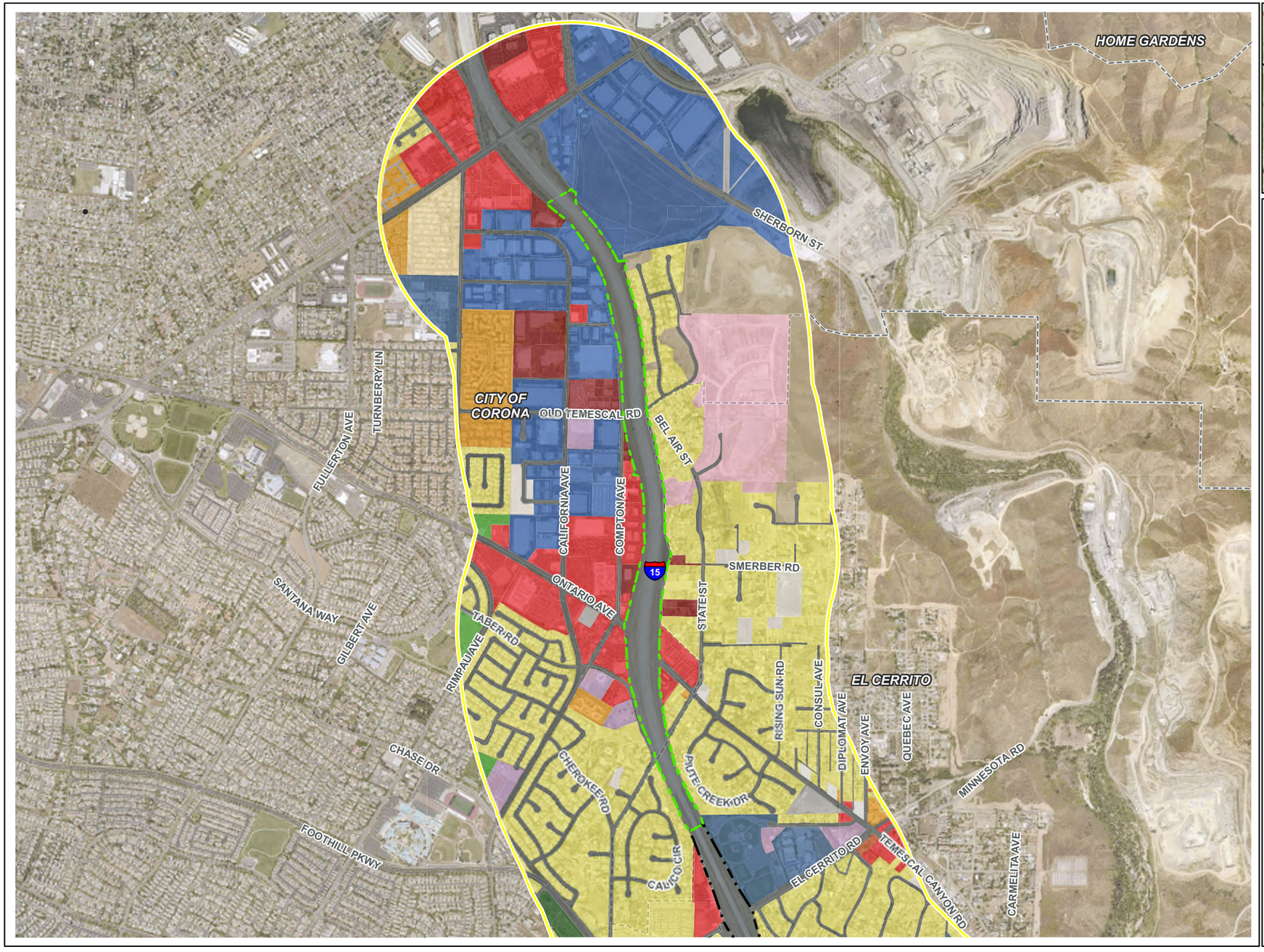

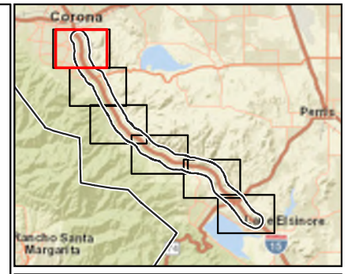

Legend

Project Limits
- Limits of Disturbance
- Advance Signage & Striping Transition

Study Area
- Section 4(f) Study Area
- City/County Boundary

Existing Land Use
- Commercial and Services
- General Office
- Under Construction
- Facilities
- Education
- Industrial
- Single Family Residential
- Multi-Family Residential
- Mobile Homes and Trailer Parks
- Mixed Residential
- Agriculture
- Open Space and Recreation
- Transportation, Communications, and Utilities
- Other
- Undeveloped
- Vacant

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.1-1 (Sheet 6 of 6)
Existing Land Use Designations within 0.5 Mile of the Project Area

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County of Riverside

The unincorporated territory within the County of Riverside is divided into 19 area plans, two of which are in the community impact study area. The purpose of these area plans is to provide more detailed land use and policy direction regarding local issues, such as land use, circulation, open space, and other topical areas, and to reflect the vision of the Riverside County Integrated Plan. The area plans in which the Project occurs are described below.

Temescal Canyon Area Plan

The Temescal Canyon Area Plan generally encompasses the City of Corona and addresses the unincorporated lands within this area (County of Riverside 2021a). The Temescal Canyon Area Plan identifies two unique communities within its boundaries: El Cerrito and the I-15 corridor. The El Cerrito community was previously a large ranch and now includes a variety of lot sizes and housing types, with parcels varying from 0.25 acre to several acres or more (County of Riverside 2021a). Temescal Canyon Road is the main corridor through what might be characterized as El Cerrito's central business district. Industrial, manufacturing, recycling, vehicle storage, commercial, and houses of varying design are prevalent along this corridor. The I-15 corridor community runs generally in a northwest-southeast direction throughout the entirety of Temescal Canyon. A variety of suburban residential and rural estate neighborhoods, as well as numerous industrial uses and extensive areas of existing and potential mineral extraction, are along the I-15 corridor. The Project area is adjacent to the Design Theme and Serrano policy areas[1] of the Temescal Canyon Area Plan and are further described below.

- **Design Theme Policy Area:** The Design Theme policies apply to the commercial area west of I-15, on either side of Temescal Canyon Road, between Maitri Road and the Temescal Canyon Road freeway exit. This policy area intends to build on the theme and character of the area established by the existing retail development west of I-15, with a focus on preserving the existing oak and sycamore trees as well as the riparian streambed in its existing natural state.

- **Serrano Policy Area:** The Light Industrial and Community Center land use designation east of I-15 near the intersection with Temescal Canyon Road will serve as a job center for area residents. This center is intended to provide a mix of non-residential employment-generating uses, which will assist in accommodating the need to balance jobs and housing in this area to reduce the impacts of commuting. Its location adjacent to I-15, proximity to several residential neighborhoods, and setting in the foothills of the Gavilan Hills make this an attractive site for employment and supporting uses.

[1] A policy area is a portion of an area plan that contains special or unique characteristics that merit detailed attention and focused policies.

Elsinore Area Plan

The land use designations within this area plan (County of Riverside 2021b) maintain the predominantly very-low-density character of the Meadowbrook and Warm Springs communities, the natural and recreational characteristics of the Cleveland National Forest, and community development uses in Lakeland Village. Areas designated Conservation-Habitat and Rural Mountainous help provide separation between communities and provide additional definition for existing communities.

City of Lake Elsinore

The City of Lake Elsinore is found at the foot of the Cleveland National Forest in the southwestern portion of Riverside County and is home to the largest natural lake in Southern California.

As described in the City of Lake Elsinore's General Plan (City of Lake Elsinore 2011a), there are 11 districts and five sphere districts that define the neighborhoods that make up Lake Elsinore. The Project overlaps with several of these districts and spheres. These districts each have their own plans that describe specific visions and land use policies and goals for each designated area as described below related to the Project.

Northwest Sphere District

The Northwest Sphere District encompasses approximately 5,190 acres and primarily consists of low- to medium-density residential uses, open space, limited agriculture, and some manufacturing and industrial areas near the freeway (City of Lake Elsinore 2011b). The Northwest Sphere District is outside the northwestern edge of the City of Lake Elsinore. The district is entirely outside the City limits and within the unincorporated area of Riverside County.

The focus of the Northwest Sphere District is to increase low- and medium-density residential areas to accommodate growth, establish preservation areas for natural resources, and increase economic activity along I-15. The residential areas are centrally located within the Northwest Sphere District between Indian Truck Trail and Lake Street, south of I-15. The vacant lands, which are primarily in the northern and southern portions, contain steep topography. Limited agricultural areas are scattered throughout the central valley. Manufacturing and industrial land uses are mainly located along either side of I-15. I-15 is the main corridor that passes through the Northwest Sphere District and includes I-15 and Indian Truck Trail, De Palma Road, Horsethief Canyon Road, and Temescal Canyon Road, which serve as important residential throughways that access I-15. The district is primarily open space and low- to medium-density residential with a large master planned community adjacent to Horsethief Canyon Road. The existing vacant land is currently planned to remain designated as preserved open space and Multiple Species Habitat Conservation Plan (MSHCP) conservation areas. Low-density residential land uses are planned to expand southward. There are also light industrial and commercial areas along I-15 that are planned for expansion.

Alberhill District

The Alberhill District encompasses approximately 4,240 acres and primarily consists of extractive uses, vacant lands, and emerging construction of residential and commercial uses as well as a community park (City of Lake Elsinore 2011c). The Alberhill District is characterized by rolling terrain and vacant lands within the higher elevations in the north, east, and southwest.

The extractive uses are generally near Lake Street, which transects the center of the Alberhill District in a north-south direction. Mining operations in the Alberhill District began roughly the same time as the region's first railroad and have continued to exist since the late 19th century and occupy a substantial portion of the Alberhill District. Over the years, Pacific Clay Products Company, a 1,374-acre facility, has purchased the local mines and has become the sole operating clay mine in the region (City of Lake Elsinore 2011c). The majority of remaining areas comprise vacant lands with the exception of a few small pockets of residential areas and a limited number of commercial uses adjacent to I-15.

North Central Sphere District

The purpose of the North Central Sphere District is to preserve the existing natural resources and ensure that residential development and business professional activities are compatible with surrounding land uses and landscape (City of Lake Elsinore 2011d). This district contains low-density housing, open space, and a limited amount of industrial, commercial, and public/institutional uses. Newer commercial development has been constructed within the portion of this district that is adjacent to the I-15/State Route (SR-) 74 interchange. According to the North Central Sphere District Plan (City of Lake Elsinore 2011d), the northern portion of the North Central Sphere District is primarily designated for rural open space with a conservation habitat near its western border. These designated open space areas and MSHCP conservation areas make up approximately 10 percent of the North Central Sphere District. Similar to the Business District described below, the North Central Sphere District has vacant and undeveloped land that is anticipated to support future urban development within the City of Lake Elsinore.

Business District

The Business District has the highest concentration of industrial and commercial uses in the City of Lake Elsinore and identifies itself as the industrial and commercial hub of Lake Elsinore (City of Lake Elsinore 2011e). According to the Business District Plan, the district encompasses approximately 1,323 acres, primarily consists of industrial and commercial uses, and serves as the primary employment and shopping center for the City of Lake Elsinore (City of Lake Elsinore 2011e). Existing commercial uses include large commercial centers such as the Outlets at Lake Elsinore, Lake Elsinore Market Place, and Oak Grove Crossing, all of which contain large chain stores (i.e., Home Depot, Lowe's, Target, Costco, Walmart, and a 99 Cents Only Store). There are also industrial parks and limited manufacturing sites dispersed throughout the district. Most of the industrial uses within the district are west of I-15 and south of Collier Avenue, which serves as the district's main northwest/southeast roadway. The district is also

characterized by low-scale development consisting of a limited amount of public/institutional, commercial, and industrial uses; scattered low-density housing; and vacant/open space areas (City of Lake Elsinore 2011e). Primary developmental constraints within this district include development restrictions associated with the Temescal Wash and its associated 100-year floodplain and floodway.

Lake Elsinore Hills District

The Lake Elsinore Hills District includes approximately 7,486 acres, which primarily consist of four master-planned residential communities currently at different stages of development (City of Lake Elsinore 2011f). Most of the acreage within the district has been approved for future development. The district has historically remained mostly undisturbed by development due to its varied terrain. Its rare attributes are that it represents the largest district within Lake Elsinore and that it contains one of the largest and most diverse open space landscape areas. The district's naturally landscaped valleys, peaks, rolling hills, watercourses, riparian habitats, and natural open space provide for a wide variety of view corridors, residential uses, and recreational opportunities. The primary commercial node is in the southern portions of the Lake Elsinore Hills District along I-15. Surrounding uses primarily include vacant lands and residences.

Historic District

The Historic District encompasses approximately 474 acres (City of Lake Elsinore 2011g). Main Street and Graham Avenue are the two main roadways that intersect at the core of the Historic District. Main Street has also recently been designated as part of Historic Highway 395. Uses along and adjacent to Main Street include several public institutional uses: Lake Elsinore City Hall, the Lake Elsinore Cultural Center, the Lake Community Center, the Youth Opportunity Center, the Lake Elsinore Police Department, California Department of Forestry and Fire Protection Station No. 10, a post office, and a public library.

Other uses found in this district are neighborhood commercial uses, residential uses, and some industrial uses. Graham Avenue serves as the Historic District's main east-west connection route and provides access between Lakeshore Drive to the west and northwest that has a mix of office, commercial, and residential uses. Additional residential uses are found to the south and southeast of the Graham Avenue/Main Street intersection. There is also an outflow concrete channel known as Temescal Wash running just northwest of Main Street.

Riverview District

The Riverview District encompasses approximately 432 acres and primarily consists of residential uses along with commercial uses and supporting institutional facilities (City of Lake Elsinore 2011h). The built environment is primarily allocated in the eastern, southern, and central areas. The central areas of the district include a mix of old and newer housing and the Railroad Canyon Elementary School. The eastern portion of the Riverview District, along I-15, contains the City of Lake Elsinore's auto mall center and a multifamily residential development. The auto mall is considered one of the Riverview

District's most defining characteristics because it provides a significant source of tax revenues for Lake Elsinore.

The southern areas include residential and commercial uses along Lakeshore Drive. Lakeshore Drive passes through the Riverview District in an east-west direction, providing a connection to Railroad Canyon Road/Diamond Drive to the southeast, which accesses I-15 and the Historic District to the northwest (City of Lake Elsinore 2011h). The Lake Elsinore Senior Activity Center and adjacent Lake Point Park are west of Lake Elsinore and south of Lakeshore Drive. The district's proximity to the river and the lake plays an important role in its future because it contains waterfront property that will provide a unique urban design and additional recreational opportunities.

City of Corona

The City of Corona has various districts and neighborhoods that have identifiable and distinct characters due to their building architecture, neighborhood design, streetscape, predominant land use, or even their history (City of Corona 2023a). These districts and neighborhoods are guided by the City's 32 specific plans, which provide regulatory guidance for these specific areas. The only specific plan area that overlaps with the Project area is associated with the El Cerrito Specific Plan, which is discussed below.

El Cerrito Specific Plan

The El Cerrito Census-Designated Place (CDP)[2] is within unincorporated Riverside County and the City of Corona. This CDP is a smaller geographic area within the boundaries of the El Cerrito Specific Plan area. This specific plan provides policies, standards, and provisions that serve to link the existing land uses and zoning controls in place under the County's jurisdiction with the provision of services and land use entitlements to be established under the City of Corona's jurisdiction (City of Corona 2020). The El Cerrito Specific Plan includes 2,928 acres of land generally located south of Magnolia Avenue, north of Cajalco Road, and to the east and west of I-15. The major roadways providing access to El Cerrito include I-15, which runs north and south bisecting the western and eastern sections of the plan; Ontario Avenue, which transitions to Temescal Canyon Road; El Cerrito Road; and Cajalco Road. Adjacent to the Project area, the specific plan area is characterized by mostly single-family residences and vacant land available for additional housing and industrial uses, three commercial centers, the El Cerrito Park, and El Cerrito Intermediate School. There are also 920.9 acres of land designated for mineral resources; however, this is outside of the community impact study area.

Development Trends and Future Land Use in the Project Vicinity

According to the SCAG 2024–2050 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), Riverside County had the largest share of population growth among the six counties in the SCAG region from 1990 to 2019 (SCAG 2024). Furthermore, the City of Lake Elsinore has been identified as one of the fastest-growing

[2] CDPs are a statistical geography representing closely settled, unincorporated communities that are locally recognized and identified by name.

cities in California, with nearly a 3.9-percent growth rate compared to 0.7 percent for the SCAG region from 2000 to 2020 (SCAG 2020). Future land use is anticipated to be primarily commercial and residential. Several mixed-use commerce centers are planned, as well as many freestanding retail developments that would benefit from the proximity to I-15, which links Southern California to the Inland Empire, Las Vegas, the Rocky Mountain states, and Canada. There are three new hotel developments planned within 0.5 mile of the Project area: the Woodspring Suites, the La Quinta Inn & Suites, and the Foothill Center Hotel. Additionally, several new apartment complexes and condominiums are planned.

The planned, completed, and proposed projects considered in this analysis are presented in Table 2.2.1-2. In general, most of the projects listed are infill projects, and the listed transportation projects would improve existing facilities rather than construct new facilities.

Table 2.2.1-2. Planned, Completed, and Proposed Projects in the Project Vicinity

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
1	I-15/Railroad Canyon Road and Franklin Interchange Project (Phase 2)	City of Lake Elsinore	I-15 and Franklin Street	• Construct new full interchange at I-15/Franklin Street. • Add auxiliary lanes from Franklin Street Interchange to Main Street Interchange and from Franklin Street Interchange to Railroad Canyon Road Interchange. • Widen Main Street and realign/widen southbound on-ramps from 1 to 2 lanes. • Construct new frontage road on the east side of I-15.	Proposed: Final design of Franklin Interchange initiated in April 2024 with Commission approval on February 14, 2024; construction timing is dependent on the duration of final design and funding. Phase 1 was completed and open to the public in summer 2022.
2	Ashland Springs: 90 Condominium Units	City of Lake Elsinore	Southwest corner of Franklin Street and Avenue 6, APNs: 373-071-020, 021, 022, 023, 024, 025, 026, 027, 028	90 condominium units	Constructed
3	Eight-Unit Apartment Complex	City of Lake Elsinore	125 Heald Avenue (APN: 373-025-008)	6,839-square-foot, 8-unit apartment complex, laundry facility, trash enclosure, and related improvements	Proposed: This project was approved in 2019: Residential Design Review No. 2015-03.

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
4	Camino Del Norte Extension	City of Lake Elsinore	Camino Del Norte and Canyon Estates Drive, south of Main Street	Extension of Camino Del Norte from Main Street to Franklin Street, realignment of Canyon Estates Drive, and extension of Canyon View Drive and Sagecrest Drive	Constructed: March 2020
5	Boos Commercial Development Main Street	City of Lake Elsinore	East side of Main Street between Flint Street and I-15 southbound on-ramp; APNs: 377-243-002, 003, 004, 005, 006, and 007	Commercial center	Constructed: 2021
6	I-15/Main Street Interchange	City of Lake Elsinore	I-15 Main Street interchange	Interchange improvements	Under Construction: May 2024
7	Commercial construction on Minthorn Street	City of Lake Elsinore	APN: 377220024	Not available	Under Construction

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
8	Pennington Industrial Project	City of Lake Elsinore	Southeast corner of Chaney Street and Minthorn Street, APN: 377-160-014	Construct 3 industrial buildings that are 91,140 square feet in total, with 167 parking spaces.	Constructed: 2021
9	Fairway Business Park II	City of Lake Elsinore	445–495 Birch Street	Development of 6 industrial buildings ranging in size from 8,154 to 18,411 square feet (70,705 square feet total)	Constructed: 2022
10	Lake Elsinore Honda	City of Lake Elsinore	18450 Collier Avenue, APNs: 377-080-053, 377-080-057, and 377-080-079	53,425-square-foot single-story building	Constructed: 2020
11	Commercial Development, Southeast Corner of Collier Avenue and Central Avenue	City of Lake Elsinore	Miguel's Jr. (18320 Collier Avenue) and commercial building (18330 Collier Avenue, Suite 102); APN: 377-081-004	Commercial building and a restaurant	Constructed

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
12	La Quinta Inn & Suites	City of Lake Elsinore	Northeast corner of Dexter Avenue and Third Street; APN 377-090-036	36,664-square-foot, 4-story, 64-room hotel on an approximately 1.05-acre site	Currently vacant site in entitlement stage
13	Wasson Canyon	City of Lake Elsinore	North, south, and east of 3rd Street; west of Diana Lane	TTM No. 37381 is a subdivision of 19.54 acres into 73 single-family residential lots. TTM No. 37382 is a subdivision of 55.06 acres into 199 single-family residential lots.	Proposed: 1-year extension of time to May 14, 2024, for TTM Nos. 37381 and 37382
14	I-15/Central Avenue Interchange	City of Lake Elsinore	I-15/SR-74 (Central Avenue), between 1,000 feet west of Collier Avenue to Riverside Street	Add northbound loop off-ramp with a deceleration lane, realign northbound entry and exit ramps, add southbound acceleration/ deceleration lanes, add northbound deceleration lane; widen SR-74 from Riverside Drive to Central Avenue from 2 to 4 through lanes and from Collier Avenue to Cambern Avenue from 6 to 8 through lanes; and construct new Riverside Avenue Overcrossing and SR-74 Post Mile 15.5.	Proposed: Construction is anticipated in 2025–2026.

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
15	Kassab Travel Center	City of Lake Elsinore	Northwest corner of Collier Avenue and Riverside Drive	8,360-square-foot convenience store with 3 quick-serve restaurants, 2 covered gas-dispensing areas totaling 6,092 square feet, and a freestanding 2,543-square-foot fast food restaurant with a drive-through on 2.39 acres	Proposed: This project was approved by City Council on July 14, 2020.
16	Nichols Ranch Specific Plan	City of Lake Elsinore	APNs 389-200-(038, 039); 389-210-(008, 032, 034, 036) and portions of current APNs 289-200-035 and 289-200-036	Master-planned, low- to medium-density residential community with commercial uses on an approximately 72.5-acre site	Adopted: This project was adopted by City Council June 11, 2019.
17	Lake Street Storage	City of Lake Elsinore	APN: 390-130-018	3,528-square-foot service station with convenience store, fuel canopy with 6 fuel pumps; new 90,000-square-foot, single-story indoor RV and boat storage facility, with 24,000 square feet of mezzanine and 192 surface RV parking spaces partially covered with 3 canopies with solar panels on 10.63 net acres	Under construction

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
18	PP26403 Self Storage facility	County of Riverside	Construction off Temescal Canyon, south of Hostettler Road	Storage facility	Under construction
19	Modular Building Fabricator	County of Riverside	North side of Concordia Ranch Road, east of Temescal Canyon Road	Construction/assembly of modular buildings	Operational
20	Horsethief Canyon Road (Interchange)	County of Riverside	Riverside County	Reconstruct/widen interchange from 2 to 4 lanes and reconstruct ramps.	Proposed: RTP# 3M0729; projected completion year 2035
21	Residential Development: TTM 37155	County of Riverside	South of Kingbird Drive, east of Towhee Lane, and west of Indian Truck Trail; APN: 290-150-004	53.7 acres into 85 single-family residential lots and 6 open space lots for 2 detention basins, 3.55-acre park area, and a 1,347-square-foot passive park	Proposed: TTM 37155, Change of Zone No. 1800010

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
22	Toscana Village Center	County of Riverside	Northwest of Indian Truck Trail, southwest of Temescal Canyon Road, northeast of I-15; APNs: 290-130-003, -004, -005, -006, -052, -053, -085, -086	Six buildings consisting of fast-food restaurants, a sit-down restaurant, office/retail, a daycare center, and a tire store	Approved: Approved by County Board of Supervisors on January 29, 2019; unknown when construction will begin
23	Temescal Village (Condo Development)	County of Riverside	North of Temescal Canyon Road, west of I-15, east of Wrangler Way, and south of Mojeska Summit Road; APNs: 290-060-024, -025.	Condominiums	Proposed: Approved June 5, 2018, by the Board of Supervisors Hearing on GPA01203, CZ07913, TR37153, PP26209

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
24	Tom's Farms Expansion Project	County of Riverside	Southwest of I-15, north of Squaw Mountain Road, east of Temescal Canyon Road	A phased expansion of the existing Tom's Farms facility to include an 8,559-square-foot banquet building, 1,800-square-foot multipurpose facility, 81,573-square-foot retail/commercial buildings, 6,790-square-foot bakery with drive-through, 12,844-square-foot greenhouse, 6,850-square-foot barn, 4,400-square-foot amusement park building, and 8,198-square-foot water park	Proposed
25	Temescal Canyon Road (Interchange)	County of Riverside	Riverside County	Reconstruct/widen Temescal Canyon interchange from 2 to 4 lanes and reconstruct ramps.	Proposed: RTP# 3M0728; projected completion year 2040
26	The Hydro-Conduit Site	County of Riverside	North, south, and east of Dawson Canyon Road and west of Temescal Canyon Road and I-15	Warehouse buildings ranging from 36,500 to 227,400 square feet, and retail buildings range from 2,900 to 4,300 square feet, including a gas station with convenience store and car wash, a fueling position canopy, and 2 drive-through restaurants	Proposed
27	Knabe Road Commercial Center	County of Riverside	Northeast of Knabe Road, south of Weirick Road, and west of I-15	2,695-square-foot convenience store, 2,462-square-foot fast-food restaurant, and a gas station	Proposed

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
28	Seven Oaks	County of Riverside	Southwest corner of Temescal Canyon Road and Dos Lagos Drive	Gas station, car wash, convenience store, and 2 drive-through restaurants on 20.24 acres	Constructed
29	Interstate 15 Interim Corridor Operations Project	County of Riverside	I-15 from Cajalco Road in Corona to Weirick Road in Temescal Valley	Add a non-tolled lane on southbound I-15 from the Cajalco Road On-Ramp to the Weirick Road Off-Ramp, next to the outer shoulder.	Constructed: 2022
30	Arantine Hills	City of Corona	Southwest of I-15, south of Cajalco Road	A specific plan that proposes 1,621 residential units on 129 acres, 38 acres of general commercial development, 40 acres of mixed-use development, 37 acres of open space, and 15 acres of park land	Proposed: Precise Plan (PP16-012) and a merchant builder map (TTM 37030) approved for the first phase of development; under construction. Second phase is under plan check. City approved 12/19/2018. General Plan Amendment (GPA2018-0001) with Specific Plan Amendment (SPA2018-0001), Parcel Map (PM 37036), and amendment to the Development Agreement (AEC724, DA15-001).

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
31	Cajalco Road Widening	County of Riverside	Cajalco Road between Temescal Canyon Road to the west and I-215 to the east	Widen Cajalco Road between Temescal Canyon Road and I-215.	Proposed: Final design anticipated to begin in fall 2025.
32	Woodspring Suites Hotel	City of Corona	South side of Tom Barnes Street, east of I-15	48,413-square-foot, 4-story hotel containing 122 rooms on 5.02 acres	Constructed 2023
33	Latitude Business Park	City of Corona	East of I-15, at the northwest corner of Tom Barns Street and Temescal Canyon Road	15 parcels totaling 74.49 acres for the development of 13 industrial buildings	Constructed 2022
34	I-15 Express Lanes Project	County of Riverside	I-15 from Cajalco Road to SR-60	Addition of two tolled Express Lanes to I-15 in each direction, a distance of approximately 15 miles	Constructed 2021
35	Foothill Center	City of Corona	Corner of Foothill Parkway and I-15	82,870-square-foot commercial center consisting of a service station, 2 drive-through restaurant pads, 2 dine-in pads, 24,000-square-foot in-line tenant building, and a 4-story, 119-room hotel	Constructed 2023

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
36	Temescal Canyon Corridor—Ontario Avenue Segment	County of Riverside	Ontario Avenue from El Cerrito Road north 0.6 mile to State Street	Road widening from 2 to 4 lanes	Under construction: completion is expected in 2026.
37	Ontario Avenue Widening	City of Corona	Ontario Avenue from California Avenue to State Street	Widen the north side of Ontario Avenue to increase the vehicle capacity	Under construction: Completion is expected in 2025.
38	Car Wash	City of Corona	South of Magnolia Avenue, west of Downs Way	10,000-square-foot car wash	Proposed: DPR2018-0019, under environmental review and design
39	Temescal Canyon Corridor–Dawson Canyon Widening Segment	City of Corona	Dos Lagos Drive to Dawson Canyon Road	Widen the roadway to 4 lanes between Dos Lagos Drive and Dawson Canyon Road.	Under construction
40	Cajalco Road Widening and Safety Enhancement Project	City of Corona	Harvill Avenue to Temescal Canyon Road	Widen and realign Cajalco Road between Temescal Canyon Road and I-215.	Proposed: Under environmental review

Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
41	Ontario Avenue Widening/ Complete Streets Project	City of Corona	Ontario Avenue from Lincoln Avenue to Buena Vista Avenue	Widen Ontario Avenue; install ADA-compliant sidewalks and ramps, curbs and gutters, and a Class II bike lane along the eastbound direction of travel.	Proposed: Under environmental review and design; expected to be constructed in 2025

Sources: County of Riverside n.d.; City of Lake Elsinore n.d.a., n.d.b., n.d.c.; RCTD n.d.
ADA = Americans with Disabilities Act; APN = Assessor's Parcel Number; No. = number; RV = recreational vehicle; TTM = Tentative Tract Map

2.2.1.2 Consistency with State, Regional, and Local Plans and Programs

This section identifies state, regional, and local plans and programs and describes how the Project is consistent with or conforms to relevant plan and program elements. The study area for analyzing the Project's consistency with state, regional, and local plans is the community impact study area.

There are several community, regional, and transportation plans that are relevant to the community impact study area. The following types of plans were considered and are described below:

- Transportation Plans and Programs (Metropolitan Transportation Plans/RTPs and Metropolitan Transportation Improvement Program/Regional Transportation Improvements Programs)
- Regional Growth Plans
- Regional Conservation Plans
- General and Community Plans
- Specific Development Proposals or Specific Plans
- Climate Action Plans

Federal Transportation Improvement Program

The Federal Transportation Improvement Program (FTIP) is a capital listing of all transportation projects proposed over a 6-year period for the SCAG region. The projects include highway improvements; transit, rail, and bus facilities; high-occupancy vehicle (HOV) lanes; active transportation; signal synchronization; intersection improvements; and freeway ramps, among others. The FTIP is prepared to implement projects and programs listed in the RTP and is developed in compliance with state and federal requirements. The Project is in the SCAG 2023 FTIP as Project Number RIV170901, which was found to conform by the Federal Highway Administration and Federal Transit Administration on December 16, 2022.

California State AB 32 Climate Change Scoping Plan

Assembly Bill (AB) 32 required California Air Resources Board (ARB) to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas (GHG) emissions to 1990 levels by 2020, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. 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 SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality,* adopted September 2022, assesses progress toward the statutory 2030 reduction goal and

defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022).

Southern California Association of Governments 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy

The RTP/SCS is a long-range transportation plan that is developed and updated by SCAG every 4 years. The RTP/SCS provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP/SCS considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The Project is included in the RTP/SCS as Project Identification (ID) 3160001.

County of Riverside Comprehensive Trails Plan

The January 2018 Riverside County Regional and Open-Space District Comprehensive Trails Plan includes policies, goals, guidelines, funding and management, and an implementation framework for planning, maintenance, and development of trails within Riverside County (County of Riverside 2018).

Western Riverside County Multiple Species Habitat Conservation Plan

The MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan (HCP) that focuses on conservation of species and their associated habitats in western Riverside County (RCTLMA 2004). The MSHCP envelops approximately 1.26 million acres with the overall goal to enhance and maintain biological diversity and ecosystem processes while allowing for future economic growth and providing permanent open space, community edges, and recreational opportunities for western Riverside County. The Western Riverside County Regional Conservation Authority (WRCRCA) is a government agency formed in 2004 with the key initiative of acquiring reserve land. The agency implements the MSHCP, which outlines a plan to conserve 146 species and conserve an excess area of 500,000 acres. This includes approximately 347,000 acres of existing public/quasi-public lands and approximately 153,000 acres of additional reserve land (RCTLMA 2004). Riverside County signed the Implementation Agreement on December 15, 2003. The plan includes but is not limited to impact mitigation for future County projects on Circulation Element roads in the covered area of western Riverside County. Additionally, the Project would be within the boundaries of the MSHCP and would therefore be subject to its requirements.

Riverside-Corona Resource Conservation District Long Range Objectives 2022–2027

Long-Range Objectives 2022–2027 is a long-term action plan with goals and objectives used to plan future projects, programming, and district operations (RCRCD 2022). The Riverside-Corona Resource Conservation District is a non-regulatory local government agency (special district) that works to permanently protect, conserve, and sustain natural resources in areas within western Riverside and San Bernardino Counties.

Habitat Conservation Plan for Stephens' Kangaroo Rat

The HCP for Stephens' kangaroo rat (SKR) is managed by the Riverside County Habitat Conservation Agency and consists of eight permanent conserved areas of over 40,000 acres, which make up the SKR reserves in western Riverside County (RCHCA 2020). The HCP's overall objective is to promote and ensure the conservation of SKR while also providing opportunities to benefit other species of concern. Portions of the Project would be within the boundaries of the SKR HCP and a Project measure ensures that the Project is consistent with the HCP.

County of Riverside Climate Action Plan

The County of Riverside Climate Action Plan, adopted in 2015 and updated in November 2019, includes GHG inventories of communitywide and municipal sources, reduction measures, forecasts, and targets to reduce GHG emissions in conjunction with relevant General Plan policies (County of Riverside 2019).

County of Riverside General Plan

The County of Riverside General Plan is a comprehensive, long-term general plan, adopted in 2015 and last updated in 2021 (County of Riverside 2021c). The elements of the General Plan make up the framework for decision-making regarding growth and development in the county and contain goals and policies relevant to the Project.

Land Use Element

The Land Use Element of the County of Riverside General Plan is intended to have the broadest scope of the General Plan elements, capturing and communicating the County's long-term vision for the future use and development of the land. This element designates the distribution, locales, and extent of land uses, in general, and includes standards of residential density and non-residential intensity.

Noise Element

The County of Riverside General Plan Noise Element includes policies, standards, criteria, programs, diagrams, action items, and maps in an effort to protect public health and welfare from noise within the County. The element contains the County's approach to identifying noise issues, quantifying current and projected noise levels, confronting excessive noise exposure, and noise regulation in community planning.

Circulation Element

The Circulation Element of the County of Riverside General Plan aims to identify and address needs and issues within the County relevant to transportation, as well as set forth its desires for an improved circulation system and consider alternatives to the single-occupant vehicle. The element also establishes policies and goals with identified funding sources, while overall providing a plan to accomplish an efficient and inclusive transportation network.

Air Quality Element

The County of Riverside General Plan Air Quality Element provides an overview of the physical and regulatory environment affecting air quality in the County, along with goals, policies, and programs intended to balance actions within the County that may have potential effects on air quality.

Healthy Communities Element

The Healthy Communities Element of the County of Riverside General Plan is intended to provide a visionary framework with the aim of achieving a healthy Riverside County. The element identifies policies that address the intersection of public health and planning, such as land use and community design, a healthy transportation system, social capital, and environmental health.

Elsinore Area Plan

Elsinore is an area within western Riverside County near Lake Elsinore. The Elsinore Area Plan contains a land use plan, statistical summaries, numerous policies, and accompanying exhibits that allow for the understanding of the physical, environmental, and regulatory characteristics of the area (County of Riverside 2021b). The Elsinore Area Plan covers the southern portion of the Project alignment in the City of Lake Elsinore.

Temescal Canyon Area Plan

Temescal Canyon is an area within western Riverside County. The Temescal Canyon Area Plan contains a land use plan, statistical summaries, policies, and accompanying exhibits that allow for the understanding of the physical, environmental, and regulatory characteristics of the area (County of Riverside 2021a). The Temescal Canyon Area Plan covers the northern portion of the Project that includes the unincorporated community of Temescal Valley and the City of Corona.

City of Lake Elsinore

City of Lake Elsinore General Plan

The City of Lake Elsinore's General Plan was adopted in 2011 and is currently being updated. The plan consists of a strategic framework that guides overall development with goals, policies, and implementation programs that analyze future development and redevelopment within the City of Lake Elsinore (City of Lake Elsinore 2011a). The plan covers the southern portion of the Project alignment that lies within the City of Lake Elsinore.

Alberhill District

The Alberhill District plan (City of Lake Elsinore 2011c) provides goals and policies including general development regulations and implementation processes.

Northwest Sphere District

The Northwest Sphere District plan (City of Lake Elsinore 2011b) provides goals and policies including general development regulations and implementation processes.

Alberhill Ranch Specific Plan

The Alberhill Ranch Specific Plan area covers the northwestern border of the City of Lake Elsinore, and a southern portion of the Project alignment is within the plan boundaries. The plan was approved in 1989 and has been amended several times since. The plan addresses the implementation of goals, objectives, policies, and programs for future development and land-use-related issues (City of Lake Elsinore 1989).

Alberhill Villages Specific Plan

The Alberhill Villages Specific Plan was adopted in 2016 and was amended and approved by the City Council in 2017. The plan covers the area in northwest Lake Elsinore just adjacent to the southwestern portion of the Project. The plan provides guidelines, goals, and objectives including general development regulations and implementation processes (City of Lake Elsinore 2017).

City of Corona

City of Corona General Plan

The City of Corona's General Plan establishes goals and policy guidance for the years 2020 to 2040 and beyond. The original general plan was approved in 2004 by the City Council and has since had several updates to accommodate changes to certain goals and policies, including new laws and regulations passed by the State Legislature (City of Corona 2023a). The long-range plan not only guides the physical development and resource management of the City of Corona but addresses elements such as land use, circulation, open space, environmental justice, and noise. The plan covers the northern portion of the Project alignment within the City of Corona.

Arantine Hills Specific Plan

Arantine Hills Specific Plan was approved by the City Council in 2012 and has been amended four times, most recently in 2023. The plan covers the area in the southeastern boundary of the City of Corona and lies adjacent to the Project to the east. The plan includes detailed development standards and design guidelines and goals related to land use issues and development (City of Corona 2023b).

Dos Lagos Specific Plan

The portion of the Project within the limits of Corona, south of Cajalco Road and north of Weirick Road, is within the Dos Lagos Specific Plan area. The specific plan provides design guidelines and development standards primarily for residential development and defers to policies of the City of Corona's General Plan (City of Corona 2023c).

El Cerrito Specific Plan

The portion of the Project within the limits of Corona, south of Old Temescal Road and north of Cajalco Road, is within the El Cerrito Specific Plan area (City of Corona 2020). El Cerrito Specific Plan guidelines are primarily for commercial development; however, the plan includes design standards applicable to the plan area.

Eagle Glen Specific Plan

The portion of the Project within the limits of Corona is adjacent to the Eagle Glen Specific Plan, west of the Cajalco Road interchange. The specific plan was approved in 1991 by the City Council and the latest amendment was in 2006. The plan provides regulations and guidelines primarily for residential development and defers to policies of the City of Corona's General Plan (City of Corona 2006).

2.2.1.3 Environmental Consequences

Build Alternative

Temporary Impacts

Land Use

As shown in Table 2.2.1-2, there are several planned and recently completed developments surrounding the community impact study area. However, the Project is being constructed within the existing California Department of Transportation (Caltrans) right of way (ROW). The Project would not require acquisitions or relocations of any residences or businesses.

Temporary indirect impacts such as traffic delays are anticipated within the Project area during construction, which may result in longer travel times on I-15. However, a detailed Traffic Management Plan (Standard Project Measure **TR-1**) would be tailored to accommodate major traffic movements during construction and to avoid construction impacts on surrounding developments. Construction activities would not require closure, alteration, or other uses of the existing and planned developments listed in Table 2.2.1-2. Therefore, there would be no temporary adverse impacts or changes to the existing land use in the community impact study area.

Consistency with State, Regional, and Local Plans and Programs

Consistency with state, regional, and local plans and programs is related to the consistency of permanent Project changes with those plans. As a result, construction of the Project is consistent with most of the state, regional, and local plans and policies, with the exception of California's AB 32 Climate Change Scoping Plan (2022), the SCAG 2024–2050 RTP/SCS, and the County of Riverside General Plan (2021c). This conflict is explained in more detail in Section 3.3, *Climate Change*. Mitigation Measures **GHG-1** through **GHG-4** and **GHG-11,** Standard Project Measure **EN-1**, and Standard Project Measure **AQ-4** are expected to reduce construction GHG emissions and potential climate change impacts from the Project. However, even with mitigation, the Project would conflict with these plans.

Permanent Impacts

Land Use

The Project would not require acquisition or relocation of any residences or businesses. Furthermore, the Project would not result in a change to the existing land uses in the community impact study area or affect the viability of the land use itself. The Project, which is intended to improve traffic throughput and reduce vehicle delays, would not change or negatively affect the land uses or planned developments in the community impact study area. Rather, the Project would improve the transportation network that serves those land uses.

Consistency with State, Regional, and Local Plans and Programs

Table 2.2.1-3 provides a summary of the Project's consistency with goals and policies from applicable plans, transportation plans, and master plans.[3] As summarized in the table, the Build Alternative is consistent with most adopted goals and policies of the applicable state, regional, and local plans and programs, with the exception of California's AB 32 Climate Change Scoping Plan (2022), the SCAG 2024–2050 RTP/SCS, and the County of Riverside General Plan (2021c). This conflict is explained in more detail in Section 3.3, *Climate Change*, due to an increase in operational emissions. Mitigation Measures **GHG-5** through **GHG-10** would reduce the GHG emissions and potential climate change impacts from the operational and maintenance of the Project**.** However, because operational emissions would increase, the Project would conflict with these plans.

[3] Several plans listed in Section 2.2.1.1, *Affected Environment*, are not included in the consistency analysis shown in Table 2.2.1-3 because the plans did not contain goals, policies, or objectives that are relevant to the Project. These include the El Cerrito Specific Plan, the Arantine Hills Specific Plan, the Dos Lagos Specific Plan, Eagle Glen Specific Plan, the Lake Elsinore North Central Sphere District Plan, the Lake Elsinore Business District Plan, the Lake Elsinore Hills District Plan, the Lake Elsinore Historic District Plan, the Lake Elsinore River View District Plan, the Alberhill Ranch Specific Plan, and the Alberhill Villages Specific Plan, which contain policies or objectives that are focused on development or construction/improvements to local roadways.

Table 2.2.1-3. Consistency with State, Regional, and Local Plans and Programs

Policy/Goal	No-Build Alternative	Build Alternative
California's AB 32 Climate Change Scoping Plan (2022)		
Overall Goal: That the following greenhouse gas emission reduction targets are hereby established for California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels.	**Inconsistent.** The No-Build Alternative would not result in any changes to existing conditions and would not help California meet the greenhouse gas emission reduction targets set forth in the State's AB 32 Climate Change Scoping Plan. Therefore, the No-Build Alternative would be inconsistent with this overall goal.	**Inconsistent.** As discussed in Chapter 3 on this EIR/EA, because operational GHG emissions are projected to increase under the Build Alternative in the Opening Year (2030) and Design Year (2050) when compared to the Existing (2019) condition and No-Build condition in the Opening and Design years, the Project would conflict with the goals included in the State's AB 32 Climate Change Scoping Plan and other regulations adopted for the purpose of reducing the emissions of GHGs. Therefore, the Build Alternative would be inconsistent with this overall goal.
SCAG 2023 Federal Transportation Improvement Program (2022)		
Policy Guideline: Each project in the County FTIP submitted to SCAG must be consistent with and reflect investment priorities established in the most recently adopted metropolitan transportation plan, in accordance with Moving Ahead for Progress in the 21st Century Act (MAP-21). Each FTIP project must show consistency with the project's design concept, and timely	**Inconsistent.** The No-Build Alternative would not result in any changes to existing conditions and would not implement the Project as reflected in the adopted 2020–2045 RTP/SCS. Therefore, the No-Build Alternative would be inconsistent with this policy guideline.	**Consistent.** The Project is identified in the Final 2023 Adopted FTIP and SCAG's 2020 RTP for Riverside County as Project ID: RIV170901. The Project is consistent with the design concept and timely implementation as reflected in the adopted 2020–2045 RTP/SCS. Therefore, the Build Alternative would be consistent with this policy guideline.

Policy/Goal	No-Build Alternative	Build Alternative
implementation as reflected in the adopted RTP/SCS.		
SCAG 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (2024)		
Goal: Ensure that reliable, accessible, affordable and appealing travel options are readily available, while striving to enhance equity in the offerings in high-need communities.	**Inconsistent.** Because the No-Build Alternative would not result in any changes to existing conditions, this alternative would not achieve the transportation improvements projected to result under the Build Alternative. As continued development and growth occur, the No-Build Alternative would be inconsistent with these goals.	**Consistent.** The Build Alternative would implement improvements that would result in a more efficient transportation system by improving traffic operations, connectivity to other ELs in the region, and current throughput levels along I-15. Therefore, Project improvements under the Build Alternative would maximize mobility for all users within the region. Consequently, the Build Alternative would be consistent with this goal.
Goal: Support investments that are well-maintained and operated, coordinated, resilient and result in improved safety, improved air quality and minimized greenhouse gas emissions.	**Inconsistent.** Currently, traffic volumes often exceed existing highway capacity. As local and regional development continues and the traffic demand increases, traffic operations along I-15 would further deteriorate, resulting in increased congestion, vehicle delay, safety concerns, vehicle operating costs, and vehicle emissions due to slower travel speeds, reduced throughput, and increased travel times. Therefore, increases in emissions as a result of the aforementioned issues may occur and a reduction of GHG	**Inconsistent.** Although the Project would improve traffic operation, under the Build Alternative, the Project would increase operational GHG emissions when compared to both the existing baseline and the No-Build Alternative conditions. Therefore, the Build Alternative would be inconsistent with this goal.

Policy/Goal	No-Build Alternative	Build Alternative
	emissions and improved air quality would not be achieved. The No-Build Alternative would be inconsistent with this goal.	
County of Riverside Comprehensive Trails Plan (2018)		
Goal: Simultaneously Develop Land, Transportation and Trail Improvements. **Policy 2: Regional Trail Connectivity.** Development located on an identified Regional Trail on The Regional Trails Map shall be required to provide a trail, open to the public that provides seamless connectivity between areas adjacent to the development.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** Under the Build Alternative, all proposed improvements would be constructed primarily within existing Caltrans ROW, with the majority of the improvements occurring within the existing I-15 median. The Build Alternative would not interfere with any of the existing or proposed trails on a temporary or permanent basis. Some proposed trails cross under I-15 in locations where the Project proposes to widen bridges within the median; however, the Project would maintain access below and would not preclude future implementation of these trails. Therefore, the Build Alternative would be consistent with this goal and policy.
Western Riverside County Multiple Species Habitat Conservation Plan (2004)		
Biological Goal: In the MSHCP Plan Area, Conserve Covered Species and their Habitats.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal would not be applicable.	**Consistent.** The Project would result in direct and indirect temporary and permanent impacts on existing riparian/riverine resources within the Project limits. Consultation with WRCRCA and the U.S. Fish and Wildlife Service (USFWS) would be required.

Policy/Goal	No-Build Alternative	Build Alternative
		Furthermore, temporary impacts would be restored upon Project completion and compensatory mitigation would be provided for permanent impacts. Therefore, the Build Alternative would be consistent with this goal.
Riverside-Corona Conservation District Long Range Objectives 2022–2027 (2022)		
Goal 2: Conserve Habitat Land and Species.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal would not be applicable.	**Consistent.** The Project would result in direct and indirect temporary and permanent impacts on existing riparian/riverine resources within the Project limits. Consultation with WRCRCA, California Department of Fish and Wildlife (CDFW), and USFWS would be required. Furthermore, temporary impacts would be restored upon Project completion and compensatory mitigation would be provided for permanent impacts. Therefore, the Build Alternative would be consistent with this goal.
Habitat Conservation Plan for the Stephens' Kangaroo Rat in Western Riverside County (1996)		
Overall Goal: To conserve 15,000 acres of occupied Stephens' kangaroo rat habitat.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal would not be applicable.	**Consistent.** The Build Alternative is expected to remove potentially suitable habitat for SKR during construction. In cases where the species is present and take may occur, take of SKR is covered under the SKR HCP, not the MSHCP. The Project limits are outside the limits of the SKR HCP core reserve areas but within the SKR HCP plan area. However,

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		the Project has an Avoidance and Minimization Measure (**TE-4**) that requires compliance with the SKR HCP. Therefore, the Build Alternative would be consistent with this goal.
County of Riverside General Plan (2021)		
Chapter 3: Policy LU 24.1. Cooperate with the California Department of Fish and Wildlife (CDFW), United States Fish and Wildlife Service (USFWS), and any other appropriate agencies in establishing programs for the voluntary protection, and where feasible, voluntary restoration of significant environmental habitats.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** The Project would result in direct and indirect temporary and permanent impacts on existing riparian/ riverine resources within the Project limits. Consultation with WRCRCA, USFWS, and CDFW would be required. Furthermore, temporary impacts would be restored upon Project completion and compensatory mitigation would be provided for permanent impacts. Therefore, the Build Alternative would be consistent with this policy.
Chapter 3: Policy LU 25.3. Require that park facilities be accessible to the community, regardless of age, physical limitation or income level.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** Project implementation would primarily be contained within Caltrans ROW; however, during construction of the Build Alternative, there may be some temporary disruptions to local circulation and access. Temporary access routes to Project-adjacent recreational facilities would maintain ADA accessibility. Therefore, detours and signage would be provided during construction to provide alternative routes and allow for continued community access to any

Policy/Goal	No-Build Alternative	Build Alternative
		Project-adjacent park facilities. Once the Build Alternative is constructed, there would be no permanent indirect or direct impacts on accessibility to park facilities. Therefore, the Build Alternative would be consistent with this policy.
Chapter 4: Policy C 1.1. Design the transportation system to respond to concentrations of population and employment activities, as designated by the Land Use Element and in accordance with the Circulation Plan, Figure C-1.	**Inconsistent.** Currently, traffic volumes often exceed existing highway capacity. As local and regional development continues and traffic demand increases, mobility along the I-15 corridor would further deteriorate, resulting in increased congestion, vehicle delay, safety concerns, vehicle operating costs, and vehicle emissions due to slower operating speeds on I-15. The No-Build Alternative would not achieve the transportation improvements projected to result under the Build Alternative and would not be able to respond to the population and employment projections that would increase demands on the existing transportation system. Additionally, under the No-Build Alternative, I-15 would not be compatible with other EL networks within the region. Therefore, the No-Build Alternative would not be consistent with this policy.	**Consistent.** The Build Alternative would help alleviate the current deficiencies of the existing system by implementing two tolled ELs in the northbound and southbound directions and southbound auxiliary lanes that would improve travel time reliability and traffic operation and throughput, and maintain compatibility with other EL networks in the region. Therefore, the Build Alternative would be consistent with this policy.

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Chapter 4: Policy C 1.3. Support the development of transit connections between Riverside County and regional activity centers in other counties as well as transit connections that link the community centers located throughout the county and as identified in the Land Use Element and in the individual Area Plans.	**Inconsistent.** Under the No-Build Alternative, the Project would not provide the needed toll lanes and auxiliary lanes that would improve travel time reliability, traffic operation, and throughput; or maintain I-15's compatibility with the regional EL networks as discussed in Chapter 1 of the Community Impact Assessment (Caltrans 2024a). Currently, traffic volumes often exceed existing highway capacity. Therefore, this alternative would not support the development of transit connections between significant transit corridors within Riverside County and to regional activity centers, improve efficiency through the extension of the EL network, or be able to respond to the anticipated growth that would increase the demand on the current deficient highway system. This disconnect in system improvements would result in adverse cumulative effects on traffic safety and operation for localities and counties along these connected highway networks, as well as the agencies that maintain these systems. The No-Build Alternative would not be consistent with these policies.	**Consistent.** The Build Alternative would expand and maintain compatibility with other EL networks in the region. Therefore, the Build Alternative would support the development of transit connections between significant transit corridors within Riverside County and to regional activity centers that would result in a regional system that would maximize the efficiency of I-15 and address the anticipated growth that would increase the demand on the current deficient highway system. As a cooperative Project between RCTC and Caltrans, the Build Alternative would enhance regional mobility and offer greater user flexibility of the regional transportation system. Therefore, the Build Alternative would be consistent with these policies.
Chapter 4: Policy C 1.4. Utilize existing infrastructure and utilities to the maximum extent practicable and provide for the logical, timely, and economically efficient extension of infrastructure and services.		
Chapter 4: Policy C 1.5. Evaluate the planned circulation system as needed to enhance the arterial highway network to respond to anticipated growth and mobility needs.		
Chapter 4: Policy C 1.6. Cooperate with and where appropriate lead local, regional, state, and federal agencies to establish an efficient circulation system.		

Policy/Goal	No-Build Alternative	Build Alternative
Chapter 4: Policy C 3.27. Evaluate proposed highway extensions or widening projects for potential noise impacts on existing and future land uses in the area. Require that the effects of truck mix, speed limits, and ultimate motor vehicle volumes on noise levels are also explored during the environmental process.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** Although the overall freeway structure itself would not be widened, there would be a widening of 15 bridges along the freeway to accommodate the use of the center median to construct the proposed ELs, as well as retaining walls and sound walls at various locations within the Project limits. During construction, excessive noise may occur; therefore, the Project would comply with standard specifications and time restrictions as applicable. Additionally, the installation of noise barriers would reduce transportation-related noise impacts on sensitive uses once the Project is in operation. Therefore, the Build Alternative would be consistent with this policy.
Chapter 4: Policy C 7.4. Coordinate with transportation planning, programming and implementation agencies such as Caltrans, Riverside County Transportation Commission, Western Riverside Council of Governments, Coachella Valley Association of Governments, and the cities of Riverside County on various studies relating to freeway, high occupancy	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** This southern extension of ELs along I-15 is a cooperative Project between RCTC and Caltrans. The Build Alternative would enhance regional mobility and offer greater user flexibility of the regional transportation system. Therefore, coordination with other agencies such as Western Riverside Council of Governments, City of Corona, and City of Lake Elsinore has been conducted and will continue to occur to facilitate planning and implementation of

Policy/Goal	No-Build Alternative	Build Alternative
vehicle/high occupancy toll lanes, and transportation corridor planning, construction, and improvement in order to facilitate the planning and implementation of an integrated circulation system.		this proposal to create a more integrated circulation system. The Build Alternative would be consistent with this policy.
Chapter 4: Policy C 20.8. Protect Riverside County residents from transportation generated noise hazards. Increased setbacks, walls, landscaped berms, other sound absorbing barriers, or a combination thereof shall be provided along freeways, expressways, and four-lane highways in order to protect adjacent noise-sensitive land uses from traffic-generated noise impacts. Additionally, noise generators such as commercial, manufacturing, and/or industrial activities shall use these techniques to mitigate exterior noise levels to no more than 60 decibels.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** During construction of the Build Alternative, excessive noise may occur; therefore, the Project would comply with standard specifications and time restrictions as applicable. Additionally, the Project proposes to install noise barriers in order to reduce transportation-related noise impacts on sensitive uses. Therefore, the Build Alternative would be consistent with this policy.
Chapter 4: Policy C 20.15. Implement National Pollutant Discharge Elimination System Best Management Practices relating to construction of	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** The center median of I-15 is largely a native soil “channel” that collects and conveys runoff from the existing roadway to the nearest inlet via a series of graded high points, flow-

Policy/Goal	No-Build Alternative	Build Alternative
roadways to control runoff contamination from affecting the groundwater supply.		through situations, and sump locations. The area surrounding the Project limits is also intersected by several major washes, rivers, and creeks throughout the entire alignment, most notably the Santa Ana River and the Temescal Wash. The newly proposed ELs would be constructed where the center median currently exists and would add retaining walls and noise walls at various locations within the Project limits. Therefore, the Project would cause an increase to net impervious surface area within the Project limits and increase surface runoff. The Project would result in approximately 125 acres of new impervious surfaces, of which 82 acres would be new impervious surface area and 43 acres would be replacement of existing impervious surface area. Prior to construction, a SWPPP required by the NPDES Construction General Permit will be prepared and will include all the necessary temporary pollution and erosion-control measures required during construction to avoid, minimize, and mitigate any adverse effects related to runoff contaminants that would affect groundwater supplies. Additionally, post-construction BMPs will be implemented according to the Caltrans NPDES permit during the PS&E phase. Therefore, the

Policy/Goal	No-Build Alternative	Build Alternative
		Build Alternative would be consistent with this policy.
Chapter 4: Policy C 21.1. Encourage the installation and use of HOV lanes. Such lanes should be continuous, linking major population centers with employment centers. If HOV lanes are used, consider making them available for mixed flow traffic during non-peak periods where warranted and feasible. Consider and implement, where feasible and needed, direct HOV connections between freeways and arterial to freeway exclusive HOV ingress/egress ramps.	**Inconsistent.** As growth and development continues within the region, the implementation of ELs and HOVs would be necessary in order to improve the operation and efficiency of the existing system. However, the No-Build Alternative would not result in any changes to existing conditions. Therefore, the tolled ELs and HOV lanes proposed under the Build Alternative would not be implemented and connections to other ELs within the region to create a more cohesive EL network would not occur. As such, the No-Build Alternative would not be consistent with this policy.	**Consistent.** The proposed tolled ELs would be used by vehicles for a toll and would also serve as HOV lanes for HOV 3+ users for a 100 percent discount for tolls (Caltrans 2024a). These improvements would enhance regional mobility and offer greater user flexibility of the regional transportation system. The Project would also include multiple entrance and exit points to access the tolled EL facility. Access into the tolled ELs would be separated from the general purpose lanes with delineators and would be restricted for a specific length. Therefore, the Build Alternative would be consistent with this policy.
Chapter 4: Policy C 21.2. Consider creating HOV lanes by adding additional travel lanes instead of removing existing mixed-flow traffic lanes.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** The Build Alternative proposes to increase capacity by adding the two tolled ELs in both directions, for a total of four ELs, within the I-15 median to accommodate increasing traffic volumes in southwestern Riverside County (Caltrans 2024a). Therefore, the Build Alternative would be consistent with this policy.
Chapter 4: Policy C 23.1. Implement street and highway projects to provide safe, sustainable, and economical	**Inconsistent.** I-15 is a major truck/ passenger route that begins at its junction with I-5 in San Diego, approximately 10 miles north of the	**Consistent.** I-15 is a major truck/ passenger route that is strategically located and is a vital interstate goods-movement corridor that links Southern

Policy/Goal	No-Build Alternative	Build Alternative
goods movement in areas where large concentrations of truck traffic exist or are anticipated to exist.	United States/Mexico Border, and ends at the United States/Canada Border. As a major truck route, I-15 also is included in the National Network for Federal STAA for oversize trucks. I-15 is also part of the ICES system of routes, which are significant transportation arteries that provide access to major sea or waterway ports, nationwide railway systems, airports, and interstate and intrastate highway systems, thereby serving as intermodal corridors of economic significance (Caltrans 2023c). The No-Build Alternative would not result in any changes to existing conditions. Therefore, continued growth and development would further deteriorate the operational efficiency of I-15, which already experiences traffic volumes that often exceed existing capacity. With increases to congestion and travel time, the Project under the No-Build Alternative would not be able to contribute to the safe, sustainable, and economical movement of goods in an economically feasible way. Therefore, the No-Build Alternative would not be consistent with these policies.	California to the Inland Empire, Las Vegas, the Rocky Mountain states, and Canada. It is a primary link between major economic centers and geographic regions and is classified as a “High Emphasis” and “Gateway” route in the IRRS (Caltrans 2023c). I-15 also is included in the National Network for Federal STAA for oversize trucks and is part of the ICES system of routes. Weekend and holiday recreational traffic on the route is exceptionally high because it serves as a connection to Las Vegas and to the Colorado River area via I-40 (Caltrans 2023c). The Build Alternative would address the current deficiencies by improving travel time reliability and traffic operation and throughput, and maintaining compatibility with other EL networks in the region. By providing additional capacity and options for motorists, the Project would maximize the efficiency of I-15 and address the anticipated growth that would increase the demand, thereby improving the safe, sustainable, and economical movement of goods in an economically feasible way. Therefore, the Build Alternative would be consistent with these policies.
Chapter 4: Policy C 23.7. Identify economically feasible street and highway improvement and maintenance projects that will improve goods movements.		

Policy/Goal	No-Build Alternative	Build Alternative
Chapter 5: Policy OS 3.3. Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** Because the Project would construct ELs within the existing median and retaining walls and sound walls at various locations within the Project limits, the Build Alternative would necessitate drainage system upgrades or construction of new systems adjacent to and as part of the I-15 infrastructure improvements. Additionally, the bridge widening that may affect intersecting water systems such as washes, rivers, and creeks, most notably the Santa Ana River and the Temescal Wash, would require capturing deck flow within a drainage conduit system that would direct flows to a water quality treatment BMP prior to discharging into the receiving water body. Prior to and post-construction, a SWPPP required by the NPDES Construction General Permit will be prepared and will include all the necessary temporary pollution and erosion-control measures required during construction and post-construction BMPs will be implemented according to the Caltrans NPDES permit during the PS&E phase to avoid, minimize, and avoid any adverse effects related to runoff contaminants that would affect water quality. No direct or indirect adverse long-term impacts would result from the Build Alternative. Therefore, the
Chapter 5: Policy OS 3.4. Review proposed projects to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Permits and require them to prepare the necessary Storm Water Pollution Prevention Program (SWPPP).		
Chapter 5: Policy OS 3.5. Integrate water runoff management within planned infrastructure and facilities such as parks, street medians and public landscaped areas, parking lots, streets, etc. where feasible.		

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		Build Alternative would be consistent with these policies.
Chapter 5: Policy OS 6.1. During the development review process, ensure compliance with the Clean Water Act's Section 404 in terms of wetlands mitigation policies and policies concerning fill material in jurisdictional wetlands.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** As discussed in the NES (Caltrans 2023a), riparian/riverine resources within USACE, RWQCB, and CDFW jurisdiction are present within the Project limits and are proposed for removal. Therefore, the Build Alternative would require submission, compliance, and approval with the federal Clean Water Act Section 404 Nationwide Permit. The Build Alternative would be consistent with this policy.
Chapter 5: Policy OS 9.4. Conserve the oak tree resources in the county.		**Consistent.** Tree removal may occur during construction and operations of the Build Alternative. However, the Build Alternative would require compliance with the Riverside County Oak Tree Management Guidelines, which would ensure that impacts on all oak trees be identified and quantified, and that an oak tree mitigation plan be prepared if oak trees are to be lost. Furthermore, the potential impacts on oak trees from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. Therefore, the Build Alternative would be consistent with this policy.

Policy/Goal	No-Build Alternative	Build Alternative
Chapter 5: Policy OS 18.1. Preserve multi-species habitat resources in the County of Riverside through the enforcement of the provisions of applicable MSHCP's and through implementing related Riverside County policies.		**Consistent.** The Project would result in direct and indirect temporary and permanent impacts on MSHCP riparian/riverine resources within the Project limits. Consultation with WRCRCA, CDFW, and USFWS would be required. Furthermore, temporary impacts would be restored upon Project completion and compensatory mitigation would be provided for permanent impacts. Therefore, the Build Alternative would be consistent with this policy.
Chapter 5: Policy OS 19.2. The County of Riverside shall establish a Cultural Resources Program in consultation with Tribes and the professional cultural resources consulting community that, at a minimum, would address each of the following: application of the Cultural Resources Program to projects subject to environmental review; government-to-government consultation; application processing requirements; information database(s); confidentiality of site locations; content and review of technical studies; professional consultant qualifications and requirements; site monitoring;		**Consistent.** The Project would be required to comply with cultural resources programs as established between the County of Riverside and consulting tribes to ensure and implement government-to-government consultation, application-processing requirements, information database(s), confidentiality of site locations, content and review of technical studies, professional consultant qualifications and requirements, site monitoring, examples of preservation and mitigation techniques and methods, proper curation, and the descendant community consultation requirements of local, state and federal law. Therefore, the Build Alternative would be consistent with this policy.

Policy/Goal	No-Build Alternative	Build Alternative
examples of preservation and mitigation techniques and methods; curation and the descendant community consultation requirements of local, state and federal law.		
Chapter 5: Policy OS 19.5. Exercise sensitivity and respect for human remains from both prehistoric and historic time periods and comply with all applicable laws concerning such remains.		**Consistent.** The Project includes Standard Project Measures in case previously unidentified cultural materials are unearthed during construction. This includes that if human remains are discovered, the Project would adhere to Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 to ensure that construction activities are ceased in the area of discovery and notification to the NAHC would be conducted. Therefore, the Build Alternative would be consistent with this policy.
Chapter 5: Policy OS 19.9. Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.		**Consistent.** Under the Build Alternative, a Paleontological Mitigation Plan would be prepared to implement appropriate protocols and procedures that would reduce Project impacts on scientifically important paleontological resources that may be encountered during Project construction. Therefore, the Build Alternative would be consistent with this policy.

Policy/Goal	No-Build Alternative	Build Alternative
Chapter 5: Policy S 2.11. Require grading plans, environmental assessments, engineering and geologic technical reports, irrigation and landscaping plans, including ecological restoration and revegetation plans, as appropriate, in order to assure the adequate demonstration of a project's ability to mitigate the potential impacts of slope and erosion hazards and loss of native vegetation.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** Permanent BMPs recommended for consideration in the SWDR include infiltration area, bioswales, biostrips, infiltration basins, and detention basins. Temporary BMPs recommended for consideration include soil-stabilization protection, sediment-control protection, tracking-control protection, and waste-management protection. For slopes, an erosion-control plan and Geotechnical Report will be prepared as needed under the supervision of the District Landscape Architect. Therefore, the Build Alternative would be consistent with this policy.
Chapter 7: Policy N.1.1. Protect noise-sensitive land uses from high levels of noise by restricting noise-producing land uses from these areas. If the noise-producing land use cannot be relocated, then noise buffers such as setbacks, landscaping, or block walls shall be used.		**Consistent.** Although the overall freeway structure itself would not be widened, there would be a widening of 15 bridges along the freeway to accommodate the use of the center median to construct the proposed ELs, as well as retaining walls and sound walls at various locations within the Project limits.
Chapter 7: Policy N 1.5. Prevent and mitigate the adverse impacts of excessive noise exposure on the residents, employees, visitors, and noise-sensitive uses of Riverside County.		During construction, excessive noise may occur; therefore, the Project would comply with standard specifications and time restrictions as applicable. Additionally, the installation of noise barriers would reduce transportation-

Policy/Goal	No-Build Alternative	Build Alternative
Chapter 7: Policy N 3.5. Require that a noise analysis be conducted by an acoustical specialist for all proposed projects that are noise producers. Include recommendations for design mitigation if the project is to be located either within proximity of a noise-sensitive land use, or land designated for noise sensitive land uses.		related noise impacts on sensitive uses once the Project is in operation. Therefore, the Build Alternative would be consistent with these policies.
Chapter 7: Policy N 9.5. Employ noise mitigation practices when designing all future streets and highways, and when improvements occur along existing highway segments. These mitigation measures will emphasize the establishment of natural buffers or setbacks between the arterial roadways and adjoining noise-sensitive areas.		
Chapter 7: Policy N 17.2. Identify and map noise-sensitive land uses throughout the county.		
Chapter 9: Policy AQ 4.7. To the greatest extent possible, require every project to mitigate any of its anticipated emissions which exceed allowable emissions as	**Inconsistent.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, continued growth and development would further deteriorate the operational	**Consistent.** Under the Build Alternative, the Project would adhere to requirements of SCAQMD, SCAB, U.S. EPA, and ARB and apply minimization measures to reduce the amount of

Policy/Goal	No-Build Alternative	Build Alternative
established by the SCAQMD, MDAQMD, SCAB, the Environmental Protection Agency, and the California Air Resources Board.	efficiency of I-15, which already experiences traffic volumes that often exceed existing capacity. With increases to congestion and travel time, the No-Build Alternative would result in increases in emissions that could contribute to exceedances of allowable emissions. Therefore, the No-Build Alternative would not be consistent with this policy.	anticipated emissions from Project construction and operation. Therefore, the Build Alternative would be consistent with this policy.
Chapter 9: Policy AQ 4.9. Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** Under the Build Alternative, the Project would adhere to requirements of the SCAQMD Rule 403 and NPDES, and apply minimization measures and BMPs to reduce the amount of fugitive dust emitted as a result of Project construction. Therefore, the Build Alternative would be consistent with this policy.
Chapter 9: Policy AQ 20.3. Reduce VMT and GHG emissions by improving circulation network efficiency.	**Inconsistent.** Under the No-Build Alternative, the Project would not construct the needed toll lanes and auxiliary lanes that would improve travel time reliability, traffic operation, and congestion; or maintain I-15's compatibility with the regional EL networks. Currently, traffic volumes often exceed existing highway capacity. As local and regional development continues and traffic demand increases, mobility along the I-15 corridor would	**Inconsistent.** Although the Project would expand and maintain compatibility with other EL networks in the region, under the Build Alternative, the Project would increase the VMT and the operational GHG emissions when compared to both the existing baseline and the No-Build Alternative conditions. Therefore, the Build Alternative would be inconsistent with this policy.

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	further deteriorate, resulting in increased congestion, vehicle delay, safety concerns, vehicle operating costs, and vehicle emissions due to slower operating speeds on I-15. Therefore, this alternative would not support the need for an efficient circulation network or be able to respond to the anticipated growth that would increase the demand on the current deficient highway system and increase VMT and GHG emissions. The No-Build Alternative would not be consistent with this policy.	
Elsinore Area Plan (2021)		
ELAP 1.1: Protect the life and property of residents and maintain the character of the Gavilan Hills through adherence to the Hillside Development and Slope section of the General Plan Land Use Element, the Environmentally Sensitive Lands section of the Multipurpose Open Space Element, and the Slope and Soil Instability Hazards and Fire Hazards sections of the General Plan Safety Element.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** I-15 is an existing freeway corridor and, according to the area plan, the Project limits traverse moderate to low slope as well as very high FHSZs and very high, high, and moderate FHSZs within state and federal responsibility areas. However, the Project would be constructed primarily within the existing ROW areas and according to regulatory design standards to ensure impacts are not adverse. Furthermore, during construction, avoidance, minimization, and mitigation measures would be utilized to reduce any potential fire risks and adverse effects on sensitive areas. Therefore, the

Policy/Goal	No-Build Alternative	Build Alternative
		preservation of life and property of residents, Gavilan Hills, environmentally sensitive lands, soil stability in steeply sloped areas, and fire hazard areas would not be adversely affected or further exacerbated with implementation of the Project. The Build Alternative would be consistent with this policy.
ELAP 2.1: Protect the multipurpose open space attributes of the Temescal Wash through adherence to policies in the Flood and Inundation Hazards section of the General Plan Safety Element; the Non-motorized Transportation section of the Circulation Element; the Multiple Species Habitat Conservation Plans and the Environmentally Sensitive Lands sections of the Multipurpose Open Space Element; and the Open Space, Habitat and Natural Resource Preservation section of the Land Use Element		**Consistent.** As discussed above, the Project would be consistent with applicable goals and policies within the County's General Plan and would be constructed and designed so that important attributes of Temescal Wash and sensitive lands and habitats would not be adversely affected, and operation or implementation of non-motorized transportation within the County or area plan would not be inhibited. Therefore, the Build Alternative would be consistent with this policy.
ELAP 2.2: Encourage the maintenance of Temescal Wash in its natural state, with its ultimate use for recreational and open space purposes such as trails,		**Consistent.** The JSA is between the Santa Ana Mountains to the west and the Gavilan Hills to the east. As previously discussed, flows from these ranges are generally conveyed downstream toward Temescal Wash.

Policy/Goal	No-Build Alternative	Build Alternative
habitat preservation, and groundwater recharge.		However, the JSA is in a highly urbanized area and all of the drainage features within the JSA have been modified to some extent or were built exclusively for flood-control purposes. There are features subject to USACE, RWQCB, and CDFW jurisdiction; therefore, the Project would be required to comply with applicable permit conditions. As previously stated, the Project would not affect any trails within the Temescal Wash area and would not inhibit the implementation of non-motorized transportation within the County or area plan. Therefore, the Build Alternative is consistent with this policy.
ELAP 13.2: Consider the following regional and community wide transportation options when developing transportation improvements in the Elsinore Area Plan: a. Construct a new interchange on Interstate 15 at Horsethief Canyon Road. b. Develop regional transportation facilities and services (such as high-occupancy vehicle lanes and express bus service), which will encourage the use of		**Consistent.** The Project would enhance transit connections between county-wide transit corridors and regional activity centers. Anticipated growth and increase in demand on the current deficient highway system would be addressed by Project improvements, thereby enhancing regional mobility and encouraging the use of public transportation and ridesharing for longer-distance trips. Therefore, the Build Alternative would be consistent with this policy.

Policy/Goal	No-Build Alternative	Build Alternative
public transportation and ridesharing for longer-distance trips.		
Temescal Canyon Area Plan (2021)		
TCAP 1.3: Provide extensive and appropriate landscaping with native trees and vegetation to complement the mission style architectural theme.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** A landscape plan would be prepared to ensure that appropriate landscaping with native trees and vegetation would be consistent with applicable design requirements. Therefore, the Build Alternative is consistent with this policy.
TCAP 1.4: Preserve the existing riparian stream bed in its existing natural state.		**Consistent.** A preliminary assessment identified a total of 0.206 acre of isolated wetlands and riparian habitat potentially subject to RWQCB jurisdiction and a total of 14.693 acres of riparian habitat potentially subject to CDFW jurisdiction . The Project would be subject to Section 401 and 1600 and required to comply with applicable permit conditions to ensure Project effects on riparian stream beds are avoided, minimized, and mitigated. Therefore, the Build Alternative is consistent with this policy.
TCAP 1.5: Preserve existing oak and sycamore trees.		**Consistent.** As previously discussed in regard to Riverside County General Plan Policy OS 9.4, tree removal may occur during construction and operations of the Build Alternative. However, the Build Alternative would ensure that impacts on

Policy/Goal	No-Build Alternative	Build Alternative
		all oak trees be identified and quantified, and that an oak tree mitigation plan be prepared if oak trees are to be lost. Furthermore, the potential impacts on oak trees from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. Therefore, the Build Alternative is consistent with this policy.
TCAP 5.10: Coordinate with the California Department of Transportation on future freeway expansions to ensure compatibility with the open space character of the corridor.		**Consistent.** Coordination is ongoing among the multiple regional and local government agencies involved in the Build Alternative, including Caltrans, to improve freeway improvements along I-15 within the Project limits. Therefore, the Build Alternative would be consistent with this policy.
TCAP 14.1: Protect the scenic highways in the Temescal Canyon Area Plan from change that would diminish the aesthetic value of adjacent properties in accordance with policies in the Scenic Corridors sections of the Land Use, Multipurpose Open Space, and Circulation Elements.		**Consistent.** The Project limits are not within a designated State Scenic Highway. However, a portion of I-15 beginning south of the Project corridor from SR-79 near the San Luis Rey River, extending north to SR-91 in Corona, is identified as eligible for the Scenic Highway Program. The Build Alternative would adhere to all design standards as they relate to the preservation of scenic highways and resources for roadway construction. Furthermore, recommendations from the VIA (Caltrans

Policy/Goal	No-Build Alternative	Build Alternative
		2024c) will be incorporated into the Build Alternative as feasible. Therefore, the Build Alternative would be consistent with this policy.
City of Corona General Plan (2023)		
Goal CE-2: A network of regional roadway facilities to ensure the safe and efficient movement of people and goods from within the City to areas outside its boundaries and that reduce regional cut-through traffic in the City.	**Inconsistent.** I-15 is a major truck/ passenger route and current traffic volumes often exceed existing highway capacity. The No-Build Alternative would not result in any changes to existing conditions, and the ELs and HOVs that are needed to improve the operation and efficiency of the existing system would not be implemented. As local and regional development continues and traffic demand increases, mobility along the I-15 corridor would further deteriorate, resulting in increased congestion, vehicle delay, safety concerns, vehicle operating costs, and vehicle emissions due to slower operating speeds on I-15. Therefore, the No-Build Alternative would not be able to support development of a network of regional roadway facilities to ensure the safe and efficient movement of people and goods within the region. The No-Build Alternative would not be consistent with this goal and policy.	**Consistent.** I-15 is a primary link between major economic centers and geographic regions and is classified as a "High Emphasis" and "Gateway" route in the IRRS (Caltrans 2023c). The Build Alternative would address the current deficiencies by improving travel time reliability and traffic operation and throughput, and maintaining compatibility with other EL networks in the region. The proposed tolled ELs would also serve as HOV lanes for HOV 3+ users for a 100 percent discount for tolls. By providing additional capacity and options for motorists, the Project would maximize the efficiency of I-15 and address projected increases on system demands, thereby improving the safe and sustainable movement of goods. Therefore, the Build Alternative would be consistent with this goal and policy.
Policy CE-2.1: Support RCTC and Caltrans efforts to improve management of the SR-91, I-15, and SR-71. Promote improvements that reduce regional cut-through traffic on City streets and work with RCTC and Caltrans to ensure that accessibility to these facilities is provided to Corona residents.		

Policy/Goal	No-Build Alternative	Build Alternative
Goal CE-6: Facilitate goods movement to support local commerce, while protecting residents and visitors from the negative effects of noise, vibration, and air pollution typically associated with truck operations and rail service.	**Inconsistent.** The No-Build Alternative would not result in any changes to existing conditions, and the ELs and HOVs that are needed to improve the operation and efficiency of the existing system and proposed noise barriers to protect sensitive land uses would not be implemented. Currently, traffic volumes often exceed existing highway capacity. Therefore, the No-Build Alternative would not be able to support the movement of goods in the City and with the projected of growth for the region, the demand on I-15 as a major truck/ passenger route would only worsen. The No-Build Alternative would eventually result in adverse impacts on residents, businesses, truck congestion, and noise or air quality. Therefore, the No-Build Alternative would not be consistent with this goal and policy.	**Consistent.** The Build Alternative would support goods movement within the City by addressing the deficiencies of the existing system. The Project would improve travel time reliability and traffic operation and throughput, and maintain compatibility with other EL networks in the region. Additionally, noise barriers would be implemented as part of the Project. During construction of the Project, standard BMPs and minimization measures would be implemented. Therefore, with the improvement in throughput, the Build Alternative would not result in excessive noise or exceed air pollutant levels. As such, the Build Alternative would be consistent with this goal and policy.
Policy CE-6.3: Develop appropriate treatments along local truck routes to minimize noise and vibration impacts on sensitive land uses that are adjacent to or impacted by the truck route.		
Goal IU-5: Ensure that urban runoff from existing and new development does not degrade the quality of the City's surface waters, groundwater system, and other sensitive environmental areas.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** Prior to and post-construction, a SWPPP required by the NPDES Construction General Permit will be prepared and will include all the necessary temporary pollution and erosion-control measures required during construction; post-construction BMPs will be implemented according to the Caltrans NPDES permit during the PS&E phase to avoid, minimize, and
Policy IU-5.7: Require developers to obtain an NPDES permit prior to moving construction equipment		

Policy/Goal	No-Build Alternative	Build Alternative
onto a development site. The NPDES permit shall be retained at the construction site throughout the construction period, and a copy shall be filed with the City Engineer.		mitigate any adverse effects related to runoff contaminants that would affect water quality. Therefore, the Build Alternative would be consistent with this goal and policy.
Goal PR-6: A comprehensive and quality system of off-road hiking, biking, and equestrian trails that are, to the extent feasible, accessible to people of all ages, and connect residents to natural resources surrounding Corona.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** Under the Build Alternative all proposed improvements would be constructed primarily within existing Caltrans ROW, with the majority of the improvements occurring within the existing I-15 median. The Project would not interfere with any of the existing or proposed trails on a temporary or permanent basis. Some proposed trails cross under I-15 in locations where the Project proposes to widen bridges within the median; however, the Project would maintain access below and would not preclude future implementation of these trails. Therefore, the Build Alternative would be consistent with this goal and policy.
Policy PR-6.8: Promote the safe use of trails and require infrastructure and other public rights-of-way to be designed and developed to accommodate trails in a manner that is safe and compatible with the intended primary use of the rights-of-way or easement, where feasible.		
Goal N-1: Protect residents, visitors, and noise-sensitive land uses from the adverse human health and environmental impacts created by excessive noise levels from transportation sources by requiring proactive mitigation.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, these goals and policies would not be applicable.	**Consistent.** Although the overall freeway structure itself would not be widened, there would be a widening of 15 bridges along the freeway to accommodate the use of the center median to construct the proposed ELs, as well as retaining walls and sound

Policy/Goal	No-Build Alternative	Build Alternative
Policy N-1.2: Minimize the rise of vehicle noise from roadways through route location, sensitive roadway design, regulation of traffic volumes and speeds, and working with Caltrans in highway improvements.		walls at various locations within the Project limits. During construction, excessive noise may occur; therefore, the Project would comply with standard specifications and time restrictions as applicable. Additionally, the installation of noise barriers would reduce transportation-related noise impacts on sensitive uses once the Project is in operation. Therefore, the Build Alternative would be consistent with these goals and policies.
Policy N-1.3: Encourage Caltrans to install and maintain mitigation (e.g., noise walls) and/or landscaping elements along highways that are adjacent to existing residential subdivisions or other noise-sensitive areas in order to reduce adverse noise impacts.		
Goal N-2: Prevent and mitigate the adverse impacts of excessive ambient noise exposure, including vibration on residents, employees, visitors, and “noise sensitive” land uses.		
Policy N-2.7: Require construction activities that occur in close proximity to existing “noise sensitive” uses, including schools, libraries, health care facilities, and residential uses to limit the hours and days of operation in		

Policy/Goal	No-Build Alternative	Build Alternative
accordance with City Noise Ordinance.		
City of Lake Elsinore General Plan (2011)		
Chapter 2 – Goal 6: Optimize the efficiency and safety of the transportation system within the City of Lake Elsinore.	**Inconsistent.** The No-Build Alternative would not result in any changes to existing conditions; therefore, this alternative would not optimize the efficiency and safety of the transportation system along the I-15 corridor. Based on future projections on demand and growth, traffic operations along I-15 would further deteriorate and result in increased congestion, vehicle delays, safety concerns, vehicle operating costs, and vehicle emissions. Therefore, the No-Build Alternative would be inconsistent with this goal.	**Consistent.** Current traffic volumes along the I-15 mainline often exceed existing highway capacity. The Build Alternative would optimize the efficiency and safety of the I-15 transportation system through the implementation of two tolled ELs in the northbound and southbound directions and southbound auxiliary lanes that would improve travel time reliability and traffic operation and throughput, and maintain compatibility with other EL networks in the region. Therefore, the Build Alternative would be consistent with this goal.
Chapter 3 – Goal 1: Continue to coordinate with the Air Quality Management District and the City's Building Department to reduce the amount of fugitive dust that is emitted into the atmosphere from unpaved areas, parking lots, and construction sites.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** Under the Build Alternative, the Project would adhere to requirements of SCAQMD and NPDES and apply minimization measures and BMPs to reduce the amount of fugitive dust that is emitted as a result of Project construction. Therefore, the Build Alternative would be consistent with this goal and policy.
Chapter 3 – Policy 1.1: Continue to implement requirements identified in the National Pollutant		

Policy/Goal	No-Build Alternative	Build Alternative
Discharge Elimination System (NPDES).		
Chapter 4 – Goal 2: Protect sensitive plant and wildlife species residing or occurring within the City.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** The Project would result in direct and indirect temporary and permanent impacts on existing riparian/riverine resources within the Project limits. Consultation with WRCRCA and USFWS would be required. Furthermore, temporary impacts would be restored upon Project completion and compensatory mitigation would be provided for permanent impacts. Therefore, the Build Alternative would be consistent with this goal and policy.
Chapter 4 – Policy 2.1: Biological resources analyses of proposed projects shall include discussion of potential impacts to any plant or wildlife species that is officially listed as threatened or endangered by the United States Fish and Wildlife Service and/or the California Department of Fish and Game but not covered by the MSHCP.		
Chapter 4 – Goal 6: Preserve, protect, and promote the cultural heritage of the City and surrounding region for the education and enjoyment of all City residents and visitors, as well as for the advancement of historical and archeological knowledge.	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this goal and policy would not be applicable.	**Consistent.** Construction of the Project was determined to have moderate sensitivity to encounter buried archaeological deposits. Although initial Section 106 and Assembly Bill 52 consultation letters were mailed in 2019 to Native American tribes who had established an interest in the APE, Caltrans would ensure consultation with appropriate tribes per the NAHC in regard to the updates to the General Plan. Therefore, the Build
Chapter 4 – Policy 6.2: The City shall consult with the appropriate Native American tribes for projects identified under Senate Bill 18		

Policy/Goal	No-Build Alternative	Build Alternative
(Traditional Tribal Cultural Places).		Alternative would be consistent with this goal and policy.
Chapter 4 – Policy 6.3: When significant cultural/archeological sites or artifacts are discovered on a site, coordination with professional archeologists, relevant state and, if applicable, federal agencies, and the appropriate Native American tribes regarding preservation of sites or professional retrieval and preservation of artifacts or by other means of protection, prior to development of the site shall be required. Because ceremonial items and items of cultural patrimony reflect traditional religious beliefs and practices, developers shall waive any and all claims to ownership and agree to return all Native American ceremonial items and items of cultural patrimony that may be found on a project site to the appropriate tribe for treatment. It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be	**Not Applicable.** The No-Build Alternative would not result in any changes to existing conditions. Therefore, this policy would not be applicable.	**Consistent.** There are Standard Project Measures for cultural resources (**CR-1** through **CR-4**) that would require that work be halted in the area of discovery until a qualified archaeologist can assess the nature and significance of the find. Additionally, if human remains are discovered, the Project would adhere to Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98 to ensure that construction activities are ceased in the area of discovery and notification to the NAHC would be conducted. Therefore, the Build Alternative would be consistent with this policy.

Policy/Goal	No-Build Alternative	Build Alternative
disclosed and shall not be governed by public disclosure requirements of the California Public Records Act.		
Alberhill District (2011)		
AH 4.1: The interchange at Lake Street and I-15 shall be improved to meet the future traffic demand and satisfy the minimum level of service required by the City.	**Not Applicable.** No-Build Alternative would not result in any changes to existing conditions. Therefore, these policies would not be applicable.	**Consistent.** The Lake Street and I-15 interchange would be improved to support the Project's ability meet the future traffic demand. Therefore, the Build Alternative would be consistent with this policy.
AH 4.4: Lake Street shall be constructed in accordance with Urban Arterial standards.		**Consistent.** Improvements to Lake Street would be subject to design requirements of the appropriate jurisdiction. Therefore, the Build Alternative would be consistent with this policy.
Northwest Sphere District (2011)		
NWS 3.4: Consider the design and the improvement of access points to I-15.	**Inconsistent.** The I-15 is a major truck/passenger route and current traffic volumes often exceed existing highway capacity. The No-Build Alternative would not result in any changes to existing conditions, and the ELs and HOVs that are needed to improve the operation and efficiency of the existing system would not be implemented, including improvements to the multiple entrance and exit points to access the tolled EL facility listed under Section	**Consistent.** The Build Alternative would address the current deficiencies of the existing system by implementing two tolled ELs in the northbound and southbound directions and southbound auxiliary lanes that would improve travel time reliability and traffic operation and throughput, and maintain compatibility with other EL networks in the region. The proposed tolled ELs would also serve as HOV lanes for HOV 3+ users for a 100 percent discount for tolls. By providing

Policy/Goal	No-Build Alternative	Build Alternative
	1.5.2 of the Community Impact Assessment (Caltrans 2024a). Therefore, the No-Build Alternative would not be able to improve the access points to I-15 and would not be consistent with this policy.	additional capacity and options for motorists, the Project would maximize the efficiency of I-15 and address projected increases on system demands, thereby improving the safe and sustainable movement of goods. Therefore, the Build Alternative would be consistent with this policy.

Source: SCAG 2020, 2022; RCTLMA n.d.; RCRCD 2022; RCHCA 1996; County of Riverside 2018, 2021a, 2021b, 2021c; City of Corona 2023a; City of Lake Elsinore 2011a, 2011b, 2011c; Caltrans 2021a, 2022a, 2022b, 2023a, 2023b, 2023c, 2023d, 2023e, 2023f, 2024a, 2024b, 2024c
ADA = Americans with Disabilities Act; APE = Area of Potential Effect; AQR = Air Quality Report; ASR = Archaeological Survey Report; BMP = best management practice; CDFW = California Department of Fish and Wildlife; CESA = California Endangered Species Act; EL = express lane; U.S. EPA = Environmental Protection Agency; FESA = federal Endangered Species Act; FHSZ = fire hazard severity zone; HPSR = Historic Property Survey Report; ICES = Intermodal Corridors of Economic Significance; IRRS = Interregional Road System; JSA = jurisdictional study area; MDAQMD = Mojave Desert Air Quality Management District; NAHC = Native American Heritage Commission; NADR = Noise Abatement Decision Report; NES = Natural Environment Study; NPDES = National Pollutant Discharge Elimination System; NSR = Noise Study Report; PIR/PER = Paleontological Identification Report/Paleontological Evaluation Report; PS&E = Plans, Specifications and Estimates; RCTC = Riverside County Transportation Commission; RWQCB = Regional Water Quality Control Board; SCAB = South Coast Air Basin; SCAQMD = South Coast Air Quality Management District; STAA = Surface Transportation Assistance Act; SWDR = Storm Water Data Report; SWPPP = Stormwater Pollution Prevention Plan; USACE = United States Army Corps of Engineers; USFWS = United States Fish and Wildlife Service; VIA = Visual Impact Assessment; VMT = vehicle miles traveled; WQAR = Water Quality Assessment Report

No-Build Alternative

Land Use

Under the No-Build Alternative, the Project would not be implemented. Therefore, there would be no adverse impacts on existing and future land uses under the No-Build Alternative. The No-Build Alternative would not improve traffic operations, throughput, and travel times along the corridor.

Consistency with State, Regional, and Local Plans and Programs

Under the No-Build Alternative, the portion of I-15 from SR-74 (Central Avenue) (Post Mile 22.3) in Lake Elsinore to Cajalco Road (Post Mile 36.8) in Corona would remain in its current condition, and no improvements would be implemented. The No-Build Alternative would not meet the purpose and need and was found to be inconsistent with multiple goals and policies of most applicable state, regional, and local plans and programs (refer to Table 2.2.1-3). These include the SCAG 2023 FTIP, SCAG 2024–2050 RTP/SCS, County of Riverside General Plan, City of Corona General Plan, City of Lake Elsinore General Plan, and Northwest Sphere District Plan. Inconsistencies generally resulted from these plans containing goals and policies related to improving the efficiency and safety of the transportation system. Because the No-Build Alternative would not result in any changes to existing conditions of heavy congestion and long travel times along the I-15 corridor, mobility along the I-15 corridor would worsen and result in increased congestion, vehicle delay, safety concerns, vehicle operating costs, and vehicle emissions from slower operating speeds.

2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

Refer to Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*; Section 2.2.10, *Cultural Resources*; Section 2.3.6*, Air Quality;* Section 2.3.8, *Energy;* Section 2.4.5, *Threatened and Endangered Species;* and Section 3.3, *Climate Change*, for measures related to air quality emissions, traffic, cultural resources, HCP compliance, and GHG emissions. Standard Project Measure **TR-1** would be tailored to accommodate major traffic movements during construction and to avoid construction impacts on surrounding developments. Standard Project Measures **CR-1** through **CR-4** relate to cultural discoveries. Avoidance and Minimization Measure **TE-4** requires compliance with the SKR HCP. Mitigation Measures **GHG-1** through **GHG-4** and **GHG-11**, Standard Project Measure **EN-1**, and Standard Project Measure **AQ-4** are expected to reduce construction GHG emissions and potential climate change impacts from the Project. Mitigation Measures **GHG-5** through **GHG-10** would reduce GHG emissions and potential climate change impacts from operation and maintenance of the Project.

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2.2.2 Parks and Recreational Facilities

2.2.2.1 Regulatory Setting

The Park Preservation Act (California Public Resources Code [PRC] Sections 5400–5409) prohibits local and state agencies from acquiring any property which is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

2.2.2.2 Affected Environment

The following discussion is from the *Community Impact Assessment* completed for the Project (Caltrans 2024) and from Appendix A, *Section 4(f)*, in this EIR/EA.

A park qualifies for protection under Section 4(f) if (1) the property is publicly owned, (2) the park is open to the general public, (3) it is being used for outdoor recreation, and (4) it is considered significant by the authority with jurisdiction. For planned and programmed projects, according to the Section 4(f) Policy Paper (FHWA 2012), for a project to be considered a Section 4(f) property, the public agency that owns the property must have formally designated the property and determined it to be significant for park, recreational, or wildlife and waterfowl refuge purposes.

The study area is defined as the Project footprint plus a 0.5-mile buffer. As shown in Table 2.2.2-1 and on Figure 2.2.2-1, there are seven existing parks, three existing trails, and 19 planned trails within the study area. Of these, 10 properties within the 0.5-mile buffer study area qualify as Section 4(f) resources and are protected under the Park Preservation Act, including seven parks and three planned trails. The Section 4(f) analysis also identified 21 public/quasi-public (PQP)/conservation/mitigation lands under the Western Riverside County Multiple Species Habitat Conservation Plan subject to Section 4(f) within the 0.5-mile buffer. PQP lands are properties within western Riverside County that are owned, managed, or maintained by public agencies for the purposes of conservation. These properties are not publicly available for recreational purposes and therefore are not discussed further in this section.

Table 2.2.2-1. Parks and Recreational Facilities within the Study Area

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
Existing Parks and Trails							
1	Yarborough Park	419 N. Poe Street, Lake Elsinore, CA 92530	City of Lake Elsinore	This 2.46-acre park is at 419 N. Poe Street. Recreational amenities include passive play areas, picnic facilities, restroom, barbeques, naturally shaded areas, splash pad, and a playground.	Yes	Yes	Within 0.50 mile
12	Cleveland National Forest	Riverside County	U.S. Department of Agriculture, Forest Service	90,749.00-acre national forest with camping and picnic areas, open space, and trails.	Yes	Yes	Within 0.50 mile
16	Sycamore Creek Sports Park	24880 Coral Canyon Road, Corona, CA 92883	County of Riverside	This 9.03-acre park includes a baseball field, barbecue area, picnic area, passive open space, walking trail, and tot lot.	Yes	Yes	Within 0.20 mile
26	El Cerrito Sports Park	7500 El Cerrito Road, Corona, CA 92881	City of Corona	This 26.30-acre park includes a barbecue area, basketball court, covered shelter, playground, passive open space, picnic area, soccer field, softball field, and tennis court.	Yes	Yes	Adjacent
27	Chase Park	1415 E. Chase Drive, Corona, CA 92881	City of Corona	Large field.	Yes	Yes	Within 0.50 mile

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
28	Citrus Community Park	1250 Santana Way, Corona, CA 92881	City of Corona	Park includes public green space with two playgrounds, a splash pad, picnic tables, and grassy areas for sports.	Yes	Yes	Within 0.50 mile
29	Rimpau Park	1156 East Ontario Avenue, Corona, CA 92881	City of Corona	Park includes barbecue areas, covered shelter, picnic area, playground, and tot lot.	Yes	Yes	Within 0.50 mile
2	Lake Elsinore Lake, River, Levee Regional Trail	500 Diamond Drive, Lake Elsinore, CA 92595	City of Lake Elsinore	The trailhead is at 500 Diamond Drive and the trail measures approximately 7 miles.	No	No	Within 0.10 mile
22	Multi-Use Path #2	Cajalco Road & Temescal Canyon Road, Corona, CA 92881	City of Corona	This Type 1 multiuse pathway begins just south of the Cajalco Road and Temescal Canyon Road intersection and ends at the Weirick Road and Temescal Canyon Road intersection. This pathway measures approximately 2.37 miles.	No	No	Within 0.20 mile
24	Multi-Use Path #1	Eagle Glen Parkway & Bedford Canyon Road, Corona, CA 92883	City of Corona	This Type 1 multiuse pathway has two trailheads at the Eagle Glen Parkway and Bedford Canyon Road intersection, and the Eagle Glen Parkway and	No	No	Within 0.20 mile

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
				Clementine Way intersection, and measures approximately 2.37 miles. The two trail segments connect along Hudson House Drive and end just east of I-15.			
Planned Trails							
7	Planned Butterfield Trail	County of Riverside, City of Corona, and City of Lake Elsinore		The 66.8-mile historic Southern Emigrant Trail/ Butterfield Overland Trail are historical corridors without existing current trails. Through Riverside County, both proposed trails generally follow the same alignment.	Yes	No	Adjacent
23	Bedford Wash Planned Trail	City of Corona		This is a planned multiuse trail for the City of Corona.	Yes	No	Adjacent
25	Potential Trail Connection	City of Corona		This is a potential trail connection for the City of Corona.	Yes	No	Adjacent
3	Community Trail #8	City of Lake Elsinore		This is a proposed trail for the City of Lake Elsinore, surrounding areas and nearby regional areas.	No	No	Within 0.10 mile
4	Regional Trail #4	City of Lake Elsinore		This is a proposed regional trail for the City of Lake Elsinore, surrounding areas and nearby regional	No	No	Adjacent

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
				areas. The trail intersects with I-15.			
5	Regional Trail #3	County of Riverside		This planned regional trail begins at the intersection of Nichols Road and El Toro Road and travels northeast along El Toro Road and southwest along Nichols Road.	No	No	Within 0.50 mile
6	Community Trail #7	County of Riverside		This planned community trail will begin at the Hilltop Drive and Big Canyon Drive intersection, just north of I-15, and travel north through the canyons.	No	No	Within 0.10 mile
8	Community Trail #6	County of Riverside		This planned community trail will begin at the Concordia Ranch Road and Temescal Canyon Road intersection, just north of I-15, and will travel eastward along Concordia Road and I-15.	No	No	Adjacent
9	Design Guidelines Trail #1	County of Riverside		This planned design guideline trail begins at the Bedford Motor Way and Knabe Road intersection and travels south along Knabe Road. This trail will cross under I-15 to the east at the McBride	No	No	Adjacent

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
				Canyon Creek and split into two segments that will travel north toward Dos Lagos Golf Club and south toward the Elsinore Area Plan Boundary.			
10	Community Trail #5	County of Riverside		This planned community trail will begin at the De Palma Road and Glen Eden Road intersection, which is just south of I-15, and travel southeast along De Palma Road and south on Horsethief Canyon Road. A portion of this trail will cross under I-15 along the wash to connect to the Southern Emigrant Trail/ Butterfield Overland Trail.	No	No	Adjacent
11	Design Guidelines Trail # 3	County of Riverside		This planned design guidelines trail begins at the De Palma Road and Glen Eden Road intersection, which is just south of I-15, and travels south through the hillsides to Mountain Road where the trail loops back up toward I-15 and ends at De Palma Road.	No	No	Within 0.10 mile
13	Regional Trail #2	County of Riverside		This planned regional trail begins just east of I-15 at	No	No	Adjacent

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
				the Temescal Canyon Road and Indian Truck Trail intersection then travels under I-15 westward along Indian Truck Trail and ends at Santiago Canyon Road.			
14	Community Trail #3	County of Riverside		This planned community trail begins just east of I-15 where Mayhew Street intersects with the Mayhew Wash. This trail travels under I-15 westward and south along Campbell Ranch Road until the Campbell Ranch Road and Indian Truck Trail intersection.	No	No	Adjacent
15	Design Guidelines Trail #2	County of Riverside		This planned design guideline trail begins just south of the Temescal Canyon Road and Campbell Ranch Road intersection, near Coral Canyon Park, and travels south.	No	No	Within 0.10 mile
17	Community Trail #4	County of Riverside		This planned design guideline trail begins just south of the Terramore Drive and Temescal Canyon Road Intersection and follows along	No	No	Within 0.20 mile

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
				Terramore Drive northward.			
18	Community Trail #1	County of Riverside		The majority of this planned community trail is observed to be west of I-15 from approximately Weirick Road and Knabe Road and travels south to Lawson Road and Temescal Canyon Road where it crosses under I-15 and follows Coldwater Wash east of I-15. This planned community trail intersects the historic Southern Emigrant Trail/Butterfield Overland Trail at the Lawson Road and Temescal Canyon Road intersection.	No	No	Adjacent
19	Regional Trail #1	County of Riverside and City of Corona		This planned regional trail begins east of Leroy Road and Temescal Wash and follows the eastern bank of Temescal Wash northward.	No	No	Within 0.40 mile

Figure 2.2.2-1 Identification Number	Recreational Resource	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Qualify Under Park Preservation Act?	Distance to Project
20	Community Trail #2	County of Riverside and City of Corona		This planned community trail will begin at the Leroy Road and Temescal Canyon Road intersection and travel east along Leroy Road ending just east of Temescal Wash.	No	No	Within 0.10 mile
21	Combination Trail	City of Corona		This planned Combination Trail is a planned regional trail/Class I bike path from the E. Ontario Avenue and State Street intersection south to the Weirick Road and Temescal Canyon Road intersection. This trail also parallels the historic Southern Emigrant Trail/ Butterfield Overland Trail.	No	No	Within 0.20 mile

Source: City of Corona n.d., 2021, 2022; Riverside County Office of Economic Development 2024; County of Riverside 2021; Riverside County Regional Park and Open-Space District 2018; City of Lake Elsinore 2011, 2019, n.d.
I- = Interstate

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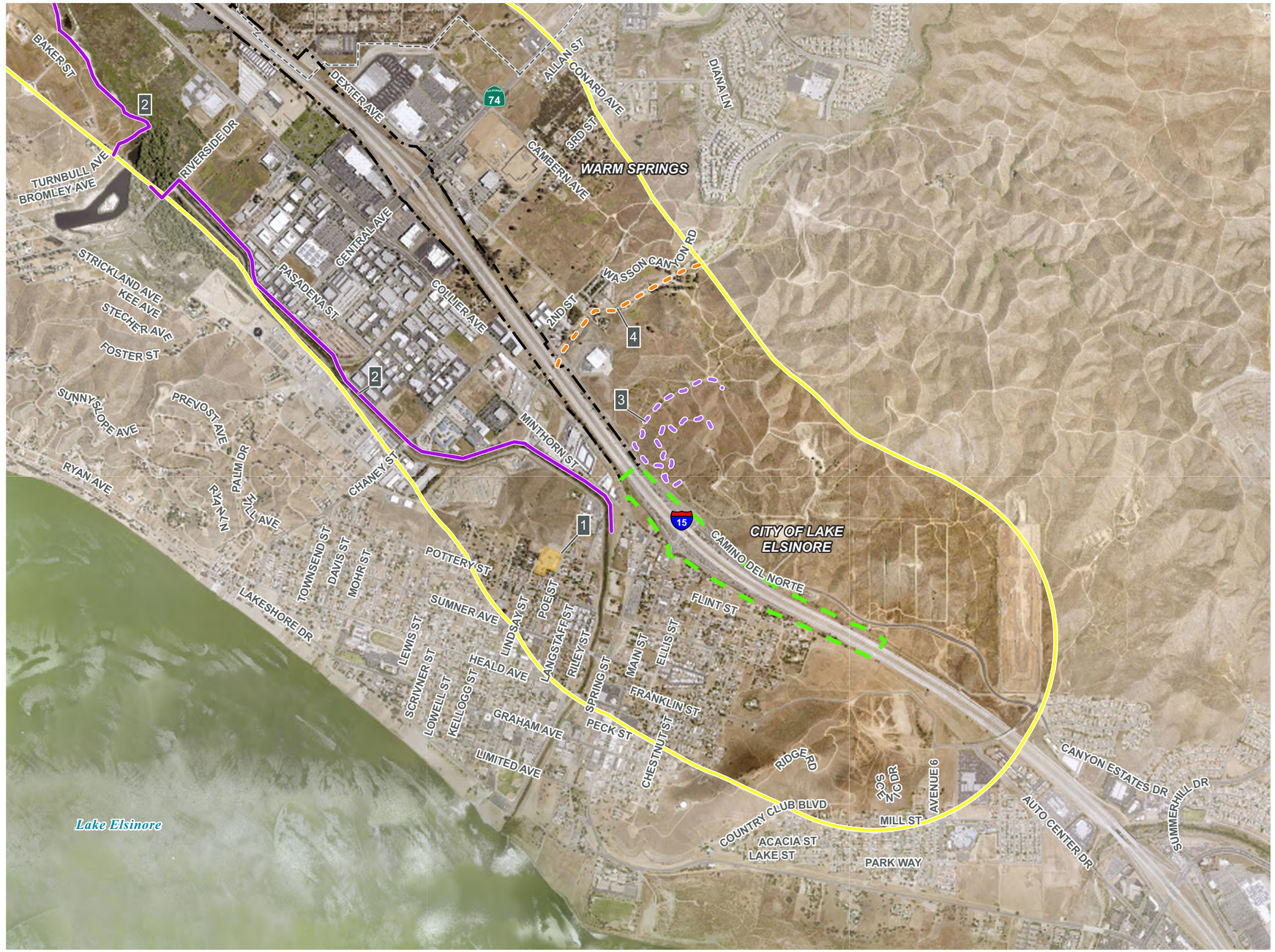

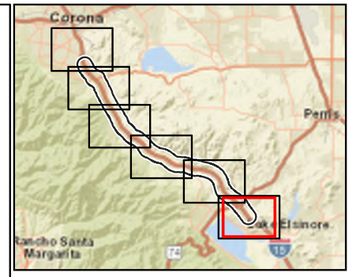

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Existing Parks
- City of Lake Elsinore

Planned Trails
- City of Lake Elsinore
- Riverside County

Existing Trails
- City of Lake Elsinore

N

0 0.2 0.4 Miles

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Figure 2.2.2-1 (Sheet 1 of 6)
Public Parks and Recreational Facilities within the Study Area

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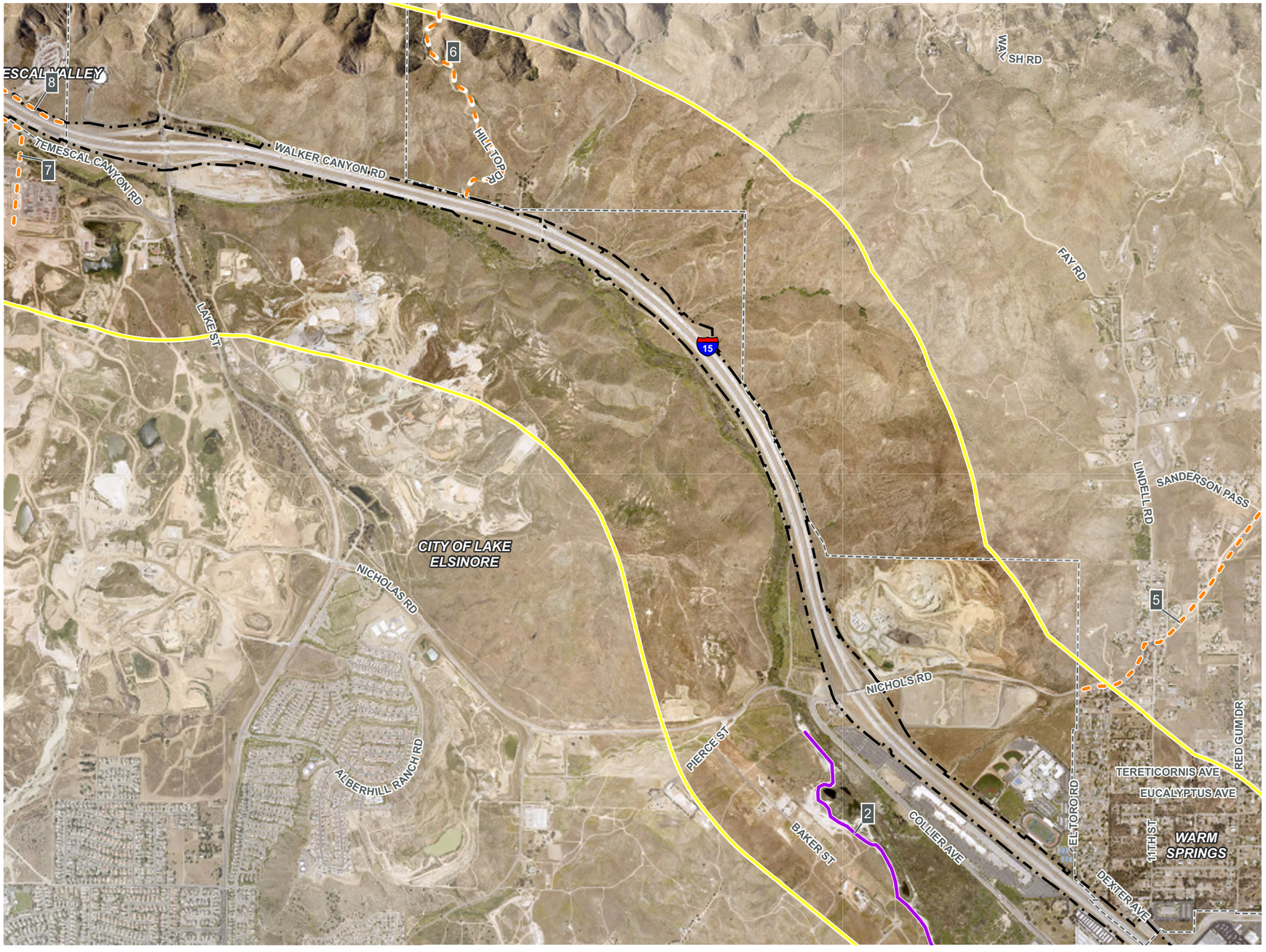

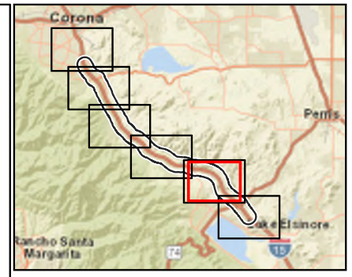

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Planned Trails
- Riverside County

Existing Trails
- City of Lake Elsinore

N

0 0.2 0.4 Miles

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Figure 2.2.2-1 (Sheet 2 of 6)
Public Parks and Recreational Facilities within the Study Area

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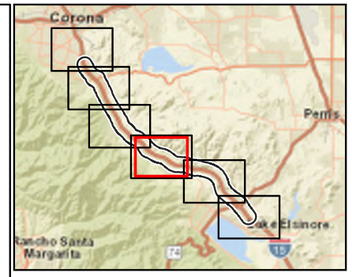

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Existing Parks
- US Forest Service

Planned Trails
- Riverside County

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.2-1 (Sheet 3 of 6)
Public Parks and Recreational Facilities within the Study Area

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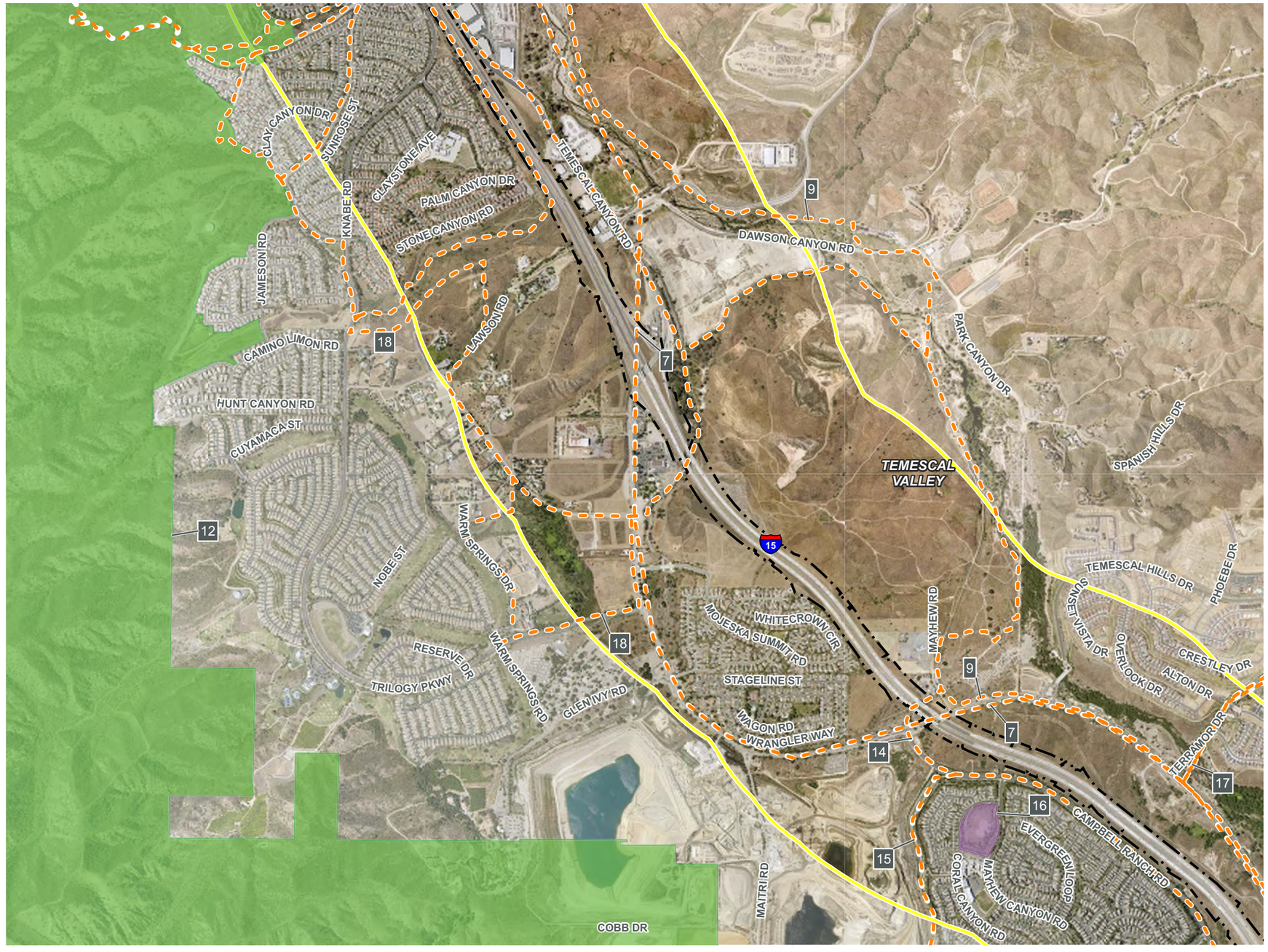

Figure 2.2.2-1 (Sheet 4 of 6)
Public Parks and Recreational Facilities within the Study Area

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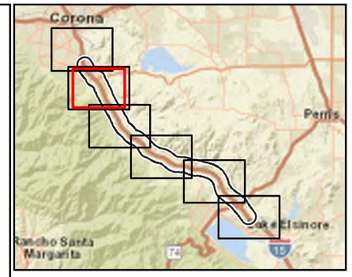

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Existing Parks
- US Forest Service

Planned Trails
- City of Corona
- Riverside County

Existing Trail
- City of Corona

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.2-1 (Sheet 5 of 6)
Public Parks and Recreational Facilities within the Study Area

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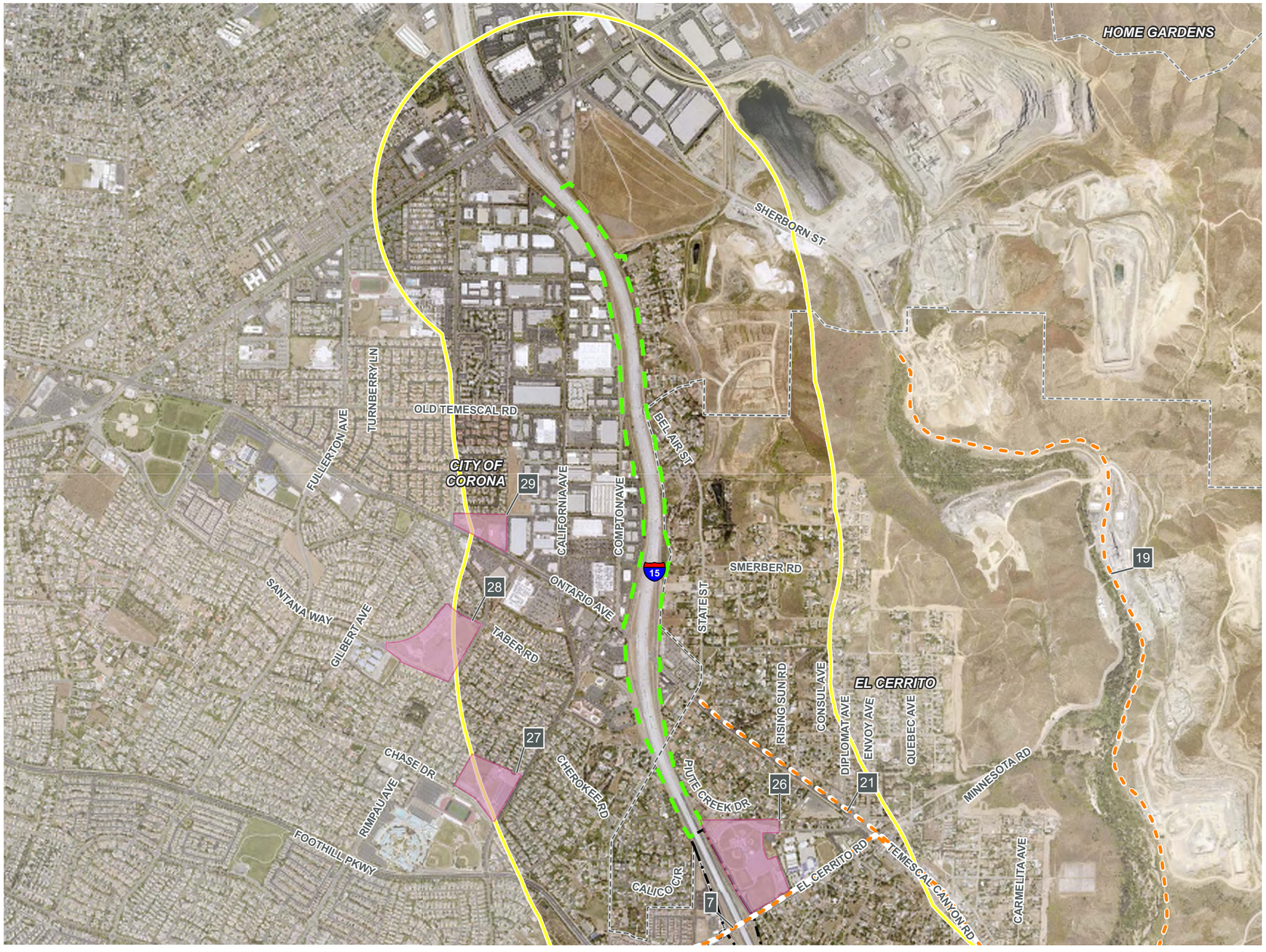

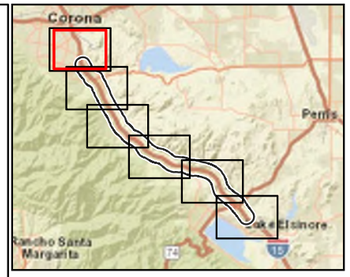

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Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Existing Parks
- City of Corona

Planned Trails
- Riverside County

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.2-1 (Sheet 6 of 6)
Public Parks and Recreational Facilities within the Study Area

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2.2.2.3 Environmental Consequences

Build Alternative

Temporary Impacts

As identified in Table 2.2.2-1, there are 10 existing parks and recreational facilities within the study area. With the exception of El Cerrito Sports Park, these resources are not expected to experience temporary noise, air, or visual construction-related effects because of their distance from the Project.

El Cerrito Sports Park is adjacent to and shares a boundary with the Project limits of disturbance. The western boundary of El Cerrito Sport Park that runs parallel to Interstate 15 is bordered by vegetation and is not an access point. The primary park entrances are along the southern boundary of the park. The El Cerrito Sports Park central parking lot is accessed via El Cerrito Road. A second parking lot can be found at the northern end of the sports park and is accessed via Rudell Road. Construction of the Project would occur primarily within the existing right-of-way; therefore, access to El Cerrito Sports Park would not be inhibited or blocked off as a result of construction. Direct temporary impacts related to noise and air quality associated with construction activities from vehicle and equipment operations and earth-disturbing activities are not anticipated; however, Standard Project Measures **N-1** and **AQ-1** through **AQ-4** would reduce construction-related impacts, if they were to occur, as they relate to noise and air quality.

Temporary indirect impacts such as traffic delays are anticipated during construction, which may result in longer travel times to existing parks and trails. However, construction activities would not require closure, alteration, or other uses of the recreational facilities listed in Table 2.2.2-1. Construction activities would primarily take place within the existing right-of-way and would not inhibit, limit, or obstruct access to the existing resources that intersect with the Project limits. Nevertheless, during the Plans, Specifications and Estimates phase, a detailed Transportation Management Plan (TMP) (Standard Project Measure **TR-1**) would be developed for implementation prior to and during construction. The TMP will be a specialized program tailored to accommodate major traffic movements during construction and to minimize or avoid construction impacts on recreational facilities.

As identified in Table 2.2.2-1, there are three planned trails that intersect the Project limits and qualify as Section 4(f) resources: the Bedford Canyon Wash Trail, the Potential Trail Connection, and the Butterfield Trail Historic Alignment. None of these trails are anticipated to be constructed or in operation prior to construction of the Build Alternative; therefore, no temporary adverse effects on these resources are anticipated, as these facilities would not be in use during construction of the Project.

The Project is not anticipated to result in temporary construction related impacts to parks or trails within the study area; however, with implementation of the TMP (see Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for full measure text), temporary indirect impacts related to traffic delays would be further minimized.

Permanent Impacts

The Build Alternative would not require partial or full acquisition of property outside of the right-of-way. Therefore, the Build Alternative would not result in permanent impacts on existing parks and recreational facilities listed in Table 2.2.2-1. Additionally, operation of the completed Project is not anticipated to have any impact on these parks or recreational facilities.

Of the 19 planned trails listed in Table 2.2.2-1, three were identified as qualifying Section 4(f) resources and would be within the Project footprint: the Bedford Canyon Wash Trail, the Potential Trail Connection, and the Butterfield Trail Historic Alignment. Each of these three trails are still in the early stages of the planning process and would not be implemented prior to construction of the Build Alternative. Additionally, construction of the Build Alternative would not preclude future development of these trails. Therefore, the Build Alternative would not result in any permanent impacts on planned trails.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no existing or planned parks or recreational facilities in the study area would be temporarily affected, and no direct or indirect adverse temporary or permanent impacts on recreational resources would occur.

Section 4(f) Properties

There are parks and recreational facilities in the Project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966. However, this Project would not "use" those facilities as defined by Section 4(f). Please see Appendix A under the heading *Resources Evaluated Relative to the Requirements of Section 4(f)* for additional details.

Access would be maintained to the Section 4(f) resources, and the Project would not require a right-of-way acquisition at any Section 4(f) property. Therefore, the Project is not anticipated to result in permanent adverse impacts on Section 4(f) resources.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

Refer to Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, Section 2.3.7, *Noise*, and Section 2.3.6, *Air Quality*, for the detailed measures related to traffic, noise, and air quality emissions. Standard Project Measure **TR-1** (TMP) would be developed for implementation prior to and during construction. The TMP will be a specialized program tailored to accommodate major traffic movements during construction and to minimize or avoid construction impacts on recreational facilities. Additionally, the inclusion of Standard Project Measures **N-1** and **AQ-1** through **AQ-4** will minimize and/or avoid impacts related to noise and air quality during construction.

2.2.3 Growth

2.2.3.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with the National Environmental Policy Act (NEPA) of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 Code of Federal Regulations [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act (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 …"

2.2.3.2 Affected Environment

The following discussion is based on the information provided in the *Community Impact Assessment* (CIA) (Caltrans 2024) and follows the First Cut Screening guidelines provided in Caltrans' *Guidance for Preparers of Growth-Related, Indirect Impact Analyses* (Caltrans 2006).

Many factors influence land use and development in an area, including planning and zoning, economic conditions, population and economic growth, infrastructure, availability of developed land, and physical and environmental barriers. The community impact study area is defined as communities within 0.5 mile of the Project limits and Census Tracts adjacent to the Project limits. The Project limits are defined as the Project footprint and the area of direct impacts where construction and operation activities under the Project have the potential to directly affect surrounding communities.

This section also considers data and growth trends in the regional study area, defined as the Southern California Association of Governments (SCAG) region. This region encompasses six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities in an area covering more than 38,000 square miles. The SCAG region is anticipated to add 2.1 million residents, 1.6 million households, and 1.3 million jobs over the Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) Plan 2024–2050 planning horizon (SCAG 2024), which can be found here: https://scag.ca.gov/connect-socal. In Table 2.2.3-1, 2050 SCAG projections were compared with the data provided in the 2019 local profiles for the cities (SCAG 2019a, 2019b) and the County of Riverside (County) (SCAG 2019c), which have the most recent socioeconomic data for population, household, and employment estimates. The two datasets were compared to evaluate the growth forecasts for the Cities of Corona and Lake Elsinore, and the County.

Table 2.2.3-1. Projected City and County Average Growth Rate Percentages (2019–2050)

Jurisdiction	2019[a]	2050	Change between 2019 and 2050 (%)
County of Riverside			
Population	2,386,000	2,992,000	25.4
Household	730,000	1,062,000	45.5
Employment	762,100[b]	1,185,000	55.5
Jurisdiction	**2019[a]**	**2045[c]**	**Change between 2019 and 2045 (%)**
City of Corona			
Population	168,574	185,100	9.8
Household	47,698	52,900	10.9
Employment	79,738 [b]	89,800	12.6
City of Lake Elsinore			
Population	63,400	111,600	76.0
Household	17,400	29,300	68.4
Employment	14,700[b]	22,700	54.4

Source: SCAG 2024, 2019a, 2019b, 2019c

a Numerical data from the SCAG 2024-2050 RTP/SCS was rounded to the nearest hundred. Therefore, numerical data from 2019 local profiles were rounded to the nearest hundred.

b The 2019 local profiles only have data for up to the year 2018; however, the differences in the rates when compared with 2019 are not anticipated to be significant.

c Local growth projections for the City of Corona and the City of Elsinore are not available in the recently adopted SCAG 2024–2050 RTP/SCS; however, the difference in rates when compared with 2050 are not anticipated to be significant.

As shown in Table 2.2.3-1, growth is projected to increase drastically in the City of Lake Elsinore and the County, while the City of Corona projections exhibit moderate increases. The high growth rate projections may be attributed to the large amount of land area at lower cost that is available for development in the City of Lake Elsinore and the County. According to the RTP/SCS 2024–2050 (SCAG 2024), from 1990 to 2020, an additional 4.2 million people called Southern California home. The County had the largest share of population growth among the six counties in the SCAG region during this period, adding 1.2 million new residents (nearly 30 percent of the region's increase in population). The expansion in the County is attributed to new communities that emerged during the housing boom (2002–2006) and availability of lower cost land for development (SCAG 2020). The City of Lake Elsinore has also been identified as one of the fastest growing cities in California. Meanwhile, the City of Corona exhibited a 64.2-percent growth from 1990 to 2000, which was among the highest in the County, and the City of Corona is relatively developed and urbanized (City of Corona 2013). As described in Section 2.2.1, *Existing and Future Land Use*, within the community impact study area there are vacant lands along I-15 and mostly within the City of Lake Elsinore. This available undeveloped land in the community impact study area provides opportunities for large-scale new development to occur.

The following sections describe growth-related policies and plans from jurisdictions along the I-15 corridor.

County of Riverside

The *County of Riverside General Plan* includes goals and policies that guide land use and development, including the locations of uses, population, housing, and job growth. The County states that population growth is to be expected but a focus will be put on using the land resources efficiently. Efforts will be coordinated with cities and the County to best accommodate population growth (County of Riverside 2021). The *County of Riverside General Plan* includes Policy C 1.5, which requires that the County evaluate the planned circulation system as needed to enhance the arterial highway network to respond to anticipated growth and mobility needs (County of Riverside 2021).

City of Corona

The *City of Corona General Plan 2020–2040* includes Goal LU-4, which guides the City of Corona to provide strategic growth. Goal LU-4 is intended to preserve viable residential neighborhoods and commercial and industrial districts, targets new development to parcels that are environmentally suitable and can be supported by infrastructure and services, and reuses appropriate properties to enhance their economic vitality and community livability (City of Corona 2023). Under this goal, Policies LU-4.1 through LU-4.5 provide guidance for additional growth management strategies.

City of Lake Elsinore

The *Lake Elsinore General Plan* includes Goal 7, which is a growth management goal to maintain orderly, efficient patterns of growth that enhance the quality of life for the residents of Lake Elsinore (City of Lake Elsinore 2011). The growth management goal ensures that public services do not lag behind population growth and the concomitant demands created by a larger population. Included in Goal 7 is Policy 7.1, which encourages mixed-use developments to reduce public service costs and environmental impacts through compatible land use relationships, and efficient circulation and open space systems (City of Lake Elsinore 2011).

2.2.3.3 Environmental Consequences

This section discusses whether the Project would result in unforeseen direct, indirect, or secondary growth or would otherwise influence growth. Direct growth-inducing impacts are permanent impacts generally associated with the provision of urban services and the extension of infrastructure to an undeveloped area. The extension of services and facilities to an individual site can reduce development constraints for other nearby areas and can induce further development in the vicinity. Indirect or secondary growth-inducing impacts consist of growth in the area by additional demand for housing, employment, and goods and services associated with population increases caused by, or attached to, new development.

A growth-related impacts analysis was conducted for the Project using the first-cut screening analysis and the *Guidance for Preparers of Growth-Related, Indirect Impact Analyses* (Caltrans 2006). The guidance was developed by an interagency work group that included representatives from Caltrans, the Federal Highway Administration, and the U.S. Environmental Protection Agency (U.S. EPA). The analysis of growth-related impacts was developed by applying the following steps from the first-cut screening analysis:

- How, if at all, does the Project potentially change accessibility?
- How, if at all, do the Project type, Project location, and growth pressure potentially influence growth?
- Is Project-related growth reasonably foreseeable as defined in NEPA? (Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable as opposed to remote and speculative.)
- If there is Project-related growth, how, if at all, will that affect resources of concern?

The potential for the Project to influence growth based on these considerations is discussed below.

Build Alternative

Temporary Impacts

Any potential growth-related impacts of the Build Alternative would be permanent. Therefore, there would be no temporary growth-inducing impacts as a result of the Build Alternative.

Permanent Impacts

The potential growth-related impacts of the Build Alternative were considered in the context of the first-cut screening analysis approach to assess the likely growth potential of the Project. Table 2.2.3-2 summarizes the potential for the Build Alternative to influence growth.

Table 2.2.3-2. Summary of First-Cut Screening Analysis

Screening Criteria	Project Consideration
How, if at all, does the Project potentially change accessibility?	The Build Alternative would maximize mobility in the region by improving traffic operations, throughput, and travel times along the I-15 mainline. It would also expand compatibility and connectivity with other express lane networks in the region. Although the Build Alternative would result in changes to an existing transportation system, the Build Alternative would not significantly change accessibility in the area, as the area is already serviced by the existing freeway and

Screening Criteria	Project Consideration
	would not add access to new areas. Further, the construction and implementation of the Project would occur primarily within Caltrans right-of-way and within the existing I-15 median. The main components of the Build Alternative would include two tolled express lanes in the northbound and southbound directions, for a total of four tolled express lanes; southbound auxiliary lanes; and widening of 15 bridges. Other standard associated improvements include noise barriers, retaining walls, drainage improvements, and signage. No new access points or connections would be implemented. Therefore, the Project under the Build Alternative would not encourage unanticipated growth in the area, as it would not result in new access to areas that previously had no access.
How, if at all, do the Project type, Project location, and growth pressure potentially influence growth?	Based on the data available (SCAG 2019a, 2019b, 2019c, 2024), it is anticipated that the population and employment growth within the cities and County would increase regardless of Project implementation. The Project improvements to I-15 would not be a catalyst for population growth or employment. The Build Alternative would not affect economic opportunities, employment, or housing availability, which directly affect local and regional development growth. The purpose of the Project is to improve traffic operations, throughput, and travel times along the I-15 mainline; as well as to connect to other express lane networks as described in Chapter 1 to accommodate current and future year (2045) traffic volumes along the I-15 corridor resulting from projected growth in the area.
Is Project-related growth reasonably foreseeable as defined in NEPA? (Under NEPA, indirect impacts need only be evaluated if they are reasonably foreseeable as opposed to remote and speculative.)	Growth in the Cities of Corona and Lake Elsinore and the County are expected to occur with or without the Project. Due to the nature of improvements envisioned as discussed in Section 1.4, and previous responses to the First-Cut Screening Analysis, the Build Alternative would not influence the amount, timing, or location of growth in the community impact study area. Therefore, no growth-related impacts are anticipated as a result of the Build Alternative.
If there is Project-related growth, how, if at all, will that affect resources of concern?	The Build Alternative would not catalyze population, housing, or employment growth. The purpose of the Project is to improve traffic operations, throughput, and travel times along the I-15 mainline; continue compatibility and connectivity with other express lane

Screening Criteria	Project Consideration
	networks in the region; and accommodate current and future year (2050) traffic volumes along the I-15 corridor. Therefore, Project-related growth is not reasonably foreseeable and effects on resources of concern would not occur.

While the Build Alternative would generate additional short-term employment opportunities during construction of the Project, the majority of these jobs are expected to be filled by residents of the cities and surrounding communities. Therefore, substantial population growth impacts associated with Project construction is not anticipated.

The Build Alternative would not establish new homes, result in permanent employment opportunities, or provide any new access into areas that previously had no access. Furthermore, the Build Alternative would result in transportation facility improvements that would improve mobility and transportation options. Therefore, operation of the Build Alternative would result in changes in mobility for the existing transportation system in this area. This change in mobility has already been identified in SCAG's 2024–2050 RTP/SCS under project number 3160001-RIV170901. The Build Alternative directly supports the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and throughput. The Project would connect to an existing tolled express lane facility, and operation of the Project would not result in additional growth beyond that already identified in SCAG's 2024–2050 RTP/SCS.

While the Build Alternative would include the construction of additional transportation infrastructure (i.e., noise barriers, retaining walls, and bridge widening), the construction activity would be contained primarily within Caltrans right-of-way as well as within the existing median of I-15. There is no lack of existing infrastructure in the community impact study area that would serve as an obstacle to growth.

Projected population growth would occur in the community impact study area with or without the infrastructure improvements associated with the Build Alternative. In addition, potential indirect growth has already been captured at the local and regional level through the inclusion of the Project in SCAG's 2024 RTP/SCS list of projects. Therefore, the Project would not result in any permanent direct or indirect substantial adverse effects related to growth.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Existing traffic volumes often exceed highway capacity. As no associated improvements would occur under the No-Build Alternative, there would be no Project-related growth impacts. However, considering projected growth and development would occur within the region (see Table 2.2.3-1), the congestion and commuter delays along I-15 would continue to increase, thereby reducing local and regional mobility for the motoring public. Therefore,

the No-Build Alternative would not address or alleviate the existing and forecasted operational and capacity issues of the I-15 mainline and would not satisfy the Project's purpose and need.

2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are identified as there would be no adverse effects related to growth with implementation or operation of the Build Alternative.

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2.2.4 Community Character and Cohesion

2.2.4.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). The Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under the California Environmental Quality Act (CEQA), an economic or social change by itself is not to be considered a significant effect on the environment. However, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.2.4.2 Affected Environment

This section is based on information provided in the *Community Impact Assessment* (CIA) (Caltrans 2024). The Project area is the area that would be physically affected by primary or direct impacts during the construction period. The community impact study area is defined as the Project footprint and a 0.5-mile buffer. The community impact study area overlaps with Census Tracts 414.13, 414.14, 414.15, 416.01, 416.02, 418.09, 418.10, 418.13, 419.09, 419.10, 419.14, 419.15, 420.07, 427.48, 427.49, 427.50, 430.01, 430.05, 430.06, 430.07, 479.01, 479.02, and 481.00 (see Figure 2.2.4-1).

These Census Tracts overlap with the incorporated Cities of Lake Elsinore and Corona and an unincorporated portion of Riverside County (County), which includes the El Cerrito, Temescal Valley, and Warm Springs Census-Designated Places (CDPs). These CDPs are included within the County's Elsinore Area Plan (Temescal Valley and Warm Springs) and Temescal Area Plan (El Cerrito). The *Federal Register* defines CDPs as statistical geographies that represent closely settled, unincorporated communities that are locally recognized and are identified by name (83 *Federal Register* 56290). Data for these cities, County, and CDPs will also be provided for comparison to the community impact study area and its Census Tracts for reference.

Community character can be defined as attributes including social and economic characteristics, as well as assets that make a community unique and establish a sense of place for its residents. Community cohesion is the degree to which residents have a sense of belonging to their neighborhood; a level of commitment of the residents to the

community; or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time (Caltrans 2011).

The demographics of the community impact study area's population, housing characteristics, and economic conditions and trends have been evaluated because they influence the character and cohesion of a community. The longer residents have lived within their community and the more homogenous the population, it can be assumed that the level of cohesion and character would be stronger in these communities than those that have a transient population with largely different social and economic backgrounds (i.e., age, ethnicity, and income).

A community's characteristics can be described by demographic information including population size, age composition, ethnicity, and household characteristics. This section describes the existing community characteristics of the community impact study area and its associated Census Tracts.

Census Tracts were used because they are the most complete dataset for the level of detail required to analyze the surrounding demographic and socioeconomic character generally associated with the community impact study area. Census Tracts are also used to incorporate populations that may not be directly affected by the Project but may be indirectly affected by Project construction and operation. To assess the potential for the Project to affect community character and cohesion adversely or beneficially, demographic characteristics were evaluated utilizing data from the 2017–2021 American Community Survey (ACS) 5-year Estimates (U.S. Census Bureau 2022).

Community Character

Regional Population Characteristics

Population

The geographic areas for impacts related to population and housing including both regional and local population changes for key geographic areas from 2010 to 2021 are shown in Table 2.2.4-1. The population growth varies widely among within the County, cities, and CDPs. Census Tracts 419.10, 419.11, 427.15, 430.01, and 430.05 have exhibited substantial growth between 2010 and 2021, at or over 15 percent, while Census Tracts 416.00, 419.09, 420.07, 430.06, and 481.00 have experienced moderate growth between 2010 and 2021, with rates ranging from 9 to 15 percent. Meanwhile, Census Tracts 414.09, 418.09, 418.10, 418.13, 430.07, and 479.00 have experienced very little to negative growth in the last 9 years. The overall growth within the community impact study area Census Tracts is approximately 13.5 percent. Population growth in these areas is attributed to the amount of developable land for residential uses, topographical restrictions (e.g., protected hillsides and mountains), and existing communities that are already built up and established.

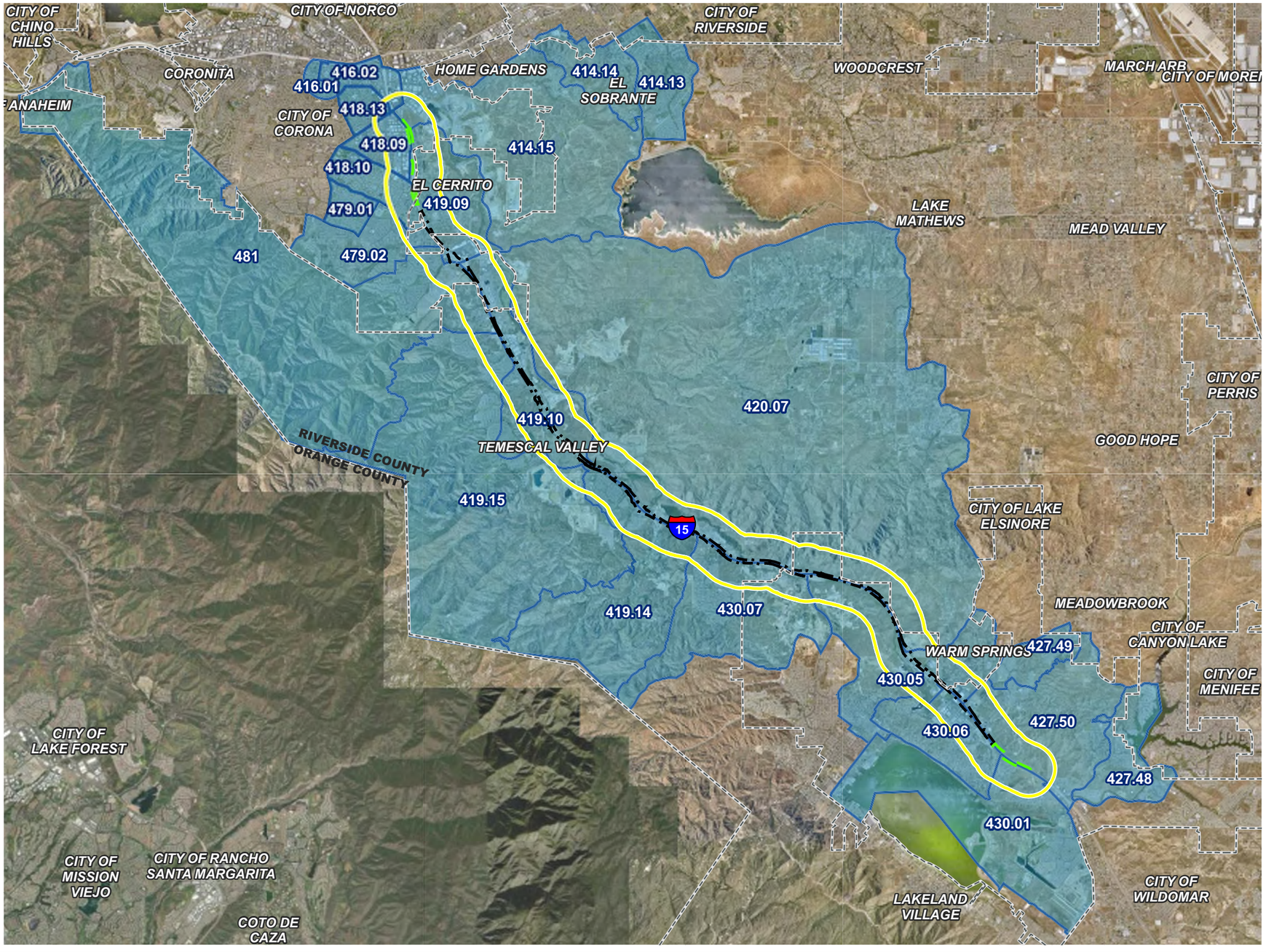

Figure 2.2.4-1
Community Impact Study Area Census Tracts

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Table 2.2.4-1. Existing Regional and Local Population Change

Geographic Area[1]	Population Estimate		
	ACS 2010 5-Year Estimate	ACS 2021 5-Year Estimate	Percent Change (2010 to 2021)
County of Riverside	2,109,464	2,409,331	14.2
City of Corona	150,497	157,844	4.9
City of Lake Elsinore	48,644	68,822	41.5
El Cerrito (CDP)	5,157	5,093	-1.2
Temescal Valley (CDP)	22,630	27,546	21.7
Warm Spring (CDP)	2,117	1,622	-23.4
Community Impact Study Area Census Tracts			
Census Tract 414.09	13,675	—	8.1
Census Tract 414.13	—	6,301	
Census Tract 414.14	—	4,247	
Census Tract 414.15	—	4,238	
Census Tract 416.00	5,688	—	15.5
Census Tract 416.01	—	2,547	
Census Tract 416.02	—	4,025	
Census Tract 418.09	5,092	4,922	-3.3
Census Tract 418.10	6,041	5,639	-6.7
Census Tract 418.13	6,516	6,700	2.8
Census Tract 419.09	5,092	5,701	12.0
Census Tract 419.10	6,095	7,808	28.1
Census Tract 419.11	10,321	—	37.9
Census Tract 419.14	—	6,100	
Census Tract 419.15	—	8,128	
Census Tract 420.07	4,491	5,162	14.9
Census Tract 427.15	11,938	—	17.7

Geographic Area[1]	Population Estimate		
	ACS 2010 5-Year Estimate	ACS 2021 5-Year Estimate	Percent Change (2010 to 2021)
Census Tract 427.48	—	5,133	
Census Tract 427.49	—	5,101	
Census Tract 427.50	—	3,812	
Census Tract 430.01	4,948	10,670	115.6
Census Tract 430.05	5,022	5,936	18.2
Census Tract 430.06	4,028	4,675	16.1
Census Tract 430.07	7,576	7,304	-3.6
Census Tract 479.00	11,627	—	-4.9
Census Tract 479.01	—	4,327	
Census Tract 479.02	—	6,731	
Census Tract 481.00	5,866	6,602	12.5
Total	114,016	131,809	15.6

Source: U.S. Census Bureau 2011:Table B01003, 2022:Table B01003

[1] Between 2010 and 2021, Census Tract 414.09 was subdivided into Census Tracts 414.13, 414.14, and 414.15; Census Tract 416 into Census Tracts 416.01 and 416.02; Census Tract 419.11 into 419.14 and 419.15; Census Tract 427.15 into Census Tracts 427.48, 427.49, and 427.50; and Census Tract 479 into Census Tracts 479.01 and 479.02.

Income and Poverty

As shown in Table 2.2.4-2, the median household income for the various geographies varies greatly with income ranging $39,886 to $169,739 for the community impact study area Census Tracts, and from $52,791 to $110,469 for the County, cities, and CDPs. Census Tracts 416.01 and 430.06 exhibit lower incomes than the cities and County and also exhibit some of the higher rates of poverty, while Census Tracts 414.13, 414.14, 414.15, 418.10, 419.09, 419.14, 430.07, 479.01, 479.01, and 479.02 exhibit higher incomes and, for the most part, lower poverty rates. However, Census Tract 427.50 has a relatively high poverty rate, given a higher median income than the cities and County.

When compared to the 2023 U.S. Department of Health and Human Services poverty guidelines of $30,000 for a family of four (DHHS 2023), all of the Census Tracts in the community impact study area have some percentage of the population below this threshold, ranging from 0.2 percent in Census Tract 414.14 to 23.6 percent in Census Tract 416.02. The overall median household income and poverty rate of the community impact study area Census Tracts are comparable to those of the cities and County and include a slightly lower percentage of population below poverty level than that of the cities and County.

Table 2.2.4-2. Existing Regional and Local Income Characteristics

Geographic Area	Median Household Income (US$)	Percent of Population Below Poverty Level
County of Riverside	76,066	12.0
City of Corona	95,268	9.0
City of Lake Elsinore	80,350	13.2
El Cerrito (CDP)	110,469	9.6
Temescal Valley (CDP)	107,790	6.7
Warm Springs (CDP)	52,791	31.6
Average	87,122	13.6
Community Impact Study Area Census Tracts		
Census Tract 414.13	141,970	5.8
Census Tract 414.14	124,525	0.2
Census Tract 414.15	128,721	7.6
Census Tract 416.01	39,886	20.1
Census Tract 416.02	60,515	23.6
Census Tract 418.09	76,702	6.6
Census Tract 418.10	140,815	4.8
Census Tract 418.13	62,241	9.5
Census Tract 419.09	112,768	8.6
Census Tract 419.10	101,691	3.2
Census Tract 419.14	149,773	7.6
Census Tract 419.15	104,603	9.3

Geographic Area	Median Household Income (US$)	Percent of Population Below Poverty Level
Census Tract 420.07	95,054	12.4
Census Tract 427.48	123,750	14.7
Census Tract 427.49	109,079	11.7
Census Tract 427.50	57,176	16.0
Census Tract 430.01	78,222	22.3
Census Tract 430.05	67,030	15.3
Census Tract 430.06	41,713	14.3
Census Tract 430.07	121,368	5.3
Census Tract 479.01	130,849	4.0
Census Tract 479.02	169,739	2.9
Census Tract 481.00	145,147	8.0
Average	103,623	10.0

Source: U.S. Census Bureau 2022 (Table B19013 and S1701)

Disabled Populations

As shown in Table 2.2.4-3, the estimated disabled populations within the community impact study area Census Tracts are in a similar range as the cities, County, and CDPs, except for Census Tracts 414.13, 416.02, 418.10, 419.14, 427.49, 430.07, 479.01, 479.02, and 481.00, which exhibit a disabled population under 7.2 percent.

Table 2.2.4-3. Disabled Populations

Geographic Area	Disabled Population (%)
County of Riverside	11.4
City of Corona	7.5
City of Lake Elsinore	8.3
El Cerrito (CDP)	14.5
Temescal Valley (CDP)	7.2
Warm Springs (CDP)	12.9
Community Impact Study Area Census Tracts	
Census Tract 414.13	4.4
Census Tract 414.14	8.1
Census Tract 414.15	11.9
Census Tract 416.01	9.8
Census Tract 416.02	3.6
Census Tract 418.09	10.5
Census Tract 418.10	5.0
Census Tract 418.13	11.3
Census Tract 419.09	13.7

Geographic Area	Disabled Population (%)
Census Tract 419.10	8.8
Census Tract 419.14	2.1
Census Tract 419.15	10.9
Census Tract 420.07	12.6
Census Tract 427.48	10.1
Census Tract 427.49	4.5
Census Tract 427.50	7.8
Census Tract 430.01	7.7
Census Tract 430.05	7.7
Census Tract 430.06	11.9
Census Tract 430.07	4.7
Census Tract 479.01	6.8
Census Tract 479.02	6.6
Census Tract 481.00	4.4
Average	7.9

Source: U.S. Census Bureau 2022 (Table S1810)

Limited English-Speaking Households

As shown in Table 2.2.4-4, Census Tracts 416.02 and 430.06 have a substantially higher percentage of limited English-speaking households, which speak Spanish, when compared to the other Census Tracts, cities, the County, and CDPs. Census Tracts 414.14, 416.01, 418.09, 418.10, 418.13, 430.01, and 430.05 are relatively similar to the percentage of limited English-speaking households for the cities and County. The remaining Census Tracts have a relatively low rate of limited English-speaking households for the cities and County, at or below 4 percent. The overall percentage of limited English-speaking households for the community impact study area Census Tracts is 4.4 percent, which is slightly lower than the range for the cities and County. The CDPs (El Cerrito, Temescal Valley, and Warm Springs) exhibit a substantially different percentage of limited English-speaking households compared to the cities and County.

Table 2.2.4-4. Limited English-Speaking Households

Geographic Area	Total Households	Total Households Speaking Language Other than English (%)	Limited English Speaking Households[1]			
			Spanish Language (%)	Other Indo-European Language (%)	Asian and Pacific Islander Languages (%)	Other Languages (%)
County of Riverside	740,506	8.3	6.9	0.3	0.9	0.1
City of Corona	45,875	6.0	3.6	0.7	1.2	0.5
City of Lake Elsinore	19,162	5.0	3.9	0.3	0.7	0.0
El Cerrito (CDP)	1,401	2.6	2.6	0.0	0.0	0.0
Temescal Valley (CDP)	8,700	2.3	1.4	0.0	0.9	0.0
Warm Springs (CDP)	482	2.9	2.9	0.0	0.0	0.0
Community Impact Study Area Census Tracts						
Census Tract 414.13	1,787	3.4	0.0	2.1	0.0	1.3
Census Tract 414.14	1,375	6.3	3.3	0.0	3.0	0.0
Census Tract 414.15	1,200	2.6	0.0	0.0	2.6	0.0
Census Tract 416.01	790	9.0	9.0	0.0	0.0	0.0
Census Tract 416.02	1,068	22.1	16.9	0.0	0.0	5.2
Census Tract 418.09	1,796	4.2	2.8	0.0	1.4	0.0
Census Tract 418.10	1,545	7.0	1.9	3.2	1.9	0.0
Census Tract 418.13	2,066	6.6	5.8	0.0	0.8	0.0
Census Tract 419.09	1,532	3.2	2.3	0.8	0.0	0.0
Census Tract 419.10	2,856	2.6	0.0	0.0	2.6	0.0
Census Tract 419.14	1,458	3.0	1.4	0.0	1.6	0.0
Census Tract 419.15	2,882	2.1	1.0	0.0	1.0	0.0
Census Tract 420.07	1,715	3.4	3.1	0.0	0.3	0.0
Census Tract 427.48	1,696	0.0	0.0	0.0	0.0	0.0

Geographic Area	Total Households	Total Households Speaking Language Other than English (%)	Limited English Speaking Households[1]			
			Spanish Language (%)	Other Indo-European Language (%)	Asian and Pacific Islander Languages (%)	Other Languages (%)
Census Tract 427.49	1,530	0.0	0.0	0.0	0.0	0.0
Census Tract 427.50	1,016	3.1	0.0	0.0	3.1	0.0
Census Tract 430.01	2,853	5.8	3.9	1.2	0.7	0.0
Census Tract 430.05	1,682	4.4	4.4	0.0	0.0	0.0
Census Tract 430.06	1,309	13.9	13.9	0.0	0.0	0.0
Census Tract 430.07	2,084	2.8	2.8	0.0	0.0	0.0
Census Tract 479.01	1,312	1.9	0.0	0.0	1.9	0.0
Census Tract 479.02	1,892	1.7	1.3	0.0	0.4	0.0
Census Tract 481.00	1,890	3.3	0.0	0.0	3.3	0.0
Total	39,334	4.4	2.8	0.3	1.1	0.2

Source: U.S. Census Bureau 2022 (Table S1602)

[1] A “limited English-speaking household” is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English “very well.” In other words, all members 14 years old and over have at least some difficulties with English. By definition, English-only households cannot belong to this group (U.S. Census Bureau 2022).

Transit-Dependent Populations

For the purpose of this analysis, the transit-dependent population was calculated by determining the number of persons in households that are eligible to drive but lack access to a vehicle.

Table 2.2.4-5 shows the approximate percentage of transit-dependent population for the community impact study area Census Tracts, which ranges from -1.4 percent to 29.3 percent and averages 15.5 percent; and for the cities, County, and CDPs, which ranges from 2.0 percent to 12.8 percent. When comparing to the cities and County, Census Tracts 416.01, 416.02, and 430.06 exhibit a substantially higher percentage of transit-dependent population, while 420.07, 427.48, 430.07, 479.01, and 479.02 have lower percentages of transit-dependent population. Census Tracts 414.13 and 430.01 have slightly higher percentages of transit-dependent people. Approximately half of the community impact study area Census Tracts, including Census Tracts 418.09, 418.10, 418.13, 419.09, 419.10, 419.14, 419.15, 427.49, 427.50, 430.05, and 481.00, are within a similar range to that of the cities and County. Therefore, approximately half of the population within the community impact study area Census Tracts is not considered to be dependent on public transportation, as it is relatively similar to that of the cities and County.

Table 2.2.4-5. Transit-Dependent Population

Geographic Area	Age 16 and Over	Group Quarters Population	Aggregate Number of Vehicles Available	Transit-Dependent Population (%)[1]
County of Riverside	1,876,133	38,755	1,612,661	12.0
City of Corona	121,743	754	106,738	11.7
City of Lake Elsinore	50,525	17	44,035	12.8
El Cerrito (CDP)	4,109	15	3,721	9.1
Temescal Valley (CDP)	21,296	4	19,954	6.3
Warm Springs (CDP)	1,262	0	1,237	2.0
Community Impact Study Area Census Tracts				
Census Tract 414.13	4,884	29	4,084	15.8
Census Tract 414.14	3,544	12	*	*
Census Tract 414.15	3,113	0	*	*
Census Tract 416.01	1,902	0	1,428	24.9
Census Tract 416.02	2,957	0	2,091	29.3
Census Tract 418.09	3,962	116	3,450	10.0
Census Tract 418.10	4,466	55	4,051	8.1
Census Tract 418.13	5,149	223	4,345	11.3
Census Tract 419.09	4,473	15	4,041	9.3
Census Tract 419.10	6,193	0	5,618	9.3

Geographic Area	Age 16 and Over	Group Quarters Population	Aggregate Number of Vehicles Available	Transit-Dependent Population (%)[1]
Census Tract 419.14	4,141	0	3,709	10.4
Census Tract 419.15	6,685	0	6,090	8.9
Census Tract 420.07	4,308	0	4,248	1.4
Census Tract 427.48	4,097	0	4,068	0.7
Census Tract 427.49	3,841	0	3,513	8.5
Census Tract 427.50	2,812	0	2,481	11.8
Census Tract 430.01	7,460	0	6,309	15.4
Census Tract 430.05	4,662	4	4,086	12.3
Census Tract 430.06	3,386	13	2,514	25.4
Census Tract 430.07	5,389	4	5,291	1.7
Census Tract 479.01	3,422	19	3,422	-0.6
Census Tract 479.02	5,584	10	5,652	-1.4
Census Tract 481.00	5,288	0	4,961	6.2
Total	101,718	500	85,452	15.5

Source: U.S. Census Bureau 2022 (Table S0101, B26001, B25046)
[1] Transit-dependent population = (population age 16 and over – group quarters population – aggregate number of vehicles available)/age 16 and over
* These data were missing from Table B25046 of the U.S. Census Bureau 2022 data.

Economic Conditions

Regional Economy

The regional study area used for analyzing impacts on regional economic conditions includes the County and the Cities of Corona and Lake Elsinore. As shown in Table 2.2.3-1 in Section 2.2.3, *Growth*, between 2017 and 2045, employment is projected to increase by 69.4 percent within the City of Lake Elsinore, 16.6 percent within the City of Corona, and 44.7 percent within the County. Growth is projected to increase drastically in the City of Lake Elsinore due to the large available land area within the City of Lake Elsinore and the County for development. Additionally, as previously described, the City of Lake Elsinore has been identified as one of the fastest-growing cities in California and the City of Corona is already relatively developed and urbanized. These employment growth projections between 2018 and 2045 correspond with the projected population growth, which is at 76.0 percent for the City of Lake Elsinore, 9.8 percent for the City of Corona, and 34.6 percent for the County. Therefore, it can be concluded that, in the future, there would be a substantial change in the size of the labor force within the City of Lake Elsinore, in particular.

Table 2.2.4-6 shows current industry trends within the cities, CDPs, County, and community impact study area Census Tracts. The largest industries are construction; manufacturing; retail trade; professional, scientific, management, and administrative and

waste management services; educational services and health care and social assistance; and arts, entertainment, and recreation, and accommodation and food services.

Table 2.2.4-6. Industry Trends

Geographic Area	Total Civilian Workforce Workers (16 Years and Over)	Industry												
		Agriculture, Forestry, Fishing and Hunting, and Mining (%)	Construction (%)	Manufacturing (%)	Wholesale Trade (%)	Retail Trade (%)	Transportation and Warehousing, and Utilities (%)	Information (%)	Finance and Insurance, and Real Estate and Rental and Leasing (%)	Professional, Scientific, and Management, and Administrative and Waste Management Services (%)	Educational Services, and Health Care and Social Assistance (%)	Arts, Entertainment, and Recreation, and Accommodation and Food Services (%)	Other Services, Except Public Administration (%)	Public Administration (%)
County of Riverside	1,131,857	1.2	8.6	7.7	2.5	11.6	6.8	1.4	4.6	9.3	19.3	10.0	1.5	4.8
City of Corona	81,342	0.2	6.6	12.4	2.5	11.6	5.6	1.7	6.2	11.2	19.2	8.7	2.8	5.4
City of Lake Elsinore	32,692	0.5	10.4	7.7	2.2	13.0	4.4	1.4	4.0	8.6	19.9	9.8	1.2	5.4
El Cerrito (CDP)	2,474	0.6	13.7	13.1	3.2	7.6	5.5	0.2	5.1	14.3	17.7	9.6	2.4	1.9
Temescal Valley (CDP)	13,347	0.1	7.7	12.6	2.2	11.0	4.5	1.7	8.9	8.8	18.9	7.5	3.7	6.4
Warm Springs (CDP)	665	1.1	23.2	5.3	1.7	10.1	8.7	1.4	2.3	4.4	15.3	5.4	2.0	3.6
Community Impact Study Area Census Tracts														
Census Tract 414.13	3,202	0.0	12.6	8.4	1.9	6.8	7.2	1.2	5.2	8.5	19.3	10.2	1.5	10.0
Census Tract 414.14	2,416	2.3	10.7	4.7	2.1	6.0	5.6	1.3	0.6	17.7	25.6	12.3	2.8	4.6
Census Tract 414.15	2,246	0.0	3.6	13.0	6.2	0.0	11.2	2.5	9.3	5.7	25.6	15.9	1.2	5.9
Census Tract 416.01	1,184	0.0	7.8	28.1	2.5	8.2	9.5	0.0	3.2	11.8	12.2	6.2	2.4	4.0
Census Tract 416.02	2,111	0.0	16.0	33.0	0.0	12.7	6.8	1.1	1.1	6.3	4.2	12.0	3.7	2.7
Census Tract 418.09	2,677	0.0	8.6	5.2	5.2	14.8	3.6	1.2	6.0	5.4	31.1	7.8	2.0	4.7

Geographic Area	Total Civilian Workforce Workers (16 Years and Over)	Industry												
		Agriculture, Forestry, Fishing and Hunting, and Mining (%)	Construction (%)	Manufacturing (%)	Wholesale Trade (%)	Retail Trade (%)	Transportation and Warehousing, and Utilities (%)	Information (%)	Finance and Insurance, and Real Estate and Rental and Leasing (%)	Professional, Scientific, and Management, and Administrative and Waste Management Services (%)	Educational Services, and Health Care and Social Assistance (%)	Arts, Entertainment, and Recreation, and Accommodation and Food Services (%)	Other Services, Except Public Administration (%)	Public Administration (%)
Census Tract 418.10	2,718	0.0	9.2	10.2	3.6	11.4	2.2	1.5	7.3	12.4	21.6	7.2	3.0	6.1
Census Tract 418.13	3,020	0.0	7.1	16.6	3.8	6.9	13.2	0.6	2.0	13.8	15.4	11.6	2.2	2.1
Census Tract 419.09	2,732	0.6	11.7	11.8	2.3	7.5	5.9	1.9	4.6	14.2	19.8	8.3	5.7	1.7
Census Tract 419.10	3,832	0.0	3.1	19.8	0.9	8.1	3.4	3.0	8.9	7.8	24.0	5.3	8.2	4.0
Census Tract 419.14	2,949	0.0	6.7	9.5	1.6	9.6	9.6	1.3	6.7	8.6	25.1	2.3	2.0	11.2
Census Tract 419.15	3,877	0.0	9.7	12.6	1.4	14.0	2.2	0.9	7.0	8.2	16.0	11.6	1.4	6.2
Census Tract 420.07	2,251	0.9	10.2	9.6	2.7	8.0	5.4	1.5	9.2	15.6	16.4	10.3	2.1	2.0
Census Tract 427.48	3,038	1.2	7.9	1.0	4.0	11.9	3.1	2.5	13.4	12.9	18.1	7.1	0.0	8.5
Census Tract 427.49	2,376	0.0	9.7	9.6	6.0	8.1	2.7	1.0	0.0	7.7	17.8	22.8	8.6	6.0
Census Tract 427.50	1,357	0.0	8.3	20.1	1.4	8.0	1.3	0.0	2.8	4.6	25.5	17.2	0.0	0.0
Census Tract 430.01	5,140	0.0	8.8	10.5	3.2	13.5	2.0	1.2	7.6	9.0	19.8	8.3	2.9	4.4
Census Tract 430.05	3,047	1.6	14.0	10.1	1.2	18.7	5.2	1.1	1.3	5.3	15.8	6.6	5.4	3.4

Geographic Area	Total Civilian Workforce Workers (16 Years and Over)	Industry												
		Agriculture, Forestry, Fishing and Hunting, and Mining (%)	Construction (%)	Manufacturing (%)	Wholesale Trade (%)	Retail Trade (%)	Transportation and Warehousing, and Utilities (%)	Information (%)	Finance and Insurance, and Real Estate and Rental and Leasing (%)	Professional, Scientific, and Management, and Administrative and Waste Management Services (%)	Educational Services, and Health Care and Social Assistance (%)	Arts, Entertainment, and Recreation, and Accommodation and Food Services (%)	Other Services, Except Public Administration (%)	Public Administration (%)
Census Tract 430.06	2,010	1.9	14.3	7.6	2.5	10.3	5.3	0.0	4.6	6.2	15.6	16.7	5.6	0.5
Census Tract 430.07	3,732	0.0	9.0	11.7	3.5	8.8	4.2	2.6	10.6	10.2	16.2	8.2	4.4	4.6
Census Tract 479.01	2,124	0.0	3.2	11.7	1.5	9.3	5.8	3.8	11.3	11.9	23.9	6.1	0.9	7.3
Census Tract 479.02	3,761	0.0	3.5	5.3	2.5	23.6	2.1	1.6	11.2	14.5	15.3	6.1	5.1	6.0
Census Tract 481.00	3,537	0.2	3.6	6.2	4.1	10.1	10.0	1.8	7.5	18.0	15.7	8.0	4.4	3.3
Average	3,202	0.0	12.6	8.4	1.9	6.8	7.2	1.2	5.2	8.5	19.3	10.2	1.5	10.0

Source: U.S. Census Bureau 2022 (Table DP03)

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Employment

The percentage of population over the age of 16 that is in the labor force (Table 2.2.4-7) for the cities, County, CDPs, and community impact study area Census Tracts is relatively within the same range of one another. However, Census Tracts 427.50 and 427.48 exhibit the lowest and highest percentages of population (age 16 and over), respectively, in the labor force that varies greatly from the rest of the geographic areas. Overall, the average population (age 16 and over) in the labor force within the community impact study area Census Tracts (64.2 percent) is within the same range as the cities, County, and CDPs.

Table 2.2.4-7. Employment Status

Geographic Area	Population (Age 16 and Over)	In Labor Force (%)	Not in Labor Force (%)
County of Riverside	1,876,133	60.3	39.7
City of Corona	121,743	66.8	33.2
City of Lake Elsinore	50,525	64.7	35.3
El Cerrito (CDP)	4,109	60.2	39.8
Temescal Valley (CDP)	21,296	62.7	37.3
Warm Springs (CDP)	1,262	52.7	47.3
Average	345,845	61.2	38.8
Community Impact Study Area Census Tracts			
Census Tract 414.13	4,884	65.6	34.4
Census Tract 414.14	3,544	68.2	31.8
Census Tract 414.15	3,113	72.1	27.9
Census Tract 416.01	1,902	62.3	37.7
Census Tract 416.02	2,957	71.4	28.6
Census Tract 418.09	3,962	67.6	32.4
Census Tract 418.10	4,466	60.9	39.1
Census Tract 418.13	5,149	58.7	41.3
Census Tract 419.09	4,473	61.1	38.9
Census Tract 419.10	6,193	61.9	38.1
Census Tract 419.14	4,141	71.2	28.8
Census Tract 419.15	6,685	58.0	42.0
Census Tract 420.07	4,308	52.3	47.7
Census Tract 427.48	4,097	74.2	25.8
Census Tract 427.49	3,841	61.9	38.1
Census Tract 427.50	2,812	48.3	51.7
Census Tract 430.01	7,460	68.9	31.1
Census Tract 430.05	4,662	65.4	34.6
Census Tract 430.06	3,386	59.4	40.6

Geographic Area	Population (Age 16 and Over)	In Labor Force (%)	Not in Labor Force (%)
Census Tract 430.07	5,389	69.3	30.7
Census Tract 479.01	3,422	62.1	37.9
Census Tract 479.02	5,584	67.4	32.6
Census Tract 481.00	5,288	66.9	33.1
Average	4,422	64.2	35.8

Source: U.S. Census Bureau 2022 (Table DP03)

Business Activity

County of Riverside

The portions of the County that overlap with the community impact study area are mostly made up of the Temescal Canyon Area Plan and the Temescal Canyon and El Cerrito CDPs. Few retail businesses exist along this segment of the Interstate (I-) 15 corridor within the County. However, the land use and zoning in this area support the development of additional housing, retail stores, restaurants, offices, warehouse/distribution uses, and personal services, which could create a more cohesive economic connection between the City of Corona and City of Lake Elsinore, as they all are connected by I-15. Because growth projections for employment, housing, and population within the County and City of Lake Elsinore are projected to increase, this unincorporated portion along I-15 may present an opportunity for areas to accommodate this growth.

City of Corona

The City of Corona has targeted areas for revitalization, which include underutilized and transitioning areas such as the southeast corner of the State Route (SR-) 91 and I-15 interchanges, and the center of the City's current industrial district north of SR-91 (City of Corona 2023).

The portion of the City of Corona that overlaps with the community impact study area is approximately between Magnolia Avenue and Weirick Road. In terms of business activity, between Magnolia Avenue and El Cerrito Road, the area west of I-15 is mixed with industrial uses and local and major retailers. Between El Cerrito Road and Weirick Road, the area north of Cajalco Road contains commercial plazas (Crossings at Corona and The Village at Eagle Glen) on either side of I-15. The area south of Cajalco Road contains land dedicated to agricultural uses as well as vacant/undeveloped land for future commercial development.

City of Lake Elsinore

The portion of the City of Lake Elsinore within the community impact study area is approximately between Indian Truck Trail and H Street. Business activities that define the current economic conditions include scattered farmlands in the Northwest Sphere District, mineral extraction uses along Lake Street in the Alberhill District, limited amounts of industrial and commercial uses in the North Central Sphere District, the City

of Lake Elsinore's main commercial and industrial activity area within the Business District, a commercial node in the southern portions of the Lake Elsinore Hills District along I-15, a mix of local commercial uses and some industrial uses in the historical uses, and the auto mall adjacent to I-15, which is considered a defining characteristic in the Riverview District because it is a major source of tax revenue for the City of Lake Elsinore. There is a large amount of available vacant land in the City of Lake Elsinore to accommodate future economic growth and development. As shown in Table 2.2.3-1 in Section 2.2.3, *Growth*, long-term population growth is expected to occur in the City. Therefore, the large amount of available land area serves as a prime location to sustain continued and high growth rates projected for the City of Lake Elsinore.

Fiscal Conditions

County of Riverside

According to the 2019 local profiles for the County (SCAG 2019a), the real retail sales in the County were approximately $24.7 billion with a real retail sales per-capita estimate of $10,400 in 2017. Total taxable sales for the County during 2015 reached $36.1 billion, which was an increase of 5.6 percent over 2016 and is the greatest increase compared across Los Angeles County (3.3 percent), Orange County (3.3 percent), San Bernardino County (3.1 percent), and Ventura County (1.1 percent) (Riverside County Economic Development Agency 2017). Table 2.2.4-8 summarizes data from the Riverside Economic Development Agency for the Taxable Sales Riverside County Annual Report 2017 (Riverside County Economic Development Agency 2017). The County's per-capita retail and food services sale total is slightly less; however, as described above and shown in the total change for the County, growth within the County during 2017 is reasonable given the growth projection within the County.

Table 2.2.4-8. County and State Retail and Food Services

Retail and Food Service Type of Business	Per-Capita Retail & Food Services Sales ($)		Percent Change 2016–2017 (County Only)
	County	State	
Motor Vehicle & Parts Dealers	2,238	2,195	5.97
Home Furniture & Appliance Stores	724	763	24.78
Building Material & Garden Equipment & Supply	904	947	10.00
Food & Beverage Stores	697	727	5.90
Gasoline Stations	1,227	1,197	8.48
Clothing & Accessories Stores	920	1,015	0.42
General Merchandise Stores	1,298	1,246	1.60
Food Service & Drinking Places	1,612	2,079	5.58
Other Retail Group	1,082	1,461	5.47
Total Retail & Food Service	10,704	11,630	6.49

Source: Riverside County Economic Development Agency 2017

City of Corona

While property taxes were once the primary source of revenue for funding municipal activities within the City of Corona, sales tax is now more important (City of Corona 2023). This is contingent upon a diversified local business base and increasing property values for residential land uses. The real retail sales in the City of Corona were approximately $1.947 billion with a real retail sales per-capita estimate of $11,700 (SCAG 2019b). The Taxable Sales Riverside County Annual Report 2017 (Riverside County Economic Development Agency 2017) also identifies the City of Corona as having a 5.57-percent increase in per-capita retail and food services sales. The Riverside County Economic Development Agency also has the first quarter of 2018's taxable sales based on total number of permits. Table 2.2.4-9 shows the distribution of sales tax revenues generated in the City of Corona and County. According to Table 2.2.4-9, the most profitable business type is gasoline stations followed by general merchandise.

Table 2.2.4-9. City of Corona and County First Quarter 2018 Taxable Sales

Retail and Food Service Type of Business	County of Riverside			City of Corona		
	Permits	Values ($)[1]	Average Sales Tax/ Business[1]	Permits	Values ($)[1]	Average Sales Tax/ Business ($)[1]
Motor Vehicle & Parts Dealers	2,244	1,324,752	590	220	104,547	475
Home Furniture & Appliance Stores	2,397	447,419	187	207	31,490	152
Building Material & Garden Equipment & Supply	1,156	515,732	446	85	52,417	617
Food & Beverage Stores	1,527	452,917	297	119	24,421	205
Gasoline Stations	542	794,443	1,466	39	79,591	2041
Clothing & Accessories Stores	6,051	544,220	90	400	22,793	57
General Merchandise Stores	2,050	799,655	390	105	85,898	818

Retail and Food Service Type of Business	County of Riverside			City of Corona		
	Permits	Values ($)[1]	Average Sales Tax/ Business[1]	Permits	Values ($)[1]	Average Sales Tax/ Business ($)[1]
Food Service & Drinking Places	5,246	103,565	20	392	83,064	212
Other Retail Group	18,243	682,463	37	1,028	36,685	36
All Other Outlets[2]	20,416	2,596,812	127	1,968	392,026	199

Source: Riverside County Economic Development Agency 2018
[1] Taxable transactions are in the thousands of dollars.
[2] Business and personal services and miscellaneous outlets. Additionally, sales totals for some classes of retail businesses are not shown because their publication would result in confidential information disclosure. These totals are included with Other Retail Group when possible.

Within the City of Corona, Riverside County Transportation Commission (RCTC) plans and implements transportation improvements to smooth the way for commuters and goods movement and assists local governments with money for local streets and roads (City of Corona n.d.). One of these local funding sources is Measure A, which was approved by voters in 1988 and implements a half-cent sales tax for transportation to address increased congestion. Measure A was renewed in 2009 and will continue to fund transportation improvements through 2039 (RCTC 2021). For western Riverside County, 30 percent of the funds go to highways, 29 percent to local streets and roads, 12 percent to public transit, 11 percent to regional arterials, and the other 9 percent to other economic programs. Another local funding source is the tolled Express Lanes. Tolled Express Lanes provide drivers time-saving benefits and represents a long-term funding source that pays for the development, construction, maintenance, and operations of toll projects and other transportation improvements on the I-15 corridor (RCTC 2021). As discussed in Chapter 1, *Proposed Project*, the Project is an extension of RCTC's completed SR-91 Express Lanes and I-15 Express Lanes Project, which were partially funded by tolls.

The City of Corona also obtains funding from Measure X, a sales tax measure passed in 2020, which creates new opportunities to invest in the community with much-needed infrastructure and service improvements (City of Corona 2021a). This new sales tax contributes to the City's revenue fund that is already supported by the General Fund (e.g., property tax, Measure A, developer impact fees) and Special Revenue Funds (e.g., Gas Tax [Highway User Tax], Transportation Urban Mitigation Fees), Successor Agency Funds, Capital Project Funds, Enterprise Funds, and Internal Service Funds (City of Corona 2021b).

City of Lake Elsinore

The real retail sales in the City of Lake Elsinore were approximately $707 million with a real retail sales per-capita estimate of $11,300 (SCAG 2019c). The Taxable Sales

Riverside County Annual Report 2017 (Riverside County Economic Development Agency 2017) also identifies the City of Lake Elsinore as having a 4.89-percent increase in per-capita retail and food services sales. The Riverside County Economic Development Agency also has the first quarter of 2018's taxable sales based on total number of permits. Table 2.2.4-10 shows the distribution of sales tax revenues generated in the City of Lake Elsinore and County. According to Table 2.2.4-10, like in the City of Corona, the most profitable business type is gasoline stations followed by general merchandise.

Table 2.2.4-10. City of Lake Elsinore and County First Quarter 2018 Taxable Sales

Retail and Food Service Type of Business	County of Riverside			City of Lake Elsinore		
	Permits	Values ($)[1]	Average Sales Tax/ Business[1]	Permits	Values ($)[1]	Average Sales Tax/ Business ($)[1]
Motor Vehicle & Parts Dealers	2,244	1,324,752	590	77	33,747	438
Home Furniture & Appliance Stores	2,397	447,419	187	60	1,838	31
Building Material & Garden Equipment & Supply	1,156	515,732	446	25	16,856	674
Food & Beverage Stores	1,527	452,917	297	41	9,715	237
Gasoline Stations	542	794,443	1,466	18	27,246	1,514
Clothing & Accessories Stores	6,051	544,220	90	144	8,788	61
General Merchandise Stores	2,050	799,655	390	36	44,214	1,228
Food Service & Drinking Places	5,246	103,565	20	132	23,985	182
Other Retail Group	18,243	682,463	37	402	10,787	27
All Other Outlets[2]	20,416	2,596,812	127	623	24,968	40

Source: Riverside County Economic Development Agency 2018
[1] Taxable transactions are in the thousands of dollars.
[2] Business and personal services and miscellaneous outlets. Additionally, sales totals for some classes of retail businesses are not shown because their publication would result in confidential information disclosure. These totals are included with Other Retail Group when possible.

The City of Lake Elsinore is also supported by RCTC and receives funding for transportation projects from Measure A and tolls, as described above. The City of Lake

Elsinore has identified Measure A along with other fees (i.e., development fees, gas tax, and the City of Lake Elsinore's general funds [which also includes sales and use tax]) to provide funding for the City of Lake Elsinore's Capital Improvement Projects.

Community Facilities

Community facilities and services are an important aspect of neighborhood identity. Schools, hospitals, and emergency services are critical resources for the community. Occasionally, transportation projects may affect (both negatively and positively) community services, thereby affecting the character and cohesion of a community, either temporarily or permanently. Community facilities and services typically include fire and police protection, public or publicly funded schools, childcare centers, health care facilities, libraries, places of worship, and parks and recreation centers.

Please refer to Section 2.2.2, *Parks and Recreational Facilities*, for specific discussions on Project impacts on recreational facilities, and Section 2.2.7, *Utilities and Emergency Services*, for specific discussions on Project impacts on emergency services.

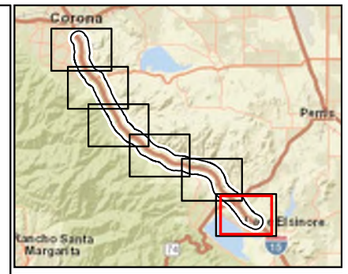
Schools

There are no planned schools within 0.5 mile of the Project limits. The following existing schools are within 0.5 mile of the Project limits (Figure 2.2.4-2) (California Department of Education n.d.):

- Elsinore Elementary School (512 West Sumner Avenue, Lake Elsinore) serves approximately 569 students (grades K–5).
- Keith McCarthy Academy (1405 Education Way, Lake Elsinore) serves approximately 252 students (grades K–12).
- Ortega High School (520 Chaney Street, Lake Elsinore) serves approximately 336 students (grades K–12).
- Temescal Canyon High School (28755 El Toro Road, Lake Elsinore) serves approximately 2,218 students (grades 9–12).
- Dr. Bernice Jameson Todd Elementary School (25105 Mayhew Canyon Road, Corona) serves approximately 1,218 students (grades K–6).
- Temescal Valley Elementary School (22950 Claystone Avenue, Corona) serves approximately 908 students (grades K–6).
- El Cerrito Middle School (7610 El Cerrito Road, Corona) serves approximately 1,007 students (grades 6–8).
- Centennial High School (1820 Rimpau Avenue, Corona) serves approximately 3,253 students (grades 9–12).

Health Facilities

There are no major healthcare facilities within the community impact study area. The closest major hospital is the Corona Regional Medical Center (800 South Main Street, Corona), which is approximately 1.2 miles northwest of the community impact study area (see Figure 2.2.4-2). The Corona Regional Medical Center comprises a 160-bed acute care hospital and a 78-bed rehabilitation campus (Southwest Healthcare 2023). It employs more than 1,250 trained healthcare workers and has a medical staff of approximately 347 physicians representing more than 40 specialties (Southwest Healthcare 2023).



Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary

Community Facilities
- Cultural Center
- Fire Station
- Law Enforcement
- Place of Worship
- School

N

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Figure 2.2.4-2 (Sheet 1 of 6)
Community Facilities and Services within the Community Impact Study Area

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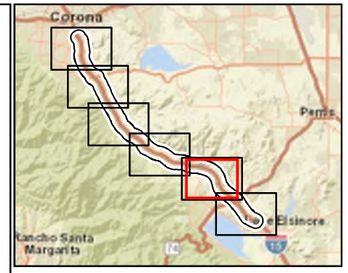

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary
- Place of Worship
- School

N

0 0.2 0.4 Miles

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Figure 2.2.4-2 (Sheet 2 of 6)
Community Facilities and Services within the Community Impact Study Area

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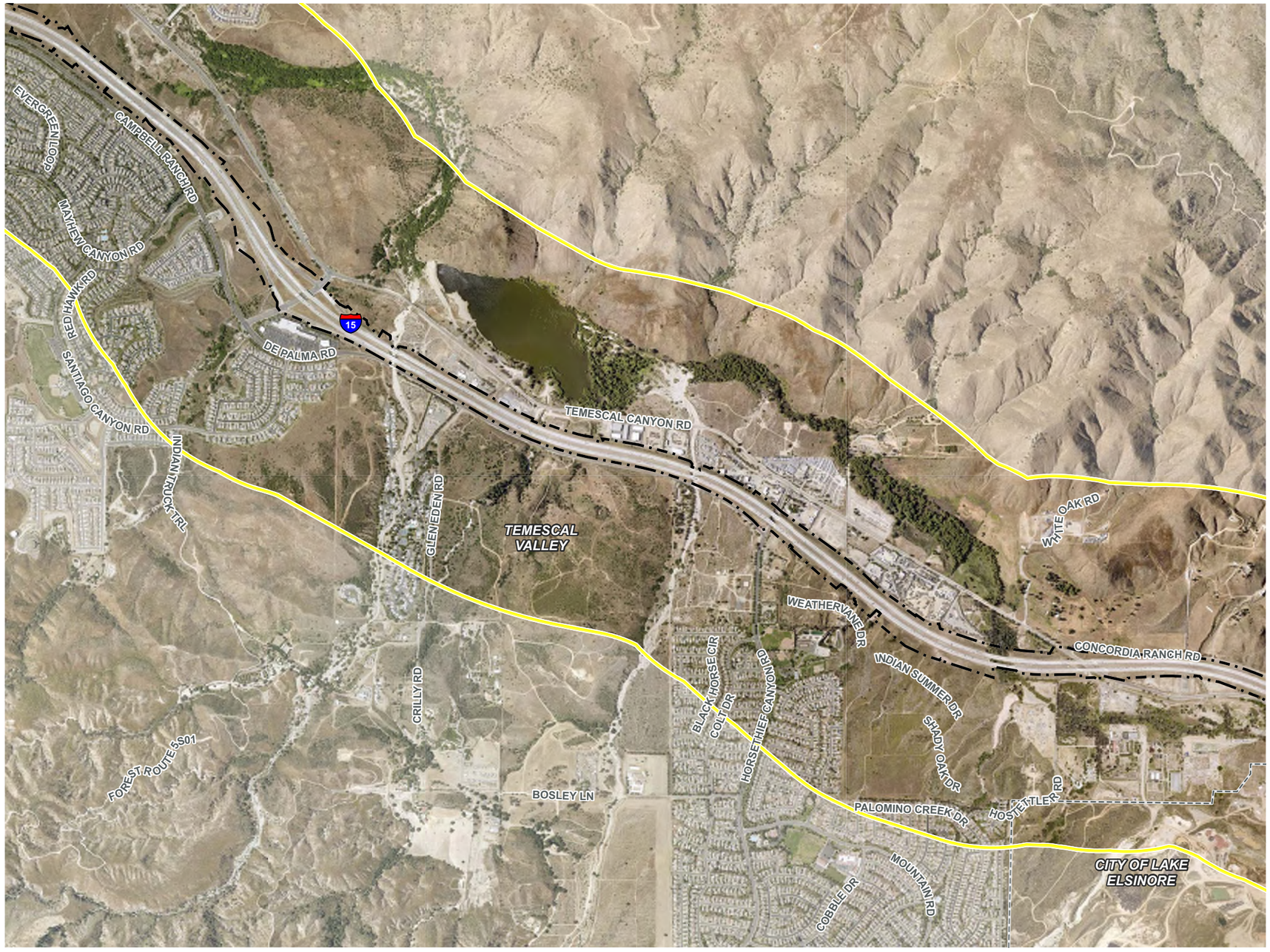

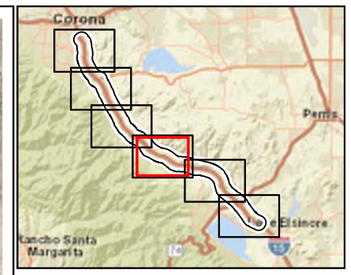

Legend

Project Limits

Limits of Disturbance

Advance Signage/Striping Areas

Study Area

Community Impact Study Area (0.5 mile buffer)

City/County Boundary

N

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Figure 2.2.4-2 (Sheet 3 of 6)
Community Facilities and Services within the Community Impact Study Area

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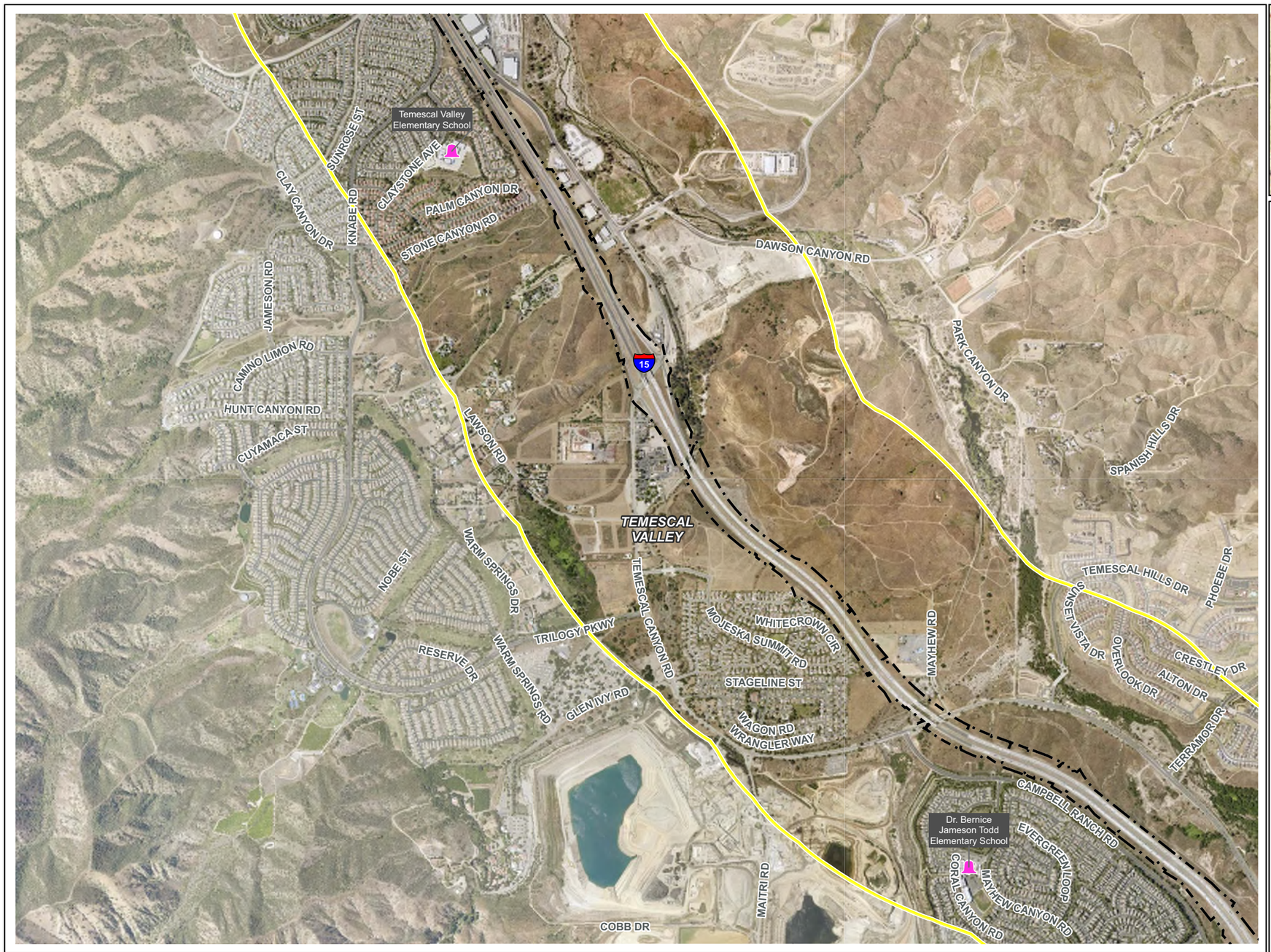

Figure 2.2.4-2 (Sheet 4 of 6)
Community Facilities and Services within the Community Impact Study Area

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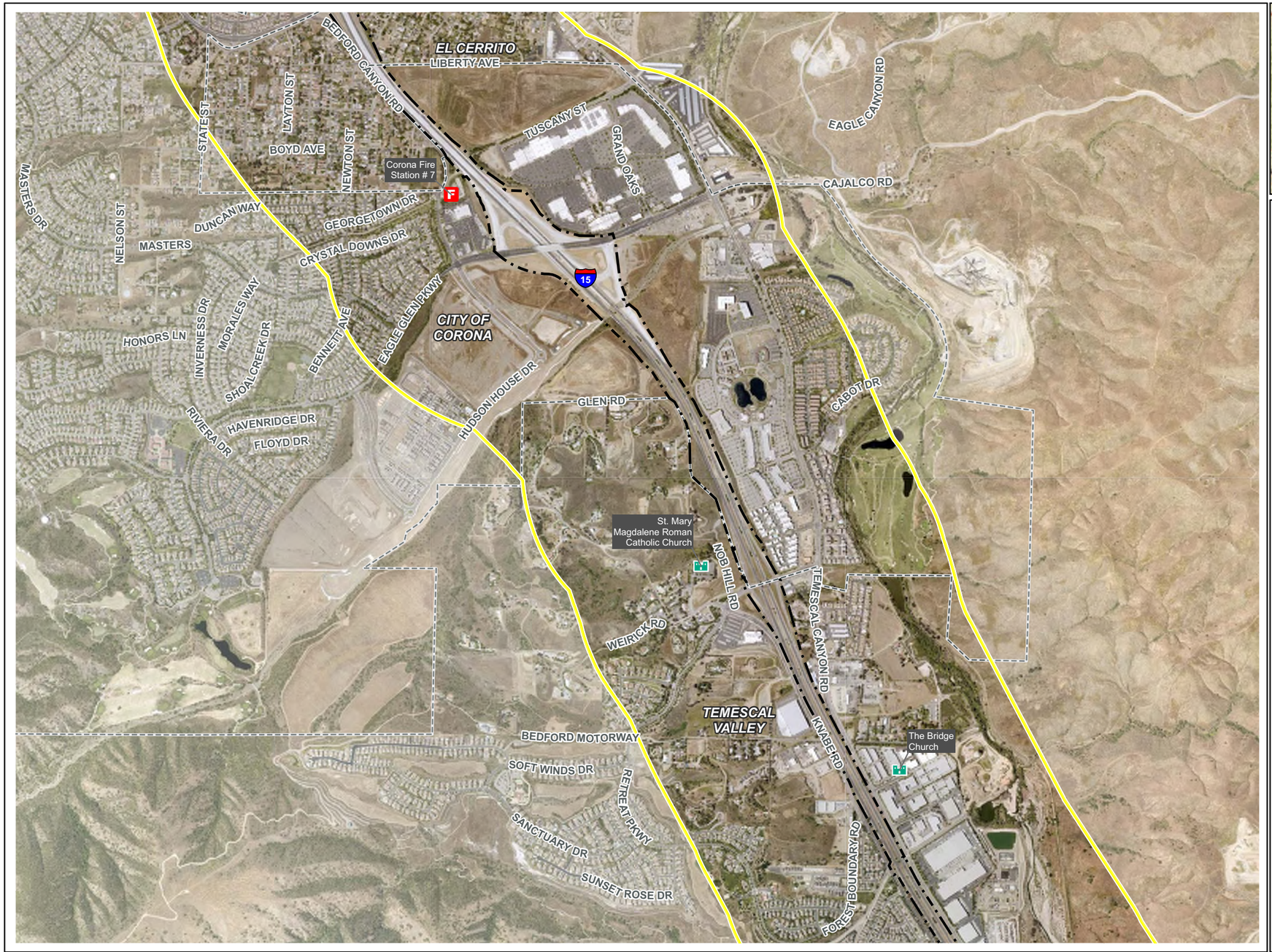

Figure 2.2.4-2 (Sheet 5 of 6)
Community Facilities and Services within the Community Impact Study Area

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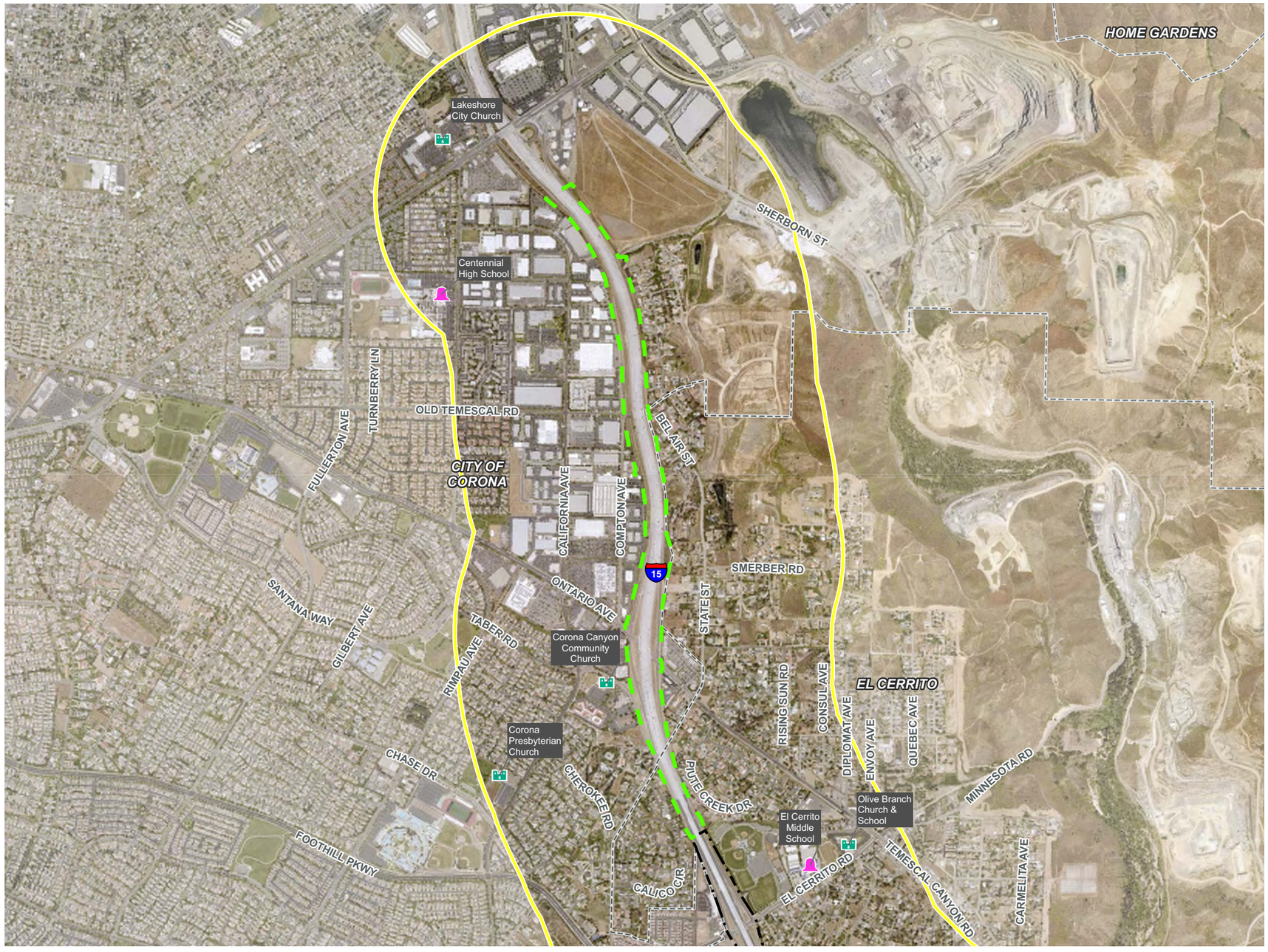

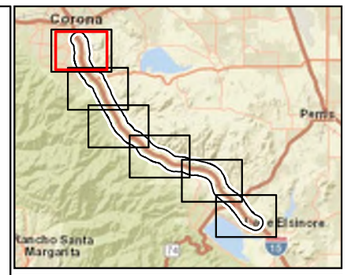

Legend

Project Limits
- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area
- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary
- Place of Worship
- School

N

0 0.2 0.4 Miles

1:18,000

Figure 2.2.4-2 (Sheet 6 of 6)
Community Facilities and Services within the Community Impact Study Area

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Places of Worship

The following places of worship are within 0.5 mile of the Project limits (Figure 2.2.4-2):

- Rebellion Church: 310 East Franklin Street, Lake Elsinore
- Iglesia de Dios Fuente de Vida: 581 Birch Street, Lake Elsinore
- The Church of Jesus Christ of Latter-day Saints: 18220 Dexter Avenue, Lake Elsinore
- The Bridge Church: 9106 Pulsar Court, Suite A, Corona
- St. Mary Magdalene Roman Catholic Church: 8540 Weirick Road, Corona
- Olive Branch Church & School: 7702 El Cerrito Road, Corona
- Corona Presbyterian Church: 2790 California Avenue, Corona
- Corona Canyon Community Church: 1504 Taber Street, Corona
- Lakeshore City Church: 1411 Rimpau Avenue Suite 203, Corona

Neighborhoods

The Temescal Canyon Area Plan identifies unique communities within its boundaries, which include El Cerrito and the I-15 Corridor. The El Cerrito community was previously a large ranch and now includes a variety of lot sizes and housing types, with parcels varying from one-quarter acre to several acres or more (County of Riverside 2021). Temescal Canyon Road is the main corridor through what might be characterized as El Cerrito's central business district. Industrial, manufacturing, recycling, vehicle storage, commercial, and houses of varying design are prevalent along this corridor. The I-15 corridor community runs generally in a northwest-southeast direction throughout the entirety of Temescal Canyon. A variety of suburban residential and rural estate neighborhoods—as well as a considerable number of industrial uses and extensive areas of existing and potential mineral extraction—are located along the I-15 corridor. Future development along the I-15 corridor is focused as much as possible around localized centers providing jobs and services to area residents.

The Elsinore Area Plan identifies the predominantly very low-density character of the Meadowbrook and Warm Springs communities, the natural and recreational characteristics of the Cleveland National Forest, and community development uses in Lakeland Village. Areas designated Conservation-Habitat and Rural Mountainous help provide a separation between communities and provide additional definition for existing communities.

The City of Corona has various districts and neighborhoods that have an identifiable and distinct character due to their building architecture, neighborhood design, streetscape, predominant land use, or even their history (City of Corona 2023). These

districts and neighborhoods are guided by the city's 32 specific plans that provide regulatory guidance for these specific areas. The only specific plan area that overlaps with the Project limits is associated with the El Cerrito Specific Plan.

As described in the City of Lake Elsinore's General Plan (City of Lake Elsinore 2011), there are 11 districts and 5 sphere districts that define the neighborhoods. The community impact study area overlaps with several of these districts and spheres. Much of these districts include neighborhoods consisting of low-medium density residential areas with commercial use and institutional facilities to support these neighborhoods.

Community Centers

The Cultural Center (183 North Main Street, Lake Elsinore) is the only community center within 0.5 mile of the Project limits (see Figure 2.2.4-2). This facility is home to the Lake Elsinore City Council and can accommodate public meetings and community gatherings (City of Lake Elsinore n.d.).

Community Cohesion

Housing

Housing Types

As identified in Table 2.2.4-11, there are 41,109 housing units in the community impact study area Census Tracts. The majority of these housing units are single-family units, at 84.0 percent. The second most common housing type for all geographies are multifamily units. However, Census Tracts 416, 418.13, and 430.06 have a higher percentage of multifamily units than the cities, Counties, and CDPs. Census Tracts 416.01, 416.02, 418.09, 418.13, 427.49, and 430.06 have a much higher percentage of mobile homes than the other Census Tracts as well as the cities, Counties, and CDPs (Temescal Valley and El Cerrito). Warm Springs CDP exhibits a very high percentage of mobile homes, which make up 72.8 percent of the housing units in the CDP, which is in line with having the highest poverty levels compared to the other geographic areas. The overall average of the 41,109 housing units within community impact study area Census Tracts is made up of single-family units (84.0 percent).

Table 2.2.4-11. Housing Types

Geographic Area	Total Housing Units	Single-Family Units (%)	Multifamily Units (%)	Mobile Homes (%)	Boat, Recreational Vehicle, Van, etc. (%)
County of Riverside	844,425	74.4	16.9	8.5	0.1
City of Corona	47,799	72.2	24.3	3.5	0.0
City of Lake Elsinore	20,082	83.6	13.5	2.8	0.1
El Cerrito (CDP)	1,492	96.3	3.7	0.0	0.0
Temescal Valley (CDP)	8,994	97.8	0.5	1.7	0.0

Geographic Area	Total Housing Units	Single-Family Units (%)	Multifamily Units (%)	Mobile Homes (%)	Boat, Recreational Vehicle, Van, etc. (%)
Warm Springs (CDP)	482	27.2	0.0	72.8	0.0
Community Impact Study Area Census Tracts					
Census Tract 414.13	1,787	97.9	2.1	0.0	0.0
Census Tract 414.14	1,442	98.1	1.9	0.0	0.0
Census Tract 414.15	1,214	89.0	2.6	8.3	0.0
Census Tract 416.01	810	60.7	39.3	0.0	0.0
Census Tract 416.02	1,102	42.1	52.1	5.8	0.0
Census Tract 418.09	1,937	46.1	38.6	15.4	0.0
Census Tract 418.10	1,587	100.0	0.0	0.0	0.0
Census Tract 418.13	2,161	67.7	32.3	0.0	0.0
Census Tract 419.09	1,623	96.6	3.4	0.0	0.0
Census Tract 419.10	2,996	82.8	14.3	2.9	0.0
Census Tract 419.14	1,458	95.4	0.0	4.6	0.0
Census Tract 419.15	3,012	98.6	1.4	0.0	0.0
Census Tract 420.07	1,943	76.6	3.1	20.2	0.0
Census Tract 427.48	1,805	87.1	12.9	0.0	0.0
Census Tract 427.49	1,605	71.8	28.2	0.0	0.0
Census Tract 427.50	1,016	90.1	7.2	2.8	0.0
Census Tract 430.01	2,943	79.9	12.9	7.2	0.0
Census Tract 430.05	1,759	63.3	13.0	23.8	0.0
Census Tract 430.06	1,442	66.3	28.4	5.3	0.0
Census Tract 430.07	2,112	100.0	0.0	0.0	0.0
Census Tract 479.01	1,372	98.2	1.8	0.0	0.0
Census Tract 479.02	1,933	100.0	0.0	0.0	0.0
Census Tract 481.00	2,050	98.8	0.4	0.8	0.0
Total	41,109	84.0	11.7	4.3	0.0

Source: U.S. Census Bureau 2022 (Table B25024)

Occupancy

According to Table 2.2.4-12, of the 41,109 housing units within community impact study area Census Tracts, 39,334 units (95.7 percent) are occupied, and the remaining 1,775 units (4.3 percent) are vacant. The percentage of vacant housing units varies among the Census Tracts, from 0 percent in Census Tracts 414.13, 419.14, and 427.50, to 11.7 percent in Census Tract 420.07. Most housing units within the community impact study area Census Tracts are owner occupied except for Census Tracts 416.01, 416.02, and 430.06, which are majority renter occupied.

Average household size and range of all the community impact study area Census Tracts are similar to those of the cities and County average ranges except for Census Tract 419.14, which has an average household size of 4.2, which is greater than that of the cities, County, and CDPs.

Table 2.2.4-12. Existing Occupancy Characteristics

Geographic Area	Total Housing Units	Occupancy Status (%)		Total Occupied Units	Type of Occupancy (%)		Average Household Size[1]
		Occupied	Vacant		Owner	Renter	
County of Riverside	844,425	87.7	12.3	740,506	68.1	31.9	3.2
City of Corona	47,799	96.0	4.0	45,875	63.6	36.4	3.4
City of Lake Elsinore	20,082	95.4	4.6	19,162	69.7	30.3	3.6
El Cerrito (CDP)	1,492	93.9	6.1	1,401	85.4	14.6	3.6
Temescal Valley (CDP)	8,994	96.7	3.3	8,700	83.7	16.3	3.2
Warm Spring (CDP)	482	100.0	0.0	482	55.4	44.6	3.4
Community Impact Study Area Census Tracts							
Census Tract 414.13	1,787	100.0	0.0	1,787	89.9	10.1	3.5
Census Tract 414.14	1,442	95.4	4.6	1,375	93.7	6.3	3.1
Census Tract 414.15	1,214	98.8	1.2	1,200	94.6	5.4	3.5
Census Tract 416.01	810	97.5	2.5	790	30.9	69.1	3.2
Census Tract 416.02	1,102	96.9	3.1	1,068	12.4	87.6	3.8
Census Tract 418.09	1,937	92.7	7.3	1,796	61.2	38.8	2.7
Census Tract 418.10	1,587	97.4	2.6	1,545	89.4	10.6	3.6
Census Tract 418.13	2,161	95.6	4.4	2,066	57.1	42.9	3.1
Census Tract 419.09	1,623	94.4	5.6	1,532	87.2	12.8	3.7
Census Tract 419.10	2,996	95.3	4.7	2,856	67.3	32.7	2.7
Census Tract 419.14	1,458	100.0	0.0	1,458	77.4	22.6	4.2
Census Tract 419.15	3,012	95.7	4.3	2,882	88.5	11.5	2.8
Census Tract 420.07	1,943	88.3	11.7	1,715	80.3	19.7	3.0
Census Tract 427.48	1,805	94.0	6.0	1,696	70.4	29.6	3.0
Census Tract 427.49	1,605	95.3	4.7	1,530	51.5	48.5	3.3
Census Tract 427.50	1,016	100.0	0.0	1,016	72.8	27.2	3.8
Census Tract 430.01	2,943	96.9	3.1	2,853	74.3	25.7	3.7

Geographic Area	Total Housing Units	Occupancy Status (%)		Total Occupied Units	Type of Occupancy (%)		Average Household Size[1]
		Occupied	Vacant		Owner	Renter	
Census Tract 430.05	1,759	95.6	4.4	1,682	55.8	44.2	3.5
Census Tract 430.06	1,442	90.8	9.2	1,309	39.2	60.8	3.6
Census Tract 430.07	2,112	98.7	1.3	2,084	86.3	13.7	3.5
Census Tract 479.01	1,372	95.6	4.4	1,312	89.0	11.0	3.3
Census Tract 479.02	1,933	97.9	2.1	1,892	90.6	9.4	3.6
Census Tract 481.00	2,050	92.2	7.8	1,890	87.3	12.7	3.5
Total	41,109	95.7	4.3	39,334	74.4	26.3	3.4

Source: U.S. Census Bureau 2022 (Tables DP04 and S1101)
[1] Average of average household size for community impact study area Census Tracts

Housing Cost

Data collected in Table 2.2.4-13 indicate that median home values within the community impact study area Census Tracts vary greatly from $282,700 to $727,300. Census Tracts 416.02, 430.05, and 430.06 have much lower median values than those of the other Census Tracts, cities, and County. Census Tract 479.02 has the highest median home value within the community impact study area, which is also higher than the median home values of the cities, County, and CDPs. Median monthly rents within the community impact study area range between $1,123 and $3,500. Census Tracts 416.01, 416.02, 418.09, 418.13, 419.09, 419.10, 419.14, 420.07, 427.49, 427.49, 427.50, 430.01, and 430.05 have similar median rents when compared to the median monthly rents of the cities and County. Meanwhile, Census Tract 430.06 has a much lower median rent compared to the rest of the Census Tracts within the community impact study area, as well as the cities and County. The City of Lake Elsinore and the City of Corona exhibit a wide range in median home value when compared to the County. The median home value in Lake Elsinore is approximately 0.5 percent higher than the median home value in the County, whereas the median home value in Corona is approximately 30.4 percent higher than the median home value in the County. Nonetheless, the difference in median monthly rent between the cities and the County is less drastic than the difference in median home values. The median monthly rent in Lake Elsinore is approximately 8.5 percent higher, and in Corona is approximately 14.9 percent higher, than the median monthly rent in the County.

Table 2.2.4-13. Housing Cost Characteristics

Geographic Area	Median Home Value ($)	Median Monthly Rent ($)
County of Riverside	390,400	1,552
City of Corona	530,100	1,802
City of Lake Elsinore	392,200	1,691
El Cerrito (CDP)	528,600	2,143
Temescal Valley (CDP)	501,300	2,352
Warm Springs (CDP)	258,900	1,212
Community Impact Study Area Census Tracts		
Census Tract 414.13	620,200	2,856
Census Tract 414.14	616,700	—[1]
Census Tract 414.15	499,600	—[1]
Census Tract 416.01	413,800	1,245
Census Tract 416.02	282,700	1,438
Census Tract 418.09	460,600	1,769
Census Tract 418.10	656,900	3,500+[2]
Census Tract 418.13	429,100	1,394
Census Tract 419.09	535,000	2,143
Census Tract 419.10	483,800	2,226
Census Tract 419.14	569,900	2,303

Geographic Area	Median Home Value ($)	Median Monthly Rent ($)
Census Tract 419.15	532,100	2,498
Census Tract 420.07	552,900	1,724
Census Tract 427.48	486,800	2,650
Census Tract 427.49	408,400	1,814
Census Tract 427.50	367,300	1,775
Census Tract 430.01	387,300	1,248
Census Tract 430.05	291,600	1,539
Census Tract 430.06	294,100	1,123
Census Tract 430.07	458,900	2,848
Census Tract 479.01	596,000	2,581
Census Tract 479.02	727,300	2,625
Census Tract 481.00	691,900	3,106
Average	494,039[3]	2,115[3]

Source: U.S. Census Bureau 2022 (Table DP04)
[1] The "—" symbol indicates that the estimate could not be computed because there was an insufficient number of sample observations. For a ratio of median estimates, one or both of the median estimates fall in the lowest or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.
[2] The "+" symbol indicates that the median falls in the highest interval of an open-ended distribution. For the purposes of the calculation for the average median monthly rent, this value was assumed to be $3,500.
[3] Average of median home value and median monthly rent for community impact study area Census Tracts.

Housing Tenure

Based on the housing tenure characteristics summarized in Table 2.2.4-14, the majority of the residential population within the community impact study area has moved into their current residence within the last 30 years. The largest number of residents moved into the community impact study area from 1990–1999 (31.7 percent), 2000–2009 (20.5 percent), and 2010–2014 (24.8 percent), which is similar to the trends of the cities and County.

Table 2.2.4-14. Housing Tenure Characteristics

Geographic Area	Total Number of Occupied Housing Units	Year Householder Moved Into Unit (%)					
		1989 or Earlier	1990–1999	2000–2009	2010–2014	2015–2018	2019 or later
County of Riverside	740,506	5.8	9.3	23.9	21.1	30.9	9.0
City of Corona	45,875	6.2	12.5	23.6	19.0	29.8	9.0
City of Lake Elsinore	19,162	2.1	5.8	19.1	23.6	40.3	9.0

Geographic Area	Total Number of Occupied Housing Units	Year Householder Moved Into Unit (%)					
		1989 or Earlier	1990–1999	2000–2009	2010–2014	2015–2018	2019 or later
El Cerrito (CDP)	1,401	14.1	28.6	19.0	19.3	17.9	1.1
Temescal Valley (CDP)	8,700	1.2	11.2	29.6	19.4	30.6	8.1
Warm Spring (CDP)	482	8.9	18.3	24.7	14.5	23.2	10.4
Community Impact Study Area Census Tracts							
Census Tract 414.13	1,787	1.9	3.1	39.6	30.9	21.2	3.2
Census Tract 414.14	1,375	0.0	17.0	18.3	16.4	48.4	0.0
Census Tract 414.15	1,200	3.1	18.1	18.1	23.0	30.3	7.4
Census Tract 416.01	790	5.6	11.4	24.4	28.0	20.3	10.4
Census Tract 416.02	1,068	4.6	9.6	16.8	11.1	40.4	17.5
Census Tract 418.09	1,796	4.7	9.1	20.7	23.9	26.2	15.5
Census Tract 418.10	1,545	1.7	16.0	32.0	24.1	20.6	5.6
Census Tract 418.13	2,066	9.5	6.0	17.4	25.7	34.0	7.4
Census Tract 419.09	1,532	11.7	25.9	17.4	20.2	23.8	1.0
Census Tract 419.10	2,856	0.5	6.6	31.4	15.8	38.8	6.9
Census Tract 419.14	1,458	0.0	1.2	32.9	12.3	46.0	7.5
Census Tract 419.15	2,882	2.7	18.4	26.3	20.9	24.7	7.0
Census Tract 420.07	1,715	15.5	9.6	19.5	11.8	28.0	15.6
Census Tract 427.48	1,696	0.0	6.3	14.4	17.5	41.6	20.2
Census Tract 427.49	1,530	0.0	1.6	21.1	14.2	47.2	15.9
Census Tract 427.50	1,016	3.1	4.6	30.6	22.6	34.4	4.6

Geographic Area	Total Number of Occupied Housing Units	Year Householder Moved Into Unit (%)					
		1989 or Earlier	1990–1999	2000–2009	2010–2014	2015–2018	2019 or later
Census Tract 430.01	2,853	1.1	4.7	16.1	13.7	50.4	14.1
Census Tract 430.05	1,682	7.0	9.0	14.8	31.8	30.5	6.9
Census Tract 430.06	1,309	5.4	15.4	15.0	28.1	26.1	10.0
Census Tract 430.07	2,084	0.0	12.8	23.7	24.2	26.0	13.3
Census Tract 479.01	1,312	0.0	25.8	35.1	10.1	26.4	2.6
Census Tract 479.02	1,892	1.5	6.7	36.5	29.7	18.2	7.5
Census Tract 481.00	1,890	2.7	8.7	42.7	19.7	18.6	7.6
Total	39,334	9.2	31.7	20.5	24.8	10.4	3.4

Source: U.S. Census Bureau 2022 (Table DP04)

Age Distribution

As shown in Table 2.2.4-15, the median age for the cities and County ranges from 32 to 36 years of age while the CDPs are slightly older, ranging from 36 to 39 years of age. Both groups have a population over 65 years of age of about 11.5 percent. The median ages of Census Tracts 416.01, 419.14, 427.48, 430.01, 430.05, and 430.07 are consistent with the City and County estimates; however, Census Tracts 414.13, 414.14, 414.15, 418.09, 418.10, 418.13, 419.09, 419.10, 419.15, 420.07, 427.50, 479.01, 479.02, and 481.00 exhibit slightly older populations ranging from 37 to 46 years of age, with the largest average percentage of people over 65 years of age. Census Tracts 416.02, 427.49, and 430.06 exhibit slightly younger populations ranging from 29 to 31 years of age with the lowest average percentage of people over 65 years of age. The overall median age within the community impact study area Census Tracts is 37 years of age.

Race and Ethnicity

As shown in Table 2.2.4-16, the population across all geographic areas is dominated by two groups: Hispanic or Latino and White. Within the community impact study area, Census Tracts 420.07, 427.48, and 479.01 have a majority of White populations, while Census Tracts 416.01, 416.02, 418.13, 427.49, 430.01, 430.05, and 430.06 have a majority Hispanic or Latino populations. The overall majority within the community impact study area is of Hispanic or Latino origin, similar to the cities and County.

Table 2.2.4-15. Age Distribution Characteristics

Geographic Area	Age Range				
	Median Age	19 and Under (%)	20 to 39 (%)	40 to 64 (%)	65 and Over (%)
County of Riverside	36	28.0	27.1	30.5	14.4
City of Corona	35	28.4	27.9	33.4	10.2
City of Lake Elsinore	32	32.2	30.3	28.6	8.9
El Cerrito (CDP)	38	25.5	27.0	35.9	11.6
Temescal Valley (CDP)	39	28.7	22.4	34.1	14.9
Warm Springs (CDP)	36	26.9	28.1	36.2	9.0
Average	36	28.3	27.1	27.4	11.5
Community Impact Study Area Census Tracts					
Census Tract 414.13	37	29.8	25.2	36.5	8.7
Census Tract 414.14	45	22.4	21.4	41.0	15.3
Census Tract 414.15	37	29.9	25.3	35.0	9.9
Census Tract 416.01	34	29.5	30.7	32.3	7.6
Census Tract 416.02	29	33.5	38.4	26.0	1.9
Census Tract 418.09	40	24.3	24.6	39.1	11.8
Census Tract 418.10	37	28.9	24.2	37.1	10.0
Census Tract 418.13	37	28.5	24.1	34.7	12.8
Census Tract 419.09	40	27.1	28.6	33.3	11.0
Census Tract 419.10	37	25.8	27.1	27.9	19.2
Census Tract 419.14	34	37.5	23.6	32.4	6.5
Census Tract 419.15	46	25.7	16.8	34.7	22.8
Census Tract 420.07	46	19.7	23.7	37.0	19.7
Census Tract 427.48	33	21.9	38.5	30.1	9.8
Census Tract 427.49	31	35.3	35.0	22.7	7.1
Census Tract 427.50	40	30.7	19.9	33.9	15.4
Census Tract 430.01	32	34.1	32.2	26.1	7.4

Geographic Area	Age Range				
	Median Age	19 and Under (%)	20 to 39 (%)	40 to 64 (%)	65 and Over (%)
Census Tract 430.05	32	30.2	31.2	27.4	11.4
Census Tract 430.06	30	35.4	27.5	23.5	13.8
Census Tract 430.07	36	31.2	25.4	37.6	6.0
Census Tract 479.01	43	26.3	21.2	36.4	16.1
Census Tract 479.02	43	26.9	20.0	42.5	10.7
Census Tract 481.00	43	27.9	18.9	45.1	8.1
Average	37	28.8	26.2	33.6	11.4

Source: U.S. Census Bureau 2022 (Table S0101)

Table 2.2.4-16. Existing Regional and Local Race/Ethnicity Characteristics

Geographic Area	Hispanic or Latino (of any race) (%)	Not Hispanic or Latino							Total Minority Population (%)
		White (%)	Black or African American (%)	American Indian or Alaskan Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Other Race (%)	Two or More Races (%)	
County of Riverside	50.3	33.2	6.1	0.4	6.6	0.3	0.3	2.9	66.8
City of Corona	49.1	31.3	5.6	0.1	9.9	0.4	0.4	3.2	68.7
City of Lake Elsinore	50.0	31.5	7.1	0.2	7.4	0.2	0.9	2.7	68.5
El Cerrito (CDP)	47.1	43.8	0.3	0.0	3.5	0.0	0.0	5.3	56.2
Temescal Valley (CDP)	37.2	43.8	7.2	0.2	8.9	0.1	0.2	2.5	56.2
Warm Spring (CDP)	62.1	25.3	0.0	0.9	6.1	0.0	0.0	5.5	74.7

Geographic Area	Hispanic or Latino (of any race) (%)	Not Hispanic or Latino							Total Minority Population (%)
		White (%)	Black or African American (%)	American Indian or Alaskan Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Other Race (%)	Two or More Races (%)	
Community Impact Study Area Census Tracts									
Census Tract 414.13	31.4	43.4	6.2	1.6	9.9	0.0	0.0	7.5	56.6
Census Tract 414.14	35.3	40.9	1.4	0.0	16.4	0.0	0.7	5.4	59.1
Census Tract 414.15	39.8	25.3	7.3	0.0	24.8	0.0	2.6	0.2	74.7
Census Tract 416.01	80.0	15.7	0.0	0.0	1.5	1.1	0.0	1.6	84.3
Census Tract 416.02	90.1	6.1	0.0	0.0	2.9	0.0	0.9	0.0	93.9
Census Tract 418.09	38.9	46.3	6.1	0.0	6.0	1.5	0.0	1.2	53.7
Census Tract 418.10	28.0	48.3	4.8	0.0	15.0	0.0	0.0	3.8	51.7
Census Tract 418.13	70.1	22.0	3.2	0.1	3.0	0.0	0.0	1.6	78.0
Census Tract 419.09	46.8	39.8	0.8	0.0	4.8	0.0	0.0	7.8	60.2
Census Tract 419.10	34.6	46.1	8.5	0.0	7.8	0.0	1.1	1.8	53.9
Census Tract 419.14	38.1	32.6	7.2	0.0	18.3	0.0	0.0	4.0	67.4
Census Tract 419.15	34.9	47.0	6.7	0.2	7.5	0.0	0.0	3.6	53.0

Geographic Area	Hispanic or Latino (of any race) (%)	Not Hispanic or Latino							Total Minority Population (%)
		White (%)	Black or African American (%)	American Indian or Alaskan Native (%)	Asian (%)	Native Hawaiian/ Pacific Islander (%)	Other Race (%)	Two or More Races (%)	
Census Tract 420.07	24.5	58.6	4.9	0.3	7.7	0.0	0.7	3.4	41.4
Census Tract 427.48	35.7	53.8	6.6	0.0	1.3	0.0	0.2	2.4	46.2
Census Tract 427.49	50.1	23.4	3.7	0.0	22.3	0.0	0.0	0.5	76.6
Census Tract 427.50	32.1	40.4	0.0	0.0	22.0	0.0	0.0	5.5	59.6
Census Tract 430.01	53.9	25.6	11.8	0.0	5.5	0.2	0.6	2.5	74.4
Census Tract 430.05	65.6	27.2	4.3	0.0	0.3	1.0	0.2	1.4	75.9
Census Tract 430.06	65.6	27.2	4.3	0.0	0.3	1.0	0.2	1.4	72.8
Census Tract 430.07	38.2	46.3	7.7	0.4	5.2	0.3	0.0	2.0	53.7
Census Tract 479.01	23.4	50.5	8.9	0.4	13.1	0.0	1.5	2.1	49.5
Census Tract 479.02	23.3	38.2	7.5	0.0	18.8	4.3	3.5	4.3	61.8
Census Tract 481.00	31.8	41.7	11.1	0.4	12.4	0.0	0.5	2.2	58.3
Average	42.9	37.3	6.0	0.2	9.6	0.4	0.5	3.0	62.7

Source: U.S. Census Bureau 2022 (Table B03002)

Summary

In considering these factors, the community impact study area and its associated Census Tracts show moderate levels of community cohesion. Based on indicators of community cohesion (e.g., tenure of residency, household size, occupied housing characteristics, ethnic homogeneity) within the community impact study area, the average of the population characteristics within the community impact study area Census Tracts does not exhibit a substantial difference from averages of the cities, County, and associated CDPs. The community impact study area Census Tracts exhibit a similar or average residential tenure, rate of age, income, population with disability, ethnic homogeneity, number of limited English-speaking households, transit-dependent population, housing occupancy characteristics, and household size.

2.2.4.3 Environmental Consequences

Impacts on community character and cohesion generally depend on whether a project is likely to create a barrier within or disrupt connectivity of a community. Either of these can be a result of disruptions in access or residential and/or business acquisitions. Temporary impacts on community character and cohesion can occur from the temporary use of land from privately owned properties for use as temporary construction easements, short-term air quality and noise effects, and temporary road and ramp closures/detours along and in the immediate vicinity of I-15 within the Project area.

Build Alternative

Temporary Impacts

Construction activities associated with the Build Alternative are expected to result in temporary indirect impacts on air quality, noise, and traffic in the community impact study area, due to temporary lane closures and access restrictions during construction. Indirect impacts on air quality would occur because of temporary increases in emissions due to traffic congestion and use of construction equipment, including indirect impacts on noise, which would also occur as a result of construction activities.

However, temporary indirect impacts on noise and air quality related to construction activities that may affect residential communities close to the Project limits would be reduced through Standard Project Measure **N-1** (see Section 2.3.7, *Noise*), which require noise reduction measures in accordance with Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications as well as Standard Project Measures **AQ-1** through **AQ-4** (see Section 2.3.6, *Air Quality*), which require the use of dust control procedures, maintenance of equipment, and other standard best management practices and regulations to be implemented during construction. These short-term impacts would not result in a substantial adverse effect on quality of life within the community impact study area.

Standard Project Measure **TR-1** (Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*), would require a Transportation Management Plan (TMP) to be

prepared, which would identify strategies to reduce potential impacts on access and traffic delays during construction.

Construction activities would be temporary and would cease after construction is complete. The Build Alternative would not result in temporary adverse impacts related to public access that would create a barrier or disruption in connectivity within the community impact study area's neighborhoods and communities.

Permanent Impacts

The Project would improve and manage traffic operations, throughput, and travel times along the I-15 corridor within the community impact study area, which would benefit the surrounding neighborhoods and communities and support planned growth in the region. The Project would also contribute to the region's ability to create a stronger sense of community character and cohesion by improving mobility for all users, residents, and businesses that provide employment and services for the surrounding communities and accommodating future growth within the community impact study area. Construction of the Build Alternative would not create new physical or geographic barriers between existing communities and would not require residential or business acquisitions or displacement. Additionally, community facilities that contribute to community character and cohesion would not be adversely affected by the Project.

As discussed in Section 2.2.3, *Growth*, the Project would improve existing transportation infrastructure and would not result in the construction and operation of residential, commercial, or industrial development. The Project improvements would occur within existing Caltrans right of way. Therefore, the Project would not result in indirect or direct temporary or permanent impacts on housing characteristics such as rent, housing prices, occupancy, housing type, or population projections requiring additional residential units.

Therefore, operation of the Build Alternative would not adversely affect population characteristics, economic opportunities, employment, or housing availability, which directly affects local and regional growth and the community's character and cohesion. Based on the information above, the Project would not result in permanent adverse effects on the community character and cohesion assessed for the community impact study area.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. I-15 would remain in its current condition and no improvements would be implemented. Therefore, there would be no adverse impacts related to community character or cohesion under the No-Build Alternative. The No-Build Alternative would not result in improvements to traffic operations, throughput, or travel times along the corridor.

2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures

Refer to Section 2.3.6, *Air Quality*, Section 2.3.7, *Noise*, and Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, for detailed measures related to noise,

air quality emissions and traffic, respectively. A TMP (Standard Project Measure **TR-1**) would be prepared to address short-term traffic circulation and access effects during Project construction. Additionally, the inclusion of Standard Project Measures **N-1** and **AQ-1** through **AQ-4** will minimize and/or avoid impacts related to noise and air quality during construction. No additional avoidance, minimization, and/or mitigation measures are recommended.

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2.2.5 Environmental Justice

2.2.5.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services (DHHS) poverty guidelines. For 2023, this was $30,000 for a family of four.

EO 14096—"Revitalizing Our Nation's Commitment to Environmental Justice for All" was enacted on April 21, 2023. EO 14096 on environmental justice does not rescind EO 12898 – "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which has been in effect since February 11, 1994 and is currently implemented through DOT Order 5610.2C. This implementation will continue until further guidance is provided regarding the implementation of the new EO 14096 on environmental justice.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this Project. The Department's commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

2.2.5.2 Affected Environment

This section is based on information from the *Community Impact Assessment* (Caltrans 2024). The Council on Environmental Quality (CEQ), which is an advisory body that has oversight of the federal government's compliance with EO 12898 and the National Environmental Policy Act (NEPA), has developed guidance for implementing environmental justice (EJ) under NEPA. The CEQ guidance recommends identifying minority populations where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. The CEQ guidance also recommends identifying low-income populations in an affected area by applying the annual statistical poverty thresholds from the U.S. Census Bureau Current Population Reports, Series P-60 on Income and Poverty.

As a high-level overview, an EJ analysis was conducted using Census Tract information from the 2017–2021 American Community Survey 5-year Estimates for the referenced populations of the community impact study area, which consists of Census Tracts within a 0.5-mile buffer around the Project footprint. The Census Tracts are in the Cities of Corona and Lake Elsinore and unincorporated Riverside County. The following analysis

provides a comparison of measures with which to evaluate EJ. The following definitions were established by the CEQ's *Environmental Justice: Guidance Under the National Environmental Policy Act* (CEQ 1997) for analyzing impacts on EJ.

- Minority individuals are defined as members of the following population groups: American Indian/Alaskan Native, Asian American, Native Hawaiian or Pacific Islander, Black, or Hispanic.

- Minority populations should be identified where either (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.[1]

- Low-income persons are those whose median household income is at or below the DHHS poverty guidelines.

- Low-income populations consist of any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed Federal Highway Administration program, policy, or activity.

The community impact study area overlaps with Census Tracts 414.15, 416.02, 418.09, 418.10, 418.13, 419.09, 419.10, 419.14, 419.15, 420.07, 427.49, 427.50, 430.01, 430.05, 430.06, 430.07, 479.02, and 481. Between 2010 and 2021, Census Tract 414.09 was subdivided into Census Tracts 414.13, 414.14, and 414.15; Census Tract 416 into Census Tracts 416.01 and 416.02; Census Tract 419.11 into Census Tracts 419.14 and 419.15; Census Tract 427.15 into Census Tracts 427.48, 427.49, and 427.50; and Census Tract 479 into Census Tracts 479.01 and 479.02 (U.S. Census Bureau 2011, 2022). Therefore, although the community impact study area does not directly overlap with Census Tracts 414.13, 414.14, 416.01, 479.01, and 427.48, they are considered as part of the community impact study area for this analysis (refer to Figure 2.2.5-1).

Environmental Justice Population: Census Tracts

As shown in Table 2.2.5-1, Census Tracts 414.13, 414.14, 414.15, 416.01, 416.02, 418.09, 418.10, 418.13, 419.09, 419.10, 419.14, 419.15, 427.49, 427.50, 430.01, 430.05, 430.06, 430.07, 479.02, and 481.00 are identified as having EJ minority populations greater than 50 percent.

[1] It should be noted that while these are the official definitions for the NEPA analyses, they may not be appropriate for assessing EJ issues in transportation plans in California where minority individuals are the majority of residents and living expenses in some areas are unusually high.

Figure 2.2.5-1 Environmental Justice Census Tracts

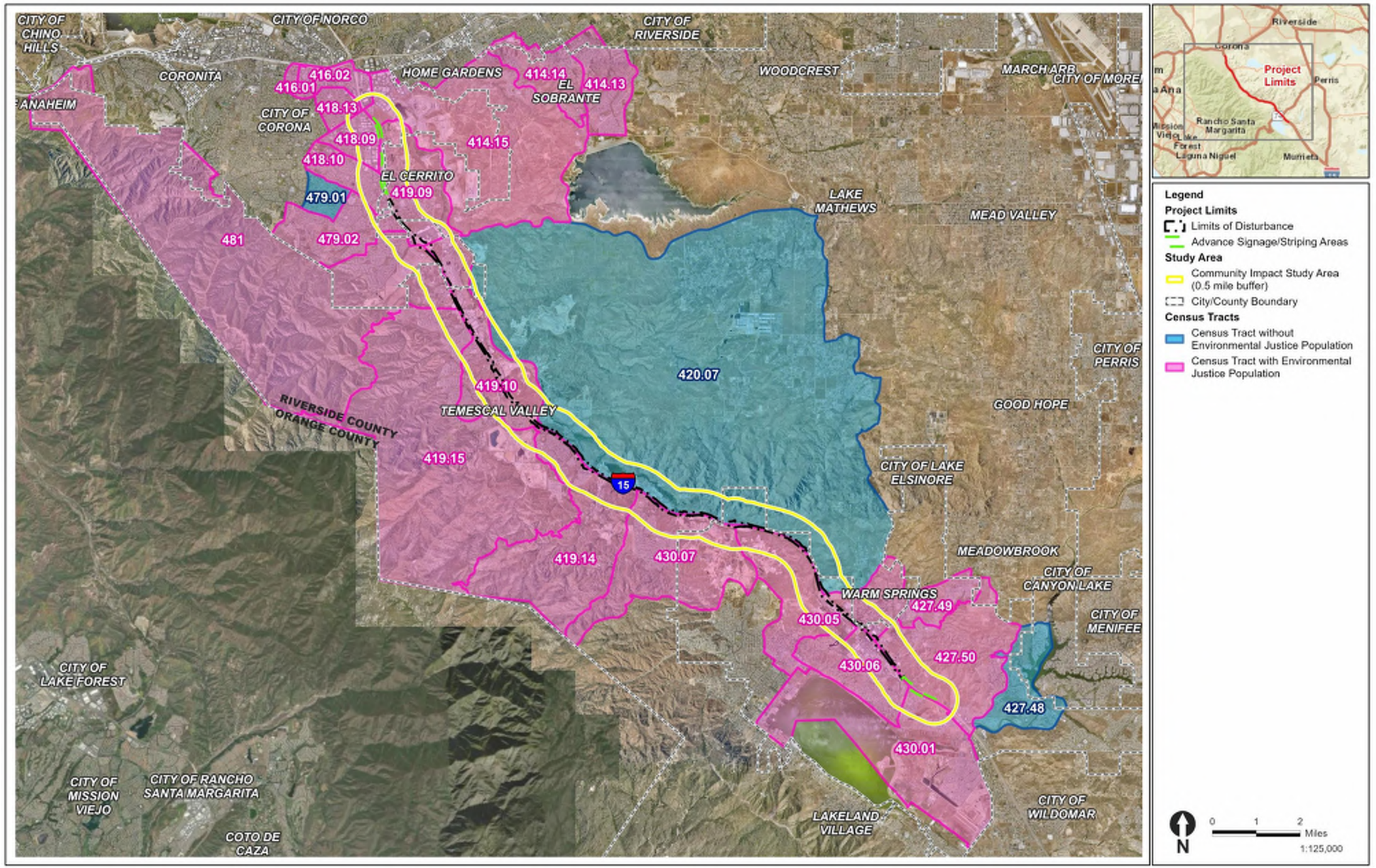

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Table 2.2.5-1. Minority and Low-Income Populations in Community Impact Study Area

Geographic Area	Minority Populations			Low-Income Populations		
	% Minority	% Minority in study area > 50% (yes/no)	Minority EJ Population (yes/no)	Median Household Income ($)	Median Household Income Below 2023 DHHS Poverty Income of $30,000* (yes/no)	Low-Income EJ Population (yes/no)
Community of Comparison						
City of Corona	68.7	N/A	N/A	$95,268	No	N/A
City of Lake Elsinore	68.5	N/A	N/A	$80,350	No	N/A
County of Riverside	78.4	N/A	N/A	$84,505	No	N/A
Community Impact Study Area Average	63.3	N/A	N/A	$103,623	No	N/A
Census Tracts in Community Impact Study Area						
Census Tract 414.13	56.6	Yes	Yes	$141,970	No	No
Census Tract 414.14	59.1	Yes	Yes	$124,525	No	No
Census Tract 414.15	74.7	Yes	Yes	$128,721	No	No
Census Tract 416.01	84.3	Yes	Yes	$39,886	No	No
Census Tract 416.02	93.9	Yes	Yes	$60,515	No	No
Census Tract 418.09	53.7	Yes	Yes	$76,702	No	No
Census Tract 418.10	51.7	Yes	Yes	$140,815	No	No
Census Tract 418.13	78.0	Yes	Yes	$62,241	No	No
Census Tract 419.09	60.2	Yes	Yes	$112,768	No	No
Census Tract 419.10	53.9	Yes	Yes	$101,691	No	No

Geographic Area	Minority Populations			Low-Income Populations		
	% Minority	% Minority in study area > 50% (yes/no)	Minority EJ Population (yes/no)	Median Household Income ($)	Median Household Income Below 2023 DHHS Poverty Income of $30,000* (yes/no)	Low-Income EJ Population (yes/no)
Census Tract 419.14	67.4	Yes	Yes	$149,773	No	No
Census Tract 419.15	53.0	Yes	Yes	$104,603	No	No
Census Tract 420.07	41.4	No	No	$95,054	No	No
Census Tract 427.48	46.2	No	No	$123,750	No	No
Census Tract 427.49	76.6	Yes	Yes	$109,079	No	No
Census Tract 427.50	59.6	Yes	Yes	$57,176	No	No
Census Tract 430.01	74.4	Yes	Yes	$78,222	No	No
Census Tract 430.05	75.9	Yes	Yes	$67,030	No	No
Census Tract 430.06	72.8	Yes	Yes	$41,713	No	No
Census Tract 430.07	53.7	Yes	Yes	$121,368	No	No
Census Tract 479.01	49.5	No	No	$130,849	No	No
Census Tract 479.02	61.8	Yes	Yes	$169,739	No	No
Census Tract 481.00	58.3	Yes	Yes	$145,147	No	No

Source: U.S. Census Bureau 2022 (Tables B03002 and B19013)
* 2023 DHHS poverty level for a family of four.
N/A = not applicable

Census Tract-level information from the 2017–2021 American Community Survey 5-year Estimates (U.S. Census Bureau 2022) were adjusted using the 2023 DHHS Poverty Guideline income of $30,000 (DHHS 2023) for a family of four as a threshold. As shown in Table 2.2.5-1, no Census Tracts were identified as low-income EJ populations in the community impact study area.

Environmental Justice Population: Census Blocks

As shown on Figure 2.2.5-1, the Census Tracts within the community impact study area cover large geographic areas. Additionally, the community impact study area intersects with only small portions of many of the Census Tracts within the study area. Therefore, the Project team determined a deeper examination into EJ communities near the Project corridor was appropriate to accurately represent affected communities. Census block group data for minority and low-income households is presented in Table 2.2.5-2 to more accurately identify where EJ communities are located within the Census Tracts along the Project corridor.

To identify minority populations in census block groups along the Project corridor, the percentage of minority persons in each block group was compared to the County of Riverside average to identify which block groups have a percentage that is 5 percent or above the county as a whole, and would thus constitute a meaningfully greater population. As shown in Table 2.2.5-2 and Figure 2.2.5-2, the percentage of minority persons in the County of Riverside is 67.6 percent, and there are 16 census block groups in the community impact study area with minority percentages that are greater than 5 percent above the County of Riverside.

To identify low-income households within census block groups within the community impact study area, the percentage of low-income households in each census block group was compared to the Country of Riverside average. As shown in Table 2.2.5-2, the percentage of low-income households in the County of Riverside is 11.3 percent. There are nine block groups in the community impact study area with low-income percentages that are greater than that of the County of Riverside.

Table 2.2.5-2. Census Block Groups with Minority and Low-Income Populations

Geographic Area	Percent Minority[1]	Percent Low-Income[1]	Environmental Justice Community
Community of Comparison			
County of Riverside	67.6	11.3	N/A
Census Block Groups			
Census Tract 414.15 Block Group 3	**95.9**	**65.6**	Yes
Census Tract 416.02 Block Group 1	**91.1**	**28.4**	Yes
Census Tract 418.09 Block Group 2	68.9	9.1	No
Census Tract 418.09 Block Group 3	60.2	9.1	No

Geographic Area	Percent Minority[1]	Percent Low-Income[1]	Environmental Justice Community
Census Tract 418.09 Block Group 4	38.1	3.7	No
Census Tract 418.10 Block Group 1	60.4	1.5	No
Census Tract 418.10 Block Group 3	39.6	1.2	No
Census Tract 418.13 Block Group 1	**81.6**	1.5	Yes
Census Tract 419.09 Block Group 1	**86.5**	5.2	Yes
Census Tract 419.09 Block Group 2	42.8	0.0	No
Census Tract 419.09 Block Group 3	**75.0**	0.0	Yes
Census Tract 419.09 Block Group 4	38.6	8.6	No
Census Tract 419.10 Block Group 1	37.9	5.8	No
Census Tract 419.10 Block Group 2	60.0	5.3	No
Census Tract 419.10 Block Group 3	67.5	6.9	No
Census Tract 419.10 Block Group 4	48.7	0.0	No
Census Tract 419.14 Block Group 1	**74.5**	10.5	Yes
Census Tract 419.14 Block Group 2	**79.3**	**13.2**	Yes
Census Tract 419.15 Block Group 2	**75.4**	0.0	Yes
Census Tract 419.15 Block Group 3	**74.2**	6.5	Yes
Census Tract 419.15 Block Group 4	56.5	0.0	No
Census Tract 420.07 Block Group 1	44.8	**13.7**	Yes
Census Tract 420.07 Block Group 2	32.6	5.6	No
Census Tract 427.50 Block Group 2	**76.6**	7.4	Yes
Census Tract 430.01 Block Group 1	**90.7**	**22.6**	Yes
Census Tract 430.01 Block Group 2	**85.5**	**39.8**	Yes
Census Tract 430.05 Block Group 2	**79.8**	0.0	Yes
Census Tract 430.05 Block Group 3 (Warm Springs)	**74.5**	**26.9**	Yes
Census Tract 430.06 Block Group 1	**86.2**	**34.3**	Yes
Census Tract 430.06 Block Group 2	**81.9**	9.3	Yes
Census Tract 430.06 Block Group 3	47.8	4.6	No
Census Tract 430.07 Block Group 1	49.9	4.3	No
Census Tract 430.07 Block Group 3	58.9	4.5	No
Census Tract 479.02 Block Group 1	63.5	4.9	No

Geographic Area	Percent Minority[1]	Percent Low-Income[1]	Environmental Justice Community
Census Tract 479.02 Block Group 3	**72.4**	3.2	Yes
Census Tract 481.00 Block Group 1	57.9	8.0	No
Census Tract 481.00 Block Group 2	63.3	8.1	No
Census Tract 481.00 Block Group 3	46.3	**13.1**	Yes

Source: U.S. Census Bureau 2022 (Tables B03002 and B19013)
[1] Bold numbers indicate census block groups with a minority population that is 5 percent or above that of the County of Riverside.
N/A = not applicable

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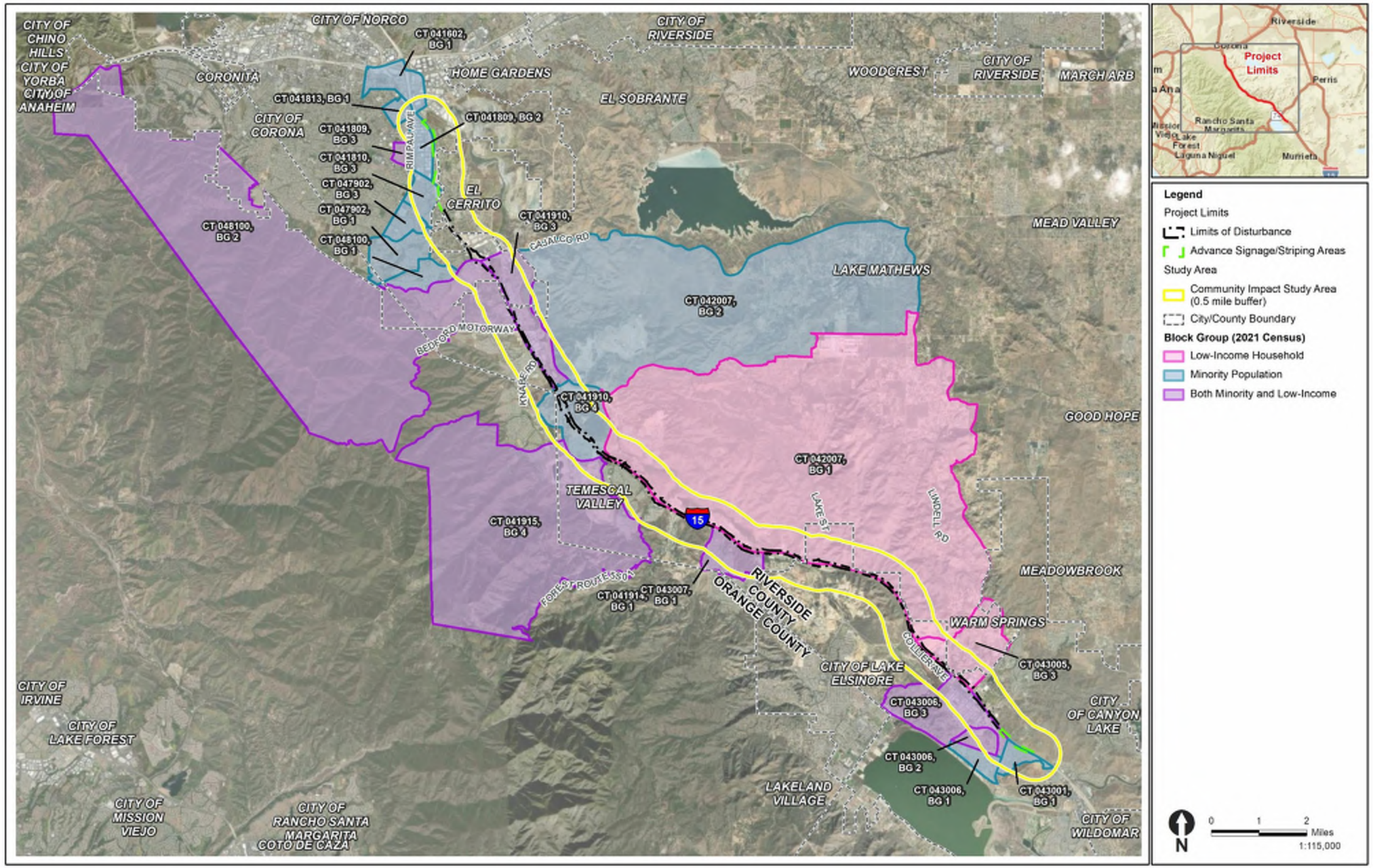
Figure 2.2.5-2 Environmental Justice Census Block Groups



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As identified in Table 2.2.5-2, census data show that 19 of the 38 census block groups within the community impact study area contain either minority or low-income populations, or both. While census block groups as a whole may contain EJ populations, the actual concentrations of EJ populations only exist in residential land uses of the census block groups. As shown on Figure 2.2.5-3 (sheets 1 through 5), the census block groups within the community impact study area still cover large geographic areas.

Environmental Justice Population: Deeper Dive (500-foot Radius)

In order to get a better understanding of the potential EJ communities, the Project team took a closer examination of the communities along the Project corridor. According to Table 1-1 of the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective* (ARB 2005), sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities should not be sited within 500 feet of a freeway. Therefore, residential communities and housing were evaluated for all EJ communities within 500 feet of the Project limits. Figure 2.2.5-3 (sheets 1 through 5) shows census block groups of both EJ populations and non-EJ communities that are within 500 feet of the Project limits. EJ populations within 500 feet of the Project limits are limited to small residential areas within portions of the City of Temescal Valley, North Elsinore, and Warm Springs.

In addition to identifying EJ and non-EJ areas by use type, the Project team conducted a manual count of housing units within 500 feet of the Project limits using aerial imagery. Table 2.2.5-3 shows the acres of residential land use types and number of housing units within 500 feet of the Project limits for both EJ and non-EJ areas within the census block groups. As shown in the table, there are both fewer acres of residential land use types and fewer housing units in EJ areas than non-EJ areas.

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Figure 2.2.5-3 Environmental Justice Areas within 500 Feet of Project Limits – Sheet 1

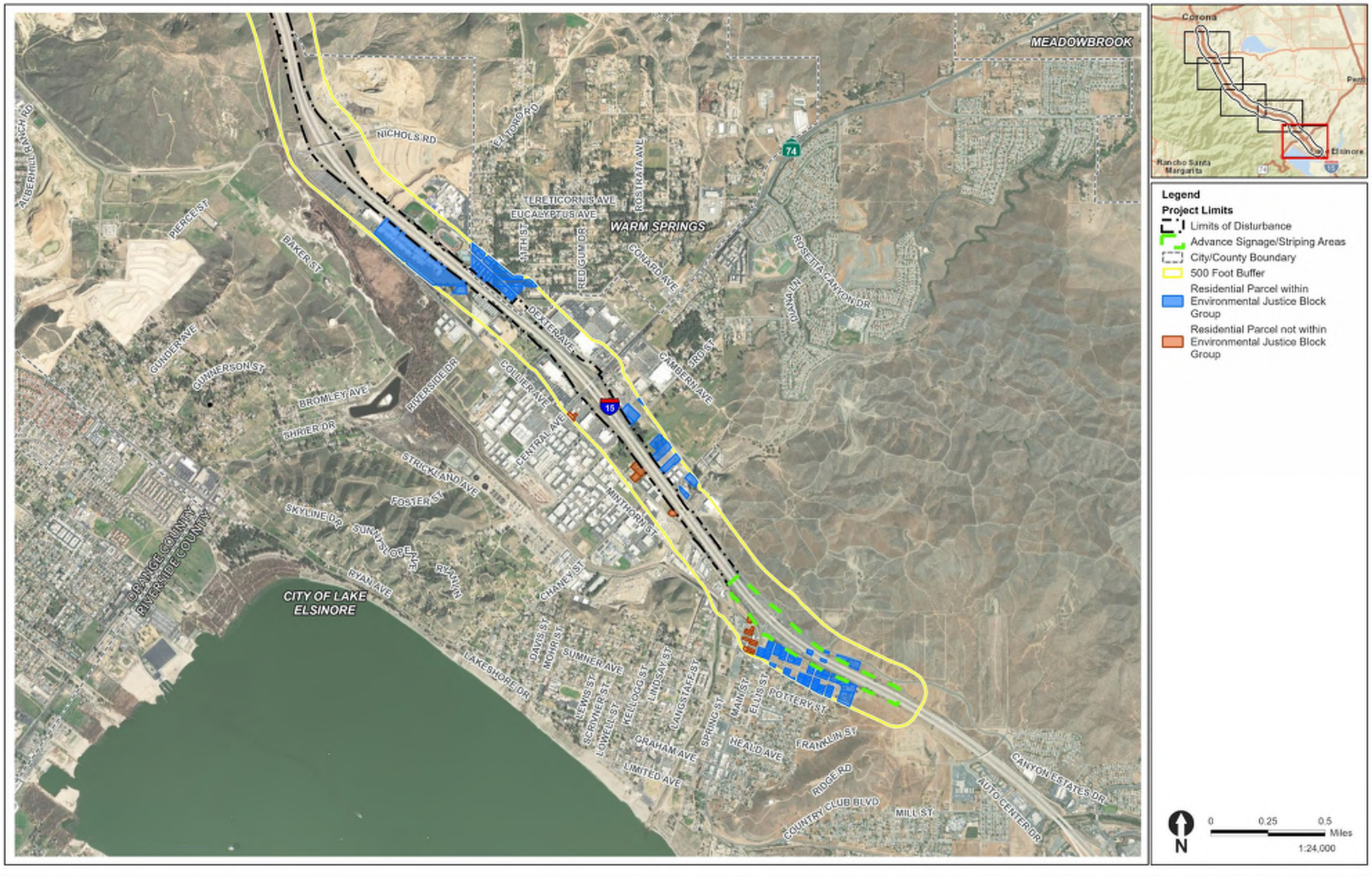

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Figure 2.2.5-3 Environmental Justice Areas within 500 Feet of Project Limits – Sheet 2

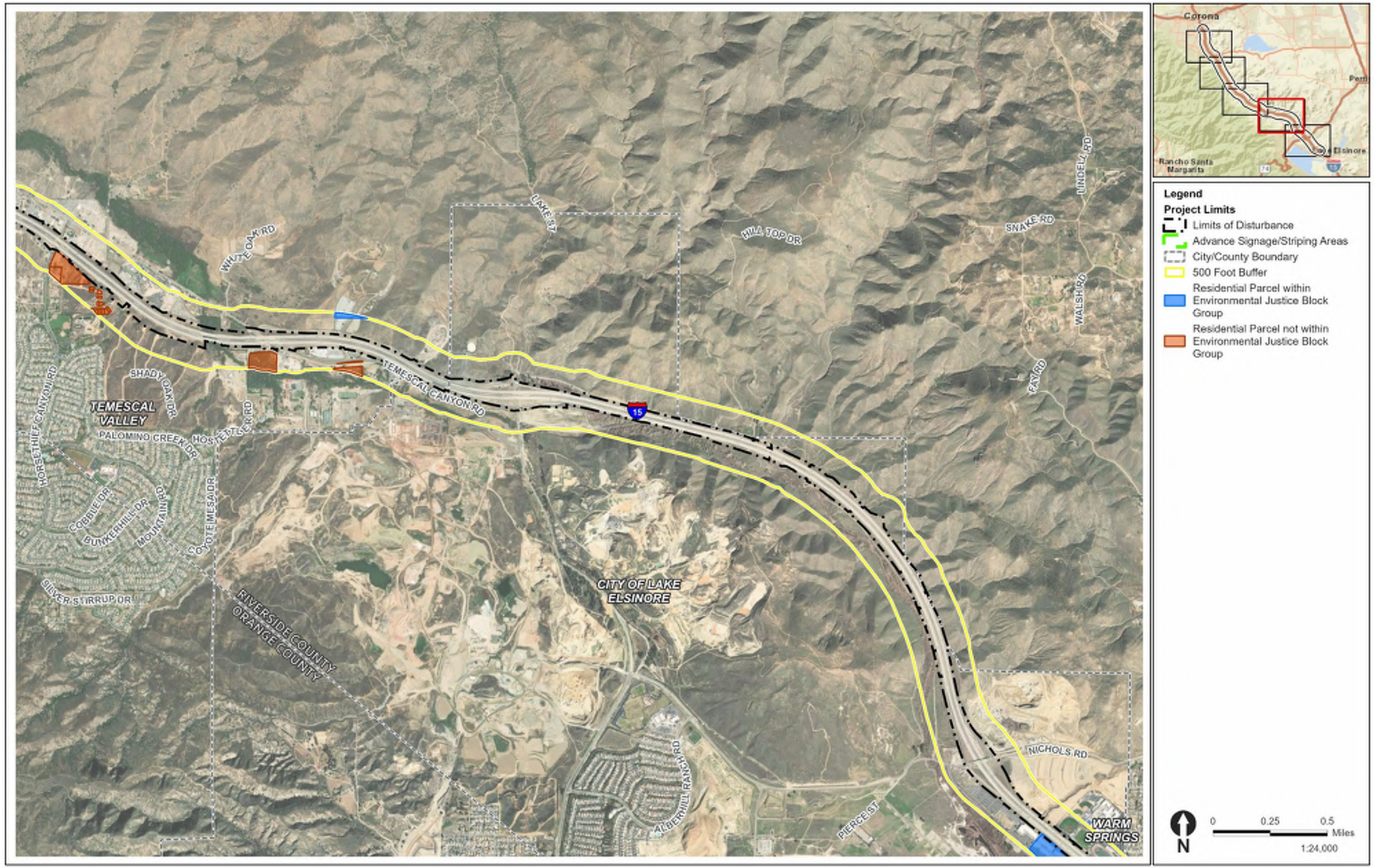

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Figure 2.2.5-3 Environmental Justice Areas within 500 Feet of Project Limits – Sheet 3

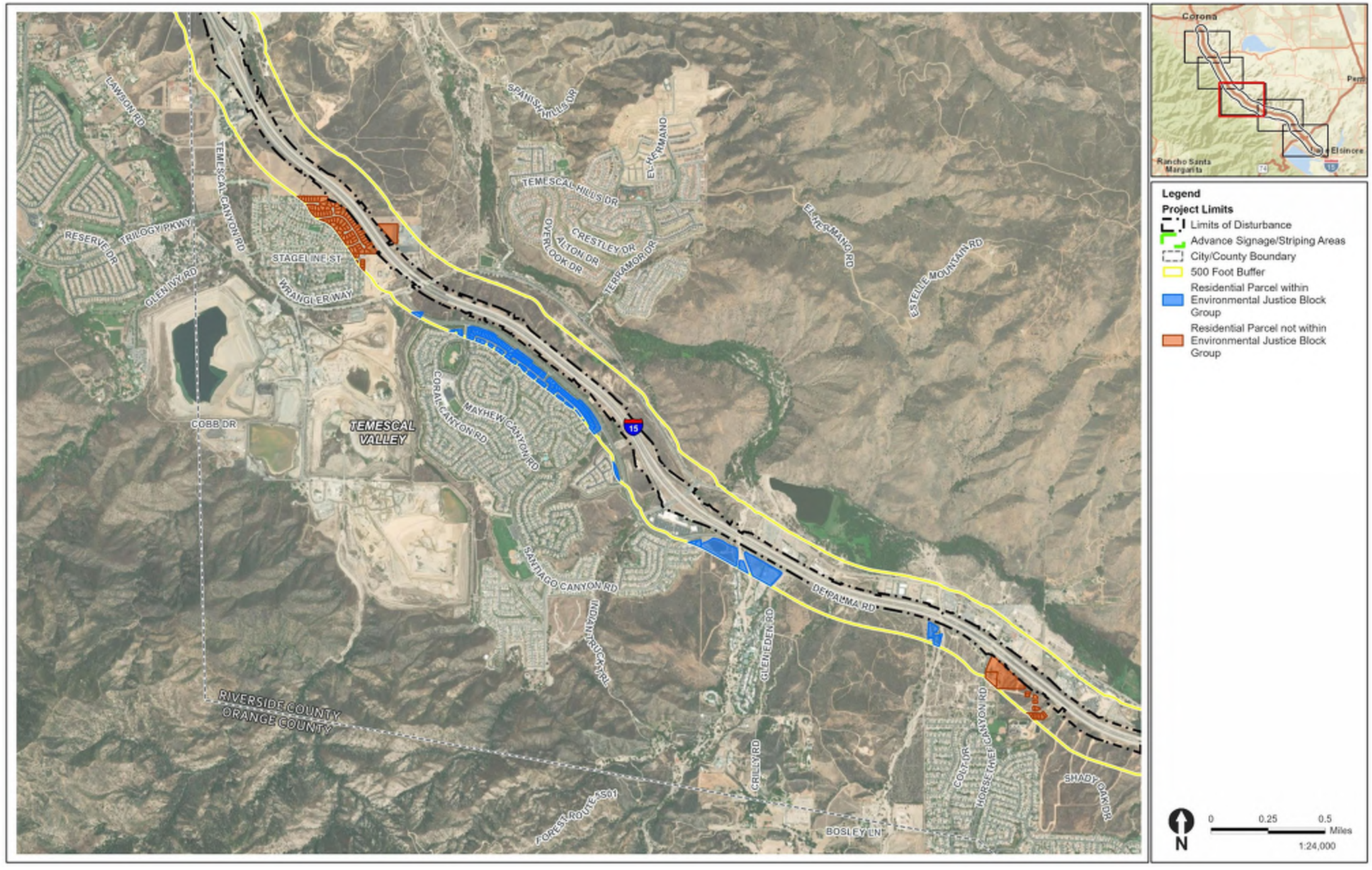

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Figure 2.2.5-3 Environmental Justice Areas within 500 Feet of Project Limits – Sheet 4

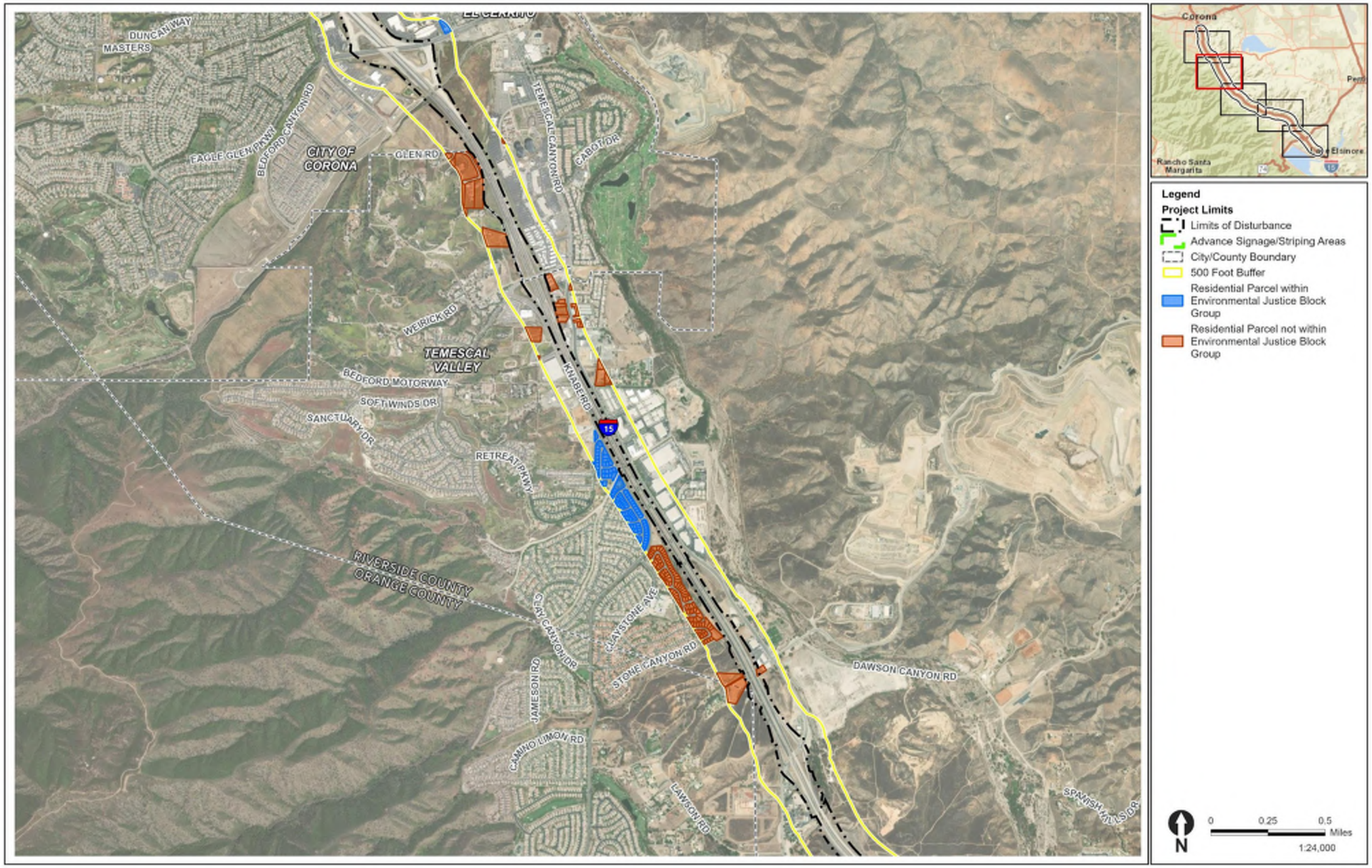

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Figure 2.2.5-3 Environmental Justice Areas within 500 Feet of Project Limits – Sheet 5

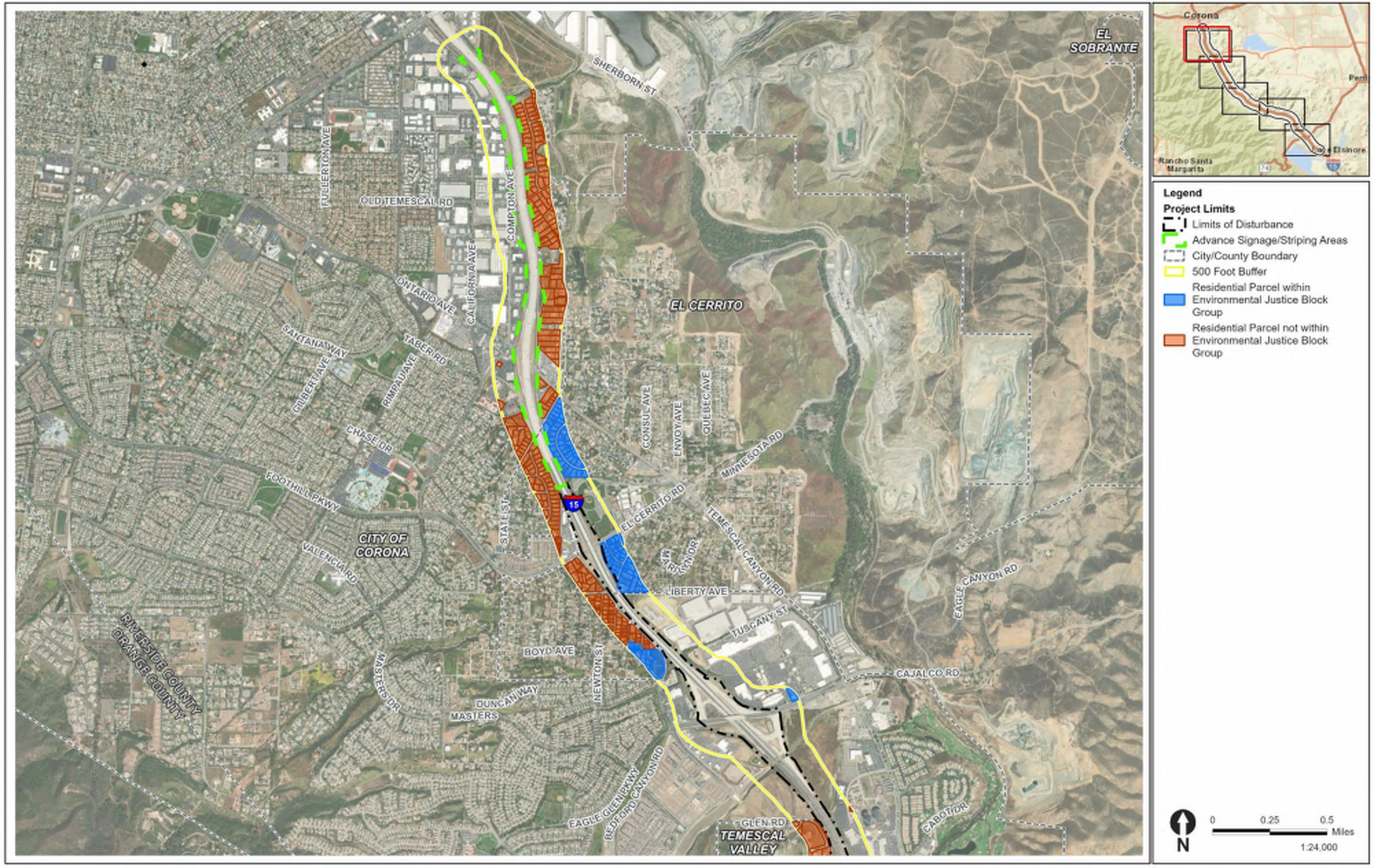

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Table 2.2.5-3. Residential Land Use Types and Housing Units with Environmental Justice Populations

Environmental Justice Areas	Acres of Residential Land Use Types within 500 Feet of Project Limits	Percent of Total Area within 500 Feet of Project Limits[1]	Housing Units within 500 Feet of Project Limits	Percent of Total Housing Units within 500 Feet of Project Limits
Environmental Justice Communities	156.6	43%	342	48%
Non-Environmental Justice Communities	208.5	57%	366	52%
Total	**365.1**	**-**	**708**	**-**

Source: U.S. Census Bureau 2022 (Tables B03002 and B19013), Google Earth Pro 2024
[1] 2022 DHHS poverty level.

2.2.5.3 Environmental Consequences

The EJ analysis in this section examines whether minority and/or low-income populations in the community impact study area would experience disproportionately high and adverse effects and whether the improvements benefit low-income and minority communities equitably.

Federal Highway Administration Order 6640.23A defines an adverse effect as one that:

- Is predominantly borne by a minority population and/or a low-income population; or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

Build Alternative

As shown in Table 2.2.5-3, there are fewer EJ communities/residences than non-EJ communities within a 500-foot radius of the Project limits. As such, no effects would be disproportionately borne by EJ communities. The Build Alternative is an improvement of the existing 15.8-mile segment of Interstate (I-) 15 from State Route (SR) 74 (Central Avenue) in the City of Lake Elsinore to El Cerrito Road in the City of Corona and would address the deficiencies of the existing transportation system. The Project is anticipated to be constructed entirely within California Department of Transportation (Caltrans) right-of-

way and would not require any temporary or permanent acquisitions. The Build Alternative would benefit residents within the community impact study area, including minority populations, by improving mobility and circulation throughout the community impact study area.

Temporary Impacts

Temporary traffic, air quality, and noise impacts would affect residents along the entire corridor during construction. The Project would not result in temporary construction easements on any parcels during construction, resulting in displacement or relocation of businesses or residences. Although long-term roadway closures or detours are not anticipated during construction, activities may cause traffic delays that may result in direct temporary impacts on both EJ and non-EJ populations that live adjacent to the Project limits within the community impact study area due to roadway, freeway, and bridge improvements; ramp closures; and construction vehicles entering and leaving the Project site.

The Build Alternative would result in direct temporary impacts on access and circulation for nearby businesses during construction due to roadway, freeway, and bridge improvements, which may result in short-term detours during construction. These direct temporary impacts on traffic and circulation would be reduced through Standard Project Measure **TR**-**1**, which includes a Transportation Management Plan (TMP) for the Project. The TMP would identify strategies to reduce impacts on access during construction. No direct temporary impacts would occur under the Build Alternative.

As discussed in Section 2.3.6, *Air Quality*, direct temporary impacts on air quality may also occur during construction as a result of site preparation and roadway construction that would involve clearing, conducting cut-and-fill activities, grading, removing or improving existing roadways, and paving roadway surfaces. During construction, short-term degradation of air quality is expected from construction activities and equipment.

Construction activities are also expected to increase traffic congestion in the area, resulting in increases in emissions from traffic during the delays. These emissions would be temporary and limited to the immediate area surrounding the construction site. Temporary air quality impacts associated with construction activities as a result of vehicle and equipment emissions and earth-disturbing activities would occur in both EJ and non-EJ communities. These impacts would be reduced by the inclusion of Standard Project Measures **AQ-1** through **AQ**-**4**. Therefore, the Build Alternative would not result in temporary adverse effects on EJ populations as it relates to air quality.

Temporary noise impacts from construction crew commutes, transport of construction equipment and/or materials to the Project site, and roadway construction activities could affect EJ populations in the community impact study area. However, the projected construction-related activities would be temporary and short term. Direct temporary impacts related to noise associated with construction activities from vehicle and

equipment operations and earth-disturbing activities would be reduced through Standard Project Measure **N-1** (see Section 2.3.7, *Noise*), which requires noise reduction measures in accordance with Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications to reduce noise impacts that may affect existing residential properties, including EJ populations, that near the Project limits.

Permanent Impacts

Under the Build Alternative, businesses would continue to operate, and access to businesses would be maintained after construction. The Build Alternative would maximize mobility in the region by improving the operational reliability and efficiency of I-15; the Project would not create new access that would trigger growth or development, or alter the transportation network in such a way that would reduce transit services or access to resources for EJ populations. Therefore, the Build Alternative would not result in direct permanent impacts or indirect permanent impacts, and no permanent adverse effects on EJ populations, as it relates to traffic and circulation, would occur.

The Build Alternative is projected to result in a marginal increase in daily regional emissions due to capacity expansion and subsequent increases in vehicle miles traveled (VMT) along the Project corridor, and result in a minimal increase in greenhouse gas emissions in the Project area compared with existing conditions. The increase in particulate matter is partly due to background growth in VMT from 2019 to 2050 because particulate matter fugitive dust emissions are a function of VMT. However, the decreases in other pollutants are due to expected improvements in vehicle engine technology, fuel efficiency, and turnover in older, more-heavily polluting vehicles, which reduce exhaust emissions.

The Project increases in air pollutant emissions detailed in Section 2.3.6, *Air Quality*, would individually not be considered substantial under NEPA, given the existing and future cumulative conditions described in the 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy Environmental Impact Report. However, the Project's incremental increase in particulate matter 10 microns or less in diameter (PM_{10}) and particulate matter 2.5 microns or less in diameter ($PM_{2.5}$) emissions would be cumulatively considerable under NEPA. In addition, as the Project increases in air pollutant emissions would be cumulatively considerable. As part of Mitigation Measure **VMT-1**, Riverside County Transportation Commission (RCTC) is mitigating VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. As part of the Vehicle Miles Traveled Mitigation Program (VMTMP) RCTC is developing, RCTC will be launching the Riverside County Free Rail Pass Program. The approximately 2-year program would offer Metrolink passes to Riverside County residents starting in 2025 to increase the number of passenger rail riders within Riverside County. This program would help expand access to public transportation for disadvantaged and low-income populations and target travelers on the most congested corridors such as SR-91, SR-74, I-15, and I-215. The Metrolink passes will last for approximately 3–6 months each. These temporary free Metrolink passes would

reduce the cost of using public transportation in order to attract new riders and encourage existing riders to take more trips. This program would help develop new lifelong commuting habits and contribute to VMT and GHG reduction. The program is designed to be in place for a minimum of 2 years, but could last up to 3 years depending on ticket distribution rates.

The program would allow riders to sign up through RCTC's existing Commuter Assistance website "IE Commuter"(https://www.iecommuter.org/rp2/Home/Home) and be issued free passes through Metrolink's Mobile Ticketing Application. For riders without access to mobile devices, the program would provide promotional codes to purchase the passes at ticket vending machines. This would help expand access to public transportation for disadvantaged and low-income populations and reduce the financial barriers to trying public transportation.

In addition to the discounted Metrolink Pass program, RCTC will work with Riverside Transit Agency (RTA) to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses would be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project. Increased use of RTA bus service would promote travel mode shift, help address competing passenger and commercial traffic in the County of Riverside, and contribute to VMT reduction and improvement in air quality.

The cumulative air quality effects would not be predominantly borne by EJ communities near the Project alignment, as there are fewer EJ residential homes than non-EJ communities in the community impact study area.

Sustained local and regional growth and development have and will increase commuter traffic along I-15, which serves as a major truck route and as a primary link between major economic centers and geographic regions. Under the Build Alternative, the Project would maximize mobility in the region by improving operational reliability and efficiency through the provision of additional travel choices and the creation of a more cohesive Express Lanes network within the region. The Project would therefore improve mobility and access for all users, residents, and businesses within the Project limits and address Existing Year (2019) and Design Year (2050) I-15 traffic volumes.

As stated in the Toll Concept Report (Caltrans 2022) for the Project, all transit agencies; motorcycles; operations and maintenance vehicles, including authorized Caltrans vehicles; tow trucks; and patrol response vehicles will be exempt from paying any toll fees for the I-15 Express Lanes. Operation and maintenance vehicles are also exempt from paying a toll for the Express Lanes. Currently, high-occupancy vehicle 3+ vehicles are provided a discount of 100 percent for tolls, while zero-emission vehicles displaying a Department of Motor Vehicles–issued Clean Air Vehicle decal defined in California Vehicle Code Section 5205.5 receive a 15 percent discount if they register their vehicle with a California Toll Operators Committee agency.

The Build Alternative would generate new vehicular traffic trips and increased traffic volumes, which may contribute to increases in noise once the Project is in operation. However, the Project would increase throughput on the mainline and encourage cars from local streets to use the freeway, benefiting all users, including EJ communities. With the inclusion of Standard Project Measure **N-1**—which requires compliance with Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications—impacts related to noise would be reduced. The calculated worst-hour traffic noise levels for Design-year Build conditions are predicted to approach or exceed the noise abatement criteria (67 A-weighted decibels [dBA] average hourly equivalent noise level [Leq(h)]) at residential and recreational land uses (Activity Categories B and C) in several Noise Analysis Areas throughout the alignment. Additionally, the calculated worst-hour traffic noise levels are predicted to approach or exceed the noise abatement criteria of 72 dBA Leq[h]) for Activity Category E land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, and E land uses within the study area. Accordingly, noise abatement must be considered at those locations. Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of noise barrier systems, although these may change:

- SW1890A + SW1890B at the northbound I-15 edge of shoulder and the northbound I-15 Weirick Road On-Ramp edge of shoulder

- SW1890A + SW1890C at the northbound I-15 edge of shoulder and at the right of way, east of the northbound I-15 Weirick Road On-Ramp edge of shoulder

Therefore, the Build Alternative would not result in direct permanent impacts, or indirect permanent or temporary impacts related to noise, and no disproportionate adverse effects on EJ populations related to noise are anticipated under the Build Alternative.

Based on the above discussion and analysis, the Build Alternative would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further EJ analysis is required.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. I-15 would remain in its current condition, and no improvements would be implemented. Therefore, there would be no Project-related EJ impacts.

2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The Project will develop a TMP per Standard Project Measure **TR-1,** as described in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, to address short-term traffic circulation and access effects during Project construction. Additionally, the inclusion of Standard Project Measures **N-1** in Section 2.3.7, *Noise*, and **AQ-1** through **AQ**-**4** in Section 2.3.6, *Air Quality*, will minimize and/or avoid impacts related to noise and

air quality during construction. Lastly, Mitigation Measure **VMT-1** in 3.3, *Climate Change*, will mitigate VMT and the associated environmental impacts.

2.2.6 Equity

Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. A central goal of transportation equity is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved. It is important to note that transportation equity does not mean equal. An equitable transportation plan considers the circumstances affecting a community's mobility and connectivity needs, and this information is used to determine the measures needed to develop an equitable transportation network (U.S. DOT 2022a, 2022b).

Equity is related to environmental justice, discussed in the previous section, but is more broadly defined. Recent laws and policies have been adopted regarding equity and the consideration of how past policies and plans have resulted in disparities for underserved and disadvantaged populations.

2.2.6.1 Regulatory Setting

Executive Order 13985. EO 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (2021), affirms that "the Federal Government should pursue a comprehensive approach to advancing equity for all, including people of color and others who have been historically underserved, marginalized, and adversely affected by persistent poverty and inequality. Affirmatively advancing equity, civil rights, racial justice, and equal opportunity is the responsibility of the whole of our Government." Under EO 13985, the term "equity" means the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. The term "underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life. EO 13985 seeks to advance equity through various efforts, including coordinating across the Federal Government, identifying methods to assess equity, conducting an equity assessment in federal agencies, allocating federal resources to advance fairness and opportunity, promoting equitable delivery of government benefits and equitable opportunities, engaging with members of underserved communities, and establishing an Equitable Data Working Group.

U.S. DOT Equity and Access Policy. The U.S. Department of Transportation's March 2021 Equity and Access Policy Statement (U.S. DOT 2021) states that "the Department is committed to promoting equitable delivery of government benefits and opportunities, including advancing meaningful engagement with all communities and ensuring that

government contracting and procurement opportunities are available on an equal basis to all eligible providers of goods and services." The policy statement reiterates U.S. DOT's commitment to incorporate environmental justice and equity principles into transportation planning and decision-making processes, including ensuring full and equitable access to programs, activities, and services for persons with limited English proficiency in accordance with EO 13166 Improving Access to Services for Persons with Limited English Proficiency.

Caltrans Equity Statement. The Caltrans Equity Statement (December 10, 2020) acknowledges that communities of color and underserved communities experienced fewer benefits and a greater share of negative impacts associated with the state's transportation system. Some of these disparities reflect a history of transportation decision-making, policy, processes, planning, design, and construction that "quite literally put up barriers, divided communities, and amplified racial inequities, particularly in our Black and Brown neighborhoods."

Local Agency Equity Policies. Local governments are also addressing equity in their policies and decision making. In August 2020, the County approved a Resolution of the Board of Supervisors of the County of Riverside Declaring Racism and Inequity as a Public Health Crisis (County of Riverside 2020).

2.2.6.2 Affected Environment

This section is based on information from the Community Impact Assessment (Caltrans 2024). The community impact study area consists of Census Tracts within a 0.5-mile buffer around the Project footprint. The community impact study area includes Census Tracts 414.13, 414.14, 414.15, 416.01, 416.02, 418.09, 418.10, 418.13, 419.09, 419.10, 419.14, 419.15, 420.07, 427.48, 427.49, 427.50, 430.01, 430.05, 430.06, 430.07, 479.01, 479.02, and 481.00.[1]

When identifying underserved and disadvantaged communities in the community impact study area, this analysis considers historic impacts from transportation infrastructure development, existing environmental conditions and pollution burdens, health disparities that make communities more sensitive to pollution, and other socioeconomic factors that correlate with sensitivity to environmental impacts and traditionally underserved communities. Many socioeconomic characteristics of the community impact study area are described in more detail in Section 2.2.4, *Community Character and Cohesion*, and Section 2.2.5, *Environmental Justice.*

To help identify communities that are disproportionately burdened by multiple sources of pollution and with population characteristics that make them more sensitive to pollution, the California Office of Environmental Health Hazards Assessment (OEHHA) developed

[1] Note that between 2010 and 2021, Census Tracts 414.09, 416.00, 419.11, 427.15, and 479.00 were subdivided further into smaller Census Tracts, some of which overlap with the study area. However, CalEnviroScreen data are not available for Census Tracts resulting from subdivision and are presented for undivided Census Tracts only. Refer to Section 2.2.5, *Environmental Justice*, for more information regarding the study area.

the CalEnviroScreen mapping tool (OEHHA 2021). CalEnviroScreen identifies communities facing socioeconomic disadvantages or health disadvantages. It uses environmental, health, and socioeconomic data from state and federal government sources to score every Census Tract in California. The scores are generated using statewide indicators in two categories representing Pollution Burden—Exposures and Environmental Effects—and in two categories representing Population Characteristics—Sensitive Populations and Socioeconomic Factors. CalEnviroScreen ranks Census Tracts (low to high sensitivity) based on their combined Pollution Burden and Population Characteristics; a percentile is then calculated from the ordered values. The California Environmental Protection Agency (CalEPA) (2022) has defined disadvantaged communities as those Census Tracts that fall above the 75th percentile in CalEnviroScreen, meaning the combined score is higher than 75 percent of the approximate 8,000 Census Tracts in California. Additionally, CalEPA generally defines communities in terms of Census Tracts and identifies Census Tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps, but receiving the highest 5 percent of CalEnviroScreen 4.0 cumulative pollution burden scores; Census Tracts identified in the 2017 disadvantaged communities designation as disadvantaged, regardless of their scores in CalEnviroScreen 4.0; and areas under the control of federally recognized Tribes (CalEPA 2022).This information is used to prioritize projects under Senate Bill (SB) 535 and Assembly Bill (AB) 1550.

Pollution Burden

CalEnviroScreen reports Pollution Burden as a summary of Exposures (environmental conditions) and Environmental Effects (effects of that exposure on communities). This analysis characterizes the cumulative impact on communities from existing pollution, and how the overall pollution burden affects health and quality of life (OEHHA 2021). Exposures involve the movement of chemicals through the environment (air, water, food, soil) to an individual or population, and Environmental Effects are the adverse environmental conditions caused by pollution. CalEnviroScreen identifies the following indicators of human exposure to pollutants and environmental degradation caused by pollutants:

- Ozone concentrations in air
- Particulate matter concentrations in air
- Diesel particulate matter emissions
- Drinking water contaminants
- Children’s lead risk from housing
- Use of certain high-hazard, high-volatility pesticides
- Toxic releases from facilities
- Traffic impacts

- Environmental effects
- Toxic cleanup sites
- Groundwater threats from leaking underground storage sites and cleanups
- Hazardous waste facilities and generators
- Impaired water bodies
- Solid waste sites and facilities

CalEnviroScreen groups data from these indicators to represent a cumulative Pollution Burden score for each Census Tract. Table 2.2.6-1 provides CalEnviroScreen (version 4.0) Pollution Burden percentiles for Census Tracts in the community impact study area. Census Tracts with the highest CalEnviroScreen Pollution Burden percentiles are 414.09, 416.00, 418.13, 419.09, and 420.07.[2]

Table 2.2.6-1. CalEnviroScreen Results by Census Tract

Census Tract[a]	Population	Pollution Burden Percentile	Population Characteristics Percentile	Combined Ranked Percentile	Disadvantaged Community?[b]
414.09	16,512	79.2	45.1	61.6	No
416.00	6,511	97.6	70.2	92.1	Yes
418.09	5,815	67.7	44.7	56.4	No
418.10	6,192	50.4	26.0	33.8	No
418.13	7,165	85.3	72.7	83.7	Yes
419.09	5,622	84.9	48.0	66.7	No
419.10	7,685	61.5	14.6	26.4	No
419.11	13,750	56.2	26.7	36.5	No
420.07	5,058	79.5	41.5	58.8	No
427.15	14,869	58.4	40.3	48.9	No
430.01	7,090	55.2	81.1	74.8	No
430.05	5,960	51.4	80.7	72.8	No
430.06	5,402	59.7	90.2	82.5	Yes

[2] Between 2010 and 2021, Census Tracts 414.09, 416.00, 419.11, 427.15, and 479.00 were subdivided further into smaller Census Tracts, some of which overlap with the community impact study area. However, CalEnviroScreen data are not available for Census Tracts resulting from subdivision and are presented for undivided Census Tracts only. Refer to Section 1.6 for more information regarding the community impact study area.

Census Tract[a]	Population	Pollution Burden Percentile	Population Characteristics Percentile	Combined Ranked Percentile	Disadvantaged Community?[b]
430.07	7,420	14.2	13.8	10.7	No
479.00	12,628	14.2	25.0	17.8	No
481.00	7,365	37.2	10.3	14.9	No

Source: OEHHA 2021.

[a] CalEnviroScreen data are not available for Census Tracts resulting from subdivision, including Census Tracts 414.13, 414.14, 414.15, 416.01, 416.02, 419.14, 419.15, 427.48, 427.49, 427.50, 479.01, and 479.02; therefore, data are presented for undivided Census Tracts only.

[b] As defined by the CalEPA (2022), a Disadvantaged Community has an overall CalEnviroScreen score in the 75th percentile or greater.

Population Characteristics

CalEnviroScreen reports Population Characteristics as a summary of Sensitive Populations (intrinsic factors such as health status) and Socioeconomic Factors (extrinsic factors such as socioeconomic status). Population Characteristics are pollution effect modifiers that may increase the magnitude of adverse effects due to environmental pollutants. Increased risk in vulnerable populations is described by these effect modifiers that amplify the risk (OEHHA 2021).

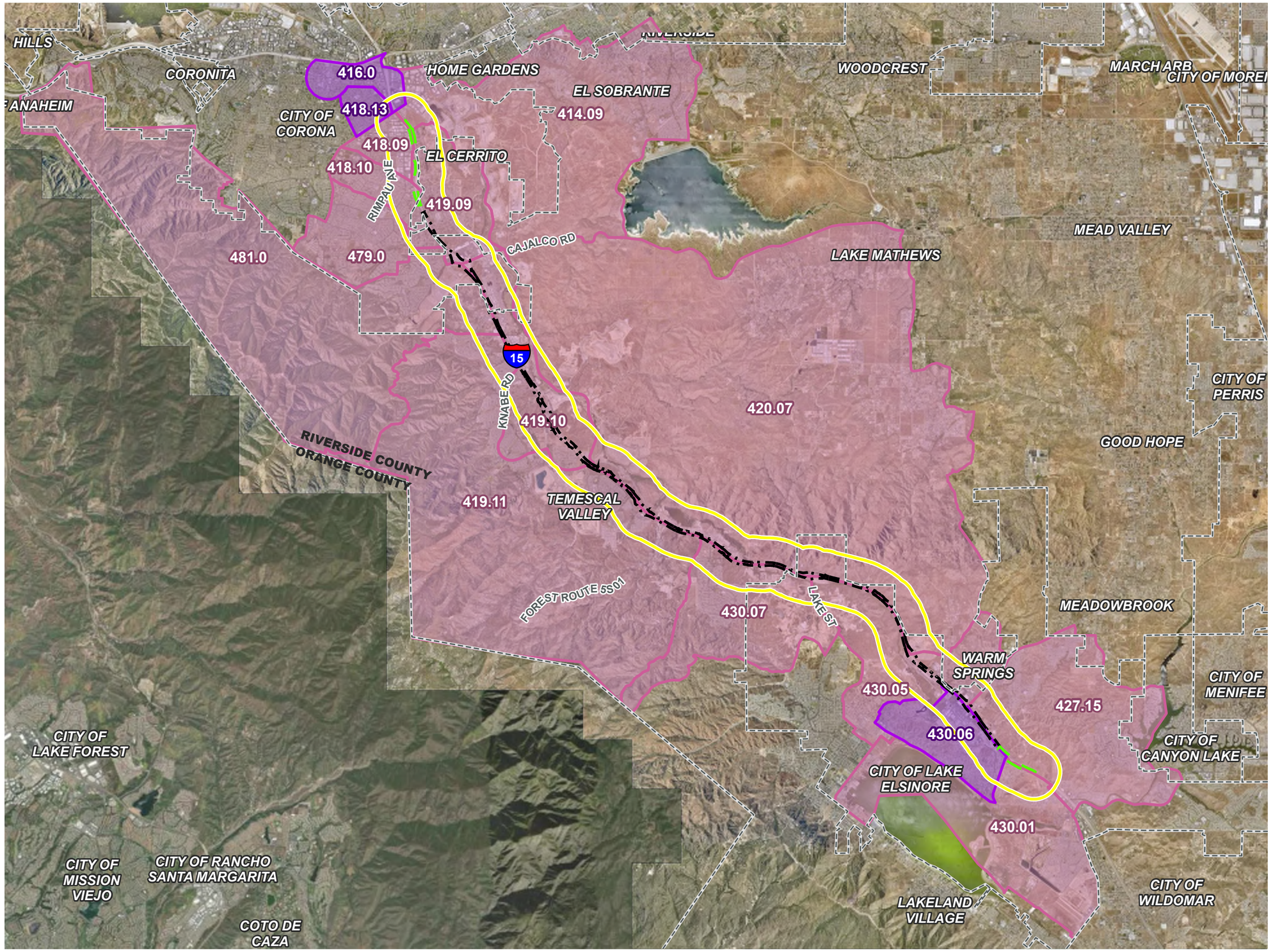
CalEnviroScreen identifies the following indicators that result in increased vulnerability to pollutants:

- Sensitive Populations:
  - Asthma
  - Cardiovascular Disease
  - Low Birth Weight
- Socioeconomic Factors:
  - Educational Attainment
  - Housing Burden
  - Linguistic Isolation
  - Poverty
  - Unemployment

CalEnviroScreen groups data from these indicators to represent a cumulative Population Characteristics score for each Census Tract. Table 2.2.6-1 provides CalEnviroScreen (version 4.0) Population Characteristics percentiles for Census Tracts in the study area. Census Tracts with the highest CalEnviroScreen Population Characteristics percentiles are 430.0, 430.05, and 430.06.

Disadvantaged Communities

As shown on Figure 2.2.6-1, Census Tracts with the highest CalEnviroScreen score are located along the Interstate (I-) 15 corridor, where the Pollution Burden percentiles and Population Characteristics percentiles combine for an overall score above the 75th percentile when compared to all Census Tracts in the state. This ranking indicates that these tracts are confronted with many burdens and vulnerabilities from environmental pollutants and are defined as disadvantaged communities. As shown on Figure 2.2.6-1, Census Tracts 416.00, 418.13, and 430.06 each have a CalEnviroScreen score above the 75th percentile and are therefore considered disadvantaged communities. Contrarily, Census Tracts 419.10, 430.07, and 479.00 each have a CalEnviroScreen score below the 30th percentile, indicating that these communities have a lower pollution burden and/or lower sensitivity. Table 2.2.6-1 presents the results of pollution burden, health disparities, and socioeconomic factor analyses to define disadvantaged communities in the study area.



Legend

Project Limits

- Limits of Disturbance
- Advance Signage/Striping Areas

Study Area

- Community Impact Study Area (0.5 mile buffer)
- City/County Boundary
- Census Tracts with CalEnviroScreen Disadvantaged Communities
- Census Tracts without CalEnviroScreen Disadvantaged Communities

N

0 1 2 Miles

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Figure 2.2.6-1
CalEnviroScreen Census Tracts
Interstate 15 Express Lanes Project Southern Extension

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2.2.6.3 Environmental Consequences

The environmental consequences of the Project are evaluated for their potential to adversely affect underserved and disadvantaged communities through changes in the human and natural environment. Project effects on communities can include changes in pollutant burdens, modifications to community character, and exacerbation of historical impacts from transportation infrastructure (e.g., divided communities). Localized changes in air quality, noise, and visual resources in underserved communities are described. Conclusions from the Environmental Justice section are referenced; please refer to Section 2.2.5, *Environmental Justice*, for an evaluation of whether minority and/or low-income populations would experience disproportionately adverse effects.

Build Alternative

Temporary Impacts

During construction, short-term changes in access, circulation, light/glare, noise, and air quality would occur. Intermittent and temporary ramp and lane closures would inconvenience all roadway users and could require alternative traffic routing. Neighboring residents and businesses may be subject to short-term noise, fugitive dust, and light/glare from construction activities. These impacts would be temporary and limited to the length of the construction period. Construction-related impacts on noise, air quality, light/glare, and traffic would be minimized through Best Management Practices (BMPs) for noise abatement, fugitive dust control, light and glare screening measures, and traffic management planning. This includes implementation of a Traffic Management Plan (TMP) through Standard Project Measure **TR-1** which would identify strategies to reduce impacts to access during construction. Additionally, Standard Project Measures **N-1** and **AQ-1** through **AQ-4** would reduce impacts on underserved communities as it relates to noise and air quality during construction.

Permanent Impacts

The Build Alternative would not result in property acquisition of businesses; therefore, no personal property acquisitions in underserved communities would occur. The Build Alternative would not divide communities, nor would it contribute to the division of a historic downtown Lake Elsinore area; the added lanes within the existing I-15 corridor do not further divide a community or remedy historical divisions.

The Build Alternative would generate new vehicular traffic trips and increase vehicular throughput, which may contribute to increases in noise once the Project is in operation. The calculated worst-hour traffic noise levels for Design-year Build conditions are predicted to approach or exceed the noise abatement criteria (67 A-weighted decibel [dBA] average hourly equivalent noise level [Leq(h)]) at residential and recreational land uses (Activity Categories B and C) in several Noise Analysis Areas throughout the alignment. Additionally, the calculated worst-hour traffic noise levels are predicted to approach or exceed the noise abatement criteria of 72 dBA Leq[h]) for Activity Category E land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, and E land uses within the study area. Accordingly, noise abatement must be considered at those locations. Based on the studies completed to date, Caltrans intends

to incorporate noise abatement in the form of noise barrier systems, although these may change:

- SW1890A + SW1890B at the NB I-15 edge of shoulder and the NB I-15 Weirick Road On-Ramp edge of shoulder
- SW1890A + SW1890C at the NB I-15 edge of shoulder and at the right of way, east of the NB I-15 Weirick Road On-Ramp edge of shoulder

Therefore, the Build Alternative would not result in adverse effects related to noise and would not disproportionately affect adjacent communities or disproportionately affect community character or quality of life in underserved communities within the study area.

Vehicular air pollution and health disparities associated with those air pollutants (including asthma, cardiovascular disease, and low birth weight) are disproportionately borne by residents who live near major highways in California (Union of Concerned Scientists 2019). Traffic is a significant source of air pollution, particularly in urban areas, where more than 50 percent of particulate emissions come from traffic (OEHHA 2021). Exhaust from vehicles also contains toxic chemicals, including nitrogen oxides, carbon monoxide, and benzene.

The Project increases in air pollutant emissions would individually not be considered substantial under NEPA; however, the incremental increases in particles of 2.5 and 10 micrometers or smaller ($PM_{2.5}$ and PM_{10}) emissions would be cumulatively considerable under NEPA. As such, the Project will include mitigation for vehicle miles traveled (VMT) (Mitigation Measure **VMT-1**) to reduce VMT and associated impacts.

How changes in air pollutants affect health outcomes for communities that already have high pollutant burdens is difficult to predict. As noted by FHWA (2023), “While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT [Mobile Source Air Toxics] exposure remain limited.” Because of the limitations in the methodologies for forecasting health impacts, predicted differences in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts (FHWA 2023). Therefore, the air quality modeling results are used as a predictor for changes in health risk. The Air Quality Report (Caltrans 2022a) concludes that the Build Alternative would not substantially increase the pollution burden on neighboring communities in the long term.

As part of Mitigation Measure **VMT-1**, Riverside County Transportation Commission (RCTC) is mitigating VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. As part of the Vehicle Miles Traveled Mitigation Program (VMTMP) RCTC is developing, RCTC will be launching the Riverside County Free Rail Pass Program. The approximately 2-year program would offer Metrolink passes to Riverside County residents starting in 2025 to increase the number of passenger rail riders within Riverside County. This program

would help expand access to public transportation for disadvantaged and low-income populations and target travelers on the most congested corridors such as State Route (SR-) 91, SR-74, I-15, and I-215. The Metrolink passes will last for approximately 3–6 months each. These temporary free Metrolink passes would reduce the cost of using public transportation in order to attract new riders and encourage existing riders to take more trips. This program would help develop new lifelong commuting habits and contribute to VMT and GHG reduction. The program is designed to be in place for a minimum of 2 years, but could last up to 3 years depending on ticket distribution rates.

The program would allow riders to sign up through RCTC's existing Commuter Assistance website "IE Commuter"(https://www.iecommuter.org/rp2/Home/Home) and be issued free passes through Metrolink's Mobile Ticketing Application. For riders without access to mobile devices, the program would provide promotional codes to purchase the passes at ticket vending machines. This would help expand access to public transportation for disadvantaged and low-income populations and reduce the financial barriers to trying public transportation.

In addition to the discounted Metrolink Pass program, RCTC will work with Riverside Transit Agency (RTA) to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses would be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project. Increased use of RTA bus service would promote travel mode shift, help address competing passenger and commercial traffic in the County of Riverside, and contribute to VMT reduction and improvement in air quality.

Visual changes would also influence community character in adjacent underserved communities. The Project proposes to increase the amount of paving within the existing width of the freeway. These changes would have a notable visual impact that is apparent to highway users and highway neighbors, including the surrounding community. While the Build Alternative would include features that may increase the dominance of the transportation facility in neighboring viewsheds, potential visual impacts would not exceed the moderately low level and would remain low or moderately low. Furthermore, Avoidance and Minimization Measures **AES-1** through **AES-4** would minimize or avoid visual impacts associated with the Project. The Project would be overall compatible with the existing visual character of the Project corridor. Therefore, the Project would not degrade the existing visual condition for disadvantaged communities adjacent to the highway.

Although the Build Alternative would not substantially affect socioeconomic conditions (e.g., housing cost, employment, and educational attainment), new tolled lanes under the Build Alternative would introduce new signage that may present challenges for linguistically isolated households. Households where no one over the age of 14 speaks English well, may be initially challenged by the toll-related signage and the process for obtaining toll transponders. Linguistically isolated households would likely adapt to the new signage and lane operations over time; however, providing messages in multiple languages would help offset this burden. One method of communication that supports

equitable transportation is changeable message signs, which are hardware found on the highway, or near on- and off-ramps, that show a brief travel-related message in orange text on a black digital board and could be used to rotate messages related to the express lanes in multiple languages (Caltrans 2023).

For low-income communities, use of tolled lanes may constitute a higher financial burden on regional low-income travelers who choose to use them than on higher-income individuals. Analysis of potential toll prices have indicated that there could be times when a low-income driver would find the Express Lanes' time savings attractive. For example, studies show that a low-income driver may find time savings beneficial when running late for work, or for other reasons, such as a toll might be less expensive than per-minute late fees at a daycare center (OEHHA 2017). Refer to Section 2.2.5, *Environmental Justice*, for an analysis of low-income populations.

The toll policies for the Project would include free in-service transit vehicles, such as commuter bus service operations, as a component in the Express Lanes, consistent with the toll policies for the I-15 Express Lanes Project. The Build Alternative would potentially improve traffic conditions for highway users, including members of underserved and disadvantaged communities, as it could improve transit performance, leading to a more reliable, faster, frequent, and accessible transit system for the underserved communities relying on the I-15 corridor for travel. As stated in the Toll Concept Report (Caltrans 2022b) for the Project, all transit agencies; motorcycles; operations and maintenance vehicles, including authorized Caltrans vehicles; tow trucks; and patrol response vehicles will be exempt from paying any toll fees for the I-15 Express Lanes. Operation and maintenance vehicles are also exempt from paying a toll for the Express Lanes. Currently, high-occupancy vehicle (HOV) 3+ vehicles are provided a discount of 100 percent for tolls, while zero emission vehicles displaying a Department of Motor Vehicles–issued Clean Air Vehicle decal defined in California Vehicle Code Section 5205.5 receive a 15 percent discount if they register their vehicle with a California Toll Operators Committee agency.

According to the American Public Transportation Association, bus riders are predominantly people of color and have lower income. In 2017, 65 percent of all bus riders in the U.S. were non-white and 69 percent of all bus riders had annual household incomes of less than $50,000 (American Public Transportation Association 2017). Additionally, a 2019 Los Angeles Metro rider survey showed that the median household income of Metro bus riders was $17,975 compared to the 2019 U.S. Department of Health and Human Services poverty guidelines of $25,750 for a family of four (LA Metro 2020; U.S. Census Bureau 2019; DHHS 2019). Congestion on freeways delays any vehicle on those freeways, including transit vehicles, and freeway bus routes are slowed by spillover traffic that occurs because freeways are overloaded. Freeways with increased throughput would improve traffic conditions for buses both on and near them. Because buses are used disproportionately by low-income households, express lanes could benefit traffic conditions for members of underserved and disadvantaged communities (Manville et al. 2022). In a letter of Project support, Riverside Transit Agency (RTA) stated that "RTA strongly supports the Project, and RTA's CommuterLink Route 206 travels along the Project corridor. Once the Project is completed, RTA buses

will be able to utilize the [Express Lanes], bypassing growing congestion along the corridor" (RTA 2024).

No-Build Alternative

Under the No Build Alternative, the Project would not be implemented. I-15 would remain in its current condition and no improvements would be implemented. Therefore, there would be no Project-related equity impacts.

2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures

Standard Project Measure **TR-1** would require the Project to develop a TMP, as described in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, to address short-term traffic circulation and access effects during Project construction. Additionally, the inclusion of Standard Project Measures **N-1** in Section 2.3.7, *Noise*, and **AQ-1** through **AQ-4** in Section 2.3.6, *Air Quality*, will minimize and/or avoid impacts related to noise and air quality during construction. Avoidance and Minimization Measures **AES-1** through **AES-4** in Section 2.2.9, *Visual/Aesthetics,* will minimize or avoid visual impacts. Lastly, Mitigation Measure **VMT-1** in 3.3, *Climate Change*, will mitigate VMT and the associated environmental impacts.

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2.2.7 Utilities and Emergency Services

2.2.7.1 Affected Environment

The study area for analyzing impacts on utilities and emergency services is defined as a 0.5-mile boundary around the Project limits and includes Census Tracts adjacent to the Project limits. The Draft Project Report (Caltrans 2024) was used to support the analysis. The Project limits are defined as the Project footprint and the area of direct impacts where construction and operational activities under the Project have the potential to directly affect surrounding communities.

Emergency Services

Police Protection

City of Corona

Law enforcement is divided among the City of Corona, Riverside County Sheriff, and California Highway Patrol (CHP). The City of Corona operates four response zones to cover the incorporated area. Riverside County Sheriff provides patrol services in El Cerrito, Coronita, Home Gardens, and Temescal Valley (City of Corona 2023).

There are no police stations within the study area in the City of Corona. The closest police, sheriff, and CHP stations that serve the area are outside of the study area and include the City of Corona Police Department northwest of the Interstate (I-) 15/State Route 91 interchange at 730 Public Safety Way, the Riverside County Sheriff's Office at 7477 Mission Boulevard in Jurupa Valley, and the CHP office at 8118 Lincoln Avenue in the City of Riverside.

City of Lake Elsinore

Lake Elsinore contracts police services with the Riverside County Sheriff's Office to enforce local, State, and federal statutes; provide public safety and traffic enforcement; and maintain public order (City of Lake Elsinore n.d.a.). There is one police station, the Lake Elsinore Police Department, just outside the southern portion of the study area at 333 Limited Street that serves the City of Lake Elsinore. Additionally, the closest CHP office is approximately 14 miles south of the Project limits, along I-15 at 27685 Commerce Center Drive in the City of Temecula.

Fire Protection

Based on information from the California Fire Hazard Severity Zone viewer (CAL FIRE 2023), the Project limits overlaps with very high, high, and moderate Fire Hazard Severity Zones in the local responsibility area and State responsibility area.

City of Corona

Fire protection services for Corona are provided by the City of Corona's Fire Department (City of Corona 2023). There is one fire station within the study area, the

City of Corona's Fire Station #7 at 3777 Bedford Canyon Road, northeast of the Cajalco Road and I-15 interchange.

City of Lake Elsinore

The City of Lake Elsinore contracts fire services with Riverside County Fire Department and the California Department of Forestry and Fire Protection (CAL FIRE) to provide a full range of fire protection services (fire prevention, suppression, and emergency medical response) (City of Lake Elsinore n.d.b.). Although there are four fire stations that serve the City of Lake Elsinore, none are within the study area. The closest of the four fire stations is the CAL FIRE Lake Elsinore Fire Station #10, which services the central area of the city (City of Lake Elsinore 2011a) and is approximately 1.0 mile from the southernmost portion of the Project limits. This fire station operates three fire engines (one paramedic engine and two CAL FIRE wildland engines) and a squad of mostly volunteer firefighters (City of Lake Elsinore n.d.b.). Standard response times are established by Riverside County Fire Department guidelines. The goal for a response time is to arrive at any location in the city in 7 minutes (City of Lake Elsinore 2011b).

Utilities

Water and Wastewater

City of Corona

The City of Corona receives water from both local groundwater basins and imported water sources (City of Corona 2023). The Corona Department of Water and Power is responsible for supplying potable water to the city and surrounding areas, a total of approximately 75 square miles. This area includes approximately 39 square miles within Corona's municipal area and 35 square miles in the City of Corona's sphere of influence in Riverside County. This sphere of influence includes Warm Springs Census-Designated Place. Lee Lake Water District (LLWD) and Metropolitan Water District (MWD) provide water and water services such as wastewater treatment and disposal to residents within the city.

City of Lake Elsinore

According to the City's General Plan (City of Lake Elsinore 2011a), the Elsinore Valley Municipal Water District (EVMWD) provides public water service, water supply development and planning, wastewater treatment and disposal, and recycling as a sub-agency of the Western Municipal Water District. Potable water supplies to EVMWD are provided from imported water from MWD, local surface water from Canyon Lake, and local groundwater from the Elsinore Basin.

Waste

City of Corona

Waste Management, Inc. provides trash disposal services to the City of Corona and transports all solid waste from the city to the El Sobrante landfill, east of the city on unincorporated County land at 10910 Dawson Canyon Road (City of Corona 2023). The El Sobrante Landfill opened in 1986 and is a Class III landfill that accepts municipal

solid waste. The City of Corona adopted comprehensive integrated waste management programs to meet State mandates. Assembly Bill 341, effective 2012, required mandatory commercial and public agency waste recycling and established a statewide 75-percent waste diversion goal by 2020. In 2016, businesses and multifamily buildings with five or more units were required by Assembly Bill 1826 to recycle organic waste.

City of Lake Elsinore

CR&R Incorporated provides trash disposal services to the City of Lake Elsinore as well as to Temecula, Canyon Lake, and unincorporated parts of Riverside County. The City of Lake Elsinore typically uses three landfills: El Sobrante, Badlands, and Lamb Canyon Landfills (City of Lake Elsinore 2011a). The El Sobrante Landfill is the closest to the Project limits. Riverside County Waste Management manages the landfills used by the City of Lake Elsinore. As of December 31, 2005, 50 percent of the City of Lake Elsinore's trash was mandated by the State of California to be recycled per the California Integrated Waste Management Act of 1989 (Assembly Bill 939).

Gas and Electrical Power

City of Corona

Southern California Edison (SCE) provides electrical service to most of Corona with power plants in California and other western states (City of Corona 2023). As of 2017, 10 substations serve the City of Corona, eight of which are owned and operated by SCE. Most major electricity transmission lines are also maintained by SCE.

Southern California Gas Company (SCG) provides natural gas service in Corona. SCG maintains transmission and distribution lines throughout the City of Corona (City of Corona 2023).

City of Lake Elsinore

The City of Lake Elsinore also gets electricity from SCE and gas from SCG. According to the City of Lake Elsinore's General Plan, SCE and SCG anticipate that they would be able to accommodate future growth within the City of Lake Elsinore (City of Lake Elsinore 2011a).

Telecommunication

City of Corona

Telecommunications in Corona are offered by multiple service providers and through different types of infrastructure systems (City of Corona 2023). Telecommunications companies are generally licensed and monitored by the California Public Utilities Commission. The City of Corona is responsible for oversight and approval authority for the siting and operation of transmission antennas and other facilities within the city but does not exercise control over the provision of telecommunication services.

City of Lake Elsinore

Verizon provides local land line telephone services; however, numerous providers provide long distance services or wireless or cell phone services. Comcast provides cable television and high-speed internet to residents within the City of Lake Elsinore (City of Lake Elsinore 2011a).

Summary

Table 2.2.7-1 describes the utilities within the study area that would potentially be affected by the Project's implementation or operation. As described in Table 2.2.7-1, 227 utilities are within the study area: 35 telecommunication, 67 electrical power, 33 natural gas, 62 water, 27 sewers, and three casing. All utilities would be protected in place.

Table 2.2.7-1. Utilities in the Project Study Area

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Telecom	11th Street	MCI	No Conflict	Protect in Place
Telecom	11th Street	Crown Castle	No Conflict	Protect in Place
Telecom	North of and parallel to I-15	AT&T	No Conflict	Protect in Place
Telecom	Lake Street, parallel to I-15	AT&T	No Conflict	Protect in Place
Telecom	East of Lake Street	Spectrum	No Conflict	Protect in Place
Telecom	East of Lake Street	AT&T	No Conflict	Protect in Place
Telecom	Temescal Canyon Road, parallel to I-15	Spectrum	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Charter	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	AT&T	No Conflict	Protect in Place
Telecom	Horsethief Canyon Road	Spectrum/Charter	No Conflict	Protect in Place
Telecom	Horsethief Canyon Road	Spectrum/Charter	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Spectrum	No Conflict	Protect in Place
Telecom	Campbell Ranch Road	Crown Castle	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	MCI	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Century Link	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Charter	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Spectrum	No Conflict	Protect in Place
Telecom	Temescal Canyon Road	Spectrum	No Conflict	Protect in Place
Telecom	Brown Canyon Wash	AT&T	No Conflict	Protect in Place
Telecom	Brown Canyon Wash	Spectrum	No Conflict	Protect in Place
Telecom	Parallel to Temescal Canyon Road	Spectrum	No Conflict	Protect in Place
Telecom	Brown Canyon Wash	Spectrum/Charter	No Conflict	Protect in Place
Telecom	Leroy Road	Charter	No Conflict	Protect in Place
Telecom	Weirick Road	Spectrum/Charter	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Telecom	Weirick Road	AT&T	No Conflict	Protect in Place
Telecom	Bedford Wash	AT&T	No Conflict	Protect in Place
Telecom	Cajalco Road	Sunesys	No Conflict	Protect in Place
Telecom	Cajalco Road	Sunesys	No Conflict	Protect in Place
Telecom	Cajalco Road	Time-Warner Cable	No Conflict	Protect in Place
Telecom	Bedford Canyon Road	Time-Warner Cable	No Conflict	Protect in Place
Telecom	El Cerrito Road	Crown Castle	No Conflict	Protect in Place
Telecom	El Cerrito Road	AT&T	No Conflict	Protect in Place
Telecom	State Street	AT&T	No Conflict	Protect in Place
Telecom	Ontario Avenue	AT&T	No Conflict	Protect in Place
Power	East Hill Street	SCE	No Conflict	Protect in Place
Power	Main Street	SCE	No Conflict	Protect in Place
Power	Collier Avenue	SCE	No Conflict	Protect in Place
Power	Camino Del Norte and 2nd Street	SCE	No Conflict	Protect in Place
Power	3rd Street	SCE	No Conflict	Protect in Place
Power	Central Avenue and Dexter Avenue	SCE	No Conflict	Protect in Place
Power	Central Avenue, Southbound Ramps	SCE	No Conflict	Protect in Place
Power	Central and Dexter Avenues	SCE	No Conflict	Protect in Place
Power	11th Street	SCE	No Conflict	Protect in Place
Power	North of and parallel to I-15	SCE	No Conflict	Protect in Place
Power	Lake Street, parallel to I-15	SCE	No Conflict	Protect in Place
Power	Lake Street	SCE	No Conflict	Protect in Place
Power	Lake Street	SCE	No Conflict	Protect in Place
Power	East of Lake Street	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road, parallel to I-15	SCE	No Conflict	Protect in Place
Power	Horsethief Canyon Wash Bridge	SCE	No Conflict	Protect in Place
Power	De Palma Road, parallel to I-15	SCE	No Conflict	Protect in Place
Power	Parallel to Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Indian Wash Bridge	SCE	No Conflict	Protect in Place
Power	Indian Truck Trail	SCE	No Conflict	Protect in Place
Power	Indian Truck Trail	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Campbell Ranch Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Campbell Ranch Road	SCE	No Conflict	Protect in Place
Power	Mayhew Wash Bridge	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	East of Stone Canyon Road	SCE	No Conflict	Protect in Place
Power	East of Stone Canyon Road	SCE	No Conflict	Protect in Place
Power	East of Stone Canyon Road	SCE	No Conflict	Protect in Place
Power	East of Stone Canyon Road	SCE	No Conflict	Protect in Place
Power	East of Stone Canyon Road	SCE	No Conflict	Protect in Place
Power	South of and parallel to I-15	SCE	No Conflict	Protect in Place
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Power	Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Knabe Road, parallel to Knabe Road	SCE	No Conflict	Protect in Place
Power	Brown Canyon Wash	SCE	No Conflict	Protect in Place
Power	Brown Canyon Wash	SCE	No Conflict	Protect in Place
Power	Parallel to Temescal Canyon Road	SCE	No Conflict	Protect in Place
Power	Brown Canyon Wash	SCE	No Conflict	Protect in Place
Power	Bedford Motor Way/Leroy Road	SCE	No Conflict	Protect in Place
Power	Foster Road	SCE	No Conflict	Protect in Place
Power	Weirick Road	SCE	No Conflict	Protect in Place
Power	Weirick Road	SCE	No Conflict	Protect in Place
Power	Bedford Wash	SCE	No Conflict	Protect in Place
Power	Bedford Wash	SCE	No Conflict	Protect in Place
Power	Cajalco Road	SCE	No Conflict	Protect in Place
Power	Cajalco Road	SCE	No Conflict	Protect in Place
Power	Cajalco Road	SCE	No Conflict	Protect in Place
Power	Cajalco Road	SCE	No Conflict	Protect in Place
Power	Bedford Canyon Road	SCE	No Conflict	Protect in Place
Power	Corona Street	SCE	No Conflict	Protect in Place
Power	Liberty Avenue	SCE	No Conflict	Protect in Place
Power	Bedford Canyon Road	SCE	No Conflict	Protect in Place
Power	El Cerrito Road	SCE	No Conflict	Protect in Place
Power	State Street	SCE	No Conflict	Protect in Place
Power	State Street	SCE	No Conflict	Protect in Place
Power	Ontario Avenue	SCE	No Conflict	Protect in Place
Power	Old Temescal Road	SCE	No Conflict	Protect in Place
Power	Compton Avenue	SCE	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Power	Compton Avenue	Caltrans	No Conflict	Protect in Place
Gas	El Cerrito Road	SCGC	No Conflict	Protect in Place
Gas	Ontario Avenue	SCGC	No Conflict	Protect in Place
Gas	Ontario Avenue	SCGC	No Conflict	Protect in Place
Gas	Main Street	SCGC	No Conflict	Protect in Place
Gas	Camino Del Norte and 2nd Street	SCGC	No Conflict	Protect in Place
Gas	Central and Dexter Avenues	SCGC	No Conflict	Protect in Place
Gas	Central and Dexter Avenues	SCGC	No Conflict	Protect in Place
Gas	Central Avenue, Southbound Ramps	SCGC	No Conflict	Protect in Place
Gas	11th Street	SCGC	No Conflict	Protect in Place
Gas	Parallel to El Toro Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road, parallel to I-15	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road, parallel to I-15	SCGC	No Conflict	Protect in Place
Gas	Horsethief Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Parallel to Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Campbell Ranch Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place
Gas	Temescal Canyon Road	SCGC	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Gas	Knabe Road, parallel to Knabe Road	SCGC	No Conflict	Protect in Place
Gas	Parallel to Knabe Road	SCGC	No Conflict	Protect in Place
Gas	ASPH Pulsar CT	SCGC	No Conflict	Protect in Place
Gas	Bedford Motor Way	SCGC	No Conflict	Protect in Place
Gas	Weirick Road	SCGC	No Conflict	Protect in Place
Gas	Weirick Road	SCGC	No Conflict	Protect in Place
Gas	Weirick Road	SCGC	No Conflict	Protect in Place
Gas	Cajalco Road	SCGC	No Conflict	Protect in Place
Gas	Bedford Canyon Road	SCGC	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Liberty Avenue	MWD	No Conflict	Protect in Place
Water	Cajalco Road	City of Corona	No Conflict	Protect in Place
Water	El Cerrito Road	City of Corona	No Conflict	Protect in Place
Water	El Cerrito Road	LLWD	No Conflict	Protect in Place
Water	El Cerrito Road	City of Corona	No Conflict	Protect in Place
Water	El Cerrito Road	City of Corona	No Conflict	Protect in Place
Water	State Street	City of Corona	No Conflict	Protect in Place
Water	State Street	City of Corona	No Conflict	Protect in Place
Water	Ontario Avenue	City of Corona	No Conflict	Protect in Place
Water	Ontario Avenue	City of Corona	No Conflict	Protect in Place
Water	Ontario Avenue	EVMWD	No Conflict	Protect in Place
Water	Adobe Street	EVMWD	No Conflict	Protect in Place
Water	Between East Hill and Granite Streets	EVMWD	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Water	Between Granite and Lookout Streets	EVMWD	No Conflict	Protect in Place
Water	Main Street	EVMWD	No Conflict	Protect in Place
Water	Camino Del Norte and 2nd Street	EVMWD	No Conflict	Protect in Place
Water	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Water	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Water	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Water	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Water	Central Avenue	EVMWD	No Conflict	Protect in Place
Water	11th Street	EVMWD	No Conflict	Protect in Place
Water	East of Lake Street	EVMWD	No Conflict	Protect in Place
Water	East of Lake Street, parallel to I-15	EVMWD	No Conflict	Protect in Place
Water	East of Lake Street	EVMWD	No Conflict	Protect in Place
Water	Lake Street	EVMWD	No Conflict	Protect in Place
Water	Hosteller Road	EVMWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Glen Eden Road	LLWD	No Conflict	Protect in Place
Water	Glen Eden Road	LLWD	No Conflict	Protect in Place
Water	East of Indian Truck Trail	LLWD	No Conflict	Protect in Place
Water	East of Indian Truck Trail	EVMWD	No Conflict	Protect in Place
Water	Parallel to Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Water	Mayhew Wash Bridge	LLWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Knabe Road, parallel to Knabe Road	LLWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Water	Temescal Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Brown Canyon Wash	LLWD	No Conflict	Protect in Place
Water	Brown Canyon Wash	LLWD	No Conflict	Protect in Place
Water	Brown Canyon Wash	LLWD	No Conflict	Protect in Place
Water	Brown Canyon Wash	LLWD	No Conflict	Protect in Place
Water	Weirick Road	LLWD	No Conflict	Protect in Place
Water	Bedford Wash	Unknown	No Conflict	Protect in Place
Water	Bedford Wash	Unknown	No Conflict	Protect in Place
Water	Cajalco Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Water	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Adobe Street	EVMWD	No Conflict	Protect in Place
Sewer	Main St	EVMWD	No Conflict	Protect in Place
Sewer	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Sewer	Central and Dexter Avenues	EVMWD	No Conflict	Protect in Place
Sewer	Central Avenue	EVMWD	No Conflict	Protect in Place
Sewer	South of Heidi Lisa Lane	EVMWD	No Conflict	Protect in Place
Sewer	East of Lake Street	SAWPA	No Conflict	Protect in Place

Utility Type	Location	Utility Owner and/ or Contact Name	Utility Conflict Description	Recommended Action or Resolution
Sewer	Temescal Canyon Road	SAWPA	No Conflict	Protect in Place
Sewer	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Sewer	Temescal Canyon Road	LLWD	No Conflict	Protect in Place
Sewer	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Sewer	Temescal Canyon Road	SAWPA	No Conflict	Protect in Place
Sewer	Temescal Canyon Road	EVMWD	No Conflict	Protect in Place
Sewer	East of Stone Canyon Road	EVMWD	No Conflict	Protect in Place
Sewer	Knabe Road, parallel to Knabe Road	LLWD	No Conflict	Protect in Place
Sewer	White Sage Street	LLWD	No Conflict	Protect in Place
Sewer	North of White Sage Street	LLWD	No Conflict	Protect in Place
Sewer	Parallel to Knabe Road	LLWD	No Conflict	Protect in Place
Sewer	Brown Canyon Wash	LLWD	No Conflict	Protect in Place
Sewer	Bedford Motor Way/Leroy Road	City of Corona	No Conflict	Protect in Place
Sewer	Bedford Wash	LLWD	No Conflict	Protect in Place
Sewer	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Bedford Canyon Road	City of Corona	No Conflict	Protect in Place
Sewer	Ontario Avenue	City of Corona	No Conflict	Protect in Place
Casing	Cajalco Road	City of Corona	No Conflict	Protect in Place
Casing	Cajalco Road	City of Corona	No Conflict	Protect in Place
Casing	Cajalco Road	City of Corona	No Conflict	Protect in Place

Source: Taylor and Nguyen 2023.
Notes: Caltrans = California Department of Transportation; EVMWD = East Valley Metropolitan Water District: LLWD = Lee Lake Water District; MCI = MCI Communications; MWD = Metropolitan Water District; SAWPA=Santa Ana Watershed Project Authority; SCE = Southern California Edison; SCGC = Southern California Gas Company

2.2.7.2 Environmental Consequences

Build Alternative

Temporary Impacts

Emergency Services

Emergency services may experience direct temporary impacts due to the shift in traffic from construction vehicles entering and leaving construction areas. Emergency services may face a delay in response time due to this temporary traffic increase during construction. Standard Project Measure **TR-1** (a Traffic Management Plan) would be implemented to minimize direct temporary impacts on traffic and circulation within the study area by maintaining continuous vehicular access and minimizing any delays during construction activities. In addition, Avoidance and Minimization Measure **FIRE-1** would minimize the risk of fires during construction activities.

Utilities

The Build Alternative is expected to require conduit connections to existing power sources, which include private utility companies. No relocations of utilities are anticipated. However, Avoidance and Minimization Measures **UT-1** and **UT-2** would ensure coordination with appropriate utility providers so that temporary disruption of utilities would not occur during construction.

Permanent Impacts

Emergency Services

There is one fire station and there are no police stations within the study area. However, there are several fire and police stations just outside the study area. The Project itself would not cause direct or indirect permanent impacts on emergency services, response times, or the demand of services, as it does not propose any new residential, commercial, or industrial developments that would result in increased traffic. There are also no anticipated long-term closures or detours needed for the Project and no closures of local roads are anticipated (Caltrans 2024). The Project would not expose people or buildings to any new fire hazard areas because it would not construct any new residential, commercial, or industrial developments. Therefore, the Project would not affect demand on fire protection services. The Project would maximize mobility in the region by improving operational safety and efficiency through implementation of two tolled express lanes in each direction on I-15 in Riverside County and multiple entrance and exit points to access the tolled express lane facilities. Therefore, the Project would improve mobility within the study area once in operation.

Utilities

The Build Alternative would not result in the permanent disruption or loss of service during the Project's operation.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. No improvements to I-15 are proposed under the No-Build Alternative other than routine maintenance. Therefore, the No-Build Alternative would not result in permanent adverse effects related to utility service or relocations. The No-Build Alternative would not address or alleviate the existing and forecast operational and capacity issues of the I-15 mainline and would not satisfy the Project purpose and need. Over time, demands on the system would continue to increase and operations would continue to deteriorate. Without implementation of the Build Alternative, the benefits of the Project would not be realized. Therefore, there is a potential for impacts on emergency response times under the No-Build Alternative.

2.2.7.3 Avoidance, Minimization, and/or Mitigation Measures

In addition to Standard Project Measure **TR-1** (Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*), no adverse effects on emergency services are anticipated under the Build Alternative with implementation of the following measures.

Avoidance and Minimization Measure **UT-1.** During construction, RCTC's resident engineer or designated contractor will ensure that all public utility lines, pipes, and cables within the Project limits continue to meet the needs of residents and businesses in the community. In addition, arrangements must be made to avoid disruption of utility services. If interruption in service is unavoidable, notice must be given, and proper arrangements will be made with residents and businesses.

Avoidance and Minimization Measure **UT-2.** Prior to grading activities, RCTC's resident engineer or designated contractor will require the designated contractor to notify Underground Service Alert (USA), at least 2 days prior to excavation, by calling 811 to require that all utility owners within the Project disturbance limit identify the locations of underground transmission lines and other utility facilities.

Avoidance and Minimization Measure **FIRE-1.** To minimize risk of fires during construction activities, the Riverside County Transportation Commission's resident engineer or designated contractor will ensure the implementation of the following minimization measures:

- Coordinate with CAL FIRE and local fire departments to identify and maintain defensible spaces around active construction areas.
- Coordinate with CAL FIRE and local fire departments to identify and maintain firefighting equipment (e.g., extinguishers, shovels, water tankers) in active construction areas.
- Post emergency services phone numbers (i.e., fire, emergency medical, police) in visible locations in all active construction areas.

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2.2.8 Traffic and Transportation/Pedestrian and Bicycle Facilities

2.2.8.1 Regulatory Setting

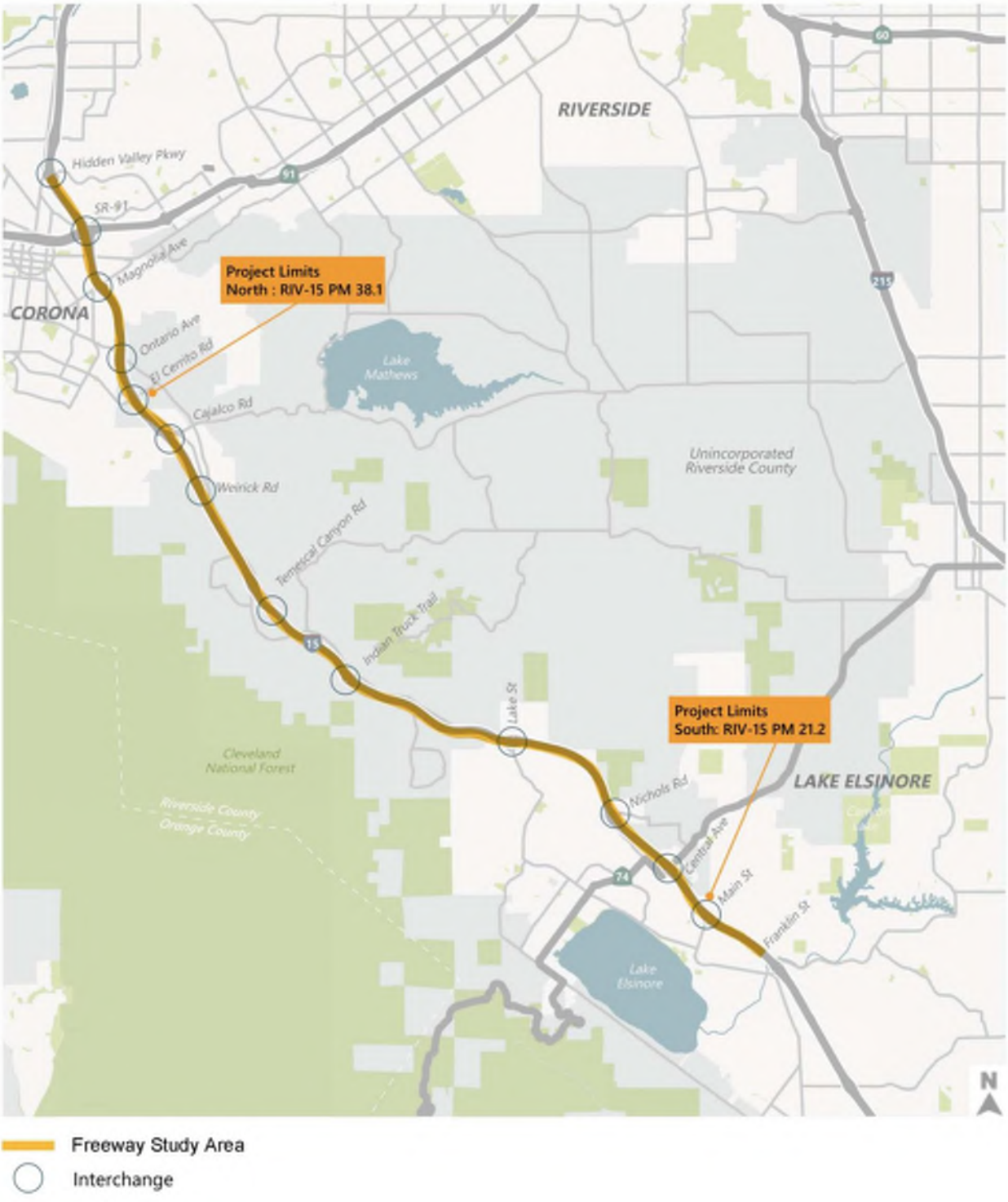
The Department, as assigned by the Federal Highway Administration (FHWA), directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 Code of Federal Regulations [CFR] 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities.

2.2.8.2 Affected Environment

The primary source used in preparation of this section was the *I-15 ELPSE Traffic Operations Analysis Report* (TOAR) (Caltrans 2022). The TOAR analyzed Project impacts on traffic operation under both Opening Year (2030) and Design Year (2050) conditions. Although the Project would have an anticipated Opening Year of 2028, an opening year of 2030 was used so that the study periods of the Project are in 5-year increments to be consistent with travel demand model forecasting, which utilizes 5-year increments. Additional discussion and detail on opening year study periods is provided in the TOAR (Caltrans 2022).

The traffic study area covers approximately 22 miles on Interstate (I-) 15, generally between the Franklin Street Overcrossing (to the south) and the I-15/Hidden Valley Parkway Interchange (to the north). Figure 2.2.8-1 shows the freeway study area, which includes the I-15 mainline segments, ramp junctions, and parallel local roadway segments. In addition, the traffic study area includes several miles beyond the Project limits. The limits of the traffic study area were established to make sure that any upstream or downstream bottlenecks that would affect how traffic is delivered to the study area are accounted for in the operations assessment.



Source: Caltrans 2022

Figure 2.2.8-1. Freeway Study Area

California Department of Transportation (Caltrans) guidance recommends the use of buffer separation between express lanes and general purpose lanes in order to provide a safe speed differential between both facilities. Per the guidance, the Project proposes to separate the express lanes and general purpose lanes with a buffer that consists of two solid white lane markings with an accommodation for channelizers, to deter illegal access. At access locations, the buffer that separates the general purpose lanes and express lanes transitions from two solid white lines to a single dashed white lane line.

The I-15 ELPSE evaluated six preliminary intermediate express lane access locations throughout the Project limits. The access points are located to provide access to all local street and system interchanges, and are subject to adjustment during the final design phase. Two types of access points are proposed: combined ingress/egress without a weave lane and ingress-only. Two optional express lane access locations are being considered in the SB direction between El Cerrito Road and Weirick Road.

Traffic Operations

Freeway Analysis

The freeway mainline and ramp junctions were analyzed using the VISSIM 11 microscopic multi-modal traffic flow simulation software, which applies procedures and methodologies contained in the *Highway Capacity Manual* (HCM)*, 6th Edition* (Transportation Research Board 2016)*.*

The level of service (LOS) was calculated for each study facility to evaluate traffic operations. LOS is a quantitative measure of traffic operating conditions whereby a letter grade, from A (free flowing traffic) to F (traffic demand exceeds the available roadway capacity), is assigned. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving. The freeway LOS was calculated for each study facility based on density in number of vehicles per hour per lane. Table 2.2.8-1 describes the LOS threshold for freeway sections identified in the HCM.

The *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) states that Caltrans “endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities; however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS.” The TOAR prepared for the Project had used LOS D as the acceptable operating level for the freeway facilities analysis.

Table 2.2.8-1. Freeway Segment Level of Service Thresholds

Level of Service	Description	Density (pc/mi/ln)[1]		
		Basic[3]	Merge and Diverge[3]	Weave[3]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11	< 10	≤ 10
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 to 18	> 10 to 20	> 10 to 20
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 to 26	> 20 to 28	> 20 to 28
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 to 35	> 28 to 35	> 28 to 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 to 45	> 35	> 35 to 43
F[2]	Represents a breakdown in flow.	Demand Exceeds Capacity OR Density >45	Demand Exceeds Capacity	Demand Exceeds Capacity OR Density >43

Source: Caltrans 2022

[1] Density is reported in number of passenger cars per mile per lane (pc/mi/ln); ≤ = less than or equal to; > = greater than.

[2] Volume to capacity greater than or equal to 1 (V/C ≥ 1) LOS is considered to be F.

[3] The HCM defines four freeway section types: merge, diverge, weave, and basic. Merge and diverge sections, which refer to the freeway ramp junctions, are defined as the section of the freeway 1,500 feet downstream of an on-ramp and upstream of an off-ramp, respectively (Caltrans 2021). Density is measured over two adjacent freeway through lanes including any auxiliary lanes. Weaving sections occur

between a successive on-ramp and off-ramp pair connected by an auxiliary lane. The maximum weaving distance between ramps is determined by the weaving total volumes and the number of lanes. All other sections not included in a merge, diverge, or weaving are considered basic. Weaving and basic section densities are measured across all mixed-flow lanes, including both through and auxiliary lanes.

Roadway Analysis

The City of Corona, City of Lake Elsinore, and County of Riverside use volume-to-capacity (V/C) ratios to analyze the LOS for roadway segments. The capacity of a roadway is determined by its classification as defined (by the City or County) and number of lanes. The roadway segment capacities for each city and their influence area in Riverside County are summarized in Table 2.2.8-2. When a roadway is approaching capacity or over capacity, which is categorized as LOS E or worse, its average daily traffic (ADT) is higher than the capacity of the roadway and V/C ratio is greater than 0.9.

Table 2.2.8-2. Roadway Capacity

Roadway	Lanes	LOS E Capacity
City of Corona		
Collector	2	13,000
Secondary	4	34,800
Mountain Arterial	2	16,100
Mountain Arterial	3	20,900
Arterial	2	18,000
Arterial	4	35,900
Major Arterial	4	37,900
Major Arterial	6	54,300
City of Lake Elsinore		
Secondary	2	12,950
Secondary	4	25,900
Major Arterial	4	34,100
Major Arterial	8	68,200
Urban Arterial	2	18,000
Urban Arterial	6	53,900
Urban Arterial	8	71,800
Riverside County		
Secondary	4	25,900
Arterial	2	18,000
Major Arterial	4	34,100
Urban Arterial	4	35,900
Urban Arterial	6	53,900
Urban Arterial	8	71,800

Source: Caltrans 2022

City of Corona

According to the City of Corona General Plan, LOS D is the minimum acceptable standard on arterial roadways. At some key locations, such as at heavily traveled freeway interchanges, LOS E may be adopted as the acceptable standard on a case-by-case basis. Locations that may warrant the LOS E standard include Lincoln Avenue at State Route (SR-) 91, Main Street at SR-91, McKinley Avenue at SR-91, Hidden Valley Parkway at I-15, Cajalco Road at I-15, and Weirick Road at I-15.

City of Lake Elsinore

According to the City of Lake Elsinore General Plan, a V/C ratio between 0.81 to 1.00 is approaching capacity and a V/C ratio below 0.8 is below capacity. Below capacity and approaching capacity are both are considered acceptable by the City. A V/C ratio between 1.01 and 1.24 is considered potentially exceeding capacity (PEC) and could be acceptable if adjacent intersections are operating acceptably during the peak hour. A V/C ratio greater than 1.24 is considered deficient.

Riverside County

According to the Riverside County General Plan Amendment No. 960, LOS “D” is the minimum acceptable standard on arterial roadways within any of the following Area Plans: Eastvale, Jurupa, Temescal Canyon, Lake Mathews/Woodcrest, Elsinore, Mead Valley, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, and Western Coachella Valley. The Project lies within the Temescal Canyon Area Plan and the Elsinore Area Plan.

Existing Year (2019) Traffic Conditions

Existing traffic volumes in the traffic study area were collected between Tuesday, September 17, 2019, and Thursday, September 19, 2019. The 3-day, 72-hour traffic data collection was conducted on I-15 at the southern and northern ends of the traffic study area, at roadway segments, and at ramp junctions at 13 interchanges.

To determine the existing traffic demand along I-15, the traffic counts were taken at uncongested portions of I-15, confirming that the demand volume would be captured for both directions on I-15. Specifically, the southbound (SB) and northbound (NB) freeway mainline traffic counts and classification counts were collected on I-15 at the NB and SB I-15/Franklin Street Overcrossing and at the NB and SB I-15/Magnolia Avenue Overcrossing.

The classification counts for the mainline freeway were conducted consistent with Caltrans guidelines and were provided as a percentage of the total in 1-hour intervals and peak-hour volumes. Data were collected while schools were in session and during favorable weather conditions during pre-COVID conditions. Additional details for existing peak-hour traffic volumes for I-15, roadway segments, and ramp junctions in the traffic study area are provided in the TOAR.

The Caltrans Traffic Operations Policy Directive (TOPD) 20-04 was released on March 13, 2020, and validated the use of traffic counts collected prior to the COVID-19 pandemic. Subsequently, TOPD 23-01 was released in January 2023 and provided traffic count baseline guidance due to the COVID-19 pandemic. The Project is consistent with the TOPD guidance, and the opening year (2030) and design year (2050) have remained consistent since Project initiation in 2019. Additionally, the Project adhered to the Regional Travel Demand Model and accounted for land use planning along the I-15 corridor through development and approval of the TOAR. The TOAR was approved by Caltrans on April 11, 2022, and a memorandum outlining Project compliance with the TOPD guidance was concurred with by Caltrans on October 2, 2024. (See Appendix F, *Traffic Operations Policy Directive (TOPD) 23-01 Memorandum*.)

Freeway Operations

Freeway mainline segment and ramp junctions were analyzed using the methodology consistent with the HCM. Table 2.2.8-3 and Table 2.2.8-8 show the LOS and density for Existing Year (2019) AM peak hour (7:00 a.m. to 8:00 a.m.) and PM peak hour (3:00 p.m. to 4:00 p.m.) for the study freeway mainline segments on SB and NB I-15.

As shown in Table 2.2.8-3, the SB I-15 freeway mainline segments are operating at LOS D or better during AM peak hours. However, several SB I-15 freeway mainline segments are operating at unacceptable LOS E or F during the PM peak hour in the Existing Year (2019) conditions, as described below.

- SB I-15 bottleneck at the Cajalco Road On-Ramp merge segment creates a queue that extends to the Magnolia Avenue On-Ramp; segments in queue due to the bottleneck operate at LOS E or F.

- Various SB I-15 diverge segments, including Weirick Road/Dos Lagos Drive Off-Ramp, Temescal Canyon Road Off-Ramp, and Indian Truck Trail Off-Ramp, operate at LOS E.

Table 2.2.8-3. Existing Year (2019) Peak-Hour Freeway Mainline Operations: Southbound I-15

ID[1]	I-15 SB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
1	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 17	C / 25
2	Hidden Valley Parkway On-Ramp	Merge	B / 11	B / 18
3	Hidden Valley Parkway On-Ramp to WB SR-91 Off-Ramp	Basic	B / 15	C / 21
4	WB SR-91 Off-Ramp	Basic	B / 15	C / 21
5	EB SR-91 Off-Ramp	Diverge	D / 26	D / 29

ID[1]	I-15 SB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
6	EB SR-91 Off-Ramp to On-Ramp	Basic	B / 13	C / 19
7	EB SR-91 On-Ramp	Merge	B / 15	C / 20
8	WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	Weave	B / 16	B / 18
9	Magnolia Avenue Off-Ramp to On-Ramp	Basic	B / 17	D / 34
10	Magnolia Avenue On-Ramp	Merge	B / 13	**F / DEC**
11	EB SR-91 Express Lane On-Ramp (Left)	Basic	B / 15	**F / DEC**
12	EB SR-91 Express Lane On-Ramp to Ontario Avenue Off-Ramp	Basic	B / 15	**F / DEC**
13	Ontario Avenue Off-Ramp	Basic	B / 15	**F / DEC**
14	Ontario Avenue Off-Ramp to On-Ramp	Basic	B / 16	**F / DEC**
15	Ontario Avenue On-Ramp	Merge	B / 13	**F / DEC**
16	El Cerrito Road Off-Ramp	Basic	C / 18	**F / DEC**
17	El Cerrito Road Off-Ramp to On-Ramp	Basic	C / 22	**F / DEC**
18	El Cerrito Road On-Ramp	Merge	C / 22	**F / DEC**
19	Cajalco Road Off-Ramp	Diverge	C / 25	**F / DEC**
20	Cajalco Road Off-Ramp to On-Ramp	Basic	C / 21	**F / DEC**
21	Cajalco Road On-Ramp	Merge	B / 18	**F / DEC**
22	Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Basic	C / 22	**E / 42**
23	Weirick Road / Dos Lagos Drive Off-Ramp	Diverge	C / 23	**E / 42**
24	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 19	D / 30
25	Weirick Road / Dos Lagos Drive On-Ramp	Merge	B / 15	D / 26
26	Weirick Road / Dos Lagos Drive On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 20	D / 33
27	Temescal Canyon Road Off-Ramp	Diverge	C / 21	**E / 37**
28	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	B / 18	D / 30
29	Temescal Canyon Road On-Ramp	Merge	B / 14	C / 24
30	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 18	D / 32
31	Indian Truck Trail Off-Ramp	Diverge	C / 19	**E / 37**
32	Indian Truck Trail Off-Ramp to On-Ramp	Basic	B / 17	D / 28
33	Indian Truck Trail On-Ramp	Merge	B / 14	C / 23
34	Indian Truck Trail On-Ramp to Lake Street Off-Ramp	Basic	B / 18	D / 29

ID[1]	I-15 SB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
35	Lake Street Off-Ramp	Diverge	B / 18	D / 32
36	Lake Street Off-Ramp to On-Ramp	Basic	B / 17	C / 26
37	Lake Street On-Ramp	Merge	B / 14	C / 20
38	Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	C / 18	D / 27
39	Nichols Road Off-Ramp	Diverge	C / 18	D / 28
40	Nichols Road Off-Ramp to On-Ramp	Basic	B / 17	C / 25
41	Nichols Road On-Ramp	Merge	B / 16	C / 22
42	Nichols Road On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	C / 19	D / 27
43	SR-74 (Central Avenue) Off-Ramp	Diverge	C / 20	D / 29
44	SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 17	C / 23
45	SR-74 (Central Avenue) On-Ramp	Merge	C / 19	C / 24
46	SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	Basic	C / 22	D / 30
47	Main Street Off-Ramp	Diverge	C / 22	D / 30
48	Main Street Off-Ramp to On-Ramp	Basic	C / 21	D / 27
49	Main Street On-Ramp	Merge	C / 20	C / 24
50	Main Street On-Ramp to Franklin Street Overcrossing	Basic	C / 24	D / 30

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
Note: **Bold and underlined** font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EB = eastbound; WB = westbound

As shown in Table 2.2.8-8, several NB I-15 freeway mainline segments are operating at unacceptable LOS E or F during the AM and PM peak hours in the Existing Year (2019) conditions, as described below.

AM Peak Hour

- The NB I-15 bottleneck at the Cajalco Road On-Ramp merge segment creates a queue that extends to the Indian Truck Trail Off-Ramp; segments in queue due to the bottleneck operate at LOS F.

- The NB I-15 Ontario Avenue Off-Ramp also operates at LOS E during the AM peak hour.

PM Peak Hour

- The NB I-15 bottleneck at the Cajalco Road On-Ramp merge segment creates a queue that extends to the Weirick Road/Dos Lagos Drive On-Ramp; segments in queue due to the bottleneck operate at LOS F.

- The NB I-15 bottleneck at the westbound (WB) Magnolia Avenue On-Ramp merge segment creates a queue that extends to the Magnolia Avenue Off-Ramp; segments in queue due to the bottleneck operate at LOS F.

To provide a simplified comparison of operations along the corridor, the following tables present an LOS summary of select basic freeway segments along the corridor under the No-Build and Build Alternatives.

Table 2.2.8-4. Select Freeway Basic Sections LOS Comparison: Southbound I-15 AM Peak Period

ID[1]	Southbound I-15 Segment	Existing (2019)	Opening Year 2030 No-Build	Opening Year 2030 Build	Design Year 2050 No-Build	Design Year 2050 Build
8	WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	B	C	C	C	C
22	Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	C	B	B	C	B
30	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	C	C	C	C	C
46	SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	C	C	C	C	C

[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.

Table 2.2.8-5. Select Freeway Basic Sections LOS Comparison: Southbound I-15 PM Peak Period

ID[1]	Southbound I-15 Segment	Existing (2019)	Opening Year 2030 No-Build	Opening Year 2030 Build	Design Year 2050 No-Build	Design Year 2050 Build
8	WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	B	F	C	D	F
22	Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	E	F	C	D	C
30	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	D	E	D	E	D
46	SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	D	E	F	D	F

[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.

Table 2.2.8-6. Select Freeway Basic Sections LOS Comparison: Northbound I-15 AM Peak Period

ID[1]	Southbound I-15 Segment	Existing (2019)	Opening Year 2030 No-Build	Opening Year 2030 Build	Design Year 2050 No-Build	Design Year 2050 Build
141	Ontario Avenue On-Ramp to WB SR-91 Express Lane Off-Ramp	C	C	C	C	F
125	Temescal Canyon Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	F	C	B	F	F
121	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	F	C	B	F	F
105	Main Street On-Ramp to SR-74 (Central Avenue) Off-Ramp	C	C	C	F	F

[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.

Table 2.2.8-7. Select Freeway Basic Sections LOS Comparison: Northbound I-15 PM Peak Period

ID[1]	Southbound I-15 Segment	Existing (2019)	Opening Year 2030 No-Build	Opening Year 2030 Build	Design Year 2050 No-Build	Design Year 2050 Build
141	Ontario Avenue On-Ramp to WB SR-91 Express Lane Off-Ramp	B	F	F	F	F
125	Temescal Canyon Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	C	F	F	F	F
121	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	B	E	F	F	F
105	Main Street On-Ramp to SR-74 (Central Avenue) Off-Ramp	C	C	D	F	F

[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.

Table 2.2.8-8. Existing Year (2019) Peak-Hour Freeway Mainline Operations: Northbound I-15

ID[1]	I-15 NB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
152	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	C / 19	B / 13
151	Hidden Valley Parkway Off-Ramp	Diverge	C / 24	B / 17
150	EB SR-91 On-Ramp	Basic	C / 21	B / 16
149	WB SR-91 On-Ramp	Merge	C / 19	B / 12
148	EB & WB SR-91 Off-Ramp to WB SR-91 On-Ramp	Basic	B / 14	A / 10
147	EB & WB SR-91 Off-Ramp	Diverge	C / 23	D / 33
146	Magnolia Avenue On-Ramp	Merge	C / 20	**F / DEC**
145	Magnolia Avenue Loop On-Ramp	Basic	C / 20	**F / DEC**
144	Magnolia Avenue Off-Ramp to Loop On-Ramp	Basic	C / 22	**F / DEC**
143	Magnolia Avenue Off-Ramp	Diverge	B / 17	C / 26
142	WB SR-91 Express Lane Off-Ramp (Left)	Basic	C / 20	C / 20

ID[1]	I-15 NB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
141	Ontario Avenue On-Ramp to WB SR-91 Express Lane Off-Ramp	Basic	C / 20	B / 16
140	Ontario Avenue On-Ramp	Merge	B / 12	A / 10
139	Ontario Avenue Off-Ramp to On-Ramp (5 Lanes)	Basic	B / 15	B / 13
138	Ontario Avenue Off-Ramp to On-Ramp (4 Lanes)	Basic	C / 20	B / 16
137	Ontario Avenue Off-Ramp to On-Ramp (3 Lanes)	Basic	D / 29	C / 22
136	Ontario Avenue Off-Ramp	Diverge	**E / 38**	C / 24
135	El Cerrito Road On-Ramp	Merge	C / 25	B / 17
134	El Cerrito Road Off-Ramp to On-Ramp	Basic	C / 24	C / 22
133	El Cerrito Road Off-Ramp	Diverge	C / 25	C / 23
132	Cajalco Road On-Ramp to El Cerrito Road Off-Ramp	Basic	D / 27	C / 26
131	Cajalco Road On-Ramp	Merge	**F / DEC**	**F / DEC**
130	Cajalco Road Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**
129	Cajalco Road Off-Ramp	Diverge	**F / DEC**	**F / DEC**
128	Weirick Road / Dos Lagos Drive On-Ramp	Merge	**F / DEC**	**F / DEC**
127	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	**F / DEC**	C / 23
126	Weirick Road/Dos Lagos Drive Off-Ramp	Diverge	**F / DEC**	C / 20
125	Temescal Canyon Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Basic	**F / DEC**	C / 19
124	Temescal Canyon Road On-Ramp	Merge	**F / DEC**	B / 17
123	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	**F / DEC**	B / 17
122	Temescal Canyon Road Off-Ramp	Diverge	**F / DEC**	C / 18
121	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	**F / DEC**	B / 18
120	Indian Truck Trail On-Ramp	Merge	**F / DEC**	B / 15
119	Indian Truck Trail Off-Ramp to On-Ramp	Basic	**F / DEC**	B / 16
118	Indian Truck Trail Off-Ramp	Diverge	**F / DEC**	B / 17
117	Lake Street On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 23	B / 17
116	Lake Street On-Ramp	Merge	B / 16	B / 14
115	Lake Street Off-Ramp to On-Ramp	Basic	B / 16	B / 15

ID[1]	I-15 NB Segment	Facility Type	LOS / Density[2]	
			AM Peak Hour	PM Peak Hour
114	Lake Street Off-Ramp	Diverge	B / 18	B / 16
113	Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	B / 17	B / 16
112	Nichols Road On-Ramp	Merge	B / 14	B / 12
111	Nichols Road Off-Ramp to On-Ramp	Basic	B / 16	B / 15
110	Nichols Road Off-Ramp	Diverge	C / 19	B / 17
109	SR-74 (Central Avenue) On-Ramp to Nichols Road Off-Ramp	Basic	B / 18	B / 16
108	SR-74 (Central Avenue) On-Ramp	Merge	B / 15	B / 13
107	SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 14	B / 14
106	SR-74 (Central Avenue) Off-Ramp	Diverge	C / 22	C / 22
105	Main Street On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	C / 19	C / 20
104	Main Street On-Ramp	Merge	B / 15	B / 18
103	Main Street Off-Ramp to On-Ramp	Basic	C / 19	C / 19
102	Main Street Off-Ramp	Diverge	C / 24	C / 24
101	Franklin Street Overcrossing to Main Street Off-Ramp	Basic	C / 22	C / 22

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
Note: **Bold and underlined** font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EB = eastbound

System-Wide Performance

While LOS is a typical indicator that has historically been used to describe transportation facility performance, system-wide performance metrics are also effective measurements in evaluating transportation system performance. The system-wide performance measures used for the Project include number of vehicles served by the study network, total travel time/vehicle hours traveled, average delay per vehicle, and total delay/vehicle hours delay. System-wide performance metrics are presented for the AM 7-hour peak period (5:00 a.m. to 12:00 p.m.) and PM 7-hour peak period (1:00 p.m. to 8:00 p.m.). Peak-period system-wide performance metrics are presented in Table 2.2.8-9.

Table 2.2.8-9. Existing Year (2019) Peak-Period System-Wide Performance Metrics

Performance Measure	AM Peak Period	PM Peak Period
Volume Served (vehicles)	160,868	182,732
Total Distance Traveled (miles)	1,317,551	1,642,809
Total Travel Time (hours)	26,541	29,205
Average Delay Per Vehicle (seconds)	161	99
Total Delay (hours)	7,318	5,125

Source: Caltrans 2022

Roadway Segment Operation

Table 2.2.8-10 shows the Existing Year (2019) ADT volumes, V/C, and LOS for parallel roadway networks to I-15. As shown in Table 2.2.8-10, the following roadway segments operate at an unacceptable LOS E, LOS F, or PEC:

- Hidden Valley Parkway east of I-15 (LOS F)
- Magnolia Avenue west of I-15 (LOS E)
- Temescal Canyon Road between Lawson Road and Trilogy Parkway (LOS E)
- Dos Lagos Drive east of I-15 (LOS E)
- Lake Street west of Temescal Canyon Road (LOS F or PEC)
- Lake Street East of Temescal Canyon Road (LOS F or PEC)
- Main Street West of I-15 (LOS F or PEC)

All other study roadway segments are operating at LOS D or better.

Table 2.2.8-10. Existing Year (2019) Average Daily Traffic and Roadway Segment Level of Service

	Roadway Segment	Classification	Capacity[1]	Existing Year (2019)		
				Volume	V/C[2]	LOS
1	Hidden Valley Parkway west of I-15	Arterial	35,900	29,967	0.83	D
2	Hidden Valley Parkway east of I-15	Arterial	35,900	40,038	1.12	**F**
3	Parkridge Avenue west of Cresta Road	Secondary	34,800	15,731	0.45	A
4	Parkridge Avenue east of Cresta Road	Secondary	34,800	8,244	0.24	A

Roadway Segment		Classification	Capacity[1]	Existing Year (2019)		
				Volume	V/C[2]	LOS
5	Cresta Road south of Parkridge Avenue	Collector	13,000	9,680	0.74	C
6	Sixth Street west of El Sobrante Road	Major Arterial	37,900	25,840	0.68	B
7	Sixth Street west of Radio Road	Major Arterial	37,900	24,767	0.65	B
8	Radio Road north of Sixth Street	Collector	13,000	7,524	0.58	A
9	El Sobrante Road between Sixth Street and Magnolia Avenue	Collector	13,000	9,346	0.72	C
10	Magnolia Avenue west of I-15	Major Arterial	54,300	49,463	0.91	**E**
11	Magnolia Avenue east of I-15	Major Arterial	54,300	39,529	0.73	C
12	Ontario Avenue west of I-15	Major Arterial	54,300	46,021	0.85	D
13	Ontario Avenue east of I-15	Major Arterial	37,900	27,363	0.72	C
14	Ontario Avenue north of El Cerrito Road	Major Arterial	54,300	22,590	0.42	A
15	El Cerrito Road west of I-15	Secondary	34,800	22,236	0.64	B
16	El Cerrito Road between I-15 and Temescal Canyon Road	Secondary	34,800	8,917	0.26	A
17	Bedford Canyon Road south of El Cerrito Road	Collector	13,000	9,221	0.71	C
18	Bedford Canyon Road north of El Cerrito Road	Collector	13,000	7,420	0.57	A
19	Evelyn Street	Collector	13,000	425	0.03	A
20	Frances Street	Collector	13,000	162	0.01	A
21	Katy Street	Collector	13,000	515	0.04	A
22	Liberty Avenue	Collector	13,000	0	0.00	A
23	Temescal Canyon Road between El Cerrito Avenue and Cajalco Road	Major Arterial	34,100	19,895	0.58	A
24	Temescal Canyon Road between Cajalco Road and Dos Lagos Drive	Major Arterial	37,900	20,424	0.54	A

	Roadway Segment	Classification	Capacity[1]	Existing Year (2019)		
				Volume	V/C[2]	LOS
25	Temescal Canyon Road between Dos Lagos Drive and Dawson Canyon Road	Major Arterial	34,100	12,476	0.37	A
26	Temescal Canyon Road between Dawson Canyon Road and I-15	Major Arterial	34,100	13,523	0.40	A
27	Temescal Canyon Road between I-15 and Lawson Road	Major Arterial	34,100	17,710	0.52	A
28	Temescal Canyon Road between Lawson Road and Trilogy Parkway	Arterial	18,000	16,947	0.94	**E**
29	Temescal Canyon Road between Trilogy Parkway and Campbell Ranch Road	Arterial	18,000	10,190	0.57	A
30	Temescal Canyon Road between Campbell Ranch Road and Indian Truck Trail Road	Major Arterial	34,100	3,986	0.12	A
31	Temescal Canyon Road between Indian Truck Trail Road and Horsethief Road	Arterial	18,000	4,148	0.23	A
32	Temescal Canyon Road between Horsethief Road and I-15 Frontage Road	Arterial	18,000	4,624	0.26	A
33	Temescal Canyon Road between Concordia Ranch Road and Lake Street	Arterial	18,000	6,339	0.35	A
34	Cajalco Road west of L-15	Major Arterial	37,900	17,990	0.47	A
35	Cajalco Road between I-15 and Grand Oaks	Major Arterial	54,300	24,124	0.44	A
36	Cajalco Road between Grand Oaks and Temescal Canyon Road	Major Arterial	54,300	18,148	0.33	A
37	Retreat Parkway west of Knabe Road	Secondary	25,900	3,552	0.14	A
38	Weirick Road between I-15 and Knabe Road	Secondary	25,900	19,353	0.75	C

	Roadway Segment	Classification	Capacity[1]	Existing Year (2019)		
				Volume	V/C[2]	LOS
39	Weirick Road north of Knabe Road	Secondary	25,900	611	0.02	A
40	Dos Lagos Drive east of I-15	Secondary	25,900	23,988	0.93	**E**
41	Knabe Road between Weirick Road and White Sage Street	Secondary	25,900	14,663	0.57	A
42	Knabe Road between White Sage Street and Hunt Road	Secondary	25,900	5,719	0.22	A
43	Campbell Ranch Road between Temescal Canyon Road and Mayhew Canyon Road	Secondary	25,900	4,149	0.16	A
44	Campbell Ranch Road between Mayhew Canyon Road and Indian Truck Trail	Secondary	25,900	7,530	0.29	A
45	De Palma Road between Indian Truck Trail and Horsethief Canyon Road	Secondary	25,900	8,091	0.31	A
46	Horsethief Canyon Road west of De Palma Road	Arterial	18,000	10,009	0.56	A
47	Horsethief Canyon Road between De Palma Road and Temescal Canyon Road	Arterial	18,000	3,870	0.22	A
48	Lake Street west of Temescal Canyon Road	Urban Arterial	18,000	20,129	1.12[3]	**F**[3]
49	Lake Street east of Temescal Canyon Road	Urban Arterial	18,000	18,535	1.03[3]	**F**[3]
50	Nichols Road west of Collier Road	Urban Arterial	18,000	8,754	0.49	A
51	Nichols Road between Collier Road and I-15	Urban Arterial	18,000	12,410	0.69	B
52	Nichols Road east of I-15	Urban Arterial	18,000	4,305	0.24	A
53	Collier Avenue between Nichols Road and Riverside Drive	Major Arterial	34,100	5,619	0.16	A

Roadway Segment		Classification	Capacity[1]	Existing Year (2019)		
				Volume	V/C[2]	LOS
54	Collier Avenue between Riverside Drive and Central Avenue	Urban Arterial	53,900	28,829	0.53	A
55	Collier Avenue south of SR-74 (Central Avenue)	Major Arterial	34,100	11,852	0.35	A
56	Dexter Avenue north of SR-74 (Central Avenue)	Collector	13,000	9,378	0.72	C
57	Dexter Avenue south of SR-74 (Central Avenue)	Collector	13,000	7,869	0.61	B
58	SR-74 (Central Avenue) between Collier Avenue and I-15	Major Arterial	68,200	41,817	0.61	B
59	SR-74 (Central Avenue) between I-15 and Dexter Avenue	Urban Arterial	71,800	54,589	0.76	C
60	SR-74 (Central Avenue) between Dexter Avenue and Cambern Avenue	Urban Arterial	71,800	43,152	0.60	B
61	SR-74 (Central Avenue) east of Cambern Avenue	Urban Arterial	71,800	44,027	0.61	B
62	Main Street west of I-15	Secondary	12,950	15,419	1.19[3]	**F[3]**

Source: Caltrans 2022
[1] Capacity for each roadway segment was determined by the number of lanes and roadway capacities as defined by the City of Corona, City of Lake Elsinore, and County of Riverside General Plans and Traffic Impact Study Guidelines.
[2] V/C ratio = ADT/roadway capacity
[3] The City of Lake Elsinore General Plan considers this V/C ratio as PEC and will accept PEC operations as "acceptable" if adjacent intersections are operating acceptably during the peak hour. Because adjacent intersection analysis was not part of the traffic study, the roadway was considered deficient.
Note: **Bold and underlined** font indicates deficient operations.

Collision Data

Traffic collision data were collected from Caltrans' Traffic Accident Surveillance and Analysis System (TASAS) for a 3-year period from January 1, 2021 to December 31, 2023, for the existing I-15 general-purpose lanes within the Project limits. Due to the length of the Project, the collision data were obtained by segment from on-ramp to off-ramp and between existing local interchanges. The TASAS Table B report identified below was obtained on September 23, 2024, and it depicts collision rates per million vehicles for ramps and segments less than 0.5 mile and per million vehicle miles for segments greater or equal to 0.5 mile.

Table 2.2.8-11 and Table 2.2.8-12 show the I-15 SB and I-15 NB collision rates, respectively, of fatal, fatal plus injury, and total collision rates on segments of the freeway mainline at interchange areas, between interchanges, and for the entire length within the Project limits.

Out of the 20 segment locations reported in the SB direction, four locations have fatal collision rates higher than the statewide average, three locations have fatal plus injury rates higher than the statewide average, and three locations have a total collision rate higher than the statewide average. The collision rates for the entire Project length in the SB direction are below the statewide average for similar facilities, as shown in Table 2.2.8-11.

Similar to the SB direction, from the 20 segment locations reported in the NB direction, four locations have fatal collision rates higher than the statewide average, one location has fatal plus injury rates higher than the statewide average, and two locations have a total collision rate higher than the statewide average. Total collision rates and fatal plus injury rates for the entire Project length in the NB direction are below the statewide average for similar facilities while the fatal collision rate is the same as the statewide average, as shown in Table 2.2.8-12.

Table 2.2.8-13 and Table 2.2.8-14 summarize the percentage of collisions by type for I-15 SB and NB directions, respectively, within the Project limits. For the entire Project length in the SB direction, nearly 50 percent of the collisions were rear-end, over 30 percent were sideswipe, and 15 percent were hit objects. All other types of collisions account for 3 percent of the total. For the entire Project length in the NB direction, over 54 percent of the collisions were rear-end, 23 percent were sideswipe, and over 17 percent were hit objects. All other types of collisions account for less than 4 percent of the total.

The proposed modifications throughout the Project limits involve a dual express lane that is a buffer separated from the general purpose lanes located within the existing median. Rear-end and sideswipe collisions on freeways are generally related to traffic congestion, speed differentials, and abrupt lane changes. The proposed extension of the express lanes would carry more traffic through congested areas where stop-and-go conditions occur during peak hours compared to the existing condition, which would result in a reduction of traffic in the general purpose lanes. A reduction of traffic translates to improved traffic operations and the potential reduction of certain types of collisions related to traffic congestion.

As shown in Table 2.2.8-15 and Table 2.2.8-16, the primary collision factors on the I-15 SB and NB directions, respectively, were for speeding, improper turn, and other violations.

Table 2.2.8-11. Summary of Collision Rates for Southbound I-15

I-15 Mainline SB			Collision Rate[1]					
			Actual Rate			State Average Rate		
Location		Post Mile	Fatal	Fatal + Injury	Total[2]	Fatal	Fatal + Injury	Total[2]
1	Main Street SB On-Ramp to Main Street SB Off-Ramp	20.55/21.27	0.000	0.17	0.28	0.006	0.41	1.25
2	Main Street SB Off-Ramp to SR-74 (Central Avenue) SB On-Ramp	21.27/21.79	0.000	0.15	0.36	0.006	0.41	1.25
3	SR-74 (Central Avenue) SB On-Ramp to SR-74 (Central Avenue) SB Off-Ramp	21.81/22.66	0.000	0.11	0.20	0.006	0.41	1.25
4	SR-74 (Central Avenue) SB Off-Ramp to Nichols Road SB On-Ramp	22.66/23.43	0.000	0.10	0.30	0.006	0.41	1.25
5	Nichols Road SB On-Ramp to Nichols Road SB Off-Ramp	23.43/24.24	0.000	0.28	0.56	0.006	0.39	1.18
6	Nichols Road SB Off-Ramp to Lake Street SB On-Ramp	24.24/26.21	**0.008**	0.12	0.30	0.006	0.34	1.03
7	Lake Street SB On-Ramp to Lake Street SB Off-Ramp	26.21/27.13	0.000	0.10	0.26	0.006	0.34	1.03
8	Lake Street SB Off-Ramp to Indian Truck Trail SB On-Ramp	27.13/30.00	0.000	0.10	0.27	0.006	0.32	0.97
9	Indian Truck Trail SB On-Ramp to Indian Truck Trail SB Off-Ramp	30.00/30.84	0.000	0.07	0.20	0.007	0.25	0.71
10	Indian Truck Trail SB Off-Ramp to Temescal Canyon Road SB On-Ramp	30.84/32.83	0.000	0.05	0.26	0.007	0.25	0.71
11	Temescal Canyon Road SB On-Ramp to Temescal Canyon Road SB Off-Ramp	32.83/33.68	**0.015**	0.05	0.20	0.007	0.25	0.74

I-15 Mainline SB			Collision Rate[1]					
			Actual Rate			State Average Rate		
Location		Post Mile	Fatal	Fatal + Injury	Total[2]	Fatal	Fatal + Injury	Total[2]
12	Temescal Canyon Road SB Off-Ramp to Weirick Road SB On-Ramp	33.68/35.29	0.000	0.08	0.23	0.006	0.34	1.03
13	Weirick Road SB On-Ramp to Weirick Road SB Off-Ramp	35.29/36.07	0.000	0.23	0.54	0.006	0.34	1.03
14	Weirick Road SB Off-Ramp to Cajalco Road SB On-Ramp	36.07/36.28	0.000	0.09	0.237	0.003	0.17	0.515
15	Cajalco Road SB On-Ramp to Cajalco Road SB Off-Ramp	36.28/37.24	**0.034**	**0.49**	**1.12**	0.006	0.34	1.03
16	Cajalco Road SB Off-Ramp to El Cerrito Road SB On-Ramp	37.24/37.60	0.000	**0.48**	**1.47**	0.006	0.34	1.03
17	El Cerrito Road SB On-Ramp to El Cerrito Road SB Off-Ramp	37.60/38.19	**0.018**	**0.49**	**1.38**	0.006	0.34	1.03
18	El Cerrito Road SB Off-Ramp to Ontario Avenue SB On-Ramp	38.19/38.31	0.000	0.042	0.222	0.003	0.17	0.515
19	Ontario Avenue SB On-Ramp to Ontario Avenue SB Off-Ramp	38.31/39.02	0.000	0.25	0.73	0.006	0.36	1.07
20	Ontario Avenue SB Off-Ramp to Magnolia Avenue SB On-Ramp	39.02/39.99	0.000	0.25	0.82	0.004	0.35	1.08
Entire Project Limits		20.30/40.10	0.002	0.004	0.17	0.47	0.006	0.33

Source: Caltrans 2024

[1] This table depicts collision rates per million vehicles for ramps and segments less than 0.5 mile and per million vehicle miles for segments greater or equal to 0.5 mile.

[2] All reported crashes (includes Property Damage Only Collisions).

Bold and underlined font indicates an actual collision rate that is higher than the state average collision rate.

Table 2.2.8-12. Summary of Collision Rates for Northbound I-15

I-15 Mainline NB			Collision Rate[1]					
			Actual Rate			State Average Rate		
Location		Post Mile	Fatal	Fatal + Injury	Total[2]	Fatal	Fatal + Injury	Total[2]
1	Main Street NB Off-Ramp to Main Street NB On-Ramp	20.55 / 21.27	0.000	0.13	0.36	0.006	0.41	1.25
2	Main Street NB On-Ramp to SR-74 (Central Avenue) NB Off-Ramp	21.27 / 21.79	0.000	0.12	0.24	0.006	0.41	1.25
3	SR-74 (Central Avenue) NB Off-Ramp to SR-74 (Central Avenue) NB On-Ramp	21.81 / 22.66	0.000	0.13	0.38	0.006	0.41	1.25
4	SR-74 (Central Avenue) NB On-Ramp to Nichols Road NB Off-Ramp	22.66 / 23.43	0.000	0.04	0.2	0.006	0.41	1.25
5	Nichols Road NB Off-Ramp to Nichols Road NB On-Ramp	23.43 / 24.24	0.000	0.07	0.24	0.006	0.39	1.18
6	Nichols Road NB On-Ramp to Lake Street NB Off-Ramp	24.24 / 26.21	0.000	0.07	0.15	0.006	0.34	1.03
7	Lake Street NB Off-Ramp to Lake Street NB On-Ramp	26.21 / 27.13	0.000	0.14	0.33	0.006	0.34	1.03
8	Lake Street NB On-Ramp to Indian Truck Trail NB Off-Ramp	27.14 / 30.00	0.005	0.15	0.44	0.006	0.32	0.97
9	Indian Truck Trail NB Off-Ramp to Indian Truck Trail NB On-Ramp	30.00 / 30.84	0.000	0.25	**0.91**	0.007	0.25	0.71
10	Indian Truck Trail NB On-Ramp to Temescal Canyon Road NB Off-Ramp	30.84 / 32.83	**0.014**	0.18	0.59	0.007	0.25	0.71
11	Temescal Canyon Road NB Off-Ramp to Temescal Canyon Road NB On-Ramp	32.83 / 33.68	0.000	**0.31**	**0.76**	0.007	0.25	0.74

I-15 Mainline NB			Collision Rate[1]					
			Actual Rate			State Average Rate		
Location		Post Mile	Fatal	Fatal + Injury	Total[2]	Fatal	Fatal + Injury	Total[2]
12	Temescal Canyon Road NB On-Ramp to Weirick Road NB Off-Ramp	33.68 / 35.29	0.000	0.20	0.47	0.006	0.34	1.03
13	Weirick Road NB Off-Ramp to Weirick Road NB On-Ramp	35.29 / 36.07	**0.03**	0.27	0.69	0.006	0.34	1.03
14	Weirick Road NB On-Ramp to Cajalco Road NB Off-Ramp	36.07 / 36.28	0.000	0.056	0.09	0.003	0.17	0.515
15	Cajalco Road NB Off-Ramp to Cajalco Road NB On-Ramp	36.28 / 37.24	**0.011**	0.13	0.32	0.006	0.34	1.03
16	Cajalco Road NB On-Ramp to El Cerrito Road NB Off-Ramp	37.24 / 37.60	0.000	0.09	0.30	0.006	0.34	1.03
17	El Cerrito Road NB Off-Ramp to El Cerrito Road NB On-Ramp	37.60 / 38.19	**0.018**	0.29	0.69	0.006	0.34	1.03
18	El Cerrito Road NB On-Ramp to Ontario Avenue NB Off-Ramp	38.19 / 38.31	0.000	0.032	0.085	0.003	0.17	0.515
19	Ontario Avenue NB Off-Ramp to Ontario Avenue NB On-Ramp	38.31 / 39.02	0.000	0.16	0.45	0.006	0.36	1.07
20	Ontario Avenue NB On-Ramp to Magnolia Avenue NB Off-Ramp	39.02 / 39.99	0.000	0.35	1.01	0.004	0.35	1.08
Entire Project Limits		20.30 / 40.10	0.006	0.005	0.18	0.49	0.006	0.33

Source: Caltrans 2024
Notes:
[1] This table depicts collision rates per million vehicles for ramps and segments less than 0.5 mile and per million vehicle miles for segments greater or equal to 0.5 mile.
[2] All reported crashes (includes Property Damage Only Collisions).
Bold and underlined font indicates an actual collision rate that is higher than the state average collision rate.

Table 2.2.8-13. Percentage of Collisions by Type for Southbound I-15

I-15 Mainline SB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
1	Main Street SB On-Ramp to Main Street SB Off-Ramp	20.55 / 21.27	0.0%	38.5%	46.2%	7.7%	7.7%	0.0%	0.0%	0.0%	0.0%	100%
2	Main Street SB Off-Ramp to SR-74 (Central Avenue) SB On-Ramp	21.27 / 21.79	0.0%	16.7%	58.3%	8.3%	0.0%	0.0%	0.0%	16.7%	0.0%	100%
3	SR-74 (Central Avenue) SB On-Ramp to SR-74 (Central Avenue) SB Off-Ramp	21.81 / 22.66	0.0%	45.5%	27.3%	0.0%	18.2%	9.1%	0.0%	0.0%	0.0%	100%
4	SR-74 (Central Avenue) SB Off-Ramp to Nichols Road SB On-Ramp	22.66 / 23.43	0.0%	40.0%	40.0%	0.0%	20.0%	0.0%	0.0%	0.0%	0.0%	100%
5	Nichols Road SB On-Ramp to Nichols Road SB Off-Ramp	23.43 / 24.24	3.3%	33.3%	20.0%	0.0%	36.7%	3.3%	3.3%	0.0%	0.0%	100%
6	Nichols Road SB Off-Ramp to Lake Street SB On-Ramp	24.24 / 26.21	0.0%	28.2%	38.5%	0.0%	20.5%	10.3%	2.6%	0.0%	0.0%	100%
7	Lake Street SB On-Ramp to Lake Street SB Off-Ramp	26.21 / 27.13	0.0%	18.8%	18.8%	0.0%	62.5%	0.0%	0.0%	0.0%	0.0%	100%
8	Lake Street SB Off-Ramp to Indian Truck Trail SB On-Ramp	27.13 / 30.00	0.0%	38.9%	31.5%	0.0%	22.2%	5.6%	0.0%	1.9%	0.0%	100%

I-15 Mainline SB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
9	Indian Truck Trail SB On-Ramp to Indian Truck Trail SB Off-Ramp	30.00 / 30.84	0.0%	41.7%	33.3%	0.0%	16.7%	0.0%	8.3%	0.0%	0.0%	100%
10	Indian Truck Trail SB Off-Ramp to Temescal Canyon Road SB On-Ramp	30.84 / 32.83	0.0%	42.1%	34.2%	0.0%	18.4%	5.3%	0.0%	0.0%	0.0%	100%
11	Temescal Canyon Road SB On-Ramp to Temescal Canyon Road SB Off-Ramp	32.83 / 33.68	0.0%	61.5%	30.8%	0.0%	0.0%	0.0%	7.7%	0.0%	0.0%	100%
12	Temescal Canyon Road SB Off-Ramp to Weirick Road SB On-Ramp	33.68 / 35.29	0.0%	26.7%	66.7%	0.0%	3.3%	3.3%	0.0%	0.0%	0.0%	100%
13	Weirick Road SB On-Ramp to Weirick Road SB Off-Ramp	35.29 / 36.07	0.0%	27.8%	52.8%	2.8%	13.9%	2.8%	0.0%	0.0%	0.0%	100%
14	Weirick Road SB Off-Ramp to Cajalco Road SB On-Ramp	36.07 / 36.28	0.0%	28.6%	52.4%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	100%
15	Cajalco Road SB On-Ramp to Cajalco Road SB Off-Ramp	36.28 / 37.24	0.0%	26.5%	50.0%	0.0%	20.4%	3.1%	0.0%	0.0%	0.0%	100%
16	Cajalco Road SB Off-Ramp to El Cerrito Road SB On-Ramp	37.24 / 37.60	0.0%	24.5%	59.2%	2.0%	12.2%	2.0%	0.0%	0.0%	0.0%	100%

I-15 Mainline SB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
17	El Cerrito Road SB On-Ramp to El Cerrito Road SB Off-Ramp	37.60 / 38.19	0.0%	30.3%	60.5%	0.0%	6.6%	0.0%	1.3%	1.3%	0.0%	100%
18	El Cerrito Road SB Off-Ramp to Ontario Avenue SB On-Ramp	38.19 / 38.31	0.0%	28.6%	61.9%	0.0%	9.5%	0.0%	0.0%	0.0%	0.0%	100%
19	Ontario Avenue SB On-Ramp to Ontario Avenue SB Off-Ramp	38.31 / 39.02	0.0%	20.0%	68.0%	0.0%	12.0%	0.0%	0.0%	0.0%	0.0%	100%
20	Ontario Avenue SB Off-Ramp to Magnolia Avenue SB On-Ramp	39.02 / 39.99	0.0%	33.8%	57.5%	0.0%	6.3%	2.5%	0.0%	0.0%	0.0%	100%
Entire Project Limits		20.30 / 40.10	0.1%	30.8%	49.4%	0.4%	15.1%	2.8%	0.7%	0.6%	0.0%	100%

Source: Caltrans 2024

Table 2.2.8-14. Percentage of Collisions by Type for Northbound I-15

I-15 Mainline NB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
1	Main Street NB Off-Ramp to Main Street NB On-Ramp	20.55 / 21.27	0.0%	17.6%	41.2%	0.0%	29.4%	11.8%	0.0%	0.0%	0.0%	100%
2	Main Street NB On-Ramp to SR-74 (Central Avenue) NB Off-Ramp	21.27 / 21.79	0.0%	0.0%	50.0%	0.0%	37.5%	0.0%	0.0%	12.5%	0.0%	100%
3	SR-74 (Central Avenue) NB Off-Ramp to SR-74 (Central Avenue) NB On-Ramp	21.81 / 22.66	0.0%	4.8%	61.9%	0.0%	28.6%	0.0%	0.0%	4.8%	0.0%	100%
4	SR-74 (Central Avenue) NB On-Ramp to Nichols Road NB Off-Ramp	22.66 / 23.43	0.0%	40.0%	30.0%	0.0%	10.0%	20.0%	0.0%	0.0%	0.0%	100%
5	Nichols Road NB Off-Ramp to Nichols Road NB On-Ramp	23.43 / 24.24	0.0%	30.8%	30.8%	7.7%	15.4%	15.4%	0.0%	0.0%	0.0%	100%
6	Nichols Road NB On-Ramp to Lake Street NB Off-Ramp	24.24 / 26.21	0.0%	42.1%	42.1%	0.0%	15.8%	0.0%	0.0%	0.0%	0.0%	100%
7	Lake Street NB Off-Ramp to Lake Street NB On-Ramp	26.21 / 27.13	0.0%	33.3%	52.4%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	100%
8	Lake Street NB On-Ramp to Indian Truck Trail NB Off-Ramp	27.13 / 30.00	0.0%	19.3%	55.7%	1.1%	20.5%	3.4%	0.0%	0.0%	0.0%	100%

I-15 Mainline NB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
9	Indian Truck Trail NB Off-Ramp to Indian Truck Trail NB On-Ramp	30.00 / 30.84	0.0%	9.1%	76.4%	0.0%	10.9%	1.8%	0.0%	1.8%	0.0%	100%
10	Indian Truck Trail NB On-Ramp to Temescal Canyon Road NB Off-Ramp	30.84 / 32.83	0.0%	18.4%	62.1%	0.0%	11.5%	5.7%	0.0%	2.3%	0.0%	100%
11	Temescal Canyon Road NB Off-Ramp to Temescal Canyon Road NB On-Ramp	32.83 / 33.68	0.0%	12.2%	69.4%	0.0%	16.3%	2.0%	0.0%	0.0%	0.0%	100%
12	Temescal Canyon Road NB On-Ramp to Weirick Road NB Off-Ramp	33.68 / 35.29	0.0%	16.4%	57.4%	1.6%	24.6%	0.0%	0.0%	0.0%	0.0%	100%
13	Weirick Road NB Off-Ramp to Weirick Road NB On-Ramp	35.29 / 36.07	0.0%	23.9%	56.5%	0.0%	15.2%	4.3%	0.0%	0.0%	0.0%	100%
14	Weirick Road NB On-Ramp to Cajalco Road NB Off-Ramp	36.07 / 36.28	0.0%	12.5%	12.5%	25.0%	37.5%	0.0%	0.0%	12.5%	0.0%	100%
15	Cajalco Road NB Off-Ramp to Cajalco Road NB On-Ramp	36.28 / 37.24	0.0%	28.6%	25.0%	3.6%	35.7%	7.1%	0.0%	0.0%	0.0%	100%
16	Cajalco Road NB On-Ramp to El Cerrito Road NB Off-Ramp	37.24 / 37.60	0.0%	60.0%	30.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	100%

I-15 Mainline NB			Collision Percentages by Type									
Interchange		Post Mile	Head-On	Side-Swipe	Rear-End	Broad-Side	Hit-Object	Over-Turn	Auto-Pedestrian	Other	Not Stated	Total
17	El Cerrito Road NB Off-Ramp to El Cerrito Road NB On-Ramp	37.60 / 38.19	0.0%	36.8%	42.1%	2.6%	15.8%	0.0%	2.6%	0.0%	0.0%	100%
18	El Cerrito Road NB On-Ramp to Ontario Avenue NB Off-Ramp	38.19 / 38.31	0.0%	12.5%	62.5%	0.0%	25.0%	0.0%	0.0%	0.0%	0.0%	100%
19	Ontario Avenue NB Off-Ramp to Ontario Avenue NB On-Ramp	38.31 / 39.02	0.0%	35.5%	41.9%	3.2%	12.9%	6.5%	0.0%	0.0%	0.0%	100%
20	Ontario Avenue NB On-Ramp to Magnolia Avenue NB Off-Ramp	39.02 / 39.99	0.0%	30.6%	48.0%	1.0%	19.4%	1.0%	0.0%	0.0%	0.0%	100%
Entire Project Limits		20.30 / 40.10	0.1%	22.9%	53.6%	1.2%	17.9%	3.1%	0.1%	0.9%	0.0%	100%

Source: Caltrans 2024

Table 2.2.8-15. Summary of Primary Collision Factors by Percent for Southbound I-15

I-15 Mainline SB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
1	Main Street SB On-Ramp to Main Street SB Off-Ramp	20.55 / 21.27	15.4%	0.0%	0.0%	30.8%	30.8%	23.1%	0.0%	0.0%	0.0%	100%
2	Main Street SB Off-Ramp to SR-74 (Central Avenue) SB On-Ramp	21.27 / 21.79	8.3%	0.0%	0.0%	16.7%	50.0%	16.7%	0.0%	8.3%	0.0%	100%
3	SR-74 (Central Avenue) SB On-Ramp to SR-74 (Central Avenue) SB Off-Ramp	21.81 / 22.66	18.2%	0.0%	0.0%	36.4%	27.3%	18.2%	0.0%	0.0%	0.0%	100%
4	SR-74 (Central Avenue) SB Off-Ramp to Nichols Road SB On-Ramp	22.66 / 23.43	13.3%	0.0%	0.0%	33.3%	33.3%	20.0%	0.0%	0.0%	0.0%	100%
5	Nichols Road SB On-Ramp to Nichols Road SB Off-Ramp	23.43 / 24.24	3.3%	0.0%	3.3%	46.7%	26.7%	13.3%	0.0%	6.7%	0.0%	100%
6	Nichols Road SB Off-Ramp to Lake Street SB On-Ramp	24.24 / 26.21	20.5%	0.0%	0.0%	30.8%	28.2%	7.7%	0.0%	12.8%	0.0%	100%
7	Lake Street SB On-Ramp to Lake Street SB Off-Ramp	26.21 / 27.13	6.3%	0.0%	0.0%	56.3%	18.8%	0.0%	0.0%	18.8%	0.0%	100%

I-15 Mainline SB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
8	Lake Street SB Off-Ramp to Indian Truck Trail SB On-Ramp	27.13 / 30.00	9.3%	0.0%	0.0%	37.0%	29.6%	16.7%	0.0%	5.6%	1.9%	100%
9	Indian Truck Trail SB On-Ramp to Indian Truck Trail SB Off-Ramp	30.00 / 30.84	8.3%	0.0%	0.0%	66.7%	16.7%	8.3%	0.0%	0.0%	0.0%	100%
10	Indian Truck Trail SB Off-Ramp to Temescal Canyon Road SB On-Ramp	30.84 / 32.83	13.2%	0.0%	0.0%	39.5%	21.1%	18.4%	0.0%	7.9%	0.0%	100%
11	Temescal Canyon Road SB On-Ramp to Temescal Canyon Road SB Off-Ramp	32.83 / 33.68	7.7%	0.0%	7.7%	30.8%	23.1%	30.8%	0.0%	0.0%	0.0%	100%
12	Temescal Canyon Road SB Off-Ramp to Weirick Road SB On-Ramp	33.68 / 35.29	3.3%	0.0%	0.0%	23.3%	60.0%	6.7%	0.0%	6.7%	0.0%	100%
13	Weirick Road SB On-Ramp to Weirick Road SB Off-Ramp	35.29 / 36.07	13.9%	0.0%	0.0%	36.1%	36.1%	13.9%	0.0%	0.0%	0.0%	100%
14	Weirick Road SB Off-Ramp to Cajalco Road SB On-Ramp	36.07 / 36.28	19.0%	0.0%	0.0%	4.8%	52.4%	23.8%	0.0%	0.0%	0.0%	100%

I-15 Mainline SB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
15	Cajalco Road SB On-Ramp to Cajalco Road SB Off-Ramp	36.28 / 37.24	10.2%	0.0%	0.0%	22.4%	50.0%	15.3%	0.0%	2.0%	0.0%	100%
16	Cajalco Road SB Off-Ramp to El Cerrito Road SB On-Ramp	37.24 / 37.60	4.1%	0.0%	0.0%	18.4%	61.2%	12.2%	0.0%	2.0%	2.0%	100%
17	El Cerrito Road SB On-Ramp to El Cerrito Road SB Off-Ramp	37.60 / 38.19	3.9%	0.0%	1.3%	25.0%	60.5%	9.2%	0.0%	0.0%	0.0%	100%
18	El Cerrito Road SB Off-Ramp to Ontario Avenue SB On-Ramp	38.19 / 38.31	0.0%	4.8%	0.0%	23.8%	61.9%	9.5%	0.0%	0.0%	0.0%	100%
19	Ontario Avenue SB On-Ramp to Ontario Avenue SB Off-Ramp	38.31 / 39.02	2.0%	0.0%	0.0%	18.0%	60.0%	18.0%	0.0%	0.0%	2.0%	100%
20	Ontario Avenue SB Off-Ramp to Magnolia Avenue SB On-Ramp	39.02 / 39.99	5.0%	0.0%	0.0%	15.0%	47.5%	27.5%	0.0%	2.5%	2.5%	100%
Entire Project Limits		20.30 / 40.10	8.1%	0.1%	0.4%	27.1%	44.5%	15.5%	0.0%	3.4%	0.8%	100%

Source: Caltrans 2024

Table 2.2.8-16. Summary of Primary Collision Factors by Percent for Northbound I-15

I-15 Mainline NB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
1	Main Street NB Off-Ramp to Main Street NB On-Ramp	20.55 / 21.27	17.6%	0.0%	0.0%	29.4%	35.3%	11.8%	0.0%	5.9%	0.0%	100%
2	Main Street NB On-Ramp to SR-74 (Central Avenue) NB Off-Ramp	21.27 / 21.79	0.0%	0.0%	0.0%	25.0%	50.0%	0.0%	0.0%	25.0%	0.0%	100%
3	SR-74 (Central Avenue) NB Off-Ramp to SR-74 (Central Avenue) NB On-Ramp	21.81 / 22.66	19.0%	0.0%	0.0%	19.0%	47.6%	9.5%	0.0%	4.8%	0.0%	100%
4	SR-74 (Central Avenue) NB On-Ramp to Nichols Road NB Off-Ramp	22.66 / 23.43	10.0%	0.0%	0.0%	50.0%	20.0%	10.0%	0.0%	10.0%	0.0%	100%
5	Nichols Road NB Off-Ramp to Nichols Road NB On-Ramp	23.43 / 24.24	7.7%	0.0%	0.0%	46.2%	23.1%	15.4%	0.0%	7.7%	0.0%	100%
6	Nichols Road NB On-Ramp to Lake Street NB Off-Ramp	24.24 / 26.21	5.3%	0.0%	0.0%	42.1%	42.1%	10.5%	0.0%	0.0%	0.0%	100%

I-15 Mainline NB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
7	Lake Street NB Off-Ramp to Lake Street NB On-Ramp	26.21 / 27.13	19.0%	0.0%	0.0%	28.6%	42.9%	9.5%	0.0%	0.0%	0.0%	100%
8	Lake Street NB On-Ramp to Indian Truck Trail NB Off-Ramp	27.13 / 30.00	5.7%	0.0%	0.0%	21.6%	53.4%	10.2%	0.0%	9.1%	0.0%	100%
9	Indian Truck Trail NB Off-Ramp to Indian Truck Trail NB On-Ramp	30.00 / 30.84	3.6%	0.0%	0.0%	16.4%	74.5%	3.6%	0.0%	1.8%	0.0%	100%
10	Indian Truck Trail NB On-Ramp to Temescal Canyon Road NB Off-Ramp	30.84 / 32.83	8.0%	0.0%	0.0%	23.0%	56.3%	5.7%	0.0%	6.9%	0.0%	100%
11	Temescal Canyon Road NB Off-Ramp to Temescal Canyon Road NB On-Ramp	32.83 / 33.68	4.1%	0.0%	0.0%	16.3%	67.3%	4.1%	0.0%	6.1%	2.0%	100%
12	Temescal Canyon Road NB On-Ramp to Weirick Road NB Off-Ramp	33.68 / 35.29	4.9%	0.0%	0.0%	16.4%	59.0%	11.5%	0.0%	8.2%	0.0%	100%
13	Weirick Road NB Off-Ramp to Weirick Road NB On-Ramp	35.29 / 36.07	13.0%	0.0%	0.0%	26.1%	52.2%	6.5%	0.0%	2.2%	0.0%	100%

I-15 Mainline NB			Primary Collision Factors by Percent									
Interchange		Post Mile	Influence of Alcohol	Follow Too Close	Failure to Yield	Improper Turn	Speeding	Other Violations	Improper Driving	Other than Driver	Unknown	Total
14	Weirick Road NB On-Ramp to Cajalco Road NB Off-Ramp	36.07 / 36.28	0.0%	0.0%	0.0%	37.5%	12.5%	0.0%	0.0%	50.0%	0.0%	100%
15	Cajalco Road NB Off-Ramp to Cajalco Road NB On-Ramp	36.28 / 37.24	10.7%	0.0%	0.0%	53.6%	17.9%	14.3%	0.0%	3.6%	0.0%	100%
16	Cajalco Road NB On-Ramp to El Cerrito Road NB Off-Ramp	37.24 / 37.60	30.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	10.0%	20.0%	100%
17	El Cerrito Road NB Off-Ramp to El Cerrito Road NB On-Ramp	37.60 / 38.19	10.5%	0.0%	0.0%	39.5%	34.2%	15.8%	0.0%	0.0%	0.0%	100%
18	El Cerrito Road NB On-Ramp to Ontario Avenue NB Off-Ramp	38.19 / 38.31	12.5%	0.0%	0.0%	25.0%	50.0%	0.0%	0.0%	12.5%	0.0%	100%
19	Ontario Avenue NB Off-Ramp to Ontario Avenue NB On-Ramp	38.31 / 39.02	0.0%	0.0%	0.0%	32.3%	35.5%	29.0%	0.0%	3.2%	0.0%	100%
20	Ontario Avenue NB On-Ramp to Magnolia Avenue NB Off-Ramp	39.02 / 39.99	6.1%	1.0%	0.0%	27.6%	38.8%	20.4%	0.0%	5.1%	1.0%	100%
Entire Project Limits		20.30 / 40.10	8.0%	0.1%	0.0%	25.4%	48.2%	11.9%	0.0%	5.8%	0.5%	100%

Source: Caltrans 2024

Pedestrian and Bicycle Facilities

The following existing pedestrian facilities cross the Project limits:

- Magnolia Avenue Overcrossing
- El Cerrito Road
- Cajalco Road Overcrossing
- Weirick Road
- Temescal Canyon Road (the crossing at Post Mile 31.9)
- Indian Truck Trail
- Nichols Road Overcrossing
- SR-74 (Central Avenue)
- Main Street

The following existing bicycle lanes cross the Project limits:

- Old Temescal Road (Class 2)
- Cajalco Road Overcrossing (Class 2)

In addition, Class 2 bicycle routes are planned (not currently in existence) along the following roadways: Nichols Road, Indian Truck Trail, and Temescal Canyon Road, which crosses I-15 in three locations along the corridor within the Project limits. For additional information on these bicycle facilities, please refer to Section 2.2.2, *Parks and Recreational Facilities*, and Appendix A, *Section 4(f) Evaluation*.

2.2.8.3 Environmental Consequences

Build Alternative

Temporary Impacts

Under the Build Alternative, no full roadway closures are anticipated during construction; however, temporary 55-hour full ramp closures may be needed to complete the ramp widening improvements at the following locations:

- SB SR-74 (Central Avenue) On-Ramp
- SB Nichols Road Off-Ramp
- NB Weirick Road On-Ramp
- NB Cajalco Road Off-Ramp
- NB Cajalco Road Loop On-Ramp
- SB Weirick Road Off-Ramp

The Project may periodically affect pedestrian facilities during construction with falsework at localized street undercrossings required during construction of the bridge widenings. It is anticipated that at these locations' openings would maintain ADA-compliant connectivity for pedestrians during construction. If temporary closures to pedestrian and bicycle facilities are unexpectedly needed, then detour routes would be provided, as detailed in Standard Project Measure **TR-1**.

Potential construction-related traffic and circulation impacts, and impacts on pedestrian and bicycle facilities, would be minimized through implementation of a comprehensive Transportation Management Plan (TMP). As identified in Standard Project Measure **TR-1**, a Project TMP would be prepared to minimize motorist delays and impacts on pedestrians and bicyclists when performing work activities.

Project construction is not anticipated to affect existing emergency or transit services within the Project limits; however, a TMP will be implemented as identified in Standard Project Measure **TR-1** to ensure that such impacts are minimized.

Permanent Impacts

As indicated previously, 2030 has been identified as the Opening Year for the Project and 2050 has been identified as the Design Year. The traffic impacts and operations under the Build and No-Build Alternatives in 2030 and 2050 are discussed below.

Opening Year (2030): Freeway Operations Analysis

The Opening Year (2030) VISSIM models includes improvements associated with the completion of the I-15 Express Lanes Project (ELP) (between SR-60 and Cajalco Road), 15/91 North-Facing Express Lane Connector Project, Cajalco Road/I-15 Interchange Project, and I-15 Interim Corridor Operations Project. Table 2.2.8-17 and Table 2.2.8-18 show the projected Opening Year (2030) AM and PM peak-hour density and LOS for the study freeway mainline segments and ramp junctions under the No-Build and Build Alternatives for the general purpose lane operations on SB I-15 and NB I-15, respectively. The express lanes were analyzed as separate facility and the operation results for the SB I-15 and NB I-15 directions under the No-Build and Build Alternatives are shown in Table 2.2.8-19.

AM Peak Hour: SB I-15

Under the Opening Year (2030) Build Alternative, all study locations including freeway mainline segments, ramps, and express lanes on SB I-15 are projected to continue to operate at LOS D or better during the AM peak hour. See Table 2.2.8-17 and Table 2.2.8-19.

AM Peak Hour: NB I-15

Under the Opening Year (2030) Build Alternative, all study locations including freeway mainline segments, ramps, and express lanes on NB I-15 are projected to continue to operate at LOS D or better during the AM peak hour. See Table 2.2.8-18 and Table 2.2.8-19.

PM Peak Hour: SB I-15

Under the Opening Year (2030) Build Alternative, the SB I-15 bottleneck at the Cajalco Road On-Ramp merge segment would be removed. Three off-ramp freeway segments at El Cerrito, Temescal Canyon Road, and Indian Truck Trail are projected to operate at LOS E, but would be expected to operate better under the Build scenario when compared to the No-Build scenario.

The Build Alternative would significantly improve operations for all SB I-15 users in Corona and Temescal Valley because the congestion point at the I-15 ELP terminus would be removed, which would result in greater traffic throughput. However, these improvements would allow additional vehicles to use the corridor and a new bottleneck would form downstream on SB I-15 at the Main Street On-Ramp merge segment. The SB I-15 bottleneck at the Main Street On-Ramp merge segment would create a queue that extends to the Nichols Road Off-Ramp (queue length is approximately 3.0 miles). Due to the bottleneck, segments in queue are projected to operate at LOS E or F. All other freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour. Please note that the auxiliary lanes added to the terminus segment of the facility would improve operations and reduce queuing at this location. However, there still would be congestion occurring at the express lane terminus, as the facility would be generally reduced from a five-lane cross-section north of Nichols Road (three general purpose lanes and two express lanes) to a three-lane facility south of Main Street. See Table 2.2.8-17 and Table 2.2.8-19.

PM Peak Hour: NB I-15

Under the Opening Year (2030) Build Alternative, the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment would remain and create a queue that extends to the Indian Truck Trail interchange with a queue length of approximately 9.8 miles. However, this would be somewhat shorter than under the No-Build Alternative, as additional capacity would be provided by the Project. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. All other freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the PM peak hour. See Table 2.2.8-18 and Table 2.2.8-19. The Project would not alleviate traffic on the general purpose lanes compared to the No-Build Alternative, but rather would help manage throughput along the corridor. With the level of throughput projected in Opening Year (2030), travel time management and reliability would be expanded with the construction of the Project.

The Build Alternative is unable to address the bottleneck at the WB Magnolia Avenue On-Ramp merge segment, which would persist under the No-Build and Build Alternatives, because it is outside the Project limits. However, providing earlier access to the express lanes network, associated with the Project, would shorten the length of the queue caused by the bottleneck. Caltrans is currently evaluating the addition of NB auxiliary lanes at various locations throughout the I-15 corridor north of the Project limits, which should assist with this bottleneck location; however, as no project has been defined or included in the Regional Transportation Plan (RTP)/Sustainable Communities

Strategy (SCS) constrained network, an improvement of this type was not included in the traffic analysis.

Table 2.2.8-17. Opening Year (2030) Peak-Hour General Purpose Lane Operations: Southbound I-15

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 17	B / 17	B / 18	C / 21
2	Hidden Valley Parkway On-Ramp	Merge	B / 18	C / 19	B / 18	C / 22
3	Hidden Valley Parkway On-Ramp to WB SR-91 Off-Ramp	Basic	B / 16	B / 15	B / 16	C / 19
4	WB SR-91 Off-Ramp	Basic	B / 16	B / 15	B / 16	C / 19
5	EB SR-91 Off-Ramp	Diverge	D / 28	C / 23	D / 28	D / 29
6	EB SR-91 Off-Ramp to On-Ramp	Basic	B / 15	C / 25	B / 15	C / 19
7	EB SR-91 On-Ramp	Merge	C / 18	**F / DEC**	C / 19	C / 20
8	WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	Weave	C / 19	**F / DEC**	C / 20	C / 19
9	Magnolia Avenue Off-Ramp to On-Ramp	Basic	C / 20	**F / DEC**	C / 21	C / 21
10	Magnolia Avenue On-Ramp	Merge	B / 18	**F / DEC**	C /19	C / 19
11	Magnolia Avenue On-Ramp to Ontario Ave Off-Ramp[3]	Weave	B / 17[3]	**F / DEC**[3]	B / 18[3]	C / 22[3]
12	Magnolia Avenue On-Ramp to Ontario Ave Off-Ramp	Basic	C / 23	**F / DEC**	C / 24	C / 24
13	Ontario Avenue Off-Ramp	Diverge	C / 26	**F / DEC**	D / 26	C / 25
14	Ontario Avenue Off-Ramp to On-Ramp	Basic	C / 19	**F / DEC**	C / 20	C / 21
15	Ontario Avenue On-Ramp	Merge	B / 13	**F / DEC**	B / 13	B / 17
16	El Cerrito Road Off-Ramp	Basic	C / 21	**F / DEC**	C / 22	**E / 37**
17	El Cerrito Road Off-Ramp to On-Ramp[3]	Basic / Weave[4]	C / 25	**F / DEC**	B / 18[3]	D / 30[3]
18	EL On-Ramp at El Cerrito Road	Basic	C / 18	**F / DEC**	-	-

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
19	El Cerrito Road On-Ramp to Cajalco Road Off-Ramp	Weave	C / 20	**F / DEC**	C / 21	D / 28
20	EL On-Ramp Cajalco Road On-Ramp (4 Lane)	Basic	B / 17	**F / DEC**	C /23	D / 31
21	Cajalco Road On-Ramp / Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Merge / Weave[4]	B / 13	**F / DEC**	C / 19	D / 29
22	Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp[3]	Basic / Weave[4]	B / 18	**F / DEC**	B / 14[3]	C / 26[3]
23	Weirick Road / Dos Lagos Drive Off-Ramp	Diverge	B / 18	**F / DEC**	-	-
24	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 21	**F / DEC**	C / 21	D / 30
25	Weirick Road / Dos Lagos Drive On-Ramp	Merge	B / 16	**F / DEC**	B / 16	D / 28
26	Weirick Road / Dos Lagos Drive On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 22	**F / DEC**	C / 22	D / 34
27	Temescal Canyon Road Off-Ramp	Diverge	C / 21	**F / DEC**	C / 22	**E / 38**
28	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	C / 19	**F / DEC**	C / 20	D / 29
29	Temescal Canyon Road On-Ramp	Merge	B / 14	**F / DEC**	B / 15	C / 26
30	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 21	**E / 42**	C / 21	D / 33
52	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp[3]	Weave	-	-	B / 15[3]	D / 27[3]
53	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	-	-	C / 21	D / 33

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
31	Indian Truck Trail Off-Ramp	Diverge	C / 19	**E / 44**	C / 21	**E / 35**
32	Indian Truck Trail Off-Ramp to On-Ramp	Basic	C / 19	**E / 35**	C / 19	D / 28
33	Indian Truck Trail On-Ramp	Merge	B / 15	D / 34	B / 15	C / 22
34	Indian Truck Trail On-Ramp to Lake Street Off-Ramp	Basic	C / 20	**E / 38**	C / 21	D / 29
54	Indian Truck Trail On-Ramp to Lake Street Off-Ramp[3]	Weave	-	-	B / 15[3]	D / 26[3]
35	Lake Street Off-Ramp	Diverge	C / 19	**E / 41**	C / 20	D / 33
36	Lake Street Off-Ramp to On-Ramp	Basic	C / 18	D / 31	C / 19	C / 25
37	Lake Street On-Ramp	Merge	B / 15	C / 25	B / 16	C / 19
38	Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	C / 20	D / 33	C / 22	D / 27
55	Lake Street On-Ramp to Nichols Road Off-Ramp (EL Egress)	Basic	-	-	B / 16	C / 25
56	Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	-	-	B / 16	**E / 41**
39	Nichols Road Off-Ramp	Diverge / Basic[4]	C / 19	D / 34	B / 16	**F / DEC**
40	Nichols Road Off-Ramp to On-Ramp	Basic	C / 18	D / 31	C / 20	**F / DEC**
41	Nichols Road On-Ramp	Merge[5]	B / 16	D / 27	B / 16	**F / DEC**
42	Nichols Road On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic[5]	C / 21	D / 34	B / 16	**F / DEC**
43	SR-74 (Central Avenue) Off-Ramp	Diverge[5]	B / 14	C / 22	B / 16	**F / DEC**
57	SR-74 (Central Avenue) (EL Egress)	Basic	-	-	B / 14	**F / DEC**
44	SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 17	D / 28	B / 15	**F / DEC**
45	SR-74 (Central Avenue) On-Ramp	Merge[5]	B / 17	D / 35	C / 20	**F / DEC**

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
46	SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	Basic[5]	C / 25	**E / 39**	C / 20	**F / DEC**
47	Main Street Off-Ramp	Diverge[5]	C / 23	**E / 36**	C / 20	**F / DEC**
48	Main Street Off-Ramp to On-Ramp	Basic	C / 23	D / 31	C / 25	**F / DEC**
49	Main Street On-Ramp	Merge	C / 21	D / 28	C / 21	**F / DEC**
50	Main Street On-Ramp to Franklin Street Overcrossing	Basic	D / 26	D / 34	D / 28	**E / 41**

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
[3] Express Lane Access Segments (analyzed as a left-sided weave).
[4] No-Build Alternative Facility Type / Build Alternative Facility Type.
[5] This segment is a weave segment in the Build Alternative due to the additional auxiliary lane.
Bold and underlined font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EB = eastbound; EL = Express Lane

Table 2.2.8-18. Opening Year (2030) Peak-Hour General Purpose Lane Operations: Northbound I-15

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
152	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 12	B / 11	B / 12	B / 11
151	Hidden Valley Parkway Off-Ramp	Diverge	B / 16	B / 16	B / 15	B / 17
150	EB SR-91 On-Ramp	Merge	B / 16	B / 15	B / 15	B / 15
149	WB SR-91 On-Ramp	Merge	B / 17	B / 14	B / 17	B / 14
148	EB and WB SR-91 Off-Ramp to WB SR-91 On-Ramp	Basic	B / 12	B / 11	B / 12	B / 12
147	EB and WB SR-91 Off-Ramp	Diverge	C / 24	D / 29	C / 24	D / 30

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
146	Magnolia Avenue On-Ramp	Merge	C / 21	**F / DEC**	C / 23	**F / DEC**
145	Magnolia Avenue Loop On-Ramp	Basic	C / 19	**F / DEC**	C / 20	**F / DEC**
144	Magnolia Avenue Off-Ramp to Loop On-Ramp	Basic	C / 19	**F / DEC**	C / 20	**F / DEC**
143	Magnolia Avenue Off-Ramp	Diverge	B / 16	**F / DEC**	B / 17	**F / DEC**
141	Ontario Avenue to Magnolia Avenue[3]	Weave	C / 19[3]	**F / DEC**[3]	C / 20[3]	**F / DEC**[3]
140	Ontario Avenue On-Ramp	Merge	B / 13	**F / DEC**	B / 14	**F / DEC**
138	Ontario Avenue Off-Ramp to On-Ramp (4 Lanes)	Basic	B / 13	**F / DEC**	B / 13	**F / DEC**
137	Ontario Avenue Off-Ramp to On-Ramp (3 lanes)	Basic	B / 17	**F / DEC**	B / 19	**F / DEC**
136	Ontario Avenue Off-Ramp	Diverge	C / 24	**F / DEC**	C / 25	**F / DEC**
135	El Cerrito Road On-Ramp	Merge	C / 20	**F / DEC**	C / 20	**F / DEC**
134	EL access to El Cerrito Road On-Ramp	Basic	B / 15	**F / DEC**	–	–
133	EL access at El Cerrito Road[3]	Basic / Weave[4]	B / 15	**F / DEC**	C / 19[3]	**E / 42**[3]
132	Cajalco Road On-Ramp to El Cerrito Road Off-Ramp	Weave	B / 17	**F / DEC**	B / 17	**F / DEC**
131	Cajalco Road Loop On-Ramp	Merge	C / 18	**F / DEC**	B / 16	**F / DEC**
154	EL ingress at Cajalco Road	Basic	C / 22	**F / DEC**	–	–
130 / 170[5]	Cajalco Road Off-Ramp to Loop On-Ramp	Basic	C / 24	**F / DEC**	B / 15	**F / DEC**
130	Cajalco Road Off-Ramp to EL access	Basic	–	–	B / 12	**F / DEC**
129	Cajalco Road Off-Ramp	Diverge	D / 27	**F / DEC**	B / 12	**F / DEC**
128	Weirick Road / Dos Lagos Drive On-Ramp	Merge	C / 23	**F / DEC**	B / 15	**F / DEC**

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
127	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 18	**F / DEC**	B / 11	**F / DEC**
126	Weirick Road / Dos Lagos Drive Off-Ramp	Diverge	C / 19	**F / DEC**	A / 11	**F / DEC**
125	Temescal Canyon Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Basic	C / 19	**F / DEC**	B / 11	**F / DEC**
124	Temescal Canyon Road On-Ramp	Merge	B / 16	**F / DEC**	A / 9	**F / DEC**
123	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	B / 17	**F / DEC**	A / 10	**F / DEC**
122	Temescal Canyon Road Off-Ramp	Diverge	C / 22	**F / DEC**	B / 14	**F / DEC**
121	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 20	**E / 36**	B / 13	**F / DEC**
160	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp[3]	Weave	–	–	B / 14[3]	**F / DEC**[3]
159	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	–	–	B / 14	**F / DEC**
120	Indian Truck Trail On-Ramp	Merge	B / 16	B / 14	A / 11	**F / DEC**
119	Indian Truck Trail Off-Ramp to On-Ramp	Basic	C / 18	B / 16	B / 12	**F / DEC**
118	Indian Truck Trail Off-Ramp	Diverge	C / 21	B / 17	B / 15	B / 16
117	Lake Street On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 21	B / 16	B / 15	B / 17
158	Lake Street On-Ramp to Indian Truck Trail Off-Ramp[3]	Weave	–	-	B / 14[3]	B / 14[3]
116	Lake Street On-Ramp	Merge	B / 18	B / 13	B / 13	B / 13

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
115	Lake Street Off-Ramp to On-Ramp	Basic	B / 16	B / 15	B / 11	B / 14
114	Lake Street Off-Ramp	Diverge	B / 18	B / 16	B / 13	B / 16
113	Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	B / 17	B / 16	B / 13	B / 16
157	Nichols Road On-Ramp to Lake Street Off-Ramp (EL ingress)	Basic	–	–	B / 12	B / 13
156	Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	–	–	B / 15	B / 17
112	Nichols Road On-Ramp	Merge	B / 14	B / 12	A / 11	B / 12
111	Nichols Road Off-Ramp to On-Ramp	Basic	B / 16	B / 14	B / 13	B / 15
110	Nichols Road Off-Ramp	Diverge	C / 19	B / 17	B / 16	C / 18
109	Dexter Avenue / SR-74 (Central Avenue) On-Ramp to Nichols Road Off-Ramp	Merge	B / 15	B / 14	B / 13	B / 15
108	Dexter Avenue / SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 14	B / 13	B / 12	B / 13
155	Dexter Avenue / SR-74 (Central Avenue) Off-Ramp to On-Ramp (EL ingress)	Diverge	–	–	B / 13	B / 14
153	Dexter Avenue Off-Ramp	Diverge	B / 14	B / 14	B / 13	B / 16
107	WB SR-74 (Central Avenue) Off-Ramp	Basic	B / 14	B / 13	B / 16	B / 17
106	EB SR-74 (Central Avenue) Off-Ramp	Diverge	B / 16	B / 15	B / 17	C / 19
105	Main Street On-Ramp to Central Ave (SR-74) Off-Ramp	Basic	C / 21	C / 20	C / 24	D / 27
104	Main Street On-Ramp	Merge	B / 18	B / 17	C / 19	C / 21
103	Main Street Off-Ramp to On-Ramp	Basic	C / 19	C / 18	C / 21	C / 24

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
102	Main Street On-Ramp	Diverge	C / 25	C / 22	D / 27	D / 28
101	Franklin Street Overcrossing to Main Street Off-Ramp	Basic	C / 22	C / 20	C / 25	D / 27

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
[3] Express Lane Access Segments (analyzed as a left-sided weave).
[4] No-Build Alternative Facility Type / Build Alternative Facility Type.
[5] No-Build Alternative Post Processor ID number / Build Alternative Post Processor ID number.
Bold and underlined font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EB = eastbound; EL = Express Lane

Table 2.2.8-19. Opening Year (2030) Peak-Hour Express Lane Operations

ID[1]	Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Southbound I-15 Express Lane						
200	WB SR-91 Off-Ramp	Basic	A / 2	A / 9	A / 2	B / 14
201	EB SR-91 On-Ramp	Basic	A / 2	B / 11	A / 2	B / 16
202	EB SR-91 On-Ramp to EL access south of Magnolia Avenue	Basic	A / 2	B / 12	A / 2	B / 16
203	EL access south of Magnolia Avenue to EL access at El Cerrito Road	Basic	A / 4	C / 25	A / 3	B /17
204	EL egress at El Cerrito Road	Basic	A / 2	B / 14	–	–
204	EL access at El Cerrito Road to EL access south of Cajalco Road	Basic	–	–	A / 2	B / 18
205	EL access south of Cajalco Road to EL access south of Temescal Canyon Road	Basic	–	–	A / 2	B / 16

ID[1]	Segment	Facility Type	No-Build Alternative (LOS / Density[2])		Build Alternative (LOS / Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
206	EL access south of Temescal Canyon to EL access south of Indian Truck Trail	Basic	–	–	A / 2	B / 18
207	EL access south of Indian Truck Trail to EL egress south of Lake Street	Basic	–	–	A / 2	B / 17
208	EL egress south of Lake Street	Basic	–	–	A / 2	B / 18
Northbound I-15 Express Lane						
306	EL ingress north of Nichols Road	Basic	–	–	B / 18	A / 7
304	EL ingress north of Nichols Road to EL access north of Lake Street	Basic	–	–	C / 25	B / 11
303	EL access north of Lake Street to EL access north of Indian Truck Trail	Basic	–	–	C / 24	B / 11
302	EL access north of Indian Truck Trail to EL access at Dos Lagos Drive	Basic	–	–	C / 21	A / 10
312	EL ingress at Cajalco Road to EL access at El Cerrito Road	Basic	–	–	C / 18	A / 10
314	EL ingress at Cajalco	Merge	–	–	B / 13	A / 7
301	EL ingress at El Cerrito Road	Basic	C / 18	A / 10	–	–
302 / 311[3]	EL access at El Cerrito Road to EL access north of Ontario Avenue	Basic	C / 18	A / 10	B / 11	A / 7
303 / 310[3]	EL access north of Ontario Avenue to WB SR-91 Off-Ramp	Basic	C / 23	A / 10	B / 13	A / 9
304 / 309[3]	WB SR-91 Off-Ramp	Basic	C / 23	A / 10	A / 10	A / 9
306 / 308[3]	EB SR-91 On-Ramp	Basic	B / 17	A / 8	A / 10	A / 9

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
[3] No-Build Alternative Segment ID / Build Alternative Segment ID.
EB = eastbound; EL = Express Lane

Opening Year (2030): Travel Time Peak Period

Exhibits showing the Opening Year (2030) peak-period freeway mainline segment travel times for AM peak period (5:00 a.m. to 12:00 p.m.) and PM peak period (1:00 p.m. to 8:00 p.m.) are provided in the TOAR.

Travel Time Peak Period: SB I-15

Under the Build Alternative, travel times peak on SB I-15 general purpose lanes during the PM peak period from 4:00 to 7:00 p.m.; peak travel time (41 minutes) would occur around 5:00 p.m. The Build Alternative would reduce the peak travel time on SB I-15 by roughly 18 percent.

Under the Build Alternative, the SB I-15 express lanes are projected to operate at free-flow conditions.

Travel Time Peak Period: NB I-15

Under the Build Alternative, travel times peak on NB I-15 general purpose lanes during the PM peak period from 2:00 p.m. to 6:30 p.m.; peak travel time (73 minutes) would occur at 5:15 p.m. The travel time is primarily influenced by the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment. The Build Alternative would have slightly higher travel times than the No-Build Alternative during some hours of the day due to a higher traffic demand volume of approximately 2,600 vehicles north of the Cajalco On-Ramp. Total volume served is presented under the *Opening Year (2030): System-Wide Performance* subsection below.

Because the Build Alternative would serve more vehicle demand in the PM peak period, the bottleneck at Magnolia On-Ramp would require more time than in the No-Build Alternative to dissipate and serve the vehicles still in queue. The average travel time for the Build Alternative would be higher than under the No-Build Alternative during the PM shoulder hours of 6:00 p.m. to 8:00 p.m. because the vehicles would still be in queue during this interval, consequently driving the overall average travel time higher during these hours. It should be noted that Caltrans has recently initiated an effort to consider the addition of an auxiliary lane between the Magnolia Avenue direct on-ramp and the SR-91 connector ramps. With the addition of this auxiliary lane, the NB bottleneck at this location is anticipated to be relieved and throughput in this area would be dramatically improved. The Project was not included in the TOAR assessment, as it had not yet been identified as a funded improvement in the RTP/SCS, but it should improve NB operations in this area significantly.

Under the Build Alternative, the NB I-15 express lanes are projected to operate at free-flow conditions.

Opening Year (2030): System-Wide Performance

Opening Year (2030) peak-period system-wide performance metrics for the No-Build and Build Alternatives are presented in Table 2.2.8-20. The system-wide performance measures used for the Opening Year (2030) analysis include number of vehicles served by the study network, average delay per vehicle, and vehicle hours delay. System-wide

performance metrics are presented for the AM peak period (5:00 a.m. to 12:00 p.m.) and PM peak period (1:00 p.m. to 8:00 p.m.).

Table 2.2.8-20. Opening Year (2030) Peak-Period System-Wide Performance Metrics

Performance Measure	No-Build Alternative		Build Alternative	
	AM	PM	AM	PM
Volume Served (vehicles)	187,710	213,068	186,519	216,348
Total Distance Traveled (miles)	1,464,943	1,868,845	1,571,606	2,024,613
Total Travel Time (hours)	24,418	53,788	25,862	54,359
Average Delay Per Vehicle (seconds)	45	431	43	398
Total Delay (hours)	2,406	26,074	2,283	24,372
Total Delay Percent Difference	-	-	-5.1%	-6.5%
Vehicle Hours Delay[1]	5.1	8.5	4.9	8.1

Source: Caltrans 2022
[1] Vehicle Hours Delay was extracted from the travel demand model, RIVTAM.

In Opening Year (2030), a typical vehicle on the I-15 corridor would experience less delay in traveling by 2 seconds during the AM peak period and by 33 seconds during the PM peak period under the Build Alternative compared to the No-Build Alternative when comparing the average delay per vehicle, as shown in Table 2.2.8-20. In addition, the Build Alternative in Opening Year (2030) would have higher-volume demand on the freeway mainline by 2,089 more vehicles compared to the No-Build Alternative, as shown in Table 2.2.8-20. The higher-volume demand on the freeway mainline in the Build Alternative would be from vehicles preferring to stay on the mainline as opposed to diverting to parallel facilities to the freeway.

Opening Year (2030): Roadway Segment Analysis

Table 2.2.8-21 shows the projected Opening Year (2030) ADT and roadway segment LOS under the No-Build and Build Alternatives. Because the Build Alternative would add capacity to the freeway and alleviate traffic on the mainline, vehicles that had previously used parallel streets to avoid I-15 congestion in the No-Build Alternative are assumed to route back to I-15 instead. This routing back onto I-15 would cause many parallel routes to experience a decrease in traffic volumes associated with the Project.

As shown in Table 2.2.8-21, in the Opening Year (2030) Build Alternative, six segments would be operating at LOS E or F, or deficiently compared to the No-Build Alternative. Overall, the V/C ratio for each segment would remain similar between scenarios. The roadway segments listed below are failing or deficient in the No-Build condition, and V/C ratio would increase with the construction of the Project. In these cases, the roadway segments were near I-15 ramps, where more vehicles are choosing to access the freeway.

- Hidden Valley Parkway west of I-15 (LOS F)
- Main Street west of I-15 (LOS F or PEC)

The following roadway segments would have no change in V/C ratio or would improve under the Build Alternative compared to the No-Build Alternative (Table 2.2.8-21):

- Hidden Valley Parkway east of I-15 (LOS F)
- Magnolia Avenue west of I-15 (LOS F)
- Temescal Canyon Road between El Cerrito Avenue to Cajalco Road (LOS E to LOS D)
- Weirick Road between I-15 and Knabe Road (LOS E)
- Dos Lagos Drive east of I-15 (LOS F)

Table 2.2.8-21. Opening Year (2030) Average Daily Traffic and Roadway Segment Level of Service

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
1	Hidden Valley Parkway west of I-15	Arterial	35,900	36,580	1.02	**F**	36,790	1.02	**F**
2	Hidden Valley Parkway east of I-15	Arterial	35,900	42,030	1.17	**F**	42,030	1.17	**F**
3	Parkridge Avenue west of Cresta Road	Secondary	34,800	18,860	0.54	A	18,850	0.54	A
4	Parkridge Avenue east of Cresta Road	Secondary	34,800	11,550	0.33	A	11,600	0.33	A
5	Cresta Road south of Parkridge Avenue	Collector	13,000	9,730	0.75	C	9,730	0.75	C
6	Sixth Street west of El Sobrante Road	Major Arterial	37,900	25,940	0.68	B	25,940	0.68	B
7	Sixth Street west of Radio Road	Major Arterial	37,900	30,080	0.79	C	30,000	0.79	C
8	Radio Road north of Sixth Street	Collector	13,000	8,860	0.68	B	8,850	0.68	B
9	El Sobrante road between Sixth Street and Magnolia Avenue	Collector	13,000	10,450	0.80	D	10,490	0.81	D
10	Magnolia Avenue west of I-15	Major Arterial	54,300	54,700	1.01	**F**	54,560	1.00	**F**
11	Magnolia Avenue east of I-15	Major Arterial	54,300	46,370	0.85	D	46,730	0.86	D
12	Ontario Avenue west of I-15	Major Arterial	54,300	46,200	0.85	D	48,640	0.90	D
13	Ontario Avenue east of I-15	Major Arterial	37,900	33,750	0.89	D	31,620	0.83	D

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
14	Ontario Avenue north of El Cerrito Road	Major Arterial	54,300	30,640	0.56	A	26,050	0.48	A
15	El Cerrito Road west of I-15	Secondary	34,800	25,040	0.72	C	25,850	0.74	C
16	El Cerrito Road between I-15 and Temescal Canyon Road	Secondary	34,800	9,920	0.29	A	9,610	0.28	A
17	Bedford Canyon Road south of El Cerrito Road	Collector	13,000	11,270	0.87	D	10,000	0.77	C
18	Bedford Canyon Road north of El Cerrito Road	Collector	13,000	9,190	0.71	C	7,930	0.61	B
19	Evelyn Street	Collector	13,000	460	0.04	A	470	0.04	A
20	Frances Street	Collector	13,000	180	0.01	A	190	0.01	A
21	Katy Street	Collector	13,000	580	0.04	A	590	0.05	A
22	Liberty Avenue	Collector	13,000	3,100	0.24	A	2,790	0.21	A
23	Temescal Canyon Road between El Cerrito Avenue and Cajalco Road	Major Arterial	34,100	33,150	0.97	**E**	28,710	0.84	D
24	Temescal Canyon Road between Cajalco Road and Dos Lagos Drive	Major Arterial	37,900	28,080	0.74	C	25,180	0.66	B
25	Temescal Canyon Road between Dos Lagos Drive and Dawson Canyon Road	Major Arterial	34,100	20,270	0.59	A	16,480	0.48	A
26	Temescal Canyon Road between Dawson Canyon Road and I-15	Major Arterial	34,100	13,290	0.39	A	13,590	0.40	A

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
27	Temescal Canyon Road between I-15 and Lawson Road	Major Arterial	34,100	16,460	0.48	A	16,110	0.47	A
28	Temescal Canyon Road between Lawson Road and Trilogy Parkway	Arterial	18,000	15,530	0.86	D	14,960	0.83	D
29	Temescal Canyon Road between Trilogy Parkway and Campbell Ranch Road	Arterial	18,000	9,170	0.51	A	8,640	0.48	A
30	Temescal Canyon Road between Campbell Ranch Road and Indian Truck Trail Road	Major Arterial	34,100	7,020	0.21	A	6,070	0.18	A
31	Temescal Canyon Road between Indian Truck Trail Road and Horsethief Road	Arterial	18,000	4,920	0.27	A	3,130	0.17	A
32	Temescal Canyon Road between Horsethief Road and I-15 Frontage Road	Arterial	18,000	8,460	0.47	A	6,890	0.38	A
33	Temescal Canyon Road between Concordia Ranch Road and Lake Street	Arterial	18,000	9,480	0.53	A	7,910	0.44	A
34	Cajalco Road west of I-15	Major Arterial	54,300	36,090	0.66	B	36,520	0.67	B
35	Cajalco Road between I-15 and Grand Oaks	Major Arterial	54,300	39,320	0.72	C	39,070	0.72	C

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
36	Cajalco Road between Grand Oaks and Temescal Canyon Road	Major Arterial	54,300	43,880	0.81	D	42,760	0.79	C
37	Retreat Parkway west of Knabe Road	Secondary	25,900	4,350	0.17	A	4,250	0.16	A
38	Weirick Road between I-15 and Knabe Road	Secondary	25,900	25,110	0.97	**E**	24,930	0.96	**E**
39	Weirick Road north of Knabe Road	Secondary	25,900	750	0.03	A	740	0.03	A
40	Dos Lagos Drive east of I-15	Secondary	25,900	30,160	1.16	**F**	26,400	1.02	**F**
41	Knabe Road between Weirick Road and White Sage Street	Secondary	25,900	17,600	0.68	B	17,620	0.68	B
42	Knabe Road between White Sage Street and Hunt Road	Secondary	25,900	8,460	0.33	A	8,530	0.33	A
43	Campbell Ranch Road between Temescal Canyon Road and Mayhew Canyon Road	Secondary	25,900	5,490	0.21	A	4,540	0.18	A
44	Campbell Ranch Road between Mayhew Canyon Road and Indian Truck Trail	Secondary	25,900	13,570	0.52	A	11,240	0.43	A
45	De Palma Road between Indian Truck Trail and Horsethief Canyon Road	Secondary	25,900	10,670	0.41	A	8,620	0.33	A
46	Horsethief Canyon Road west of De Palma Road	Arterial	18,000	12,300	0.68	B	12,460	0.69	B

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
47	Horsethief Canyon Road between De Palma Road and Temescal Canyon Road	Arterial	18,000	6,780	0.38	A	6,440	0.36	A
48	Lake Street west of Temescal Canyon Road	Urban Arterial	53,900	20,830	0.39	A	20,850	0.39	A
49	Lake Street east of Temescal Canyon Road	Urban Arterial	53,900	25,170	0.47	A	25,080	0.47	A
50	Nichols Road west of Collier Road	Urban Arterial	53,900	11,440	0.21	A	10,650	0.20	A
51	Nichols Road between Collier Road and I-15	Urban Arterial	53,900	3,100	0.06	A	2,470	0.05	A
52	Nichols Road east of I-15	Urban Arterial	53,900	7,380	0.14	A	7,620	0.14	A
53	Collier Avenue between Nichols Road and Riverside Drive	Major Arterial	34,100	8,160	0.24	A	7,400	0.22	A
54	Collier Avenue between Riverside Drive and SR-74 (Central Avenue)	Urban Arterial	53,900	30,860	0.57	A	30,160	0.56	A
55	Collier Avenue south of SR-74 (Central Avenue)	Major Arterial	34,100	16,190	0.47	A	16,740	0.49	A
56	Dexter Avenue north of SR-74 (Central Avenue)	Secondary	25,900	13,170	0.51	A	13,410	0.52	A
57	Dexter Avenue south of SR-74 (Central Avenue)	Collector	13,000	9,010	0.69	B	9,080	0.70	B
58	SR-74 (Central Avenue) between Collier Avenue and I-15	Major Arterial	68,200	43,540	0.64	B	43,860	0.64	B

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2030) No-Build Alternative			Opening Year (2030) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
59	SR-74 (Central Avenue) between I-15 and Dexter Avenue	Urban Arterial	71,800	55,790	0.78	C	55,890	0.78	C
60	SR-74 (Central Avenue) between Dexter Avenue and Cambern Avenue	Urban Arterial	71,800	47,320	0.66	B	47,950	0.67	B
61	SR-74 (Central Avenue) east of Cambern Avenue	Urban Arterial	71,800	45,430	0.63	B	45,950	0.64	B
62	Main Street west of I-15	Secondary	12,950	15,920	1.23[3]	**F[3]**	16,020	1.24[3]	**F[3]**

Source: Caltrans 2022

[1] Capacity for each roadway segment was determined by the number of lanes and roadway capacities as defined by the City of Corona, City of Lake Elsinore, and County of Riverside General Plans and Traffic Impact Study Guidelines.

[2] V/C ratio = ADT / Roadway Capacity

[3] The City of Lake Elsinore General Plan considers this V/C ratio as PEC and will accept PEC operations as "acceptable" if adjacent intersections are operating acceptably during the peak hour. Because adjacent intersection analysis was not part of the traffic study, the roadway was considered deficient.

Bold and underlined font indicates deficient operations.

Opening Year (2030): Summary of Traffic Operations

Table 2.2.8-22 shows the projected overall traffic analysis performance results between the No-Build and Build Alternatives under Opening Year (2030) conditions and summarizes the findings from Table 2.2.8-17 through Table 2.2.8-21.

Table 2.2.8-22. Opening Year (2030) Traffic Performance Metrics

Measure of Effectiveness		No-Build Alternative		Build Alternative	
Number of Freeway Mainline Locations[1]	Peak Hour LOS A, B, C, or D	149	73%	175	81%
	Peak Hour LOS E or F	55	27%	41	19%
Average Peak Period Travel Time (minutes)[2] [AM / PM]	SB I-15 GP Lanes	20 / 34		21 / 29	
	SB I-15 EL	-		19 / 21	
	NB I-15 GP Lanes	23 / 51		23 / 57	
	NB I-15 EL	-		21 / 21	
Peak Period Volume Served Change (vehicles)		-		+2,089	
Peak Period Total Distance Traveled (miles)		-		+262,431	
Peak Period Total Vehicle Hours Delay Change (hours)		-		-1,825	

Source: Caltrans 2022.
[1] Mainline locations do not include express lane analysis locations.
[2] Travel time was measured on SB I-15 from Hidden Valley Parkway overcrossing to Main Street undercrossing. Travel time was measured on NB I-15 from Main Street undercrossing to Hidden Valley Parkway overcrossing.
EL = Express Lanes; GP = general purpose

In Opening Year (2030), the Build Alternative is projected to improve traffic operation LOS where the number of freeway mainline and ramp locations during the AM and PM peak hour operating at LOS E or worse would be reduced by approximately 8 percent when compared to the No-Build Alternative (Table 2.2.8-22). The Build Alternative is expected to serve approximately 2,089 more vehicles during the peak period, particularly those making longer trips, and reduce overall vehicle delay within the traffic study limits by approximately 4.4 percent (Table 2.2.8-22). When comparing the projected volume served and total distance traveled, it is expected that the Build Alternative would serve trips with longer lengths than the No-Build Alternative.

As previously discussed, under Existing Conditions (2019), the AM peak direction on I-15 is in the NB direction, as it experiences heavy congestion (LOS F) due to heavy commute traffic. NB I-15 bottlenecks at the Cajalco Road On-Ramp merge segment and extends to the Indian Truck Trail Off-Ramp during the AM peak hour. The PM peak direction on I-15 is in the SB direction, which also experiences heavy congestion (LOS F) due to heavy commute traffic. SB I-15 bottlenecks at the Cajalco Road On-Ramp merge segment and extends to the Magnolia Avenue On-Ramp during the PM peak

hour. In addition, SB I-15 bottlenecks at the El Cerrito Road Off-Ramp lane drop segment in the PM peak hour.

In Opening Year (2030), the Build Alternative is projected to reduce the queue length on NB I-15 upstream of the existing WB Magnolia Avenue On-Ramp bottleneck by approximately 0.5 mile during the AM peak hour. In addition, the Build Alternative is projected to eliminate the existing 4.8-mile-long bottleneck at Cajalco Road during the PM peak hour.

Under Opening Year (2030) conditions, the Build Alternative would lead to an increase in annual vehicle miles traveled (VMT). This is expected to increase between the Existing (2019) and the Opening Year (2030) scenarios. The expected increase in VMT across all alternatives, including the No-Build Alternative, is a result of land use growth and population growth assumed in the future year travel demand model. Refer to Section 3.3, *Climate Change,* for VMT discussion.

Design Year (2050): Freeway Operations Analysis

The Design Year (2050) VISSIM models include improvements associated with the completion of the I-15 High-Occupancy Vehicle (HOV) Lanes Project (between SR-74 [Central Avenue] and I-15/I-215 South Junction) and the Horsethief Road/I-15 Interchange Project. Table 2.2.8-23 and Table 2.2.8-24 show the projected Design Year (2050) AM and PM peak-hour density and LOS for the study freeway mainline segments and ramp junctions under the No-Build and Build Alternatives for the general purpose lane operations on SB I-15 and NB I-15, respectively. The express lanes were analyzed as separate facility and the operation results for SB I-15 and NB I-15 under the No-Build and Build Alternatives are shown in Table 2.2.8-25.

AM Peak Hour: SB I-15

As shown in Table 2.2.8-23 and Table 2.2.8-25, all freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the AM peak hour under the Design Year (2050) Build Alternative with the exception of the following segments:

- The Ontario Avenue Off-Ramp bottleneck is anticipated to form in the year 2044 under the No-Build Alternative. In the Build Alternative, the SB I-15 bottleneck at the Ontario Avenue Off-Ramp diverge segment would remain and the queue would extend to the Magnolia Avenue On-Ramp with a queue length of approximately 1.0 mile. Segments in queue due to the bottleneck are projected to operate at LOS E, and would be expected to operate better under the Build Alternative scenario when compared to the No-Build scenario.

- SB I-15 eastbound (EB) SR-91 Off-Ramp is projected to improve from LOS F to LOS E.

- SB I-15 El Cerrito Off-Ramp segment is projected to degrade to LOS E because the Ontario Avenue Off-Ramp bottleneck is expected to be slightly relieved when the Project is constructed and adjacent downstream links increase in density.

Table 2.2.8-23. Design Year (2050) Peak-Hour General Purpose Lane Operations: Southbound I-15

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	C / 21	C / 22	C / 21	**F / DEC**
2	Hidden Valley Parkway On-Ramp	Merge	C / 21	C / 24	C / 21	**F / DEC**
3	Hidden Valley Parkway On-Ramp to WB SR-91 Off-Ramp	Basic	C / 21	C / 21	C / 19	**F / DEC**
4	WB SR-91 Off-Ramp	Basic	C / 22	C / 21	C / 20	**E / 43**
5	EB SR-91 Off-Ramp	Diverge	**F / DEC**	D / 33	**E / 38**	**F / DEC**
6	EB SR-91 Off-Ramp to On-Ramp	Basic	C / 19	C / 21	C / 19	**F/DEC**
7	EB SR-91 On-Ramp	Merge	D / 26	D / 29	C / 26	**F / DEC**
8	WB SR-91 On-Ramp to Magnolia Avenue Off-Ramp	Weave	C / 24	D / 30	C / 25	**F / DEC**
9	Magnolia Avenue Off-Ramp to On-Ramp	Basic	D / 27	**F / DEC**	D / 28	**F / DEC**
10	Magnolia Avenue On-Ramp	Merge	C / 25	**F / DEC**	D / 28	**F / DEC**
11	Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp[3]	Weave	C / 24[3]	**E / 41**[3]	C / 26[3]	**F /DEC**[3]
12	Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp	Basic	**E / 38**	**F / DEC**	**E / 37**	**F / DEC**
13	Ontario Avenue Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**E / 45**	**F / DEC**
14	Ontario Avenue Off-Ramp to On-Ramp	Basic	D / 27	**F / DEC**	D / 32	**F / DEC**
15	Ontario Avenue On-Ramp	Merge	C / 20	**E / 37**	C / 24	**F / DEC**
16	El Cerrito Road Off-Ramp	Basic	D / 33	**F / DEC**	**E / 38**	**F / DEC**
17	El Cerrito Road Off-Ramp to On-Ramp[3]	Basic / Weave[4]	D / 33	**F / DEC**	C / 24[3]	**E / 40**[3]
18	EL On-Ramp at El Cerrito Road	Basic	C / 24	**E / 36**	-	-

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
19	El Cerrito Road On-Ramp to Cajalco Road Off-Ramp	Weave	C / 25	**E / 38**	D / 27	D / 31
20	EL On-Ramp Cajalco Road On-Ramp (4 Lanes)	Basic	C / 19	D / 30	-	-
21	Cajalco Road On-Ramp / Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Merge / Weave[4]	B / 15	**F / DEC**	C / 23	D / 27
22	Cajalco Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp[3]	Basic / Weave[4]	C / 21	D / 35	B / 17[3]	C / 25[3]
23	Weirick Road / Dos Lagos Drive Off-Ramp	Diverge	C / 21	**E / 35**	-	-
24	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	C / 24	**F / DEC**	C / 25	D / 29
25	Weirick Road / Dos Lagos Drive On-Ramp	Merge	C / 18	**F / DEC**	C / 20	C / 24
26	Weirick Road / Dos Lagos Drive On-Ramp to Temescal Canyon Road Off-Ramp	Basic	C / 25	**E / 41**	D / 27	D / 32
27	Temescal Canyon Road Off-Ramp	Diverge	C / 25	**F / DEC**	D / 28	D / 34
28	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	C / 22	**F / DEC**	C / 23	D / 28
29	Temescal Canyon Road On-Ramp	Merge	B / 16	**F / DEC**	B / 17	C / 24
30	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	C / 23	**E / 42**	C / 24	D / 32
52	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp[3]	Weave	-	-	B / 18[3]	D / 28[3]
53	Temescal Canyon Road On-Ramp to Indian Truck Trail Off-Ramp	Basic	-	-	C / 24	D / 34

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
31	Indian Truck Trail Off-Ramp	Diverge	C / 22	**F / DEC**	C / 25	**E / 35**
32	Indian Truck Trail Off-Ramp to On-Ramp	Basic	C / 21	D / 33	C / 22	D /28
33	Indian Truck Trail On-Ramp	Merge	B / 16	D / 29	C / 18	C / 23
60	Indian Truck Trail On-Ramp to Horsethief Road Off-Ramp	-	C / 22	**E / 38**	C / 24	D / 30
61	Horsethief Road Off-Ramp	-	C / 22	**E / 45**	C / 24	D / 30
62	Horsethief Road Off-Ramp to On-Ramp	-	C / 19	D / 28	C / 22	D / 27
63	Horsethief Road On-Ramp	-	B / 15	D / 26	C / 18	D / 30
34	Horsethief Road On-Ramp to Lake Street Off-Ramp	Basic	C / 21	D / 33	C / 23	D / 34
54	Horsethief Road On-Ramp to Lake Street Off-Ramp[3]	Weave	-	-	B / 16[3]	D / 29[3]
35	Lake Street Off-Ramp	Diverge	C / 20	D / 34	C / 23	**E / 35**
36	Lake Street Off-Ramp to On-Ramp	Basic	C / 19	D / 28	C / 21	D / 28
37	Lake Street On-Ramp	Merge	B / 17	C / 21	B / 17	C / 23
38	Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	C / 22	D / 29	C / 23	D / 34
55	Lake Street On-Ramp to Nichols Road Off-Ramp (EL egress)	Basic	-	-	B / 17	**E / 40**
56	Lake Street On-Ramp to Nichols Road Off-Ramp	Basic	-	-	B / 17	**F / DEC**
39	Nichols Road Off-Ramp	Diverge / Basic[4]	C / 21	D / 29	C / 20	**F / DEC**
40	Nichols Road Off-Ramp to On-Ramp	Basic	C / 20	D / 27	C / 21	**F / DEC**
41	Nichols Road On-Ramp	Merge[5]	B / 18	C / 23	B / 17	**F / DEC**
42	Nichols Road On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic[5]	C / 22	D / 29	B / 17	**F / DEC**

ID[1]	Southbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
43	SR-74 (Central Avenue) Off-Ramp	Diverge[5]	B / 15	C / 20	-	-
57	SR-74 (Central Avenue) (EL egress)	Basic	-	-	B / 15	**F / DEC**
44	SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	B / 17	C / 20	A / 6	**E / 36**
45	SR-74 (Central Avenue) On-Ramp	Merge[5]	B / 18	C / 20	-	-
46	SR-74 (Central Avenue) On-Ramp to Main Street Off-Ramp	Basic[5]	C / 26	D / 28	C / 21	**F / DEC**
47	Main Street Off-Ramp	Diverge[5]	C / 24	D / 30	C / 21	**F / DEC**
48	Main Street Off-Ramp to On-Ramp	Basic	C / 23	C / 23	C / 26	**F / DEC**
48	Main Street On-Ramp	Merge	C / 22	C / 20	C / 24	**F / DEC**
50	Main Street On-Ramp to Franklin Street Overcrossing	Basic	D / 27	C / 25	D / 30	**E / 39**

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
[3] Express Lane Access Segments (analyzed as a left-sided weave).
[4] No-Build Alternative Facility Type / Build Alternative Facility Type.
[5] This segment is a weave segment in the Build Alternative due to the additional auxiliary lane.
Bold and underlined font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EL = Express Lane

Table 2.2.8-24. Design Year (2050) Peak-Hour General Purpose Lane Operations: Northbound I-15

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
152	Hidden Valley Parkway Off-Ramp to On-Ramp	Basic	B / 14	B / 18	B / 16	B / 17
151	Hidden Valley Parkway Off-Ramp	Diverge	C / 19	C / 22	C / 20	C / 22
150	EB SR-91 On-Ramp	Merge	C / 19	C / 21	C / 19	C / 20
149	WB SR-91 On-Ramp	Merge	C / 21	C / 21	C / 22	C / 21
148	EB & WB SR-91 Off-Ramp to WB SR-91 On-Ramp	Basic	B / 16	C / 20	B / 18	C / 20
147	EB & WB SR-91 Off-Ramp	Diverge	D / 27	D / 32	D / 31	D / 33
146	Magnolia Avenue On-Ramp	Merge	C / 26	**F / DEC**	**F / DEC**	**F / DEC**
145	Magnolia Avenue Loop On-Ramp	Basic	C / 22	**F / DEC**	**F / DEC**	**F / DEC**
144	Magnolia Avenue Off-Ramp to Loop On-Ramp	Basic	C / 24	**F / DEC**	**F / DEC**	**F / DEC**
143	Magnolia Avenue Off-Ramp	Diverge	C / 21	**F / DEC**	**F / DEC**	**F / DEC**
141	Ontario Avenue to Magnolia Avenue[3]	Weave	C / 23[3]	**F / DEC[3]**	**F / DEC[3]**	**F / DEC[3]**
140	Ontario Avenue On-Ramp	Merge	B / 17	**F / DEC**	**F / DEC**	**F / DEC**
138	Ontario Avenue Off-Ramp to On-Ramp (4 Lanes)	Basic	B / 17	**F / DEC**	**F / DEC**	**F / DEC**
137	Ontario Avenue Off-Ramp to On-Ramp (3 Lanes)	Basic	C / 26	**F / DEC**	**F / DEC**	**F / DEC**
136	Ontario Avenue Off-Ramp	Diverge	**E / 44**	**F / DEC**	**F / DEC**	**F / DEC**
135	El Cerrito Road On-Ramp	Merge	**E / 38**	**F / DEC**	**F / DEC**	**F / DEC**
134	EL access to El Cerrito Road On-Ramp	Basic	C / 22	**F / DEC**	-	-

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
133	EL access at El Cerrito Road[3]	Basic/ Weave[4]	C / 23	**F / DEC**	**F / DEC[3]**	**E / 37[3]**
132	Cajalco Road On-Ramp to El Cerrito Road Off-Ramp	Weave	C / 24	**F / DEC**	**F / DEC**	**F / DEC**
131	Cajalco Road Loop On-Ramp	Merge	C / 20	**F / DEC**	**F / DEC**	**F / DEC**
154	EL access at Cajalco Road	Basic	C / 19	**F / DEC**	-	-
130 / 170[5]	Cajalco Road Off-Ramp to Loop On-Ramp	Basic	C / 26	**F / DEC**	**F / DEC**	**F / DEC**
130	Cajalco Road Off-Ramp to EL access	Basic	-	-	**F / DEC[3]**	**F / DEC[3]**
129	Cajalco Road Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
128	Weirick Road / Dos Lagos Drive On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
127	Weirick Road / Dos Lagos Drive Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
126	Weirick Road / Dos Lagos Drive Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
125	Temescal Canyon Road On-Ramp to Weirick Road / Dos Lagos Drive Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
124	Temescal Canyon Road On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
123	Temescal Canyon Road Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
122	Temescal Canyon Road Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
121	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
160	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp[3]	Weave	-	-	**F / DEC[3]**	**F / DEC[3]**
159	Indian Truck Trail On-Ramp to Temescal Canyon Road Off-Ramp	Basic	-	-	**F / DEC**	**F / DEC**
120	Indian Truck Trail On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
119	Indian Truck Trail Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
118	Indian Truck Trail Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
168	Horsethief Road On-Ramp to Indian Truck Trail Off-Ramp	-	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
167	Horsethief Road On-Ramp	-	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
166	Horsethief Road Off-Ramp to On-Ramp	-	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
165	Horsethief Road Off-Ramp	-	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
117	Lake Street On-Ramp to Horsethief Road Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
158	Lake Street On-Ramp to Horsethief Road Off-Ramp[3]	Weave	-	-	**F / DEC[3]**	**F / DEC[3]**
116	Lake Street On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
115	Lake Street Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
114	Lake Street Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
113	Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
157	Nichols Road On-Ramp to Lake Street Off-Ramp (EL ingress)	Basic	-	-	**F / DEC**	**F / DEC**

ID[1]	Northbound I-15 Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
156	Nichols Road On-Ramp to Lake Street Off-Ramp	Basic	-	-	**F / DEC**	**F / DEC**
112	Nichols Road On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
111	Nichols Road Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
110	Nichols Road Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
109	Dexter Avenue / SR-74 (Central Avenue) On-Ramp to Nichols Road Off-Ramp	Merge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
108	Dexter Avenue / SR-74 (Central Avenue) Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
155	Dexter Avenue / SR-74 (Central Avenue) Off-Ramp to On-Ramp (EL ingress)	Diverge	-	-	**F / DEC**	**F / DEC**
153	Dexter Avenue Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
107	WB SR-74 (Central Avenue) Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
106	EB SR-74 (Central Avenue) Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
105	Main Street On-Ramp to SR-74 (Central Avenue) Off-Ramp	Basic	**F / DEC**	**F / DEC**	**F / DEC**	**F / DEC**
104	Main Street On-Ramp	Merge	**F / DEC**	**F / DEC**	**F / 54**	**F / DEC**
103	Main Street Off-Ramp to On-Ramp	Basic	**F / DEC**	**F / DEC**	**E / 44**	**F / DEC**
102	Main Street Off-Ramp	Diverge	**F / DEC**	**F / DEC**	**E / 38**	**F / DEC**
101	Franklin Street Overcrossing to Main Street Off-Ramp	Basic	**F / DEC**	**F / DEC**	**D / 30**	**F / DEC**

Source: Caltrans 2022
[1] Identification number for each freeway segment corresponds to its segment number listed in the TOAR.
[2] Density reported in passenger cars per lane per mile.
[3] Express Lane Access Segments (analyzed as a left-sided weave).
[4] No-Build Alternative Facility Type / Build Alternative Facility Type.

[5] No-Build Alternative Post Processor ID number/Build Alternative Post Processor ID number.
Bold and underlined font indicates LOS E or F conditions.
DEC = Demand Exceeds Capacity; EL = Express Lane

Table 2.2.8-25. Design Year (2050) Peak-Hour Express Lane Operations

ID[1]	Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Southbound I-15 Express Lane						
200	WB SR-91 Off-Ramp	Basic	A / 2	B / 16	A / 2	C / 19
201	EB SR-91 On-Ramp	Basic	A / 3	C / 19	A / 3	C / 22
202	EB SR-91 On-Ramp to EL access south of Magnolia Avenue	Basic	A / 3	C / 19	A / 3	C / 22
203	EL access south of Magnolia to EL access at El Cerrito Road	Basic	A / 5	D / 32	A / 3	C / 23
204	EL egress at El Cerrito Road	Basic	A / 3	B / 18	-	-
204	EL access at El Cerrito Road to EL access south of Cajalco Road	Basic	-	-	A / 3	C / 23
205	EL access south of Cajalco to EL access south of Temescal Canyon Road	Basic	-	-	A / 2	C / 20
206	EL access south of Temescal Canyon Road to EL access south of Horsethief Canyon Road	Basic	-	-	A / 2	C / 22
207	EL access south of Horsethief Canyon Road to EL egress south of Lake Street	Basic	-	-	A / 2	C / 20
208	EL egress south of Lake Street	Basic	-	-	A / 2	C / 21
Northbound I-15 Express Lane						
306	EL ingress north of Nichols Road	Basic	-	-	C / 19	B / 14
304	EL ingress north of Nichols Road to EL access north of Lake Street	Basic	-	-	C / 23	B / 16
303	EL access north of Lake Street to EL access north of Indian Truck Trail	Basic	-	-	C / 23	B / 16

ID[1]	Segment	Facility Type	No-Build Alternative (LOS/Density[2])		Build Alternative (LOS/Density[2])	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
302	EL access north of Indian Truck Trail to EL access at Dos Lagos Drive	Basic	-	-	C / 20	B / 13
312	EL ingress at Cajalco Road to EL access at El Cerrito Road	Basic	-	-	B / 18	B / 12
314	EL ingress at Cajalco Road	Merge	-	-	B / 13	A / 9
301	EL ingress at El Cerrito Road	Basic	C / 20	B / 12	-	-
302 / 311[2]	EL access at El Cerrito Road to EL access north of Ontario Avenue	Basic	C / 19	B / 12	B / 14	A / 8
303 / 310[2]	EL access north of Ontario to WB SR-91 Off-Ramp	Basic	C / 23	B / 15	C / 20	A / 11
304 / 309[2]	WB SR-91 Off-Ramp	Basic	C / 24	B / 15	C / 18	A / 10
306 / 308[2]	EB SR-91 On-Ramp	Basic	C / 18	B / 13	B / 18	A / 10

Source: Caltrans 2022
[1] Density reported in passenger cars per lane per mile.
[2] No-Build Alternative Segment ID/Build Alternative Segment ID.
EL = Express Lane

AM Peak Hour: NB I-15

As shown in Table 2.2.8-24 and Table 2.2.8-25, all freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the AM peak hour under the Design Year (2050) Build Alternative with the exception of the segments discussed below.

The Weirick Road/Dos Lagos Drive On-Ramp bottleneck is anticipated to form in the year 2039 under the No-Build Alternative. The Build Alternative would improve operations at the Weirick Road/Dos Lagos Drive On-Ramp merge segment by providing additional throughput capacity. As the Build Alternative improves the bottleneck at the Weirick Road/Dos Lagos Drive On-Ramp merge segment, a bottleneck would form downstream at the WB Magnolia Avenue On-Ramp merge segment. The NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment would create a queue that extends to the Main Street On-Ramp in Lake Elsinore with a queue length of 19.5 miles. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. Upstream of the queue there would be a slow down at the Main Street Off-Ramp (LOS E).

Although there would be more segments operating at LOS F under the Build Alternative, this is because the Project would provide additional throughput capacity at the Weirick Road/Dos Lagos Drive On-Ramp merge. As a result, the bottleneck would shift downstream, which would allow for additional vehicles to enter the network. Caltrans is currently evaluating the addition of NB auxiliary lanes at various locations throughout the I-15 corridor north of the Project limits, which should assist with this bottleneck location; however, as no project has been defined or included in the RTP/SCS constrained network, an improvement of this type was not included in the traffic analysis.

PM Peak Hour: SB I-15

As shown in Table 2.2.8-23 and Table 2.2.8-25, all freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour under the Design Year (2050) Build Alternative with the exception of the segments discussed below.

Under the Design Year (2050) Build Alternative, the SB I-15 bottleneck at the El Cerrito Road Off-Ramp diverge segment (due to the lane drop) would create a queue that extends south of Hidden Valley Parkway (queue length approximately 4.5 miles); segments in queue due to the bottleneck are projected to operate at LOS E or F. The Build Alternative is expected to attract drivers who, under the No-Build Alternative, would be expected to use local streets to bypass the freeway. Indian Truck Trail and Lake Street Off-Ramp are projected to operate at LOS E.

Nevertheless, the Build Alternative is expected to improve operations at express lane egress segments at El Cerrito Road and Cajalco Road. As the Build Alternative would significantly improve the bottleneck at the express lane egress segments—resulting in greater traffic throughput—a bottleneck would form downstream on SB I-15 at the Main Street On-Ramp merge segment even with the addition of the future HOV lane. This would be primarily due to the lane reduction that would occur on the corridor (five lanes north of Nichols Road: three general purpose lanes and two express lanes; and four lanes south of Main Street: three general purpose lanes and one HOV lane). This lane reduction, with increased demands on I-15 due to the addition of the express lane project, is expected to create congestion at this location.

The Main Street On-Ramp bottleneck is anticipated to form in the year 2028 under the Build Alternative, when the Project is expected to be open to traffic. The SB I-15 bottleneck at the Main Street On-Ramp merge segment is projected to create a queue that extends to the Nichols Road Off-Ramp with a queue length of approximately 3.2 miles. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. It should be noted that in the Opening Year (2030), the queue is projected to be drastically shorter but is projected to extend over time as traffic along the corridor increases.

It should be noted that, when looking at LOS and simulation metrics for this scenario/ direction, the Project benefit is not fully encapsulated due to some of the analysis limitations. There are numerous other regional factors that are assumed without the

Project that are affecting traffic distribution in the area that are outside of the simulation model. This is because the analysis uses a fixed origin-destination routing derived from a sub-regional four-step travel demand model to estimate volume demands based on model capacities. As such, the model is not as sensitive to systemwide performance and traffic diversion under congested conditions. This appears to be occurring in this scenario/direction as origins/destinations are being rerouted based on large-scale regional facilities and the fixed routing estimated by the travel demand model at a macro scale is less sensitive to bottleneck locations the simulation model has identified.

Specifically, the regional travel demand model is identifying a travel-time savings occurring by using the assumed Community and Environmental Transportation Acceptability Process (CETAP) West corridor via the I-215 corridor and on Temescal Canyon Road in the 2050 No-Build Alternative instead of using I-15. The increased capacity on I-15 assumed in the Build Alternative is estimating a rerouting of traffic from both the local roadways and I-215 (via CETAP West) back to I-15. This is shown on the freeway ramp volumes, where the No-Build Alternative shows additional peak-hour trips using the CETAP West connection via Cajalco Road during the PM peak hour as compared to the Build Alternative. Additionally, the segment assessment indicates upward of 11,000 daily trips are displaced from local roadways over to I-15 due to the increased capacity on I-15. The static routing for this scenario shows substantial traffic stays on I-15.

These factors are part of the reason that network vehicle hours of delay, as estimated by the travel demand model, are also presented in the TOAR. This metric, which accounts for model delay estimation within the Project corridor, shows the Build Alternative decreases total delay (6.5 vehicle hours of delay in the corridor under the Build Alternative compared to 6.9 vehicle hours of delay in the corridor under the No-Build Alternative, or a 6-percent reduction in vehicle delay per vehicle) and reflects the Project benefit in the study area.

These items support the fact that the LOS assessment and simulation results do not account for all of the redistribution of traffic and overall Project benefits within the corridor. An additional analysis scenario was run using the Build Alternative volumes with the No-Build Alternative geometrics as a baseline comparison within the simulation model to better identify how the Project would benefit if demand for the corridor remained on the facility (instead of using parallel corridors or those trips not occurring at all on the system). These additional analyses are presented in the TOAR, Exhibits Q1 through R2, as additional information for the decisionmaker and they indicate that, with the same volume projections, the Build Alternative clearly provides benefit to the corridor with volume demands being static.

PM Peak Hour: NB I-15

Under the Design Year (2050) Build Alternative, the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment would remain and create a queue that extends past Main Street in Lake Elsinore and the model's southerly limit. The queue cannot be measured and/or would be greater than 15 miles in length. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. All other freeway

mainline segments, ramps, and express lanes on NB I-I-15 are projected to operate at LOS D or better during the PM peak hour, as shown in Table 2.2.8-24 and Table 2.2.8-25. The Project would not alleviate traffic on the general purpose lanes from the No-Build Alternative, but rather would help manage throughput along the corridor. With the level of throughput projected in Design Year, travel time management and reliability would be expanded with construction of the Project.

It is not expected that the Build Alternative would relieve the existing bottleneck at the WB Magnolia Avenue On-Ramp weave segment to the SR-91 ramps, as it is outside the Project limits. The breakdown of the WB Magnolia Avenue On-Ramp merge segment occurs under existing conditions during the late morning/early afternoon time period and is identified in the Opening Year (2030) as extending into the peak hours. This weave is projected to further degrade operationally, as volumes are projected to increase by 2050. The Project would generally improve operations within this segment of roadway, but the bottleneck would still form and spill back to downstream locations. Caltrans is currently evaluating the addition of NB auxiliary lanes at various locations throughout the I-15 corridor north of the Project limits, which should assist with this bottleneck location; however, as no project has been defined or included in the RTP/SCS constrained network, an improvement of this type was not included in the traffic analysis.

Design Year (2050): Travel Time Peak Period

Exhibits showing the Design Year (2050) peak-period freeway mainline segment travel times for the AM peak period (5:00 a.m. to 12:00 p.m.) and PM peak period (1:00 p.m. to 8:00 p.m.) are provided in the TOAR.

Travel Time Peak Period: SB I-15

Under the Build Alternative, travel times would peak on SB I-15 general purpose lanes during the PM period from 4:00 to 8:00 p.m.; peak travel time (68 minutes) would occur around 6:15 p.m. The increase in travel time would be largely attributable to increased traffic demand along the corridor associated with travel shifts from parallel facilities back to I-15.

The Build Alternative would attract drivers who, under the No-Build Alternative, would use local streets to bypass the freeway in addition to increased demand along the I-15 corridor. As a result, overall congestion would worsen on SB I-15 during the PM peak hour. The Build Alternative would incur an additional demand of 17,600 vehicles on SB I-15 during the 7-hour PM peak period.

Under the Build Alternative, the SB I-15 express lanes are projected to operate at free-flow conditions during all hours of the day.

Travel Time Peak Period: NB I-15

In the Design Year (2050), the NB I-15 corridor would be congested throughout the day. Under the Build Alternative, travel times on NB I-15 general purpose lanes would exceed 40 minutes after 5:30 a.m. due to the bottleneck at the WB Magnolia On-Ramp merge segment.

Between 7:00 a.m. and 12:00 p.m., the travel time on NB I-15 general purpose lanes in the Build Alternative would exceed the travel time under the No-Build Alternative. This is because the Project would provide additional throughput capacity at the Weirick Road/Dos Lagos Road On-Ramp merge and, as a result, the bottleneck would be shifted downstream.

During the PM peak period, the travel time primarily would be influenced by the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment. The NB I-15 bottleneck at the WB Magnolia On-Ramp merge segment is active for both the No-Build and Build Alternatives between 1:00 and 8:00 p.m.

Because the corridor is over-saturated, many of the on-ramps are unable to serve the demand going to the freeway. Travel times are generally projected to be higher for the Build Alternative because more vehicles making longer trips on I-15 would be served overall. This means that more vehicles could enter the I-15 corridor at the on-ramps under the Build Alternative, causing additional merging and weaving. Total volume served is presented under the *Design Year (2050): System-Wide Performance* subsection below.

Under the Build Alternative, the NB I-15 express lanes are projected to operate at free-flow conditions during all hours of the day.

Design Year (2050): System-Wide Performance

Design Year (2050) peak-period system-wide performance metrics for the No-Build and Build Alternatives are presented in Table 2.2.8-26. The system-wide performance measures used for the Design Year (2050) analysis include number of vehicles served by the study network, average delay per vehicle, and vehicle hours delay. System-wide performance metrics are presented for the AM peak period (5:00 a.m. to 12:00 p.m.) and PM peak period (1:00 p.m. to 8:00 p.m.).

Table 2.2.8-26. Design Year (2050) Peak-Period System-Wide Performance Metrics

Performance Measure	No-Build Alternative		Build Alternative	
	AM	PM	AM	PM
Volume Served (vehicles)	229,846	244,357	223,834	248,183
Total Distance Traveled (miles)	1,673,876	1,792,393	1,922,607	2,273,999
Total Travel Time (hours)	61,902	83,097	71,234	105,106
Average Delay Per Vehicle (seconds)	549	800	646	980
Total Delay (hours)	36,686	56,372	42,328	71,393
Vehicle Hours Delay[1]	3.6	6.9	3.4	6.5

Source: Caltrans 2022

[1] Vehicle Hours Delay was extracted from the travel demand model, RIVTAM.

As shown in Table 2.2.8-26, the Build Alternative in Design Year (2050) would have higher-volume demand on the freeway mainline by 18,337 more vehicles compared to

the No-Build Alternative. In addition, under the Build Alternative, the total distance traveled on the freeway mainline would be 262,431 miles more than under the No-Build Alternative. When comparing the volume served and total distance traveled, it can be concluded that the Build Alternative would serve trips with longer lengths than the No-Build Alternative. Similar to Opening Year (2030), the Build Alternative in Design Year (2050) would have higher-volume demand on the mainline freeway than the No-Build Alternative. The higher-volume demand on the freeway mainline in the Build Alternative would be from vehicles preferring to stay on the mainline as opposed to diverting to parallel facilities to the freeway.

Design Year (2050): Roadway Segment Analysis

Table 2.2.8-27 shows the projected Design Year (2050) ADT and roadway segment LOS under the No-Build and Build Alternatives. Because the Build Alternative would add capacity to the freeway and alleviate traffic on the mainline, vehicles that had previously used parallel streets to avoid I-15 congestion in the No-Build Alternative are assumed to route back to I-15 instead. This routing back onto I-15 would cause many parallel routes to experience a decrease in traffic volumes associated with the Project.

In the Design Year (2050) Build Alternative, 16 out of 62 roadway segments would be operating at LOS E, F, or deficiently. All 16 roadway segments that would be deficient in the Build Alternative are also deficient in the No-Build Alternative.

- Hidden Valley Parkway west of I-15 (LOS F)
- Hidden Valley Road east of I-15 (LOS F)
- Sixth Street west of Radio Road (LOS F)
- El Sobrante Road between Sixth Street and Magnolia Avenue (LOS E)
- Magnolia Avenue west of I-15 (LOS F)
- Magnolia Avenue east of I-15 (LOS F)
- Ontario Avenue west of I-15 (LOS F)
- Ontario Avenue east of I-15 (LOS E)
- El Cerrito Road west of I-15 (LOS F)
- Bedford Canyon Road south of El Cerrito Road (LOS F)
- Bedford Canyon Road north of El Cerrito Road (LOS E)
- Temescal Canyon Road between El Cerrito Avenue and Cajalco Road (LOS F)
- Temescal Canyon Road between Cajalco Road and Dos Lagos Drive (LOS F)

- Weirick Road between I-15 and Knabe Road (LOS F)
- Dos Lagos Drive east of I-15 (LOS F)
- Main Street west of I-15 (LOS F)

Table 2.2.8-27. Design Year (2050) Average Daily Traffic and Roadway Segment Level of Service

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
1	Hidden Valley Parkway west of I-15	Arterial	35,900	51,070	1.42	**F**	50,210	1.40	**F**
2	Hidden Valley Parkway east of I-15	Arterial	35,900	45,720	1.27	**F**	45,770	1.27	**F**
3	Parkridge Avenue west of Cresta Road	Secondary	34,800	25,070	0.72	C	24,300	0.70	B
4	Parkridge Avenue east of Cresta Road	Secondary	34,800	18,250	0.52	A	17,730	0.51	A
5	Cresta Road south of Parkridge Avenue	Collector	13,000	9,730	0.75	C	10,190	0.78	C
6	Sixth Street WEST of El Sobrante Road	Major Arterial	37,900	25,940	0.68	B	25,940	0.68	B
7	Sixth Street west of Radio Road	Major Arterial	37,900	39,830	1.05	**F**	39,630	1.05	**F**
8	Radio Road north of Sixth Street	Collector	13,000	11,310	0.87	D	11,270	0.87	D
9	El Sobrante Road between Sixth Street and Magnolia Avenue	Collector	13,000	12,600	0.97	**E**	12,850	0.99	**E**
10	Magnolia Avenue west of I-15	Major Arterial	54,300	60,880	1.12	**F**	61,110	1.13	**F**
11	Magnolia Avenue east of I-15	Major Arterial	54,300	63,220	1.16	**F**	64,210	1.18	**F**
12	Ontario Avenue west of I-15	Major Arterial	54,300	55,820	1.03	**F**	63,570	1.17	**F**
13	Ontario Avenue east of I-15	Major Arterial	37,900	42,310	1.12	**F**	34,350	0.91	**E**
14	Ontario Avenue north of El Cerrito Road	Major Arterial	54,300	42,610	0.78	C	27,630	0.51	A

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
15	El Cerrito Road west of I-15	Secondary	34,800	39,270	1.13	**F**	40,550	1.17	**F**
16	El Cerrito Road between I-15 and Temescal Canyon Road	Secondary	34,800	11,750	0.34	A	10,880	0.31	A
17	Bedford Canyon Road south of El Cerrito Road	Collector	13,000	19,790	1.52	**F**	14,460	1.11	**F**
18	Bedford Canyon Road north of El Cerrito Road	Collector	13,000	16,920	1.30	**F**	11,780	0.91	**E**
19	Evelyn Street	Collector	13,000	510	0.04	A	520	0.04	A
20	Frances Street	Collector	13,000	210	0.02	A	240	0.02	A
21	Katy Street	Collector	13,000	620	0.05	A	680	0.05	A
22	Liberty Avenue	Collector	13,000	7,560	0.58	A	5,610	0.43	A
23	Temescal Canyon Road between El Cerrito Avenue and Cajalco Road	Major Arterial	34,100	48,290	1.42	**F**	36,930	1.08	**F**
24	Temescal Canyon Road between Cajalco Road and Dos Lagos Drive	Major Arterial	37,900	52,760	1.39	**F**	41,010	1.08	**F**
25	Temescal Canyon Road between Dos Lagos Drive and Dawson Canyon Road	Major Arterial	34,100	34,970	1.03	**F**	21,530	0.63	B
26	Temescal Canyon Road between Dawson Canyon Road and I-15	Major Arterial	34,100	14,220	0.42	A	14,190	0.42	A
27	Temescal Canyon Road between I-15 and Lawson Road	Major Arterial	34,100	15,890	0.47	A	14,400	0.42	A

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
28	Temescal Canyon Road between Lawson Road and Trilogy Parkway	Arterial	18,000	14,380	0.80	C	12,330	0.69	B
29	Temescal Canyon Road between Trilogy Parkway and Campbell Ranch Road	Arterial	18,000	9,070	0.50	A	6,810	0.38	A
30	Temescal Canyon Road between Campbell Ranch Road and Indian Truck Trail Road	Major Arterial	34,100	8,900	0.26	A	7,640	0.22	A
31	Temescal Canyon Road between Indian Truck Trail Road and Horsethief Road	Major Arterial	34,100	18,350	0.54	A	9,850	0.29	A
32	Temescal Canyon Road between Horsethief Road and I-15 Frontage Road	Major Arterial	34,100	30,980	0.91	**E**	22,930	0.67	B
33	Temescal Canyon Road between Concordia Ranch Road and Lake Street	Major Arterial	34,100	30,740	0.90	**E**	22,680	0.67	B
34	Cajalco Road west of I-15	Major Arterial	54,300	11,870	0.22	A	11,870	0.22	A
35	Cajalco Road between I-15 and Grand Oaks	Major Arterial	54,300	26,990	0.50	A	23,580	0.43	A
36	Cajalco Road between Grand Oaks and Temescal Canyon Road	Major Arterial	54,300	18,510	0.34	A	17,560	0.32	A
37	Retreat Parkway west of Knabe Road	Secondary	25,900	5,550	0.21	A	5,450	0.21	A

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
38	Weirick Road between I-15 and Knabe Road	Secondary	25,900	33,380	1.29	**F**	34,620	1.34	**F**
39	Weirick Road north of Knabe Road	Secondary	25,900	990	0.04	A	970	0.04	A
40	Dos Lagos Drive east of I-15	Secondary	25,900	35,600	1.37	**F**	34,640	1.34	**F**
41	Knabe Road between Weirick Road and White Sage Street	Secondary	25,900	22,750	0.88	D	22,570	0.87	D
42	Knabe Road between White Sage Street and Hunt Road	Secondary	25,900	13,610	0.53	A	13,570	0.52	A
43	Campbell Ranch Road between Temescal Canyon Road and Mayhew Canyon Road	Secondary	25,900	4,310	0.17	A	3,040	0.12	A
44	Campbell Ranch Road between Mayhew Canyon Road and Indian Truck Trail	Secondary	25,900	19,090	0.74	C	15,140	0.58	A
45	De Palma Road between Indian Truck Trail and Horsethief Canyon Road	Secondary	25,900	11,990	0.46	A	9,590	0.37	A
46	Horsethief Canyon Road west of De Palma Road	Major Arterial	34,100	16,480	0.48	A	16,710	0.49	A
47	Horsethief Canyon Road between De Palma Road and Temescal Canyon Road	Major Arterial	34,100	16,490	0.48	A	13,280	0.39	A
48	Lake Street west of Temescal Canyon Road	Urban Arterial	53,900	22,630	0.42	A	23,130	0.43	A

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
49	Lake Street east of Temescal Canyon Road	Urban Arterial	53,900	40,250	0.75	C	38,750	0.72	C
50	Nichols Road west of Collier Road	Urban Arterial	53,900	18,090	0.34	A	14,710	0.27	A
51	Nichols Road between Collier Road and I-15	Urban Arterial	53,900	9,400	0.17	A	9,000	0.17	A
52	Nichols Road east of I-15	Urban Arterial	53,900	11,720	0.22	A	12,390	0.23	A
53	Collier Avenue between Nichols Road and Riverside Drive	Major Arterial	34,100	12,580	0.37	A	10,010	0.29	A
54	Collier Avenue between Riverside Drive and SR-74 (Central Avenue)	Urban Arterial	53,900	36,120	0.67	B	34,700	0.64	B
55	Collier Avenue south of SR-74 (Central Avenue)	Major Arterial	34,100	23,590	0.69	B	23,290	0.68	B
56	Dexter Avenue north of SR-74 (Central Avenue)	Secondary	25,900	20,720	0.80	C	21,030	0.81	D
57	Dexter Avenue south of SR-74 (Central Avenue)	Collector	13,000	11,270	0.87	D	11,370	0.87	D
58	SR-74 (Central Avenue) between Collier Avenue and I-15	Major Arterial	68,200	49,540	0.73	C	52,150	0.76	C
59	SR-74 (Central Avenue) between I-15 and Dexter Avenue	Urban Arterial	71,800	66,590	0.93[4]	E[4]	66,790	0.93[4]	E[4]

ID	Roadway Segment	Classification	Capacity[1]	Opening Year (2050) No-Build Alternative			Opening Year (2050) Build Alternative		
				Volume	V/C Ratio[2]	LOS	Volume	V/C Ratio[2]	LOS
60	SR-74 (Central Avenue) between Dexter Avenue and Cambern Avenue	Urban Arterial	71,800	56,260	0.78	C	55,500	0.77	C
61	SR-74 (Central Avenue) east of Cambern Avenue	Urban Arterial	71,800	49,520	0.69	B	49,590	0.69	B
62	Main Street west of I-15	Secondary	12,950	16,420	1.27[3]	**F[3]**	17,120	1.32[3]	**F[3]**

Source: Caltrans 2022

[1] Capacity for each roadway segment was determined by the number of lanes and roadway capacities as defined by the City of Corona, City of Lake Elsinore, and County of Riverside General Plans and Traffic Impact Study Guidelines.

[2] V/C ratio = ADT / Roadway Capacity

[3] The City of Lake Elsinore General Plan considers this V/C ratio as PEC and will accept PEC operations as "acceptable" if adjacent intersections are operating acceptably during the peak hour. Since adjacent intersection analysis was not part of the traffic study, the roadway was considered deficient.

[4] The City of Lake Elsinore General Plan considers this V/C ratio as approaching capacity and it is considered acceptable by City standards.

Bold and underlined font indicates deficient operations.

As shown in Table 2.2.8-27, in Design Year (2050), the roadway segments listed below are deficient under No-Build conditions, and V/C ratio would increase with the construction of the Project. In these cases, these roadway segments were near I-15 ramps, where more vehicles are choosing to access the freeway.

- Hidden Valley Road east of I-15 (LOS F)
- El Sobrante Road between Sixth Street and Magnolia Avenue (LOS E)
- Magnolia Avenue west of I-15 (LOS F)
- Magnolia Avenue east of I-15 (LOS F)
- Ontario Avenue west of I-15 (LOS F)
- El Cerrito Road west of I-15 (LOS F)
- Weirick Road between I-15 and Knabe Road (LOS F)
- Main Street west of I-15 (LOS F)

As shown in Table 2.2.8-27, in Design Year (2050), the following roadway segments that are operating at LOS E or worse would have a V/C ratio that remains the same or improves with the construction of the Project:

- Hidden Valley Parkway west of I-15 (LOS F)
- Sixth Street west of Radio Road (LOS F)
- Ontario Avenue east of I-15 (LOS E)
- Bedford Canyon Road south of El Cerrito Road (LOS F)
- Bedford Canyon Road north of El Cerrito Road (LOS E)
- Temescal Canyon Road between El Cerrito Avenue and Cajalco Road (LOS F)
- Temescal Canyon Road between Cajalco Road and Dos Lagos Drive (LOS F)
- Dos Lagos Drive east of I-15 (LOS F)

As shown in Table 2.2.8-27, in Design Year (2050), the roadway segments listed below are operating at LOS E under No-Build conditions but would improve to acceptable LOS with the construction of the Project. All segments are along Temescal Canyon Road where the amount of cut-through traffic would decrease such that the V/C ratio would decrease by as much as 0.35.

- Temescal Canyon Road between Dos Lagos Drive and Dawson Canyon Road (LOS F to LOS B)
- Temescal Canyon Road between Horsethief Road and I-15 Frontage Road (LOS E to LOS B)
- Temescal Canyon Road between Concordia Ranch Road and Lake Street (LOS E to LOS B)

All other study roadway segments would be operating at acceptable conditions in Design Year (2050), as shown in Table 2.2.8-27.

Design Year (2050): Summary of Traffic Operations

Table 2.2.8-28 shows the projected overall traffic analysis performance results between the No-Build and Build Alternatives under Design Year (2050) conditions and summarizes the findings from Table 2.2.8-23 through Table 2.2.8-27.

Table 2.2.8-28. Design Year (2050) Traffic Performance Metrics

Measure of Effectiveness		No-Build Alternative		Build Alternative	
Number of Freeway Mainline Locations[1]	Peak Hour LOS A, B, C, or D	112	51%	85	37%
	Peak Hour LOS E or F	108	49%	143	63%
Average Peak Period Travel Time (minutes)[2] [AM / PM]	SB I-15 GP Lanes	22 / 22		23 / 44	
	SB I-15 EL	-		19 / 21	
	NB I-15 GP Lanes	82 / 130		101 / 141	
	NB I-15 EL	-		26 / 31	
Peak Period Volume Served Change (vehicles)		-		-2,186[3]	
Peak Period Total Distance Traveled (miles)		-		+730,337	
Peak Period Total Vehicle Hours Delay Change (hours)		-		+20,663[4]	

Source: Caltrans 2022

[1] Mainline locations do not include express lane analysis locations

[2] Travel time was measured on SB I-15 from Hidden Valley Parkway overcrossing to Main Street undercrossing. Travel time was measured on NB I-15 from Main Street undercrossing to Hidden Valley Parkway overcrossing.

[3] Volume served is slightly skewed because vehicles in the No-Build Alternative may be double counted through exiting I-15, taking a local route, and then entering I-15 at a downstream location.

[4] Vehicle hours of delay do not include vehicles that are unable to enter the simulation model due to oversaturated conditions. As such, these increases with the Build Alternative largely would be due to vehicles that enter the network and travel through the corridor instead of being stuck in queue along the corridor.

EL = Express Lane; GP = general purpose

In Design Year (2050), the Build Alternative is projected to degrade traffic operation LOS at approximately 14 percent of the freeway mainline and ramp locations during the AM and PM peak hours when compared to the No-Build Alternative (Table 2.2.8-28). The number of freeway mainline segments operating unacceptably is expected to increase under the 2050 Build Alternative conditions when compared to the No-Build Alternative conditions primarily because the Project is projected to shift the bottlenecks downstream by providing additional throughput capacity (projected to serve 3,646 more vehicles during the peak hour). With the increased capacity that would be provided on the freeway system associated with the express lanes under the Build Alternative, more demand is expected to occur and to be served. The Build Alternative is projected to serve longer trip lengths on the freeway because vehicles are expected to prefer to stay on I-15 rather than exit and divert to cut through or parallel local facilities. On average, trip lengths are projected to increase by 1.6 miles between the No-Build and Build Alternatives. The delay within the traffic study area is expected to be reduced by 5.7 percent when accounting for local roadways.

The Build Alternative is expected to further improve traffic operations between Cajalco Road and Weirick Road/Dos Lagos Drive Off-Ramp and resolve the bottleneck at the Magnolia Avenue On-Ramp during the PM peak hour and eliminate the NB I-15 bottleneck at Weirick Road/Dos Lagos Drive during the AM peak hour.

Under Design Year (2050) conditions, the Build Alternative would lead to an increase in annual VMT. This is expected to increase between the Existing (2019) and the Opening Year (2030) and Design Year (2050) scenarios. The expected increase in VMT across all alternatives, including the No-Build Alternative, is a result of land use growth and population growth assumed in the future year travel demand model. Refer to Section 3.3, *Climate Change,* for VMT discussion.

Pedestrian and Bicycle Facilities

No Project elements are proposed that would include modifications to existing or future local sidewalks, crosswalks, ADA access and connectivity, or other pedestrian facilities; therefore, no permanent impacts on pedestrian facilities, including ADA-compliant facilities, are anticipated. Although the Project widens existing mainline freeway bridge structures, there are no permanent impacts on any existing pedestrian facilities. For information on bicycle facilities, please refer to Section 2.2.2, *Parks and Recreational Facilities*, and Appendix A, *Section 4(f) Evaluation*.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. None of the improvements proposed under the Build Alternative would be constructed under the No-Build Alternative. As a result, the No-Build Alternative would not result in temporary impacts related to traffic and circulation or to pedestrian or bicycle facilities.

Opening Year (2030): Freeway Operations Analysis

AM Peak Hour: SB I-15

Under the Opening Year (2030) No-Build Alternative, all study locations including freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the AM peak hour. See Table 2.2.8-17 and Table 2.2.8-19.

AM Peak Hour: NB I-15

Under the Opening Year (2030) No-Build Alternative, all study locations including freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the AM peak hour. See Table 2.2.8-18 and Table 2.2.8-19.

PM Peak Hour: SB I-15

Under the Opening Year (2030) No-Build Alternative, the SB I-15 bottleneck at the Cajalco Road Interchange is exacerbated with the termination of the ELP. As such, it creates a queue that extends to the EB SR-91 On-Ramp. That queue length is approximately 4.8 miles from the Cajalco Road On-Ramp. The demand from EB SR-91 cannot be fully served during the peak hour and will spill back onto EB SR-91. Additionally, five various SB I-15 freeway segments between Temescal Canyon On-Ramp and Lake Street Off-Ramp and two SB I-15 freeway segments near the Main Street Off-Ramp are projected to operate at LOS E. All other freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour. See Table 2.2.8-17 and Table 2.2.8-19.

PM Peak Hour: NB I-15

Under the Opening Year (2030) No-Build Alternative, the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment creates a queue that extends to the Indian Truck Trail On-Ramp with a queue length of approximately 10 miles. Due to that bottleneck, segments in queue are projected to operate at LOS E or F. All other freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the PM peak hour. See Table 2.2.8-18 and Table 2.2.8-19.

Opening Year (2030): Travel Time Peak Period

Travel Time Peak Period: SB I-15

Under the No-Build Alternative, travel times are projected to peak on SB I-15 general purpose lanes during the PM peak period from 3:30 to 8:00 p.m.; peak travel time (50 minutes) is expected to occur around 5:30 p.m.

Travel Time Peak Period: NB I-15

Under the No-Build Alternative, travel times are projected to peak on NB I-15 general purpose lanes during the PM peak period from 2:00 p.m. to 6:00 p.m., peak travel time (68 minutes) is expected to occur around 3:30 p.m. The travel time is primarily

influenced by the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment.

Opening Year (2030): System-Wide Performance

In Opening Year (2030), a typical vehicle on the I-15 corridor would experience more delay in traveling by 2 seconds during the AM peak period and by 33 seconds during the PM peak period under the No-Build Alternative than under the Build Alternative when comparing the average delay per vehicle, as shown in Table 2.2.8-20. In addition, the No-Build Alternative in Opening Year (2030) has lower-volume demand on the freeway mainline by 2,089 fewer vehicles than the Build Alternative, as shown in Table 2.2.8-20. The lower-volume demand on the freeway mainline in the No-Build Alternative is from vehicles preferring to divert from the mainline to parallel facilities to the freeway to avoid congestion on I-15.

Opening Year (2030): Roadway Segment Analysis

As shown in Table 2.2.8-21, under the No-Build Alternative in Opening Year (2030), seven out of 62 roadway segments are projected to operate at LOS E or F or deficiently. Five of these seven failing segments are projected to operate at LOS E or F or deficiently in Existing Conditions and remain over capacity when the roadway volumes were forecasted to 2030 conditions. These seven segments are:

- Hidden Valley Parkway west of I-15 (LOS F)
- Hidden Valley Parkway east of I-15 (LOS F)
- Magnolia Avenue west of I-15 (LOS F)
- Temescal Canyon Road between El Cerrito Avenue and Cajalco Road (LOS E)
- Weirick Road between I-15 and Knabe Road (LOS E)
- Dos Lagos Drive east of I-15 (LOS F)
- Main Street west of I-15 (LOS F or PEC)

Otherwise, all other study roadway segments are projected to operate at LOS D or better.

Opening Year (2030): Summary of Traffic Operations

In Opening Year (2030), the No-Build Alternative is projected to experience congestion on SB I-15 due to a bottleneck at the Cajalco Road On-Ramp during the PM peak hour and on NB I-15 due to a bottleneck at the WB Magnolia Avenue On-Ramp during the AM peak hour, where the weave between the Magnolia Avenue On-Ramp and SR-91 Off-Ramp breaks down but is outside the Project limits.

Design Year (2050): Freeway Operations Analysis

AM Peak Hour: SB I-15

As shown in Table 2.2.8-23 and Table 2.2.8-25, all freeway mainline segments, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the AM peak hour under the Design Year (2050) No-Build Alternative with the exception of the segments listed below that would be expected to operate at LOS E or worse due to a new bottleneck at Ontario Avenue Off-Ramp. The Ontario Avenue Off-Ramp bottleneck is anticipated to form in the year 2044. This bottleneck exists in the No-Build and Build Alternatives and would improve slightly with the Project.

- EB SR-91 Off-Ramp
- Magnolia Avenue On-Ramp to Ontario Avenue Off-Ramp
- Ontario Avenue Off-Ramp

AM Peak Hour: NB I-15

As shown in Table 2.2.8-24 and Table 2.2.8-25, all freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the AM peak hour under the Design Year (2050) No-Build Alternative with the exception of the segments discussed below.

- NB I-15 bottleneck at the Weirick Road/Dos Lagos Drive On-Ramp merge segment would create a queue that extends past Main Street with a queue length extending past the model limits that cannot be measured. Due to the bottleneck, segments in queue are projected to operate at LOS F.
- Due to high serving volumes, the El Cerrito Road On-Ramp and Ontario Avenue Off-Ramp are projected to operate at LOS E during the peak hour.

The Weirick Road/Dos Lagos Drive On-Ramp bottleneck is anticipated to form in the year 2039. This bottleneck exists in the No-Build Alternative only.

PM Peak Hour: SB I-15

Under the Design Year (2050) No-Build Alternative, the SB I-15 bottleneck at the Ontario Avenue Interchange would extend to the Magnolia Avenue Interchange with a queue length of approximately 1.5 miles. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. Downstream of Ontario Avenue there are slowdowns at each interchange ramp between El Cerrito and Horsethief Canyon, where vehicles are navigating to and from the on/off-ramps of the freeway; segments in queue due to the slowdown are projected to operate at LOS E or F. All other freeway mainline segment, ramps, and express lanes on SB I-15 are projected to operate at LOS D or better during the PM peak hour. See Table 2.2.8-23 and Table 2.2.8-25.

PM Peak Hour: NB I-15

Under the Design Year (2050) No-Build Alternative, the NB I-15 bottleneck at the WB Magnolia Avenue On-Ramp merge segment would create a queue that extends past Main Street and the model limits. The queue cannot be measured and/or is greater than 15 miles in length. Due to the bottleneck, segments in queue are projected to operate at LOS E or F. All other freeway mainline segments, ramps, and express lanes on NB I-15 are projected to operate at LOS D or better during the PM peak hour. See Table 2.2.8-24 and Table 2.2.8-25.

Design Year (2050): Travel Time Peak Period

Travel Time Peak Period: SB I-15

Under the No-Build Alternative, travel times on SB I-15 general purpose lanes range between 19 and 25 minutes.

In Design Year (2050) No-Build, the travel times have improved when comparing to the Opening Year (2030) No-Build scenario. With the construction of CETAP West in Design Year (2050), approximately 7,500 vehicles traveling SB on I-15 during the 7-hour peak period prefer to exit at Cajalco Road Off-Ramp to CETAP West rather than continuing south on I-15. As a result of this preference to take CETAP West over I-15, Opening Year (2030) forecasts are lower on the mainline freeway south of the Cajalco Road Interchange.

Travel Time Peak Period: NB I-15

Under the No-Build Alternative, travel times on NB I-15 general purpose lanes begin to exceed 40 minutes after 5:15 a.m. due to the bottleneck at the Weirick Road/Dos Lagos Road On-Ramp merge segment.

Design Year (2050): System-Wide Performance

As shown in Table 2.2.8-26, the No-Build Alternative in Design Year (2050) has lower volume demand on the freeway mainline by 18,337 fewer vehicles than the Build Alternative. In addition, under the No-Build Alternative, the total distance traveled on the freeway mainline would be 262,431 fewer miles than under the Build Alternative. When comparing the volume served and total distance traveled, it can be concluded that the No-Build Alternative serves trips with shorter lengths than the Build Alternative. Similar to Opening Year (2030), the No-Build Alternative in Design Year (2050) has lower-volume demand on the mainline freeway than the Build Alternative. The lower-volume demand on the freeway mainline in the No-Build Alternative is from vehicles preferring to divert from the mainline to parallel facilities to the freeway to avoid congestion on I-15.

Design Year (2050): Roadway Segment Analysis

As shown in Table 2.2.8-27, under the No-Build Alternative in Design Year (2050), 19 out of 62 roadway segments are projected to operate at LOS E or F or deficiently. Seven of the 19 segments are also projected to operate deficiently in Opening Year

(2030) conditions and remain over capacity when the roadway volumes are forecasted to 2050 conditions.

Design Year (2050): Summary of Traffic Operations

In Design Year (2050), the No-Build Alternative is projected to experience congestion on SB I-15 due to a bottleneck at the Magnolia Avenue On-Ramp during the PM peak hour and it would have congestion on NB I-15 due to a bottleneck at the Weirick Road/Dos Lagos Road On-Ramp during the AM peak hour and at the WB Magnolia Avenue On-Ramp during the PM peak hour where the weave between the Magnolia Avenue On-Ramp and SR-91 ramps breaks down.

Pedestrian and Bicycle Facilities

The No-Build Alternative would not result in permanent impacts related to pedestrian or bicycle facilities, including ADA-compliant facilities.

2.2.8.4 Avoidance, Minimization, and/or Mitigation Measures

The Project will incorporate the Standard Project Measure below to minimize potential construction-related traffic and circulation impacts and impacts on pedestrian and bicycle facilities.

TR-1. Transportation Management Plan. During the Plans, Specifications, and Estimates phase, a detailed Transportation Management Plan (TMP) will be developed for implementation prior to and during construction. Some of the key elements recommended in the TMP include the following:

- Public information/public awareness campaign
- Motorist information strategies
- Incident management
- Construction strategies
- Demand management
- Alternate route Strategies

The TMP will contain elements to reduce traveler delay and enhance traveler safety. These elements will be developed during final design and incorporated in the TMP for implementation during Project construction.

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2.2.9 Visual/Aesthetics

2.2.9.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA), in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest, considering adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

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

California Streets and Highways Code Section 92.3 directs Caltrans to use drought-resistant landscaping and recycled water when feasible and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

2.2.9.2 Affected Environment

This section was prepared based on findings from the *Visual Impact Assessment – Interstate 15 (I-15) Express Lanes Project Southern Extension* (VIA) prepared for the Project in 2024 (Caltrans 2024). The VIA evaluates potential visual impacts of the Project based on the guidance from FHWA in *Visual Impact Assessment for Highway Projects.* The following key terms describe the visual resources and general landscape in the Project corridor and are used in assessing visual impacts throughout this section.

- *Visual Character* includes attributes of form, line, color, and texture, and it is used to describe, not evaluate, visual resources.
- *Visual Quality* is evaluated based on the attributes of vividness (the extent to which the landscape is memorable), intactness (integrity of visual features in the landscape and extent of visual obstructions), and unity (combination of visual elements in a coherent pattern).
- *Resource Change* is one of two variables that determines visual impact. It is determined by evaluating the visual character and visual quality of the visual resources within the Project corridor before and after the construction of the Project.
- *Viewer Response* is the second variable that determines visual impact. It is a measure or prediction of how the viewer would react to changes in the visual environment. The two dimensions of viewer response are viewer exposure (viewer's

ability to physically see an object; attributes include location, quantity, and duration) and viewer sensitivity (viewer's recognition of an object; attributes include activity, awareness, and local values).

- *Visual Impact:* Level of visual impact is evaluated based on combining resource change and viewer response.

Visual quality, resource change, viewer response, and visual impact are assigned a level of low, moderately low, moderate, moderately high, or high for the visual resource or landscape they are describing.

Additionally, the following terms are used throughout this section and are defined below to provide clarity:

- *Project limits:* Includes the physical extent of Project components.

- *Project corridor or corridor:* Includes the Project limits as well as the surrounding area that encompasses all visual assessment units (VAUs), as to be discussed below.

- *Project viewshed:* Includes the geographical areas, generally of higher scenic value, visible from either a specific or general vantage point within the Project corridor.

Project Location and Setting

The Project is on Interstate (I-) 15 between Post Mile (PM) 20.3 in the City of Lake Elsinore and PM 40.1 in the City of Corona, in Riverside County, California. The Project corridor also includes a portion of the unincorporated Riverside County community of Temescal Valley.

The Project is in the South Coast Range bioregion of Southern California. The landscape is characterized by local hillsides and distant mountains, with a predominantly urban landcover and pockets of rural communities. The Project is in western Riverside County, with general land uses in this region consisting of predominantly residential, commercial, and industrial development. Land uses in the Project corridor are further characterized below by southern, middle, and northern portions:

- The southern portion of the Project corridor is in the City of Lake Elsinore on both sides of I-15. The portion of the city in the Project corridor contains the following types of land uses: commercial, education-related, industrial, open space and recreation, and multiple types of residential.

- The middle portion of the Project corridor is in the unincorporated Riverside County community of Temescal Valley on both sides of I-15. The area has a lower residential density but includes similar land uses to the other communities surrounding the Project corridor, including commercial, industrial, open space and recreation, and residential uses.

- The northern portion of the Project corridor is in the City of Corona on both sides of I-15. The portion of Corona in the Project corridor is situated in a valley and is more urbanized than the southern and middle portions of the Project corridor; land uses in this area are mainly residential, education-related, commercial, and industrial.

The portion of I-15 within the Project limits is not within a designated State Scenic Highway; however, it has been identified as eligible for the State Scenic Highway Program, occurring from PM 20.3 to PM 40.1. The Project is not anticipated to change the eligibility status of I-15 for the State Scenic Highway Program within the Project limits. Since the Project is not within an officially designated State Scenic Highway, a scenic resource evaluation was not prepared for the Project in the VIA.

Types of Viewers

Viewers within the Project corridor include highway neighbors (views *to* the road) and highway users (views *from* the road). For this Project, the following highway neighbors were considered:

- Residents
- Recreational users
- Educational users
- Commercial and industrial operators

For this Project, the following highway users were considered:

- Highway travelers (i.e., commuting travelers, touring travelers, shipping travelers, motoring travelers, and haulers)
- Other local travelers (i.e., pedestrians and bicyclist travelers)

Group Viewer Response

Viewer response is a measure or prediction of how the viewer would react to changes in the visual environment and has two dimensions: viewer exposure and viewer sensitivity. Recreational neighbors are the most sensitive viewer group, while educational users, highway travelers, and other local travelers are considered to have the highest viewer exposure, described in detail in the VIA for each viewer group (Caltrans 2024). The viewer response along the Project corridor overall is expected to be low to moderately high. Table 2.2.9-1 summarizes the overall viewer response determinations for each viewer type.

Table 2.2.9-1. Viewer Response Ratings

Viewer Type	Viewer Exposure	Viewer Sensitivity	Viewer Response
Residents	Moderately low	Moderate	Moderate
Recreational users	Moderately low	Moderately high	Moderate
Educational users	Moderate	Low	Moderately low
Commercial and industrial operators	Low	Low	Low
Highway travelers	Moderate	Moderate	Moderate
Other local travelers	Moderate	Moderate	Moderate

Visual Resources

Visual resources of the Project setting are defined and identified below by assessing visual character and visual quality of the Project corridor. The distance zone descriptions outlined below are used to describe the location of visual resources for the Project.

- *Foreground*: 0 to 0.25–0.5 mile.
- *Middle ground*: Extends from the foreground zone (0.25–0.5 mile) to 3–5 miles from the viewer in relation to the landscape.
- *Background:* Extends from the middle ground zone (3–5 miles) to infinity.

Visual resources of the Project setting are defined and identified below by assessing visual character and visual quality in the Project corridor.

Visual resources are those that do not fit the definition of a scenic resource, which are officially recognized by a government agency or non-governmental organization, but still enhance or contribute to the visual quality and character of the Project corridor.

- **Bedford Wash.** Bedford Wash intersects I-15 south of Cajalco Road and contains riparian vegetation and seasonal waterflow. The Project corridor contains foreground views of Bedford Wash.
- **Temescal Valley.** Identifying features of the Temescal Valley include the Temescal Wash, the I-15 corridor, and low-lying areas with urban development. Background views include the Santa Ana Mountains, and middle ground views include the low-lying Gavilan Hills. The Temescal Wash (Temescal Creek) connects Lake Elsinore with the Santa Ana River and crosses I-15 twice within the Project corridor; however, the majority of the wash is not visible from I-15. The Gavilan Hills and Gavilan Plateau are east of I-15 and are classified as a mineral resource area for aggregate

rock with a history of extensive mining. The Project corridor contains foreground and middle ground views of Temescal Valley.

- **Santa Ana Mountains.** The Santa Ana Mountains are one of the most dominant identifying natural features of western Riverside County. The range is highly visible from the I-15 corridor, specifically from El Cerrito Road in Corona to State Route (SR-) 74 (Central Avenue) in Lake Elsinore within the Project corridor. The Project corridor contains background views of the Santa Ana Mountains.

- **Walker Canyon.** Walker Canyon is in the City of Lake Elsinore, just east of the Alberhill community area. It is a scenic and recreational area known as a popular site for seasonal viewing of the California poppy (*Eschscholzia californica*) bloom. The hills forming the canyon are highly visible from I-15 within the Project corridor; however, the main wildflower viewing area is farther away from I-15, just east of Walker Canyon Road. The Project corridor contains foreground views of Walker Canyon.

- **San Gabriel Mountains.** The San Gabriel Mountains, within the Southern California Transverse Ranges, are highly visible in clear weather conditions traveling northbound along I-15 in the northern portion of the Project corridor. The Project corridor contains background views of the San Gabriel Mountains.

Visual Character and Visual Quality

The visual character of the Project corridor is a mix of urban land use types in its northern and southern portions, with areas of rural and low-density and medium-density residential communities. The Project corridor has minimal areas of unobstructed Project viewshed, limited to the canyon area north of urbanized Lake Elsinore to just north of Nichols Road. When compared to the existing urban and transportation-oriented landscape surrounding the Project corridor, the implementation of the Project to this portion of I-15 under the Build Alternative would be consistent in form and scale with the visual character of the area. Additionally, the Project would be a direct continuation of the I-15 Express Lanes Project (EA: 0J0804), which runs from north of El Cerrito Road in Corona to SR-60 in the City of Eastvale, thus providing continuity to the currently established visual character of the transportation corridor of the region.

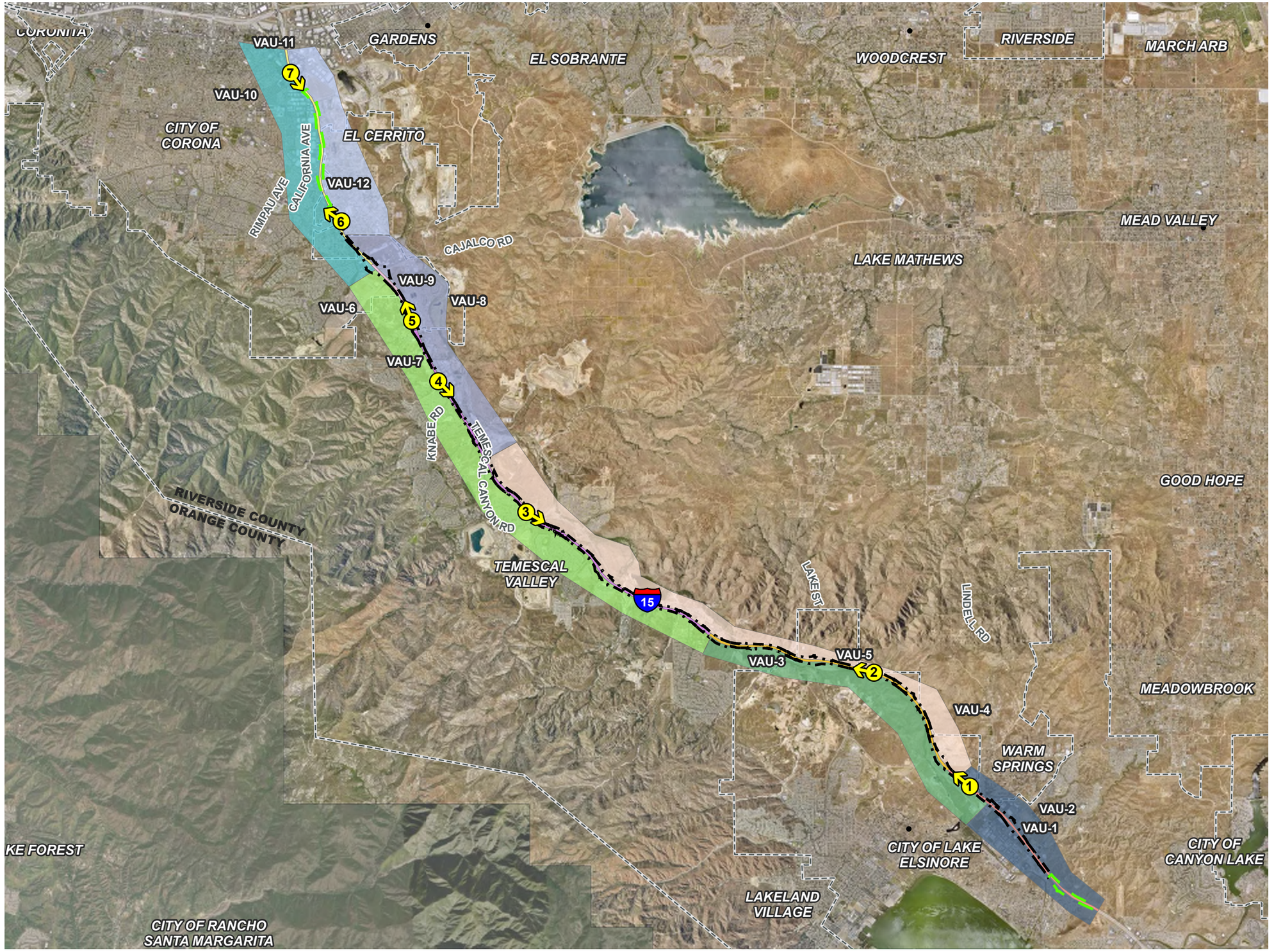
Visual resources in the Project corridor include foreground views of Bedford Wash, Temescal Valley, and Walker Canyon; middle ground views of greater Temescal Valley and Walker Canyon; and background views of the Santa Ana Mountains and San Gabriel Mountains. Walker Canyon is considered a valuable visual resource known for its seasonal views of the California poppy bloom, which is visible from I-15. Walker Canyon has a high visual quality for the vividness of the California poppy on its hillsides and its strong tourist attraction. Overall, the Project corridor has unity, but moderate-low vividness and intactness. The visual quality of the existing Project corridor is considered moderately low.

Visual Assessment Units and Key Views

The Project corridor was divided into a series of 12 "outdoor rooms" or VAUs, each with unique visual character and visual quality. Additionally, seven key view (KV) locations are proposed and were selected as a representation of the visual character and visual quality of the area within and adjacent to the Project corridor. Visual simulations were prepared for six of the seven KV locations (Figure 2.2.9-1, shown in yellow). The following 12 VAUs and, if applicable, their associated KVs (see Figure 2.2.9-1) have been identified and are described below.

1. **Visual Assessment Unit 1 (VAU-1): I-15 Freeway Unit – Southern Express Lane Terminus.** This VAU encompasses the southern extent of the Project limits, extending from the southern express lanes' proposed terminus at PM 40.1, to approximately 0.2 mile southeast of the I-15/Nichols Road overcrossing. This VAU is entirely within the Caltrans right of way (ROW). VAU-1 represents the typical views while traveling along I-15 in this portion of the Project corridor, with commercial and residential uses associated with VAU 2 in the foreground and the Santa Ana Mountains in the background. VAU-1 includes the following KV location:
    - *Key Viewpoint 1 (KV-1): I-15 Freeway Unit Southern Express Lane Terminus.* KV-1 is located on northbound (NB) I-15, west of Temescal Canyon High School in the City of Lake Elsinore. KV-1 is oriented northwest with foreground views of NB and southbound (SB) I-15 and distant views to hillsides above the Alberhill community. This KV demonstrates how the center median and entrance into the I-15 NB express lanes would appear upon implementation of the Project.

2. **Visual Assessment Unit 2 (VAU-2): Lake Elsinore Mixed Residential Commercial.** VAU-2 extends from the southern portion of the Project limits, at the southern express lanes' proposed terminus at PM 40.1, to just west of Riverside Drive south of I-15 and west of Temescal Valley High School north of I-15. VAU-2 represents the typical view of the Project corridor from a highway traveler's perspective, containing views of commercial uses in the foreground and background views of the Santa Ana Mountains. There are no KV locations selected for this VAU given the lack of critical or particularly representative components of visual character.
3. **Visual Assessment Unit 3 (VAU-3): Rural and Open Space South of I-15.** VAU-3 extends from south of I-15, approximately west of Temescal Canyon High School and west to Temescal Canyon Road. This VAU was selected based on its recreational uses, open space characteristics, and commercial centers that are representative of area's developed communities. Walker Canyon is within this VAU and provides seasonal viewing of the California poppy bloom in the Walker Canyon Ecological Reserve. This VAU includes a more prominent presence of natural landscape and trees. The northern portion of VAU-3 includes views of transmission lines running alongside I-15. The Temescal Wash crosses under I-15 in this VAU, but it is concrete lined and not visible. There are no KV locations selected for this VAU given the lack of critical or particularly representative components of visual character.



Legend

Project Limits

- Limits of Disturbance
- Advance Signage/Striping Areas
- City/County Boundary
- Proposed Key Viewpoints

Visual Assessment Unit

- VAU-1 - I-15 Freeway Unit Southern Express Lane Terminus
- VAU-2 - Lake Elsinore Mixed Residential Commercial
- VAU-3 - Rural and Open Space South of I-15
- VAU-4 - Open Space North of I-15
- VAU-5 - I-15 Freeway Unit - Alberhill Area
- VAU-6 - Residential South of I-15
- VAU-7 - I-15 Freeway Unit - Temescal Canyon
- VAU-8 - Mixed Use Northwest of I-15
- VAU-9 - I-15 Easterly Alignment Shift Freeway Unit
- VAU-10 - City of Corona Residential/Commercial Unit West of I-15
- VAU-11 - I-15 Freeway Unit Northern Terminus
- VAU-12 - City of Corona Residential/Commercial Unit East of I-15

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Figure 2.2.9-1
Visual Assessment Units and Key Views
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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4. **Visual Assessment Unit 4 (VAU-4): Open Space North of I-15.** VAU-4 extends roughly from Temescal Canyon High School northwest to the Temescal Canyon Road On- and Off-Ramp. Similar to VAU-3, this VAU was selected based on its recreational uses, such as hiking and walking trails, and open-space characteristics. This VAU contains views of recreational and open space land uses, including Walker Canyon, with small pockets of commercial and industrial development adjacent to I-15. Transmission lines run along I-15 in the northern portion of VAU-4. No KV locations were selected for this VAU given the lack of critical or particularly representative components of visual character.
5. **Visual Assessment Unit 5 (VAU-5): I-15 Freeway Unit – Alberhill Area.** VAU-5 comprises NB and SB I-15, from approximately 0.2 mile south of the Nichols Road overcrossing north to approximately 0.4 mile south of Horsethief Canyon Road. This VAU is entirely within the Caltrans ROW. VAU-5 includes typical views of open space land uses associated with VAU-3 and VAU-4 from a highway traveler's perspective within this portion of the Project corridor. I-15 currently contains three travel lanes in both directions and a center median containing non-native vegetation as well as native scrub species, such as buckwheat, throughout this VAU. VAU-5 includes the following KV location:
    - *Key Viewpoint 2 (KV-2): I-15 Freeway Unit – Alberhill Area.* KV-2 is located on NB I-15, approximately 0.9 mile south of the Lake Street undercrossing, with views to the west and east sides of I-15. This KV was selected as a representation of how the constructed express lanes and paved center median would appear among views of the scenic hillsides on both sides of I-15. The California seasonal superbloom occurs alongside Walker Canyon and can also be visible from this KV with incorporated Project improvements.
6. **Visual Assessment Unit 6 (VAU-6): Residential Units South of I-15.** VAU-6 encompasses the area within the Project corridor south of I-15, from approximately 0.4 mile south of Horsechief Canyon Road, extending north to approximately Cajalco Road. This VAU includes views of adjacent residential, industrial, commercial, and rural community land uses, as well as views of the Santa Ana Mountains and local hillsides. Transmission lines along I-15 are also present throughout the majority of this VAU. VAU-6 includes the following KV location:
    - *Key Viewpoint 4 (KV-4): Residential Unit West of I-15.* KV-4 is on the east side of Knabe Road (adjacent to the Caltrans ROW on the west side of the I-15 corridor) and approximately 50 feet south of the Evonvale Drive and Knabe Road intersection, with views to the southeast. This KV was selected to represent the appearance of the proposed express lanes and paved center median from the perspective of an adjacent residential area upon implementation of the Project improvements.
7. **Visual Assessment Unit 7 (VAU-7): I-15 Freeway Unit – Temescal Canyon Area.** VAU-7 comprises NB and SB I-15, from approximately 0.4 mile south of Horsethief Canyon Road extending north, to approximately Weirick Road. This VAU is located entirely within Caltrans ROW. This VAU represents typical views while traveling

along I-15 in this portion of the Project corridor. It contains views of adjacent residential, commercial, and industrial development; the Santa Ana Mountains; and the seasonal California poppy bloom. I-15 contains three travel lanes in both directions and a non-native grass center median throughout this VAU. VAU-7 includes the following KV locations:

- *Key Viewpoint 3 (KV-3): I-15 Freeway Unit – Temescal Valley.*

  - KV-3a is on SB I-15, less than 1.0 mile south of the Temescal Canyon Road On- and Off-Ramp, with a view to the south of I-15. This KV was selected to represent the appearance of the bridge median widening and express lanes over Coldwater Wash upon implementation of the Project.

  - KV-3b is on SB I-15, approximately 1.0 mile south of the Temescal Canyon Road On- and Off-Ramp, with a view to the southwest side of the I-15. This KV was selected to represent the appearance of the express lanes and paved center median among neighboring scenic hillsides upon implementation of the Project.

8. **Visual Assessment Unit 8 (VAU-8): Mixed Use Northwest of I-15.** VAU-8 encompasses the northeastern side of I-15, extending from the Temescal Canyon Road Off-Ramp to Liberty Avenue. This VAU contains views of adjacent industrial, commercial, business, community center, and residential land uses, as well as views of the Santa Ana Mountains, local hillsides, and the San Gabriel Mountains. VAU-8 also contains views of I-15, numerous billboards, and the existing advanced signage and express lanes system north of El Cerrito Road. No KV locations were selected for this VAU given the lack of critical or particularly representative components of visual character.
9. **Visual Assessment Unit 9 (VAU-9): I-15 Freeway Unit – Easterly Alignment Shift.** This VAU encompasses NB and SB I-15 from just north of the Weirick Road undercrossing to just north of the Cajalco Road overcrossing. VAU-9 includes views of commercial and residential development, advanced signage for the existing tolled express lanes system north of El Cerrito Road, as well as the Santa Ana Mountains, local hillsides, and the San Gabriel Mountains. Bedford Wash is visible from I-15 within this VAU; however, the view of the riparian area is obstructed partially by the existing Cajalco Road Off-Ramp. I-15 contains three travel lanes in both directions and a non-native grass center median throughout this VAU. VAU-9 includes the following KV location:

   - *Key Viewpoint 5 (KV-5): I-15 Easterly Alignment Shift Freeway Unit.* KV-5 is located on I-15 northbound approximately 0.1 mile north of the Weirick Road undercrossing with views to the north. This KV represents the appearance of the express lanes, proposed noise barriers, overhead freeway signage and tolling equipment, and the freeway centerline shift from the perspective of a highway user.

10. **Visual Assessment Unit 10 (VAU-10): City of Corona Residential/Commercial Unit West of I-15.** This VAU encompasses the residential and commercial areas west of I-15 from approximately Cajalco Road to East 6th Street. Views from VAU-10 include the adjacent commercial, industrial, education-related, and residential land uses, as well as the San Gabriel Mountains in clear weather conditions. This VAU also includes the transition of I-15 from the three travel lanes and center median to the established tolled express lanes system with a fully paved center median beginning north of Cajalco Road. A noise barrier was constructed as a part of the I-15 Express Lanes Project (EA: 0J0804) along the western side of I-15, separating residential areas from the I-15 corridor. No KV locations were selected for this VAU given the lack of critical or particularly representative components of visual character.
11. **Visual Assessment Unit 11 (VAU-11): I-15 Freeway Unit – Northern Terminus.** This VAU encompasses the northern extent of I-15 within the Project limits, from approximately Cajalco Road north to East 6th Street. This VAU is located entirely within the Caltrans ROW. VAU-11 represents typical views while traveling along I-15 in this portion of the Project corridor, including views of the San Gabriel Mountains traveling NB in clear weather conditions, the Santa Ana Mountains traveling SB, as well as adjacent commercial, industrial, and residential development alongside I-15. This VAU marks the transition of I-15 from the three travel lanes in both directions and center median to the established tolled express lane system, with a fully paved center median beginning north of Cajalco Road. Noise barriers for residential corridors have been constructed by previous projects along SB I-15 in a portion of this VAU at the start of the tolled express lane system. Advanced signage and electronic overhead tolling signage are also included with the start and duration of the tolled express lane system. This VAU includes the following KV location:
    - *Key Viewpoint 6 (KV-6): City of Corona Residential/Commercial Unit East of I-15.* KV-6 is located at the intersection of El Cerrito Road and Frances Street with views to the northwest. This KV represents the freeway embankment from local streets looking toward the express lanes.
12. **Visual Assessment Unit 12 (VAU-12): City of Corona Residential/Commercial Unit East of I-15.** This VAU encompasses the area east of I-15 from approximately Liberty Avenue to East 6th Street. VAU-12 includes the northern terminus of the Project corridor, from Liberty Avenue to El Cerrito Road. Views from this VAU consist of the San Gabriel Mountains in clear weather conditions, as well as surrounding industrial/commercial, residential, and recreational land uses. This VAU signifies the transition of the Project corridor into the surrounding area. VAU-12 includes the following KV location:
    - *Key Viewpoint 7 (KV-7): I-15 Freeway Unit Northern Terminus.* KV-7 is located on SB I-15, approximately 0.1 mile north of Magnolia Avenue with views to the southeast. This KV represents the express lanes and associated infrastructure along I-15, showing little visual change as compared to the existing conditions.

2.2.9.3 Environmental Consequences

Build Alternative

Temporary Impacts

Construction of the Project is anticipated to last approximately 21 months, which may result in short-term, minor visual impacts. Daytime, nighttime, weekday, weekend, and extended weekend construction have been approved for the Project. Highway travelers and residents near this portion of the I-15 would experience minor visual impacts during construction of the Project.

Temporary construction impacts may result from the implementation of staging areas, warning/advanced signage, and on-site storage of construction equipment. Highway travelers may experience visual impacts from dust created by the construction of noise barriers and retaining walls, as well as the entering and exiting of construction vehicles. The Project would require nighttime construction, in addition to night security lighting of staging areas, which would result in visual impacts for highway travelers from increased glare. There are multiple residential areas adjacent to the Project corridor that would experience temporary impacts from these Project components during construction. However, Avoidance and Minimization Measure **AES-4** will reduce or avoid potential effects from lighting and glare during construction.

The impacts disclosed above from construction of the Project are temporary and relatively short in duration. Avoidance and minimization measures are proposed in Section 2.2.9.4, *Avoidance, Minimization, and/or Mitigation Measures,* and are expected to reduce or avoid temporary visual impacts.

Permanent Impacts – Visual Assessment

A visual assessment for each of the Project KV locations within their respective VAUs was conducted to consider permanent visual impacts under the Build Alternative. The assessment is included in the VIA and is summarized below.

VAU-1: I-15 Freeway Unit – Southern Express Lane Terminus; KV-1 from I-15 Looking Northwest

Figure 2.2.9-2. KV-1 Existing Condition

Viewer Response. KV-1 represents the perspective of a highway traveler and recreator from the center median entrance into the I-15 express lanes (Figure 2.2.9-2). This portion of the I-15 corridor is highly traveled as a connective corridor to the SR-91 and SR-74 (Central Avenue) highways. KV-1 experiences traffic congestion and slower speeds than other portions of I-15, which increases viewer exposure. There are no bicycle routes located adjacent to the highway. The addition of a center median entrance in this area would be consistent with other large-scale signs along the highway associated with the commercial businesses. Highway travelers would continue to have a background view of the adjacent hillsides and Santa Ana Mountains. Overall viewer response is considered low.

Figure 2.2.9-3. Key View 1 Proposed Condition – Build Alternative

Resource Change. As shown on Figure 2.2.9-3, the visual changes would be limited to the paving of the center median to accommodate the southern extent of the NB and SB express lanes and the first entrance into the express lanes on NB I-15. The overall highway landscape would remain similar to the existing condition, with the exception of the introduction of the express lanes sign in the center median. The background views of the mountains to the north would not be affected by the Project components. The overall resource change is at KV-1 is considered low.

Visual Impact. A low viewer response in combination with low resource change would result in an overall visual impact that is considered low.

VAU-5: I-15 Freeway Unit – Alberhill Area; KV-2 from I-15 Looking West

Figure 2.2.9-4. KV-2 Existing Condition

Viewer Response. KV-2 includes recreational user and other highway traveler's viewer perspectives from I-15. These viewers would be considered to have a high sensitivity to any substantial visual changes due to the lack of commercial or residential development in these areas. While the proposed changes would not introduce any substantial visual features, the view from KV-2 would present a vivid and memorable feature to highway users during the California poppy bloom in Walker Canyon, allowing the viewer to distinguish this view from other points along I-15 and resulting in a moderate vividness. See Figure 2.2.9-4. The overall viewer response for KV-2 would be moderate.

Figure 2.2.9-5. KV-2 Proposed Condition – Build Alternative

Resource Change. As shown on Figure 2.2.9-5, the visual change would be limited to the newly constructed express lanes within the newly paved center median and median barrier that would replace the existing center median of nonnative grass. The background views of the mountains and the adjacent scenic hillsides would still be visible, and the scenic hillside views would not be obstructed. The overall level of resource change at KV-2 is considered low.

Visual Impact. A moderate viewer response in combination with low resource change would result in an overall visual impact that is considered moderately low. Furthermore, Avoidance and Minimization Measure **AES-4** would require signage placement to intentionally avoid obstructing views of identified visual resources, and specifically the seasonal California poppy bloom near Walker Canyon.

VAU-7: I-15 Freeway Unit – Temescal Canyon Area; KV-3 from I-15 Looking Southeast

Figure 2.2.9-6. KV-3a Existing Condition

Viewer Response. KV-3a provides a highway traveler's viewer perspective of the proposed bridge median widening with the NB and SB express lanes and associated infrastructure. Highway travelers usually have a limited viewer exposure due to increased vehicle speeds. While the proposed bridge median widening would remove vegetation growing from Coldwater Wash, highway travelers would continue to have background views of the scenic hillsides adjacent to the highway and the vegetation in the middle ground. The addition of a bridge median widening with express lanes and associated infrastructure would not change the overall highway traveler viewer response at KV-3a, which is considered low.

Figure 2.2.9-7. KV-3a Proposed Condition – Build Alternative

Resource Change. Figure 2.2.9-6 shows that the current view is limited to adjacent hillsides with commercial developments in the background. The visual resources in the area are limited to the scenic hillsides adjacent to the highway. Figure 2.2.9-7 shows that the construction of the bridge median widening and express lanes would not block views of these adjacent hillsides. The visual change would be limited to the bridge median with the NB and SB express lanes and associated infrastructure. The overall level of resource change for KV-3a is considered low.

Visual Impact. A low viewer response in combination with low resource change would result in an overall low visual impact.

Figure 2.2.9-8. KV-3b Existing Condition

Viewer Response. KV-3b provides the highway traveler's viewer perspective of the proposed paved center median with the NB and SB express lanes and associated infrastructure. Highway travelers usually have a limited viewer exposure due to increased vehicle speeds. Highway travelers have background views of the scenic hillsides adjacent to the highway and the vegetation in the middle ground (see Figure 2.2.9-8). The addition of a paved center median with express lanes and associated infrastructure would not change the overall highway traveler viewer response at KV-3b, which is considered low.

Figure 2.2.9-9. KV-3b Proposed Condition – Build Alternative

Resource Change. As shown on Figure 2.2.9-8, the current view is limited to residences to the east and west, with residences primarily behind the existing landscape of trees. The visual resources in the area are limited to the scenic hillsides adjacent to the highway. Figure 2.2.9-9 shows that the construction of the paved center median and express lanes would not block views of these adjacent hillsides. The visual change would be limited to the newly paved center median with the NB and SB express lanes and associated infrastructure. The overall level of resource change for KV-3b is considered low.

Visual Impact. A low viewer response in combination with low resource change would result in an overall low visual impact.

VAU- 6: Residential Unit South of I-15; KV-4 from Knabe Road Looking Southeast

Figure 2.2.9-10. KV-4 Existing Condition

Viewer Response. KV-4 represents a residential viewer's perspective for the construction of proposed paved center median with the tolled express lanes. The residential viewers have been identified to have a moderately high viewer response due to higher sensitivity. As shown on Figure 2.2.9-10, several residences in this area currently have obstructed views of the drainage ditch and the riparian vegetation due to fencing and trees. Although residential users have been identified to have an overall viewer response that is moderately high, the foreground views at KV-4 are currently partially obstructed. Overall viewer response is considered moderate.

Figure 2.2.9-11. KV-4 Proposed Condition – Build Alternative

Resource Change. As shown on Figure 2.2.9-11, the proposed condition includes Project improvements such as a paved center median and the tolled express lanes. The limited middle ground views of the waterway and surrounding vegetation would not change as a result of Project improvements. The level of resource change at KV-4 is considered low because the existing partially obstructed views would remain, and there are a limited number of residential views affected.

Visual Impact. A moderate viewer response in combination with low resource change would result in an overall visual impact that is considered moderately low.

VAU- 9: I-15 Freeway Unit – Easterly Alignment Shift; KV-5 from I-15 Looking North

Figure 2.2.9-12. KV-5 Existing Condition

Viewer Response. As Figure 2.2.9-12 shows, KV-5 includes the perspective of highway travelers moving at high speeds and commercial users located adjacent to the highway. The highway viewers have view of the express lanes and the associated infrastructure, such as signage and tolling equipment, as well as the freeway centerline shift of approximately 12 feet to the east. The Project elements at this location would be consistent with the existing commercial signage adjacent to the highway and would not further block the existing views of the surrounding hillsides in the middle ground. The commercial viewers have limited views of the Project signage and tolling equipment due to their locations at a lower elevation. The overall viewer response for KV-5 is considered low.

Figure 2.2.9-13. KV-5 Proposed Condition – Build Alternative

Resource Change. As shown on Figure 2.2.9-13, the freeway centerline shift of approximately 12 feet to the east and potential construction of a soundwall would not substantially change the highway landscape, and the addition of the proposed express lane signage and tolling equipment would be consistent with the adjacent commercial signage. The overall resource change at KV-5 is considered low.

Visual Impact. A low viewer response in combination with low resource change would result in an overall visual impact that is determined to be low.

VAU-11: I-15 Freeway Unit – Northern Terminus; KV-6 from El Cerrito Road and Frances Street Looking Northwest

Figure 2.2.9-14. KV-6 Existing Condition

Viewer Response. As shown on Figure 2.2.9-14, KV-6 provides a highway neighbor's perspective of new express lane signage from the local streets toward the express lanes. The signage would not impede any existing foreground, middle ground, or background views. Proposed improvements do not differ much from the existing condition. The overall viewer response for KV-6 is considered low.

Figure 2.2.9-15. KV-6 Proposed Condition – Build Alternative

Resource Change. The introduction of new express lane signage on the existing sign is shown on Figure 2.2.9-15. The addition of the proposed express lane signage and tolling equipment would be consistent with the adjacent commercial signage. The overall resource change for KV-6 is considered low.

Visual Impact. A low viewer response in combination with low resource change would result in an overall low visual impact.

VAU-12: City of Corona Residential/Commercial Unit East of I-15; KV-7 from I-15 Looking Southeast

Figure 2.2.9-16. Existing Conditions from KV-7

KV-7 is on I-15 SB, approximately 0.1 mile north of Magnolia Avenue, with views to the southeast. A visual simulation was not prepared for this KV location because views at this location are not anticipated to experience change as a result of the Project. Figure 2.2.9-16 depicts the existing conditions for KV-7.

Summary of Key View Narrative Ratings (Build Alternative)

Table 2.2.9-2 summarizes and compares the narrative ratings for visual resource change, viewer response, and resulting visual impacts of the Build Alternative for each key view.

Table 2.2.9-2. Summary of Key View Narrative Ratings (Build Alternative)

Key View	Resource Change	Viewer Response	Visual Impact
KV-1	Low	Low	Low
KV-2	Low	Moderate	Moderately Low
KV-3	Low	Low	Low

Key View	Resource Change	Viewer Response	Visual Impact
KV-4	Moderate	Low	Moderately Low
KV-5	Low	Low	Low
KV-6	Low	Low	Low
KV-7	N/A	N/A	N/A

The visual analysis, summarized in Table 2.2.9-2, identified the overall visual impacts within each KV for the Build Alternative to be low or moderately low. Overall, Project improvements would be generally consistent with existing conditions. Any moderately low visual impacts were a result of additional highway elements being introduced to the I-15 corridor, specifically in portions of Walker Canyon. Although potential visual impacts do not exceed the moderately low level, implementation of Avoidance and Minimization Measures **AES-1** through **AES-4** would further minimize or avoid visual impacts associated with the Build Alternative. These measures would require the development of a Project Aesthetics and Landscape Master Plan (PALM) (**AES-1**), aesthetic treatments to noise barrier and retaining wall designs (**AES-2**), replacement planting for all disturbed landscaping and soil consistent with existing character (**AES-3**), and that lighting and signage be placed in unobstructive locations, using warm-toned lighting with light shields (**AES-4**). Impacts on visual resources are not expected to be adverse.

Context-Sensitive Solutions

The Project includes improvements designed to support the implementation of the tolled express lanes and reduce impacts on visual resources. The potential construction of two noise barriers along I-15 is proposed to minimize noise impacts but will also be designed to comply visually with the existing visual character of the residential neighborhoods along the Project corridor. As required by **AES-1**, a PALM will be developed in the Project's final design phase to identify the aesthetic treatments to be used for each noise barrier to be constructed. Additionally, **AES-2** requires noise barriers and retaining walls to be designed and implemented based on the design guidelines designated by each community as applicable.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, there would be no temporary or permanent visual impacts on the existing visual character, visual quality, or affected viewer groups within the Project corridor. However, visual impacts could still occur on I-15 from other planned projects located along the Project corridor.

2.2.9.4 Avoidance, Minimization, and/or Mitigation Measures

Under the Build Alternative, avoidance and minimization measures are recommended and are described below. No mitigation is required.

AES-1. Project Aesthetics and Landscape Master Plan. During final design, a decision regarding construction of noise barriers will be determined. A PALM must be developed to identify the aesthetic treatments to be utilized for each wall structure, including noise barriers and retaining walls, to be constructed.

AES-2. Noise Barriers and Retaining Walls. The design of noise barriers, retaining walls, and other wall structures must comply with Caltrans standards for noise attenuation, safety requirements, and other features. Aesthetic features must be reviewed by the Caltrans District Landscape Architect. Architectural details, such as texture and color, must be considered carefully in effort to minimize the appearance of the noise barrier and retaining wall surfaces. The noise barriers and retaining walls must also be designed to comply visually with the surrounding community character, following the guidelines of the City of Corona, City of Lake Elsinore, and County of Riverside aesthetic recommendations, consistent with the PALM developed in the final design phase.

AES-3. Landscaping. Landscaping design for replacement planting where established landscaping occurs must follow Caltrans standards for aesthetic treatments and must be designed and implemented under the direction of the Caltrans District Landscape Architect. All soil area disturbed during construction of the Project must be treated with a native hydroseed mix that includes native wildflowers. The loss of the vegetation from the disturbed soil areas must be replaced by plantings of native shrubs and ground cover in addition to hydroseeding, where appropriate, after construction. Replacement of highway landscaping, where required, will be consistent with the existing character of its respective community and use drought-resistant, regional native plants, when applicable, to the greatest extent possible. These replacement regional native plant materials, where deemed necessary, must also be chosen in respect to the air quality of the implementation area. A District Biologist must be consulted throughout the design and implementation process.

AES-4. Lighting and Signage. Changeable message signs and other signs consisting of illuminating and/or moving features must be placed to avoid viewsheds to the greatest extent possible, and according to consultation with the Caltrans District Landscape Architect. Specifically, the placement of signs will intentionally avoid obstructing views of identified visual resources, particularly the seasonal California poppy bloom near Walker Canyon. Highway lighting must conform to Caltrans design guidelines and be placed to illuminate only intended areas. Light shielding with non-glare hoods will be incorporated into Project designs to limit dispersion of light beyond the Project ROW during all night work, including for construction staging areas. Lighting will incorporate yellow-white or amber-white light emitting fixtures of 3000K or less.

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2.2.10 Cultural Resources

2.2.10.1 Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 Code of Federal Regulations [CFR] 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the Federal Highway Administration (FHWA), the ACHP, the California State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The FHWA’s responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (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, Assembly Bill (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.

2.2.10.2 Affected Environment

This section summarizes information from the Historic Property Survey Report (HPSR) (Caltrans 2023a). The section also compiles information from technical studies that

accompany the HPSR, including the Archaeological Survey Report (ASR) (Caltrans 2023b), the Historical Resources Evaluation Report (HRER) (Caltrans 2023c), and the Finding of Effect (Caltrans 2023d).

2.2.10.3 Methods

Area of Potential Effects

The purpose of the Area of Potential Effects (APE) is to delineate the geographic areas within which an undertaking may directly or indirectly alter the character or use of historic properties, if any such properties exist. The APE includes all anticipated direct impacts from construction activity, plus a buffer to include potential indirect effects that may develop as a result of this undertaking.

The APE was established from the Project footprint and includes the Area of Direct Impact (ADI), which was established as (1) portions of the existing right of way (ROW) where permanent construction will take place, (2) temporary construction easements (plus a sufficient buffer to allow heavy equipment to maneuver), and (3) potential staging areas. The APE further encompasses the full boundaries of previously recorded archaeological sites that intersect with the ADI, as well as entire parcels where proposed work includes construction of an auxiliary lane at the outer limits of the ROW where buildings within those parcels are within 150 feet of the ROW. The area defined by the ADI, plus the inclusion of the previously identified archaeological sites, is referred to herein as the Archaeological Survey Area. Extensions of the APE for built environment analysis in some areas were not surveyed by archaeologists, as they are in locations where extensive disturbance from development-related construction, including grading and paving activities, has taken place.

The vertical APE depth within the Project limits is anticipated to range from 3.5 feet for widening and other excavations, down to 75 feet for piles. Excavation depths vary greatly, depending on the location and nature of construction activities. Activities such as median paving, outside widening, median barrier construction, construction of best management practices for water quality treatment, and drainage improvements range from depths of 3.5 to 25 feet below the ground surface. In some locations, excavations for retaining walls reach from 25 feet below the ground surface to 45 feet into slopes. To account for temporary construction equipment, advance signage installation, and barriers, the vertical APE extends to approximately 80 feet above grade. The APE for the Project totals approximately 912 acres and extends vertically from a range of 3.5 to 75 feet along the Project alignment. In addition, the APE incorporates areas of both direct (i.e., physical) and indirect (i.e., changes to setting) effects to allow for the analysis of archaeological and built-environment resources.

Record Search

Archaeologists conducted cultural resources records searches on October 10, 11, and 29 and on November 8, 2019, at the Eastern Information Center. The records search included a review of all available cultural resources surveys, as well as excavation reports and site records within the APE and a half-mile radius of the APE. Also

consulted were the NRHP (National Park Service 2010) and documents and inventories from the California Office of Historic Preservation, including California Historical Landmarks (COHP 2010a), California Points of Historical Interest (COHP 2010b), CRHR, the Listing of NRHP Properties (COHP 2010c), and Inventory of Historic Structures (COHP 2010d).

The records search results indicated that a total of 182 studies have been conducted within the half-mile boundary of the Project APE. Previous studies encompassed approximately 60 percent of the APE. The results of the record search indicate that 122 resources are within a half mile of the APE (see Table 2.2.10-1, below). Twelve of these resources are within or adjacent to the boundaries of the APE; of these, five are prehistoric archaeological sites (i.e., P-33-000108, P-33-000630, P-33-000659, P-33-001099, and P-33-002992), four are historical-period resources (i.e., P-33-003832, P-33-003858, P-33-007919, and P-33-024785/P-33-028199), one is of unknown age and function (i.e., P-33-000703), and two are prehistoric isolates (i.e., P-33-012660 and P-33-013691). It is relevant to note that not all of the sites within the Archaeological Survey Area are in the APE because the survey area was larger than the Project footprint. One newly recorded historical-period resource (i.e., 18740 Collier Avenue) was identified and analyzed by architectural historians.

The other 110 resources in the half-mile records search buffer consist of 35 prehistoric archaeological sites, 23 historical-period archaeological sites, 2 multicomponent archaeological sites, 12 historical-period buildings/structures/roads, 35 prehistoric isolates, and 3 historical-period isolates. Prehistoric resource types include petroglyphs, pictographs, bedrock milling sites, habitation sites, lithic scatters, and isolated ground-stone and lithic artifacts. Historical-period resource types include structural foundations, privies, water-conveyance systems, residential and commercial structures, refuse deposits, and isolated glass artifacts.

Table 2.2.10-1. Previously Recorded Cultural Resources within a Half-Mile Radius of the APE

Primary Number	Trinomial	Resource Type	Age	Description	Within APE
P-33-000034	CA-RIV-000034	Site	Prehistoric	Milling site; petroglyphs	No
P-33-000078	CA-RIV-000078	Site	Prehistoric	Pictographs	No
P-33-000101	CA-RIV-000101	Site	Multicomponent	Foundations/structure pads; landscaping/orchard; privies/ dumps/trash scatters; graves/cemetery; lithic scatter	No
P-33-000108	CA-RIV-000108	Site	Prehistoric	Lithic scatter	Adjacent
P-33-000630	CA-RIV-000630	Site	Prehistoric	Lithic scatter	Adjacent
P-33-000642	CA-RIV-000642	Isolate	Prehistoric	Milling site	No
P-33-000643	CA-RIV-000643	Site	Prehistoric	Lithic scatter	No
P-33-000656	CA-RIV-000656	Site	Historic	Highway/trail	No
P-33-000659	CA-RIV-000659	Site	Prehistoric	Lithic scatter	Yes
P-33-000703	CA-RIV-000703	Site	Unknown	Unknown	Yes
P-33-000883	CA-RIV-000883	Site	Prehistoric	Lithic scatter; milling site	No
P-33-001089	CA-RIV-001089	Site	Prehistoric	Lithic scatter; milling site	No
P-33-001090	CA-RIV-001090	Site	Prehistoric	Lithic scatter; milling site	No
P-33-001091	CA-RIV-001091	Site	Prehistoric	Petroglyphs	No
P-33-001099	CA-RIV-001099	Site	Prehistoric	Lithic scatter; milling site	Yes
P-33-001423	CA-RIV-001423	Site	Prehistoric	Milling site	No
P-33-001446	CA-RIV-001446	Site	Prehistoric	Lithic scatter	No
P-33-001461	CA-RIV-001461	Site	Prehistoric	Lithic scatter	No
P-33-002992	CA-RIV-002992	Site	Prehistoric	Habitation site	Adjacent
P-33-003277	CA-RIV-003277	Site	Prehistoric	Lithic scatter	No
P-33-003451	CA-RIV-003451	Site	Prehistoric	Lithic scatter	No
P-33-003818	CA-RIV-003818	Site	Multicomponent	Milling site; railroad grade	No

Primary Number	Trinomial	Resource Type	Age	Description	Within APE
P-33-003819	CA-RIV-003819	Site	Prehistoric	Milling site; petroglyph; hearth	No
P-33-003820	CA-RIV-003820	Site	Prehistoric	Milling site; petroglyph	No
P-33-003828	CA-RIV-003828	Site	Prehistoric	Petroglyph	No
P-33-003829	CA-RIV-003829	Site	Prehistoric	Lithic scatter	No
P-33-003830	CA-RIV-003830	Site	Prehistoric	Pictograph	No
P-33-003831	CA-RIV-003831	Site	Prehistoric	Milling site	No
P-33-003832	CA-RIV-003832	Site	Historic	Railroad grades; bridge; refuse dumps	Yes
P-33-003858	CA-RIV-003858	Site	Historic	Refuse scatter	Adjacent
P-33-004110	CA-RIV-004110	Site	Prehistoric	Habitation site	No
P-33-004111	CA-RIV-004111	Site	Historic	Tanning vats	No
P-33-004121	CA-RIV-004121	Site	Prehistoric	Lithic scatter	No
P-33-005821	Not applicable	Buildings	Historic	Residential structures	No
P-33-007918	CA-RIV-005870H	Site	Historic	Structural remains; landscaping/ orchard; privies; refuse dumps; water conveyance system	No
P-33-007919	CA-RIV-005871H	Site	Historic	Habitation debris	Adjacent
P-33-008267	CA-RIV-006152/H	Site	Prehistoric	Habitation site	No
P-33-008433	CA-RIV-006153	Site	Prehistoric	Lithic scatter	No
P-33-011089	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-011090	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-011091	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-011722	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-012557	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-012559	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-012560	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-012660	Not applicable	Isolate	Prehistoric	Lithic artifacts	Yes
P-33-013146	Not applicable	Isolate	Prehistoric	Ground stone artifact	No

Primary Number	Trinomial	Resource Type	Age	Description	Within APE
P-33-013147	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-013148	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-013366	Not applicable	Isolate	Prehistoric	Lithic artifacts	No
P-33-013622	CA-RIV-007494	Site	Prehistoric	Milling site	No
P-33-013623	CA-RIV-007495	Site	Prehistoric	Milling site	No
P-33-013624	CA-RIV-007496	Site	Prehistoric	Milling site	No
P-33-013625	CA-RIV-007497	Site	Prehistoric	Milling site	No
P-33-013690	CA-RIV-007515	Isolate	Prehistoric	Ground stone artifact	No
P-33-013691	Not applicable	Isolate	Prehistoric	Ground stone artifact	Yes
P-33-013692	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-013693	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-013802	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-013803	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-014872	CA-RIV-007927	Site	Historic	Refuse dump	No
P-33-015348	CA-RIV-008104	Site	Prehistoric	Lithic scatter	No
P-33-015349	CA-RIV-008105	Site	Historic	Mining prospect trenches	No
P-33-015351	CA-RIV-008107	Site	Historic	Refuse dump	No
P-33-015361	CA-RIV-008117	Site	Historic	Water conveyance features	No
P-33-015364	CA-RIV-008120	Site	Historic	Refuse dumps	No
P-33-015424	CA-RIV-008135	Site	Historic	Structural remains	No
P-33-015425	CA-RIV-008136	Site	Historic	Refuse dump	No
P-33-015427	CA-RIV-008137	Site	Historic	Water conveyance features	No
P-33-015793	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-016641	Not assigned	Site	Prehistoric	Milling site	No
P-33-016643	Not assigned	Structure	Historic	Earthen reservoir	No
P-33-016699	Not applicable	Isolate	Prehistoric	Lithic artifact	No

Primary Number	Trinomial	Resource Type	Age	Description	Within APE
P-33-016700	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-016701	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-016702	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-017017	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-017018	Not Assigned	Site	Historic	Structural remains	No
P-33-017019	Not applicable	Building	Historic	Residential buildings	No
P-33-017021	Not applicable	Building	Historic	Residential buildings	No
P-33-017024	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-017025	CA-RIV-008864	Site	Historic	Refuse dump	No
P-33-017026	CA-RIV-008865	Site	Historic	Structural remains	No
P-33-017027	CA-RIV-008866	Site	Historic	Structural remains; refuse	No
P-33-017028	Not applicable	Building	Historic	Structure	No
P-33-017571	CA-RIV-009110	Site	Historic	Water storage feature	No
P-33-017572	Not applicable	Building	Historic	Residential structure	No
P-33-017576	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-019925	Not applicable	Building	Historic	Residential structures	No
P-33-020202	Not applicable	Building	Historic	Commercial buildings	No
P-33-020205	Not applicable	Building	Historic	Commercial buildings	No
P-33-020339	CA-RIV-010263	Site	Historic	Refuse dumps; privy	No
P-33-021069	CA-RIV-010914	Structures	Historic	Well; structural remains	No
P-33-023790	CA-RIV-011685	Site	Historic	Refuse dump	No
P-33-023880	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-023903	CA-RIV-011738	Site	Historic	Water conveyance features	No
P-33-024119	CA-RIV-011860	Site	Historic	Quarry	No
P-33-024666	Not applicable	Isolate	Historic	Glass artifact	No
P-33-024667	Not applicable	Isolate	Historic	Glass artifact	No

Primary Number	Trinomial	Resource Type	Age	Description	Within APE
P-33-024724	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-024725	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-024726	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-024779	CA-RIV-012271	Site	Prehistoric	Lithic scatter	No
P-33-024780	CA-RIV-012272	Site	Prehistoric	Lithic scatter, ceramic	No
P-33-024782	CA-RIV-012274	Site	Historic	Refuse dump	No
P-33-024783	CA-RIV-012275	Site	Prehistoric	Lithic scatter	No
P-33-024784	CA-RIV-012276	Structure, Site, Other	Historic	Dam; water storage; water conveyance features	No
P-33-024785	CA-RIV-012277	Site	Historic	Road	Yes
P-33-024786	Not assigned	Site	Prehistoric	Milling site	No
P-33-024787	CA-RIV-012278	Site	Prehistoric	Lithic scatter	No
P-33-024788	CA-RIV-012279	Site	Prehistoric	Habitation site	No
P-33-024789	Not applicable	Isolate	Historic	Rock feature	No
P-33-024861	CA-RIV-012323	Site	Prehistoric	Milling site	No
P-33-026416	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-026417	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-026419	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-026420	Not applicable	Isolate	Prehistoric	Ground stone artifact	No
P-33-028133	Not applicable	Isolate	Prehistoric	Lithic artifact	No
P-33-028197	Not applicable	Structure, Site	Historic	Culvert	No
P-33-028199	Not applicable	Site	Historic	Road (segment of Temescal Canyon Road; see Attachment C of the HPSR)	No
P-33-028821	Not assigned	Site	Historic	Structural remains	No
P-33-028905	Not applicable	Isolate	Prehistoric	Ground stone artifact	No

Field Survey

Archaeologists conducted a cultural resources pedestrian survey of the Archaeological Survey Area on March 24, 25, 30, and 31 and April 22, 2021. Following California Department of Transportation (Caltrans) guidance, archaeologists walked transects spaced no more than 15 meters apart, as terrain and vegetation allowed. They examined the ground surface within the Archaeological Survey Area for the presence of prehistoric artifacts, prehistoric milling surfaces on exposed bedrock, rock shelters, and historical artifacts and features. The Archaeological Survey Area coordinates were loaded onto an iPad tablet with Collector software prior to survey. Collector software allowed them to navigate to the Archaeological Survey Area, record existing conditions at each portion, and take photographs. A Trimble R1 GNSS Receiver was used to ensure that the Collector software recorded all survey and resource information to sub-meter accuracy.

In a few locations, the APE was extended out from the Archaeological Survey Area for the purposes of analyzing and evaluating built-environment properties that could potentially be indirectly affected by the Project, either visually or audibly. In a few cases, these locations were not part of the archaeological pedestrian survey. Generally, these extensions of the APE for built-environment analysis were not surveyed because they are in locations where extensive disturbance from development-related construction has taken place. In all these cases, the areas have been graded and paved over or are built on.

A cultural resources pedestrian field survey was conducted that covered unpaved portions of the ADI and ROW. During the field survey, efforts were made to revalidate the locations of 12 previously recorded cultural resources. As a result of the field survey, findings for six prehistoric sites were mapped within or adjacent to the Project ADI and APE. The remaining six resources were either exempted out of analysis or are historical-period resources that are discussed in the HRER and were evaluated as not being eligible for the NRHP. No new archaeological sites were identified during the survey.

Two of the resources (P-33-003832 and P-33-024785/P-33-028199) are historical-period built-environment resources. P-33-003832 was previously determined ineligible for the NRHP, with SHPO concurrence. P-33-024785/P-33-028199 was evaluated for the purposes of the Project and found ineligible for the NRHP (see Attachment C of the HPSR). Two historical-period archaeological resources (P-33-003858 and P-33-007919) were not identified during pedestrian surveys and are no longer extant within the Project APE. These resources were exempted per Caltrans' Section 106 PA Attachment 4 as "isolated refuse dumps and scatter more than 50 years old that lack specific associations." Two of the resources are prehistoric isolates (P-33-012660 and P-33-013691), were not identified during pedestrian surveys for the current Project, and are exempt from further analysis per the Caltrans PA Attachment 4 as "isolated prehistoric finds consisting of fewer than three items per 100 square meters."

Lastly, during consultation between Caltrans District 8, on behalf of FHWA, and the Pechanga Band of Luiseño Indians (Pechanga Tribe) for another nearby project, the tribe identified three Traditional Cultural Properties (TCPs): *Túu'uv* (TCP-1), *Qaxáalku Payómik* (TCP-2), and *Qaxáalku Kwíimik* (TCP-3). The full extent and exact boundaries of each TCP are not currently defined by the tribe, but together these TCPs represent a vast, undefined geographic area that overlaps with portions of the current Project's APE and APE vicinity. The TCPs are considered by the tribe to be eligible for the NRHP under all four evaluation criteria. Therefore, Caltrans assumes these three TCPs are eligible for the NRHP under Criteria A, B, C, and D for the purposes of this Project only. The Caltrans Cultural Studies Office (CSO) approved the assumption of eligibility for the three TCPs on March 10, 2022.

2.2.10.4 Native American Consultation

Archaeologists sent a letter to the Native American Heritage Commission (NAHC) on September 13, 2019, requesting a search of the Sacred Lands File and a list of potentially interested Native American groups and individuals. The NAHC responded on October 1, 2019, stating that a search of the Sacred Lands Files was positive for sacred lands or TCPs in proximity to the APE. The NAHC also recommended that the Pechanga Band be contacted for further information. In addition, the NAHC provided a list of Native American contacts who might have knowledge of cultural resources in the Project area.

Using the NAHC list, the Caltrans District 8 District Native American Coordinator sent outreach letters and maps of the Project APE to six Native American groups on October 28, 2019, as follows:

- Andrew Salas, Gabrieleño Band of Mission Indians
- Travis Armstrong, Morongo Band of Mission Indians
- Shasta Gaughen, Pala Band of Mission Indians
- Gary Dubois, Pechanga Band
- Cheryl Madrigal, Tribal Historic Preservation Officer, Pechanga Band
- Joseph Ontiveros, Soboba Band of Luiseño Indians

The letters included a description of the Project and maps indicating the Project location. The following is a summary of consultation to date.

- **Gabrieleño Band of Mission Indians – Kizh Nation, Andrew Salas, Chairperson.** Mr. Salas responded to Gary Jones on December 12, 2019, by phone and requested a copy of the consultation letter via email. Andrew Belcourt provided the consultation letter via email. Mr. Salas requested that a Native American monitor be present for ground-disturbing activities. The signed APE, signed ASR, associated

shapefiles, and the Finding of No Adverse Effect (FNAE) regarding the four archaeological sites (i.e., P-33-000108, -000630, -001099, and -002992) and three TCPs (*Túu'uv* [TCP 1], *Qaxáalku Payómik* [TCP-2], and *Qaxáalku Kwíimik* [TCP-3]) were sent by Caltrans in June of 2023.

- **Morongo Band of Mission Indians, Travis Armstrong, Tribal Historic Preservation Officer.** Mr. Armstrong responded to the letter on November 13, 2019, and requested a copy of the NAHC letter. On November 14, 2019, Caltrans archaeologist Shannon Clarendon provided the NAHC letter and included a location map of the Project. On November 14, 2019, the Morongo Band of Mission Indians responded via email, stating that they defer to the Pechanga Band for the Project.

- **Pala Band of Mission Indians, Shasta Gaughen, Tribal Historic Preservation Officer.** Ms. Gaughen responded to the letter on December 4, 2019, via email, stating that they have determined that the Project is not within the boundaries of the recognized Pala Indian Reservation and is outside the boundaries of their Traditional Use Area. The tribe stated that they deferred to the wishes of tribes closer to the Project area.

- **Pechanga Band, Juan Ochoa, Assistant Tribal Historic Preservation Officer.** Mr. Ochoa, assistant to Tribal Historic Preservation Officer Gary DuBois, responded to the letter on November 22, 2019, via two separate emails, along with an electronic attachment stating that they look forward to beginning formal Section 106 and AB 52 consultation. The Pechanga Band requested to be notified and involved in the entire environmental review process. The tribe also formally requested to be notified and involved closely with Caltrans District 8 until the Section 106 process is completed to their mutual satisfaction. The Pechanga Band requested in-person meetings with Caltrans District 8 and reserved the right to fully participate in the environmental review process. In addition, the Pechanga Band stated that it intends to assist in the determination of which environmental document should be prepared, identifying potential tribal cultural resources (TCRs), determining whether potential substantial adverse effects would occur on them, and developing appropriate preservation, avoidance, and/or mitigation measures. An update letter was sent via email on November 2, 2021, informing Mr. Dubois of changes to the Project APE and informing him of Caltrans' awareness of TCPs in the Project area. Mr. Dubois responded via email on November 2, 2021, indicating that they would be in contact soon. To date, there has been no further response from Mr. Dubois. On March 1, 2023, Caltrans sent the Pechanga Band the Draft ASR and FNAE via email, including associated files and maps. No response has been received to date other than acknowledgment of receipt.

- **Rincon Band of Luiseño Indians, Cheryl Madrigal, Tribal Historic Preservation Officer.** Ms. Madrigal responded to the letter on November 18, 2019, via email, with an attached electronic document stating that the Project is within the Rincon Band's specific area of historic interest. The tribe recommends that an archaeological records search and assessment be conducted and copies of the results be provided

to them. The Rincon Band requested Section 106 and AB 52 consultation to learn more about the Project and any potential impacts on cultural resources. On March 1, 2023, Caltrans sent the Rincon Band the Draft ASR and FNAE via email, including associated files and maps. Based on the limited cultural-resources sensitivity in the APE, and based on previous and ongoing consultation, the signed APE, the signed draft ASR, and the draft FNAE regarding the four archaeological sites (i.e., P-33-000108, -000630, -001099, and -002992) and three TCPs (*Túu'uv* [TCP 1], *Qaxáalku Payómik* [TCP-2], and *Qaxáalku Kwíimik* [TCP-3]) were sent via email on June 20, 2023, for review by the Rincon Band to determine if they had additional comments or concerns before proceeding with consultation. The Rincon Band responded to acknowledge receipt and state that they had no further comments on the FNAE.

- **Soboba Band of Luiseño Indians, Joseph Ontiveros, Tribal Historic Preservation Officer.** Mr. Ontiveros responded via email, along with two letters on November 26, 2019, requesting government-to-government Section 106 consultation and the commencement of AB 52 consultation. Mr. Ontiveros also requested that Soboba Band continue to be a consulting tribal entity for the Project; that Native American monitors from the Soboba Cultural Resource Department be present for ground-disturbing activities, including surveys and archaeological testing; and that proper procedures be taken, requests of the Soboba Band be honored, and a face-to-face meeting between Caltrans District 8 and the Soboba Cultural Resource Department be held. An update letter was sent via email on November 2, 2021, informing Mr. Ontiveros of changes to the Project APE and informing him of Caltrans' awareness of TCPs in the Project area. To date, there has been no response from Mr. Ontiveros. On March 1, 2023, Caltrans sent the Soboba Band the Draft ASR and FNAE via email, including associated files and maps. No response has been received to date.

Tribal consultation is an ongoing process throughout the life of projects; as such, Caltrans District 8 will continue to consult with all interested tribes as responses are received.

2.2.10.5 Resources

The list below includes the resources within or adjacent to the APE in the records search and their status.

1. Prehistoric site P-33-000108/CA-RIV-108 (adjacent to APE; assumed NRHP-eligible for the purposes of the Project only, with CSO approval given on January 27, 2023)

2. Prehistoric site P-33-000630/CA-RIV-630 (adjacent to the APE; assumed NRHP-eligible for the purposes of the Project only, with CSO approval given on January 27, 2023)

3. Prehistoric site P-33-000659/CA-RIV-659 (no longer extant in the APE)

4. Unknown site P-33-000703/CA-RIV-703 (no longer extant in the APE)

5. Prehistoric site P-33-001099/CA-RIV-1099 (adjacent to the APE; assumed NRHP-eligible for the purposes of the Project only, with CSO approval given on January 27, 2023)

6. Prehistoric site P-33-002992/CA-RIV-2992 (adjacent to the APE; assumed NRHP-eligible for the purposes of the Project only, with CSO approval given on January 27, 2023)

7. Southern California Railway/Atchison, Topeka & Santa Fe Railway in Temescal Canyon (P-33-003832/CA-RIV-3832) (previously determined NRHP-ineligible, with SHPO concurrence dated February 10, 2021)

8. Historical-period refuse scatter P-33-003858 (no longer extant in the APE; exempted from analysis per Section 106 PA, Attachment 4)

9. Historical-period debris site P-33-007919 (no longer extant in the APE; exempted from analysis per Section 106 PA, Attachment 4)

10. Prehistoric isolate P-33-012660 (not identified during the survey; exempted from analysis per Section 106 PA, Attachment 4)

11. Prehistoric isolate P-33-013691 (not identified during the survey; exempted from analysis per Section 106 PA, Attachment 4)

12. Temescal Canyon Road (P-33-024785/CA-RIV-12277; P-33-028199) (previously evaluated without SHPO concurrence; evaluated for the purposes of this Project and found NRHP-ineligible)

The archaeological sites within the APE in Table 2.2.10-2 are considered NRHP-eligible for the Project only because they will be protected in their entirety from any potential effects through the establishment of an Environmentally Sensitive Area (ESA), in accordance with Section 106 PA, Stipulation VIII.C.4.). Therefore, seven historic properties are within or adjacent to the APE for the purposes of this Project.

Table 2.2.10-2. National Register of Historic Places–Eligible Archaeological Sites within the APE

Name*	Community	COHP Status Code
Túu'uv TCP (TCP-1)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)
Qaxáalku Payómik TCP (TCP-2)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)
Qaxáalku Kwíimik TCP (TCP-3)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)

Name*	Community	COHP Status Code
P-33-000108/CA-LAN-108	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-000630/CA-RIV-630	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-001099/CA-RIV-1099	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-002992/CA-RIV-2992	Temescal Valley, CA	3S (for the purposes of this Project only)

* Not a State-owned resource.
COHP = California Office of Historic Preservation

2.2.10.6 Traditional Cultural Properties

Túu'uv, Qaxáalku Payómik, and *Qaxáalku Kwíimik*

The Project activities within the boundaries of *Túu'uv* (TCP-1), *Qaxáalku Payómik* (TCP-2), and *Qaxáalku Kwíimik* (TCP-3) would not alter any applicable characteristics that would convey their historical significance that qualify them for inclusion in or eligibility for the NRHP. The Project would not physically alter the TCPs such that the overall setting and integrity of the TCPs' character-defining features would be adversely affected. Additionally, impacts associated with construction resulting from the Project would all occur within the existing ROW and would not change the integrity of the resource's location, design, setting, materials, workmanship, feeling, or association.

Less-than-adverse effects on the TCPs would be anticipated under Criteria i, iii, and iv. None of the prehistoric sites identified as within or adjacent to the ADI would be affected by the Project. Therefore, the Project would not change the characteristics of the TCP landscapes such that they did not retain integrity of setting, feeling, and location. Within the APE (which is a very small fraction of the area of the TCPs), if there were to be a change in character of the sites' physical features within the TCPs' settings, it would not be to an extent great enough to adversely affect the greater TCPs because their extent comprises multiple similar resources over a vast area.

Overall, the Project APE is 981 acres, whereas the approximate acreage of the TCPs (determined previously) is greater than 28,000 acres. Because the full boundaries have yet to be determined for the TCPs, this number is an underestimate. This would indicate that the entire APE is approximately 0.03 percent of the currently identified area of the TCPs; however, not all of the APE is within the currently identified boundaries of the TCPs. The total amount of acreage from the APE that is within the TCPs is approximately 96.34 acres, or 0.003 percent of the estimated total TCP acreage. Based on the limited percentage of permanent impacts on the overall TCP and the lack of impacts on potentially contributing archaeological sites, an FNAE, under Section 106, on the TCPs is applicable. SHPO concurred with the two ineligible properties and did not object to the finding for the Project on May 26, 2023. The letter from SHPO is included in Chapter 4, *Comments and Coordination*.

P-33-000108 (CA-LAN-108)

P-33-000108 has been mis-mapped by the Eastern Information Center and is not within the ADI or APE for the Project. There is no anticipated construction in the location of this resource. As such, there would be no physical impact on the resource that would damage or destroy any part of the site. However, because of the site's proximity to the Project, it has been assumed eligible for the NRHP for the purposes of the Project only with CSO approval on January 27, 2023 (Stipulation VIII.C.4), Due to the site's proximity to the Project APE, an ESA will be established and an Archaeological Monitoring Area (AMA) surrounding the site will be delineated to ensure that the intact portions of the site are protected in their entirety.

P-33-000630 (CA-RIV-630)

P-33-000630 is not within the ADI or APE for the Project. There is no anticipated construction in the location of this resource. The mapped site boundaries adjacent to the ADI and APE are in the location of a highly active wash and an area that has been heavily disturbed by flood-control activities and construction of the Interstate (I-) 15 overpass. As such, there would be no physical impact on any part of the site. However, because of the site's proximity to the Project APE, it has been assumed eligible for the NRHP for the purposes of the Project only with CSO approval on January 27, 2023 (Stipulation VIII.C.4), An ESA will be established and an AMA surrounding the site will be delineated to ensure that the intact portions of the site are protected in their entirety.

P-33-001099 (CA-RIV-1099)

P-33-001099 has been severely affected by previous construction of I-15 within the ADI and in other areas in the APE. Despite the significant disturbance to the site, portions potentially remain intact outside of the Project ADI, but within the APE and Caltrans ROW. Although there would be no physical impact on the site related to construction activities because construction would be focused in previously disturbed portions of the roadway where the site no longer exists, there are potentially intact site constituents outside of the ADI. As such, the site is assumed eligible for the NRHP for the purposes of the Project only (Stipulation VIII.C.4) with CSO approval on January 27, 2023 (Stipulation VIII.C.4), An ESA boundary will be established near the remaining portions of the site, on both the western and eastern sides of the highway ROW. An AMA will be delineated in the previously constructed/disturbed portions on the site, where the current I-15 median will be constructed, to that ensure the intact portions of the site are protected in their entirety.

P-33-002992 (CA-RIV-2992)

P-33-002992 is outside of the ADI/APE for the Project; however, the site is in close proximity to both. The easternmost portion of the site has been graded to create a slope down to the highway, likely removing any remnant of the site that may have existed in this area. The disturbed portion of the site is adjacent to the Project ADI/APE. There would be no direct physical impacts on the site; however, due the site's proximity to the ADI/APE, it is assumed eligible for the NRHP for the purposes of the Project only with CSO approval on January 27, 2023 (Stipulation VIII.C.4), An ESA boundary will be

established near the remaining portions of the site on the western side of the highway ROW to ensure that the intact portions of the site are protected in their entirety.

2.2.10.7 Environmental Consequences

This section summarizes the environmental consequences of the Build Alternative and the No-Build Alternative regarding cultural resources.

Build Alternative

Previously Undocumented Cultural Materials

Although a low potential for previously undocumented cultural materials has been determined, in general, it is possible that these materials or previously undocumented human remains could be unearthed during site preparation, grading, or excavation for the Build Alternative. Those potential effects would be avoided or minimized through Standard Project Measures **CR-1** and **CR-2**.

Temporary Impacts

Within the Project APE, seven cultural resources have been determined NRHP-eligible for purposes of this Project only.

Four of the seven historic properties are prehistoric archaeological sites that will be avoided and protected with an ESA and archaeological monitors for each as required by Standard Project Measures **CR-3** and **CR-4**. Therefore, the Project has a finding of “no adverse effect with nonstandard conditions” (i.e., an FNAE) for the four prehistoric historic properties. The other three resources are TCPs. Based on the limited percentage of permanent impacts on the overall TCPs and the lack of impacts on potentially contributing archaeological sites, an FNAE on the TCPs also is applicable.

The Build Alternative would require ground disturbance for new or replaced roadway pavement, minor roadway grading, retaining- and sound-wall construction, stormwater best management practices, new and reconstructed surface-drainage systems, new and reconstructed overhead-sign foundations, and lighting. However, impacts on archaeological resources are considered permanent because they are nonrenewable resources. The ESA boundaries set up for each of the four archaeological sites, along with archaeological monitors who will be present during construction near those sites, will ensure that no impacts occur on known cultural resources (Standard Project Measures **CR-3** and **CR-4**).

Permanent Impacts

Project operation would not have an effect on cultural resources. Overall, the undertaking, as currently proposed, would have No Adverse Effect on the four archaeological sites or three TCPs. Caltrans District 8, in applying the Criteria of Adverse Effect, proposes that an FNAE is appropriate, and the SHPO supplied concurrence in the finding, pursuant to 36 CFR 800.5(c) and 106 PA Stipulation X.B.2 on May 26, 2023.

No-Build Alternative

Under the No-Build Alternative, none of the improvements to I-15 proposed under the Build Alternative would be constructed. Therefore, the No-Build Alternative would not result in temporary impacts related to cultural resources as a result of construction activities.

Section 4(f) Resources

There are historic properties protected by Section 4(f) of the Department of Transportation Act of 1966 in the Project vicinity. However, this Project will not "use" those properties as defined by Section 4(f). Please see Appendix A under the heading *Resources Evaluated Relative to the Requirements of Section 4(f)* for additional details.

2.2.10.8 Avoidance, Minimization, and/or Mitigation Measures

The following Standard Project Measures would be implemented during construction to minimize or avoid impacts related to cultural resources.

CR-1. Unanticipated Discoveries. If cultural materials are discovered during construction, all earthmoving activity within 60 feet of the discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

CR-2. Human Remains. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to PRC 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the District 8 Native American Coordinator Gary Jones at (909) 261-8157 so that he may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.

CR-3. Environmentally Sensitive Areas. The establishment of ESAs and barriers within and adjacent to archaeological sites P-33-000108, P-33-000630, P-33-001099, and P-33-002992 shall protect elements of these resources in place for the duration of the Project. The ESAs will be marked on plans and delineated in the field by a Caltrans archaeologist. No excavation or subsurface ground disturbance will occur within the delineated ESA. In addition, construction personnel will be informed of historic preservation laws that protect archaeological sites against any disturbance or removal of artifacts.

CR-4. The Establishment of Archaeological Monitoring Areas. Archaeological monitor(s) as assigned by Caltrans shall monitor all ground-disturbing construction-related activities within AMAs that have been established within or adjacent to archaeological sites P-33-000108, P-33-000630, P-33-001099, and P-33-00292. The Resident Engineer will notify Caltrans' Professionally Qualified Staff (PQS) Principal Investigator or equivalent PQS consultant Principal Investigator (archaeological monitor) at least 2 weeks in advance of construction to ensure that they will be available to

monitor and review the ESA boundary protection. A construction schedule will be provided. The engineer and the archaeological monitor will conduct a field review at least 5 business days before the start of job-site activities. The archaeological monitor will monitor ground-disturbing activities within the AMA; a Native American monitor may also be present. If the ESA is breached, the archaeological monitor will have the authority to immediately:

1. Stop all work within 60 feet of the ESA boundary.

2. Secure the area.

3. Notify the engineer.

Upon completion of construction, the Caltrans PQS archaeologist or equivalent PQS consultant archaeologist will remove the fencing and fill any post holes with soil removed during the installation of clean fill. An Archaeological Monitoring Report will be completed detailing the results of the monitoring efforts when the monitoring effort has been terminated.

2.3 PHYSICAL ENVIRONMENT

2.3.1 Hydrology and Floodplain

2.3.1.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The Federal Highway Administration (FHWA) requirements for compliance are outlined in 23 Code of Federal Regulations (CFR) 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the Project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a one percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

2.3.1.2 Affected Environment

This section was prepared using information from the *I-15 Express Lanes Project Southern Extension Preliminary Drainage Report* and the *I-15 Express Lanes Project Southern Extension Location Hydraulic Study* (Caltrans 2021, 2023).

Regional Hydrology

The Project is in the Santa Ana River Watershed, which is classified as Santa Ana River Hydrologic Unit (801.0). The Santa Ana River’s headwaters are the eastern San Gabriel Mountains and a majority of the San Bernardino Mountains. Runoff from these mountains and foothills drain through a network of surface streams, collect on the valley floor, flow southwest, and ultimately to its confluence with the Santa Ana River. Runoff within the Project limits ultimately discharges into Temescal Wash. Temescal Wash begins at the outlet from Lake Elsinore near the Seaport Boat Launch on West Lakeshore Drive. From the outlet, Temescal Wash generally flows northwest for approximately 23 miles before its confluence with Santa Ana River Reach 3 and Prado Dam near the Cities of Norco and Corona. The Santa Ana River flows southwest from Riverside County into Orange County toward the Pacific Ocean (Caltrans 2023).

Local Hydrology

The Project is in the Terra Colta (801.35), Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) hydrologic subareas. The Terra Colta (801.35) hydrologic subarea drains to Arroyo del Toro and Temescal Wash. The Lee Lake (801.34), Bedford (801.25), Coldwater (801.31), and Temescal (801.25) hydrologic subareas drain to Temescal Wash. Throughout the length of the Project limits, the general drainage flow pattern is from south to north, and predominantly west to east, but it varies depending on the location. Stormwater that falls on Interstate (I-) 15 within the Project limits eventually discharges into Temescal Wash. The Project crosses 11 channels, as listed in Table 2.3.1-1 from south to north. These 11 channels are tributary to Temescal Wash and ultimately convey water to the Pacific Ocean via the Santa Ana River. Several other channels that are also tributary to these channels are in the Project vicinity but do not cross the Project.

Table 2.3.1-1. Channel Crossings

Channel	I-15 Crossing Post Mile
Wasson Canyon Wash	PM 21.57
Arroyo del Toro	PM 22.60
Stovepipe Canyon Wash	PM 23.50
Gavilan Wash	PM 25.55
Temescal Wash	PM 28.04
Horsethief Canyon Wash	PM 29.13
Indian Wash	PM 30.09
Mayhew Wash	PM 31.97
Coldwater Wash	PM 32.96
Brown Canyon Wash	PM 34.72
Bedford Wash	PM 36.58

Source: Caltrans 2023
PM = Post Mile

A description of the 11 channels that the Project crosses is as follows:

- **Wasson Canyon Wash** crosses I-15 at approximately PM 21.57. East of the Project, Wasson Canyon Wash is a natural meandering creek that crosses under an I-15 bridge through an earthen channel and then flows through a culvert box under Collier Avenue that outlets onto Wasson Basin west of the Project.

- **Arroyo del Toro** is just north of State Route (SR-) 74 (Central Avenue) and crosses I-15 at approximately PM 22.60. East of the Project, Arroyo del Toro is a concrete rectangular channel that crosses Dexter Avenue through a quintuple 14-foot by 10-foot reinforced concrete box (RCB). The RCB outlets into a detention basin between Dexter Avenue and the northbound I-15 roadway. From the detention basin

east of I-15, ten 36-inch and five 48-inch culverts convey the flow under I-15 to a rectangular channel parallel to the southbound I-15 roadway, turning west to an established outfall in Temescal Wash west of the Project.

- **Stovepipe Canyon Wash** crosses I-15 at approximately PM 23.50. East of the Project, Stovepipe Canyon Wash is a natural earthen channel that crosses I-15 through a 14-foot by 8-foot RCB. The RCB outlets into Temescal Wash west of the Project.

- **Gavilan Wash** is south of Lake Street and north of Cajalco Road within the City of Lake Elsinore and crosses under an I-15 bridge at approximately PM 25.55. Gavilan Wash flows west and converges with Temescal Wash approximately 450 feet west of I-15. Generally, Gavilan Wash can be characterized as a natural channel with an earthen streambed and banks with low vegetation. The channel's segment crossing I-15 has both streambed and banks covered in riprap with no vegetation.

- **Temescal Wash** is the main regional drainage system where all runoff produced within the Project limits and vicinity would ultimately be discharged into wash. Temescal Wash runs parallel to the I-15 alignment continuously until it crosses the freeway just south of Horsethief Canyon Road at approximately PM 28.04; it continues running parallel to I-15 past the Project limits, gathering all the channels that cross the Project limits. Throughout the alignment, Temescal Wash is characterized as a natural, meandering channel.

- **Horsethief Canyon Wash** is just north of Horsethief Road within the unincorporated area of Riverside County and crosses under I-15 at approximately PM 29.13. Horsethief Canyon Wash flows north and converges with Temescal Wash at approximately 1,400 feet east of the I-15 alignment. Horsethief Canyon Wash is characterized as a natural channel having both streambed and banks composed of soil with low vegetation. The channel's segment crossing I-15 has a streambed covered by soil with low vegetation, while the streambanks are covered in riprap.

- **Indian Wash** is just south of Indian Truck Trail in the unincorporated area of Riverside County and crosses I-15 at approximately PM 30.09. Indian Wash flows north and converges with Temescal Wash at approximately 1,500 feet west of I-15. Indian Wash is characterized as a natural channel having both streambed and banks composed of soil with low vegetation, and it has the same characteristics as the segment crossing under the I-15 bridge. No armor cover exists on either streambed or banks within this segment.

- **Mayhew Wash** is just north of Temescal Canyon Road and crosses an I-15 bridge at approximately PM 31.97. Mayhew Wash flows east and converges with Temescal Wash at approximately 2,000 feet east of I-15. Mayhew Wash is characterized as a natural channel having both streambed and banks composed of soil with heavy vegetation (low bushes) within the segment crossing under the I-15 bridge. No armor cover exists on either streambed or banks within this segment, but both have a natural vegetation cover.

- **Coldwater Wash** is just south of Temescal Canyon Road and crosses the I-15 bridge at approximately PM 32.96. Coldwater Wash flows north and has an alignment parallel to Temescal Canyon Road until it converges with Temescal Wash. Coldwater Wash is characterized as a natural earthen channel densely vegetated with bushes and trees. The channel's segment crossing I-15 has a streambed covered in soil and streambanks covered in riprap; it is highly vegetated with bushes and trees.

- **Brown Canyon Wash** is a concrete channel south of Weirick Road/Dos Lagos Drive within Riverside County's unincorporated area and crosses an I-15 bridge at approximately PM 34.72. Brown Canyon Wash flows east and discharges onto Lee Lake (approximately 1,200 feet east of I-15), which ultimately drains to Temescal Wash.

- **Bedford Wash** is located just south of Cajalco Road and passes under an I-15 bridge at approximately PM 36.58. The upstream reach of Bedford Wash (just west from I-15) is an earthen channel that transitions into a natural, meandering channel after crossing I-15 and continues downstream until it converges with Temescal Wash.

Currently, I-15 uses several methods to convey stormwater runoff off and through its right of way. Existing storm drain facilities run parallel via roadside ditches and shoulder dikes. They also intersect the Project alignment via pipes and culverts as the drainage conditions dictate. The center median is predominantly a native soil "channel" that collects and conveys runoff from the existing roadway to the nearest inlet. The shoulder areas typically sheet flow to graded swales and to asphalt concrete dikes to direct flow to the nearest inlet or low point. Water collected by the median, shoulder dikes, and swales is conveyed through concrete pipes and culverts running transversely. The collected water is then discharged onto marshes, creeks, and other surface depressions and ultimately to Temescal Wash (Caltrans 2021).

Existing storm drain systems within the Project limits range from having 12- to 84-inch diameters for circular conduit and varying dimensions for box culverts. A variety of culvert material is used within the Project limits, such as reinforced concrete pipe, RCB, corrugated steel pipe, corrugated metal pipe, and alternative pipe culvert. Several drainage systems are employed in a series, and most are a single pipe system conveying flow from one side of the freeway to the other. Spreading and ponding issues occur on the Temescal Wash Bridge and Mayhew Wash Bridge because neither bridge has a deck drainage system (Caltrans 2021).

Floodplains

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) show the Project limits as being within and/or adjacent to the following flood zones (see Figure 2.3.1-1):

- **Zone A:** Special flood-hazard areas (SFHAs) subject to inundation by the 1-percent annual chance flood event; no base flood elevations determined.

- **Zone AE:** SFHAs subject to inundation by the 1-percent annual chance flood event; base flood elevations determined.

- **Zone AO:** SFHAs subject to inundation by the 1-percent annual chance flood event; flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

- **Zone X:** Area determined to be outside the 0.2-percent annual chance flood.

- **Zone X (Shaded):** Areas of 0.2-percent annual chance flood; areas of 1-percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from the 1-percent annual chance flood.

As shown on Figure 2.3.1-1, the Project limits are predominantly within FEMA designated Zone X (500-year floodplains), which consists of areas of minimal flood hazard. However, the Project limits is also within and/or adjacent to FEMA designated Zones A, AE, and AO (100-year floodplains), which are associated with the following six channels:

- **Arroyo del Toro.** The portion of Arroyo Del Toro within the Project limits is in a 1-percent annual chance SFHA Zone A, per FEMA FIRM Panel 06065C2029G.

- **Stovepipe Canyon Wash.** The portion of Stovepipe Canyon Wash within the Project limits is in a 1-percent annual chance SFHA Zone AO and 0.2-percent annual chance flood hazard Zone X. This portion corresponds to FEMA FIRM Panel 06065C2028G.

- **Temescal Creek.** The portion of Temescal Wash within the Project limits lies within a 1-percent annual chance SFHA Zone AE and is classified as a Regulatory Floodway. The area surrounding the channel and the SFHA Zone AE are 0.2-percent annual chance flood hazard Zone X. The portion in the Project vicinity corresponds to the following FEMA FIRM Panels: 06065C1360G, 06065C1390G, 06065C2005G, 06065C2006G, 06065C2007G, 06065C2026G, 060652028G, and 06065C2029G. The portion crossing I-15 corresponds to FEMA FIRM Panel 06065C2006G.

- **Mayhew Wash.** The portion of Mayhew Wash within the Project limits lies in a Zone X region. The outlet of the channel onto Temescal Wash is a 1-percent annual chance SFHA Zone AE. This corresponds to the FEMA FIRM Panel 06065C1390G. In addition, Mayhew Wash is within a California Department of Water Resources Awareness Floodplain as defined by Ordinance 458 adopted by Riverside County.

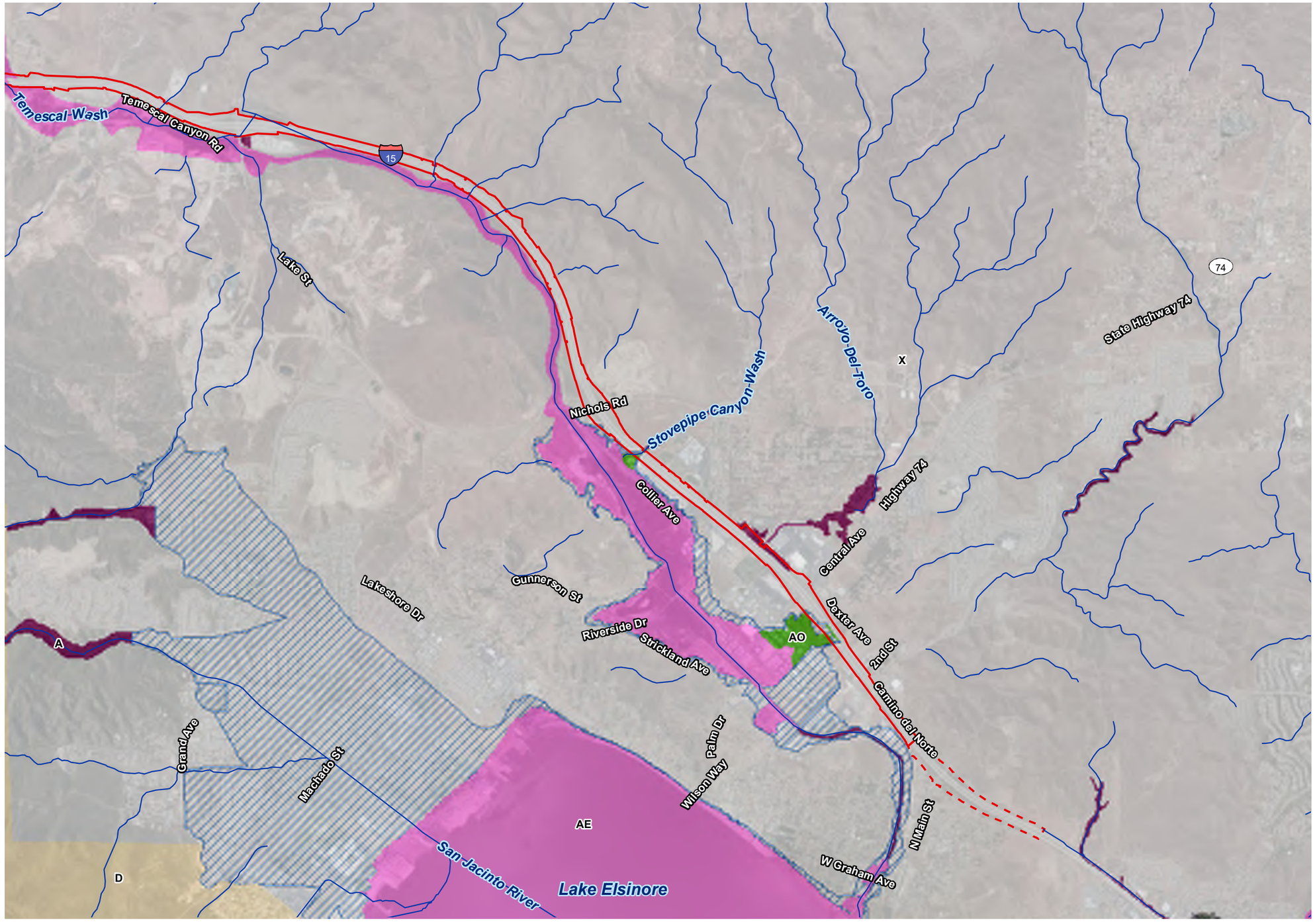
- **Coldwater Wash.** The portion of Coldwater Wash within the Project limits lies in a Zone X region. The outlet of the channel onto Temescal Wash is a 1-percent annual chance SFHA Zone AE. This corresponds to the FEMA FIRM Panel 06065C1390G.

In addition, Coldwater Wash is within a Special Study Floodplain, as defined by Ordinance 458 adopted by Riverside County.

- **Bedford Wash.** Bedford Wash is within a 1-percent annual chance SFHA Zone A region up to the Project limits; however, the Bedford Wash Bridge remains just outside the SFHA Zone A region and is within Zone X. This corresponds to the FEMA FIRM Panel 06065C1360G.

Natural and Beneficial Floodplain Values

Natural and beneficial floodplain values may include, but are not limited to, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge. No impacts on fish, open space, natural beauty, scientific study, outdoor recreation, agriculture, forestry, natural moderation of floods, and groundwater recharge are anticipated per the *I-15 Express Lanes Project Southern Extension Location Hydraulic Study* (Caltrans 2023) due to a lack of such resources within the Project limits. For information on wildlife, refer to Section 2.4.4, *Animal Species*, and Section 2.4.5, *Threatened and Endangered Species*. For information on plants, refer to Section 2.4.3, *Plant Species*. For information on water quality maintenance, refer to Section 2.3.2, *Water Quality and Stormwater Runoff*.



Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

FEMA Flood Zones

- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone D
- Zone X (Shaded)
- Zone X

Source: ESRI USA Imagery

N

0 1,500 3,000 Feet

1:36,000

Figure 2.3.1-1, Sheet 1 of 3
FEMA Flood Zones
Interstate 15 Express Lanes Project Southern Extension

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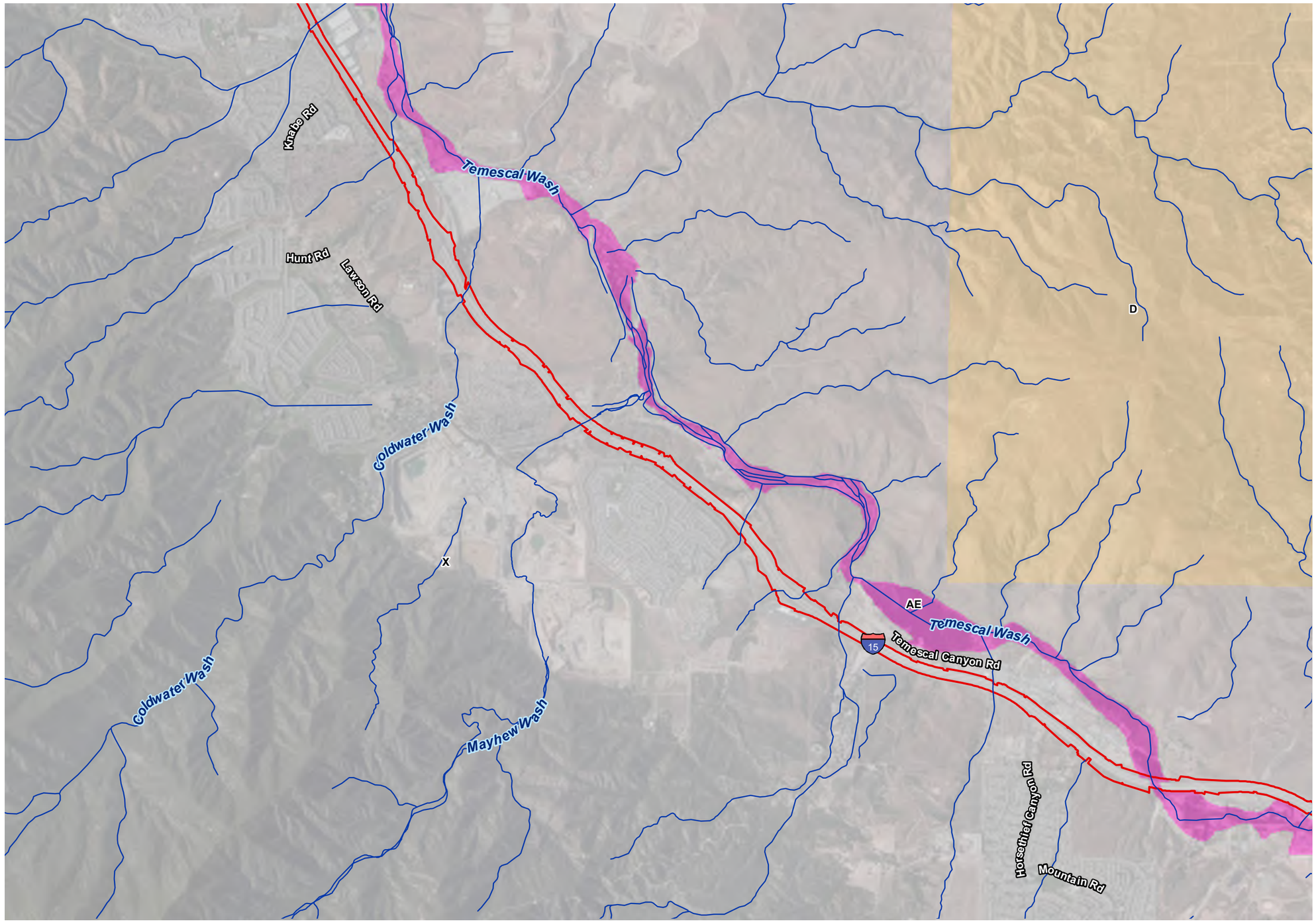

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

FEMA Flood Zones

- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone D
- Zone X (Shaded)
- Zone X

Source: ESRI USA Imagery

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0 1,500 3,000 Feet

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Figure 2.3.1-1, Sheet 2 of 3
FEMA Flood Zones
Interstate 15 Express Lanes Project Southern Extension

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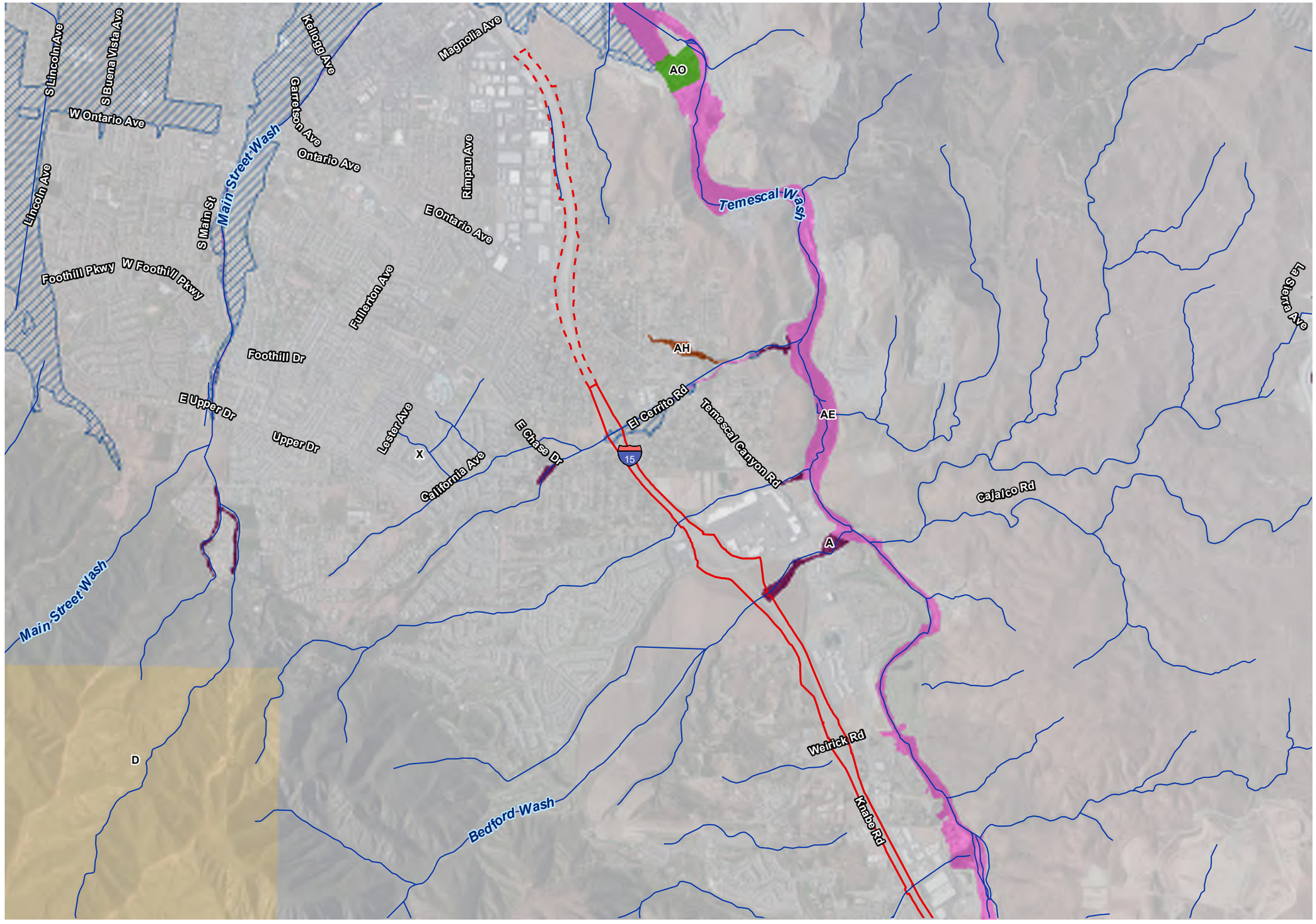

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

FEMA Flood Zones

- Zone A
- Zone AE
- Zone AH
- Zone AO
- Zone D
- Zone X (Shaded)
- Zone X

Source: ESRI USA Imagery

N

0 1,500 3,000 Feet

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Figure 2.3.1-1, Sheet 3 of 3
FEMA Flood Zones
Interstate 15 Express Lanes Project Southern Extension

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2.3.1.3 Environmental Consequences

This section describes potential impacts on hydrology and flooding that could result from Project construction or operation. The analysis identifies the impacts of the Project to the extent that is reasonably foreseeable, given the general level of Project detail that is available at this time.

Build Alternative

Temporary Impacts

Arroyo del Toro, Stovepipe Canyon Wash, Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash are designated as flood hazard areas associated with 100-year floodplains. The Project would not alter the existing drainage facilities at Arroyo del Toro and Stovepipe Canyon Wash. Construction access and work within Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash are anticipated for the bridge-widening work. In addition, temporary bridge falsework may also be required. The temporary falsework would consist of minor structures that would not be expected to substantially affect the floodplains in Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash, and it would be removed upon completion of construction. The Project may also use pre-cast girders as an option to eliminate the need for the bridge falsework. During final design, the Project will further evaluate the use of temporary bridge falsework and pre-cast girders. Both options would not adversely affect the floodplains, and flood conveyance would be maintained during construction activities.

Work within any floodplains, including the proposed bridge-widening work at Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash, would require an encroachment permit from the Riverside County Flood Control and Water Conservation District. In addition, the Project is anticipated to require regulatory permits from the U.S. Army Corps of Engineers (Section 404 Nationwide Permit), Santa Ana Regional Water Quality Control Board (Section 401 Water Quality Certification and Porter-Cologne Waste Discharge Requirements), and California Department of Fish and Wildlife (1602 Streambed Alteration Agreement) for improvements to Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash.

Permanent Impacts

Floodplain Development

The Project would widen bridges associated with Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash. However, hydraulics of Stovepipe Canyon Wash and Arroyo del Toro would not be affected by the Project because drainage structures for Stovepipe Canyon Wash and Arroyo del Toro crossing underneath I-15 would not be altered. According to the *I-15 Express Lanes Project Southern Extension Location Hydraulic Study* (Caltrans 2023), the Project's hydraulic models for Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash show that there would be a minimal increase in water surface elevation (WSE) under Project conditions for a 1-percent probability base flood (100-year). Changes in WSE with implementation of the

Project would be less than 1 foot at each affected crossing, as shown in Table 2.3.1-2. In addition, there would be sufficient waterway area to pass the 1-percent probability base flood without freeboard under the proposed conditions, as shown in Table 2.3.1-3. Therefore, the new bridge widenings at Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash would not interfere with the flows within the channels, and the minimal increase in WSE would continue to be contained within the boundaries of the mapped floodplains and meet freeboard requirements. In addition, the Project improvements would meet California Department of Transportation (Caltrans) requirements listed in Caltrans' *Highway Design Manual*, Section 821.3 (1), Bridges, which states the hydraulic design of bridges should pass a 2-percent probability flood (50-year) (Caltrans 2020).

The Project would not support incompatible floodplain development. In addition, the minimal increase in WSE would not introduce additional risk for traffic disruptions or loss of life and property. Based on the assessment of level of risk in the *I-15 Express Lanes Project Southern Extension Location Hydraulic Study* (Caltrans 2023), the Project is considered low risk. Impacts would be minimal and no permanent impacts or associated mitigation measures are anticipated.

Table 2.3.1-2. Water Surface Elevation Impacts (100-Year Flood Event)

Channel	100-Year Flow Rate (cfs)	Existing Condition	Project Condition	Maximum Change in WSE (ft)
		WSE (ft)	WSE (ft)	
Temescal Wash	10,400	1,190.31	1,190.82	0.51
Mayhew Wash	4,048	1,048.62	1,048.64	0.02
Coldwater Wash	12,300	1,022.82	1,022.69	-0.13
Bedford Wash	4,372	888.69	889.23	0.54

Source: Caltrans 2023
cfs = cubic feet per second; ft = feet

Table 2.3.1-3. Minimum Freeboard (100-Year Flood Event)

Channel	WSE (ft)	Low Chord Elevation (ft)[1]	Minimum Freeboard (ft)
Temescal Wash (downstream edge of SB Bridge)	1,191.1	1,209.92	18.8
Mayhew Wash (upstream edge of SB Bridge)	1,051.0	1,069.17	18.2
Coldwater Wash (downstream edge of SB Bridge)	1,024.59	1,044.46	19.9
Bedford Wash (upstream edge of SB bridge)	8,92.5	894.98	2.5

Source: Caltrans 2023
[1] The low chord is the lowest portion of the bridge deck.

ft = feet; SB = southbound

Temescal Creek is designated as Zone AE and classified as a Regulatory Floodway within the Project limits. As shown in Table 2.3.1-2, Temescal Creek would experience approximately a 0.51-foot WSE increase as a result of the Project, which exceeds the 0.0-foot rise allowance for a Regulatory Floodway. Due to possible Regulatory Floodway encroachment on Temescal Wash, preparation of a Conditional Letter of Map Revision, hydraulic analysis, and remapping the floodplain would be required during final design. Mayhew Wash, Coldwater Wash, and Bedford Wash are not within a Regulatory Floodway. Coordination with local, state, and federal water resource and floodplain management agencies has not been required at this time; however, relevant agencies are included in Chapter 6, Distribution List.

Encroachments of the floodplains at the Temescal Wash Bridge, Mayhew Wash Bridge, and Coldwater Wash Bridge as a result of the bridge widenings would be transverse encroachments.[1] The Bedford Wash Bridge widening would not result in an encroachment on the floodplain because the floodplain begins on the north side of the bridge, where no widening is proposed. Because Stovepipe Canyon Wash and Arroyo del Toro cross underneath I-15 and would not be affected by the Project, there would be no longitudinal encroachment.

The Project would occur primarily within the median (California Department of Transportation [Caltrans] right of way). In addition, bridge improvements would be structurally similar to the existing spans and alignments. However, improvements would not change the flow regime or rate of conveyance. Riprap may be placed to minimize undercutting from the structure foundation, as needed, and will be further evaluated in the final design phase. Therefore, there would be no potential risks to the natural and beneficial floodplain values or beneficial uses, as defined by the Santa Ana Regional Water Quality Control Board Basin Plan.

The Project would not adversely affect the hydraulics of Arroyo del Toro, Stovepipe Canyon Wash, Temescal Wash, Mayhew Wash, Coldwater Wash, or Bedford Wash, nor would it negatively affect floodplains in the Project area. As such, no significant encroachments on any floodplains in the Project area would result under the Build Alternative. The Project does not support incompatible floodplain development. Furthermore, improvements would meet Caltrans Highway Design Manual requirements, including freeboard requirements, as previously discussed.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. There would be no construction activities within the floodplain. Therefore, no temporary impacts would occur on hydrology or floodplain resources as a result of the No-Build Alternative.

[1] A transverse encroachment is an encroachment perpendicular or skewed to the direction of flow.

2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

The Project would require regulatory permits from the U.S. Army Corps of Engineers (Section 404 Nationwide Permit), Santa Ana Regional Water Quality Control Board (Section 401 Water Quality Certification and Porter-Cologne Waste Discharge Requirements), and California Department of Fish and Wildlife (1602 Streambed Alteration Agreement) for improvements to Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash. Please refer to the discussion in Section 2.4.1, *Natural Communities*, and 2.4.2, *Wetlands and Other Waters*, (Mitigation Measure **NC-16**).

2.3.2 Water Quality and Stormwater Runoff

2.3.2.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[1] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.

- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).

- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/ construction and municipal separate storm sewer systems (MS4s).

- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits,

[1] A point source is any discrete conveyance such as a pipe or a man-made ditch.

the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (U.S. EPA) Section 404 (b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[2] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in Section 2.4.2, *Wetlands and Other Waters*.

State Requirements: 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 CWA 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 (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (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 about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters 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-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify

[2] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

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 administers water rights, sets water pollution control policy, and 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 Pollutant Discharge Elimination System (NPDES) Program**

  Municipal Separate Storm Sewer Systems (MS4)

  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department’s MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

  On September 22, 2022, the SWRCB adopted a new MS4 permit for Caltrans. The Department’s MS4 Permit, Order No. 2022-0033-DWQ, NPDES No. CAS000003 (effective January 1, 2023), has three basic requirements:

  1. The Department must comply with the requirements of the Construction General Permit (see below);

  2. The Department must implement a year-round program in all parts of the state to effectively control storm water and non-storm water discharges; and

  3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

  To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout

California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

On September 8, 2022, the State Water Resources Control Board adopted a new Construction General Permit. Construction General Permit, Order No. WQ 2022-0057-DWQ took effect on September 1, 2023. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with the Department's SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.3.2.2 Affected Environment

The primary source used in preparation of this section was the *Water Quality Assessment Report for Interstate 15 Express Lanes Project Southern Extension* (Caltrans 2021).

Hydrology

Regional and Local Hydrology

Runoff within the Project limits, which consist of the limits of disturbance and advanced signage/striping areas, ultimately discharges into Temescal Wash. Temescal Wash discharges to the Santa Ana River in the Santa Ana River Watershed, which is classified as Santa Ana River Hydrologic Unit (HU 801.0). The Santa Ana Watershed covers approximately 2,840 square miles over portions of Orange, Riverside, San Bernardino, and Los Angeles Counties and consists mainly of high mountain ranges that surround and divide large, dry alluvial valleys.

The Santa Ana River's headwaters are the eastern San Gabriel Mountains and a majority of the San Bernardino Mountains. Runoff from these mountains and foothills drain through a network of surface streams, collect on the valley floor, flow southwest, and ultimately to its confluence with the Santa Ana River. The Santa Ana River flows southwest from Riverside County into Orange County toward the Pacific Ocean.

Temescal Wash begins at the outlet from Lake Elsinore near the Seaport Boat Launch on West Lakeshore Drive. From the outlet, Temescal Wash flows northwest generally for about 23 miles before its confluence with Santa Ana River Reach 3 and Prado Dam near the Cities of Norco and Corona. The Project is in the Terra Colta (801.35), Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) hydrologic subareas. The Terra Colta (801.35) subarea is 14,217 acres and drains to Arroyo Del Toro and Temescal Wash. The Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) subareas drain to Temescal Wash and are 25,729 acres, 31,761 acres, 10,441 acres, and 35,737 acres, respectively.

Throughout the length of the Project limits, the general drainage flow pattern is from south to north, and predominantly west to east, but it varies depending on the location. Stormwater that falls on the I-15 within the Project limits is conveyed to existing storm drain facilities that run parallel (via roadside ditches and shoulder dikes), as well as intersect (via pipes and culverts) with the Project limits as the drainage conditions dictate. Existing storm drain systems within the Project limits range from 12 inches to 84 inches in diameter for circular conduit and varying dimensions for box culverts.

The center median on I-15 within the Project limits is largely a native soil “channel” that collects and conveys runoff from the existing roadway to the nearest inlet via a series of graded high points, flow-through situations, and sag locations. The shoulder areas typically sheet flow to graded swales and to asphalt concrete dikes to direct flow to the nearest inlet or low point. Water collected by the median, shoulder dikes, and swales is conveyed through concrete pipes and culverts running transversely. The collected water is then discharged to marshes, creeks, and other surface depressions and ultimately to Temescal Wash. Several washes and creeks also cross the Project limits. Figure 2.3.2-1 shows the location of the Project in the Santa Ana Watershed and nearby surface waterbodies. The Project does not discharge directly or indirectly to Areas of Special Biological Significance designated by the SWRCB, which are areas requiring special protection of species or biological communities to maintain natural water quality.

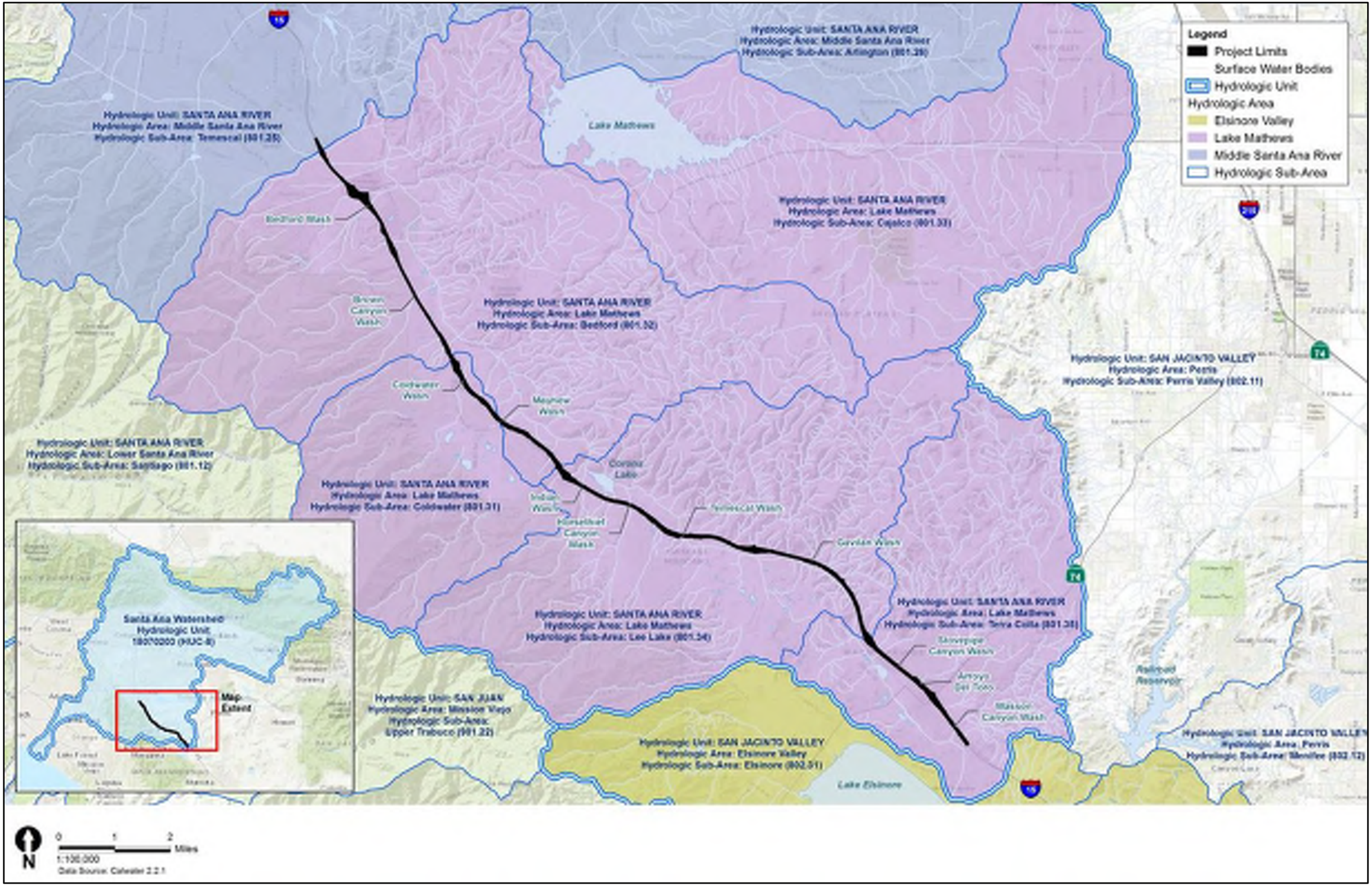

Figure 2.3.2-1
Project Watershed and Surface Waters
Interstate 15 Express Lanes Project Southern Extension

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Surface Waters

As discussed in Section 2.3.1, *Hydrology and Floodplain*, the Project limits from south to north cross over 11 channels: Wasson Canyon Wash, Arroyo Del Toro, Stovepipe Canyon Wash, Gavilan Wash, Temescal Wash, Horsethief Canyon Wash, Indian Wash, Mayhew Wash, Coldwater Wash, Brown Canyon Wash, and Bedford Wash. These 11 channels are tributary to Temescal Wash. Flows are then conveyed to the Santa Ana River and ultimately to the Pacific Ocean.

The beneficial uses of water are defined in the Santa Ana Regional Water Quality Control Board (SARWQCB) Basin Plan (SARWQCB 2019) as those necessary for the survival or well-being of humans, plants, and wildlife. Examples of beneficial uses include drinking water supplies, swimming, industrial and agricultural water supply, and the support of freshwater and marine habitats and their organisms. A beneficial use may be classified as intermittent when water conditions do not allow the beneficial use to occur year-round.

There are no beneficial uses designated for Wasson Canyon Wash, Arroyo Del Toro, Gavilan Wash, Horsethief Canyon Wash, Indian Wash, and Brown Canyon Wash. The beneficial uses for Stovepipe Canyon Wash, Temescal Wash, Mayhew Wash, Coldwater Wash, Bedford Wash, and Santa Ana River Reach 3 (Prado Dam to Mission Boulevard in Riverside) are groundwater recharge (GWR); contact water recreation (REC1); non-contact water recreation (REC2); water freshwater habitat (WARM); wildlife habitat (WILD); agricultural supply (AGR); industrial service supply (IND); rare, threatened, or endangered species (RARE); limited warm freshwater habitat (LWRM); municipal and domestic supply (MUN); and spawning, reproduction, or early development (SPWN). Table 2.3.2-1 lists the beneficial uses for the nearest-named water bodies that the Project discharges into.

Table 2.3.2-1. Beneficial Use Designations for Surface Waters

Water Body Name	Beneficial Uses
Wasson Canyon Wash	None[a]
Arroyo Del Toro	None[a]
Stovepipe Canyon Wash	GWR[b], REC1[b], REC2[b], WARM[b], WILD[b]
Gavilan Wash	None[a]
Temescal Creek Reach 2	AGR, IND, GWR, REC1, REC2, WARM, WILD, RARE
Temescal Creek Reach 4	AGR, GWR, REC1, REC2, WARM, WILD, RARE
Temescal Creek Reach 5	AGR, GWR, REC1, REC2, WARM, WILD, RARE
Horsethief Canyon Wash	None[a]
Indian Wash	None[a]
Mayhew Wash	AGR[b], IND[b], GWR[b], REC1[b], REC2[b], LWRM[b], WILD[b]
Coldwater Wash	MUN, AGR, GWR, REC1, REC2, WARM, WILD, SPWN
Brown Canyon Wash	None[a]
Bedford Wash	GWR[b], REC1[b], REC2[b], WARM[b], WILD[b]

Water Body Name	Beneficial Uses
Santa Ana River Reach 3 – Prado Dam to Mission Boulevard in Riverside	AGR, GWR, REC1, REC2, WARM, WILD, RARE, SPWN

Source: Caltrans 2021; SARWQCB 2019.
[a] The SARWQCB Basin Plan does not identify any beneficial uses; however, it states that all other tributaries to the creeks listed under Temescal Creek have the following intermittent beneficial uses: GWR, REC 1, REC 2, WARM, and WILD.
[b] Intermittent beneficial uses.
Notes:
GWR = Groundwater Recharge; AGR = Agricultural Supply; IND = Industrial Supply; REC 1 = Contact Water Recreation; REC2 = Non-Contact Water Recreation; WARM = Warm Freshwater Habitat; WILD = Wildlife Habitat; RARE = Rare, Threatened, or Endangered Species; SPWN = Spawning, Reproduction, and/or Early Development

List of Impaired Water Bodies

The U.S. EPA has created a Section 303(d) Program as a part of the CWA that assists states, territories, and authorized tribes in (1) submitting lists of impaired and threatened waters and (2) developing TMDLs based on the severity of the pollution and sensitivity of the waters. Impairment of waterbodies may be caused by water column exceedances, excessive sediment levels of pollutants, or bioaccumulation of pollutants. None of the 11 channel crossings associated with the Project is listed on the 2020–2022 Section 303(d)/305(b) Integrated List as impaired waterbodies. However, Temescal Wash confluences with Santa Ana River Reach 3, which is listed as an impaired waterbody for copper, indicator bacteria, and lead. TMDLs are still required for copper and lead, and indicator bacteria is being addressed by U.S. EPA-approved TMDL (SWRCB 2022).

Statewide Trash Implementation Plan

In 2022, the SWRCB amended the current Caltrans NPDES Permit (NPDES No. CAS000003) to include a “trash amendment,” requiring trash capture devices on routes designated as “Significant Trash Generating Areas (STGAs).” The entire I-15 corridor within the Project limits falls within a STGA (Caltrans 2021). Therefore, the Project is required to evaluate the inclusion of trash capture devices.

Groundwater

The Project is in the Elsinore–Elsinore Valley, Elsinore–Bedford–Coldwater, and Upper Santa Ana Valley–Temescal groundwater subbasins. These groundwater subbasins are described below.

Elsinore Valley Subbasin

The Elsinore Valley Subbasin is in the Elsinore Groundwater Basin, and it covers approximately 40 square miles. It is bounded on the east by consolidated rocks of the Gavilan Plateau and Estelle Mountain and on the south by the Elsinore watershed boundary. The nearest groundwater well is approximately 1.6 miles south of the Project limits. The groundwater well is an observation well that is operated by the Elsinore

Valley Municipal Water District. It is on Wisconsin Street in the City of Lake Elsinore, between Lakeshore Drive to the north and Lehr Drive to the east. The depth to groundwater in November 2019 was approximately 299 feet (Caltrans 2021). Groundwater flows toward the center of the subbasin.

Bedford-Coldwater Subbasin

The Bedford-Coldwater Subbasin is in the Elsinore Groundwater Basin, and it covers approximately 11 square miles. It is bounded on the northwest by Temescal Subbasin, with a groundwater divide near Bedford Wash; on the east and west by consolidated rocks of Estelle Mountain and the Santa Ana Mountains; and on the south by the jurisdictional boundary of the Elsinore Valley Subbasin. The nearest groundwater well is approximately 0.3 mile east of the Project limits. The groundwater well is an irrigation well operated by the Temescal Valley Water District, and it is adjacent to Leroy Road in the Temescal Valley. The depth to groundwater in April 2020 was approximately 32 feet (Caltrans 2021). Groundwater flows toward the center and northwest of the subbasin.

Upper Santa Ana Valley Subbasin

The Upper Santa Ana Valley Subbasin is in the Temescal Groundwater Basin, and it covers approximately 36 square miles. It is bounded on the north by the Chino Subbasin, separated by low hills of crystalline rock near Norco and the Santa Ana River. The east side of the subbasin is bounded by non-water-bearing crystalline rocks of the El Sobrante de San Jacinto and La Sierra Hills, and the west side is bounded by the Santa Ana Mountains. The south side is bounded by the Elsinore Basin at a constriction of alluvium of Temescal Wash. The nearest groundwater well is approximately 3.5 miles north of the start of the Project limits. The groundwater well is an observation well operated by the Elsinore Valley Municipal Water District, and it is on the corner of Tenth Street and Lincoln Avenue in the City of Corona. The depth to groundwater in April 2020 was approximately 196 feet (Caltrans 2021). Groundwater typically flows toward the center of the subbasin and then northeast toward the Santa Ana River.

The SARWQCB Basin Plan (SARWQCB 2019) identifies beneficial uses for groundwater resources in the Warm Spring Valley, Lee Lake, Temescal, and Bedford Groundwater Management Zones (located in the Lake Mathews and Middle Santa Ana River hydrologic areas of the Middle Santa Ana River Basin), which is where the Project is located. The designated beneficial uses for these Groundwater Management Zones are: municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PROC).

Project Limits

The depth to groundwater within the Project limits is anticipated to be 5 feet below ground surface when seasonal flows are not present (Caltrans 2021). However, groundwater levels along the Project limits are susceptible to fluctuation due to rainfall, seasonal variation, upstream flood control management, upstream development, nearby construction, irrigation, and numerous other artificial and natural influences.

2.3.2.3 Environmental Consequences

Build Alternative

Temporary Impacts

Short-term temporary construction impacts on water quality have the potential to occur during demolition and roadway construction activities related to the Project. The total DSA for the Project is approximately 844 acres and would include the following soil disturbance activities during construction: demolition, grubbing, grading, asphalt and concrete removal, drainage improvements, installation of BMPs, and paving activities. Construction activities would result in exposed soil, increasing the potential for soil erosion and impacts on water quality. Soil erosion could also occur at an accelerated rate during a storm event. Construction equipment and employee vehicles could also inadvertently track sediment from the Project site onto adjacent roadways that could potentially be conveyed to stormwater drainage systems. Other pollutants that can have an impact on water quality during construction activities include sediment, metals, trash, concrete waste (dry and wet), sanitary waste, and chemicals, including gasoline oils, grease, solvents, lubricants, and other petroleum products. Each of these pollutants on its own or in combination with other pollutants can have a detrimental impact on water quality.

As described in Standard Project Measure **WQ-1**, the Project would need to comply with the requirements of the Caltrans NDPES Statewide Storm Water Permit and NPDES Construction General Permit (CGP). In compliance with the CGP, preparation of a SWPPP and implementation of construction BMPs would be required to identify sources of stormwater pollution, minimize erosion, control stormwater, and prevent spills (Standard Project Measure **WQ-2**). Potential construction BMPs may include but are not limited to stabilized construction entrance/exit, preservation of existing vegetation, slope protection, construction scheduling, storm drain inlet protection, perimeter and runoff controls, sediment barriers, tire/wheel wash, street sweeping and vacuuming, wind erosion control, concrete waste management, temporary stockpiles, streambank stabilization, gravel bag berms, sandbag barriers, concrete curing, and solid waste management. The construction BMPs would retain sediment and other pollutants on the Project site, which would prevent these pollutants from reaching receiving waters.

A CGP Risk Assessment was performed for the Project as part of the *Water Quality Assessment Report for Interstate 15 Express Lanes Project Southern Extension* (Caltrans 2021). The Project is anticipated to be Risk Level 2 under the CGP, where soils within the Project limits are expected to be moderately susceptible to erosion and the potential for sediment transport to receiving waters is expected to be low. As a requirement of a Risk Level 2, water quality will be monitored during construction as directed by the CGP (Standard Project Measure **WQ-3**). Effluent monitoring for pH and turbidity levels would be required during storm events. This would ensure that pH and turbidity levels remain below numeric action levels (NAL), as established in the CGP.

If a batch plant or crushing plant is needed to construct the Project and will be located off site or within state right-of-way, then coverage under the Industrial NPDES permit,

Order No. 2014-0057-DWQ, CAS000001 will be required to address discharges from such manufacturing facilities (Standard Project Measure **WQ-4**).

The depth to groundwater within the Project limits is anticipated to be 5 feet below ground surface when seasonal flows are not present (Caltrans 2021). In addition, groundwater levels along the Project limits are susceptible to fluctuation. As discussed in Section 2.2.10, *Cultural Resources*, Project excavation activities may extend down to 75 feet for piles; therefore, dewatering activities would be required for the Project during construction. To minimize potential water quality impacts related to dewatering activities, groundwater and any other non-stormwater dewatering activities would be subject to the requirements of the SARWQCB and would include a dewatering permit, waste discharge requirements, and dewatering BMPs (Avoidance and Minimization Measure **WQ-5**). The Project would also require regulatory permits from USACE (Section 404), SARWQCB (Section 401), and the California Department of Fish and Wildlife (1602 Streambed Alteration Agreement) for improvements to channels and other drainage improvements. Additional information on these regulatory permits is discussed in Sections 2.4.1, *Natural Communities*, and 2.4.2, *Wetlands and Other Waters* (Mitigation Measure **NC-16 (NES BIO-16, Riparian/Riverine Compensation)**

Physical/Chemical Characteristics of the Aquatic Environment

Potential short-term impacts on the aquatic environment may include temporary increases in sediment, oil, grease, and chemical pollutants during construction activities, which would include work within channels associated with the bridge widenings. Chemical pollutants anticipated for use during construction include gasoline, oils, grease, solvents, lubricants, and other petroleum products. Many petroleum products contain a variety of toxic compounds and impurities, which tend to form oily films on the water surface, thereby altering oxygen diffusion rates. Concrete, soap, trash, and sanitary wastes are other common sources of potentially harmful materials on construction sites. Wash water can easily introduce pollutants to surface waters or seep into groundwater. Also, construction chemicals may accidentally be spilled into nearby storm drains or watercourses. The impact of toxic construction-related materials on water quality would vary, depending on the quantity spilled.

Implementation of erosion and sediment control BMPs during construction would prevent sediment and suspended solids from entering into surface waters or minimize the amount of sediment and suspended solids. In addition, implementation of non-stormwater management and material management BMPs during construction would prevent chemical pollutants, such as concrete waste, from entering surface waters or minimize the amount of chemical pollutants. These BMPs would involve keeping a clean, orderly construction site. Non-stormwater management BMPs are source-control BMPs that prevent pollution by limiting or reducing potential pollutants at their source or eliminating offsite discharges. Non-stormwater management BMPs also include procedures and practices that have been designed to minimize or eliminate the discharge of pollutants from vehicle and equipment cleaning, fueling, and maintenance operations to stormwater drainage systems or watercourses. Further, waste management BMPs consist of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to

prevent the release of waste materials into stormwater runoff or discharges through proper management of the waste. These BMPs are intended to prevent the release of pollutants during stormwater and non-stormwater discharges. With the implementation of Standard Project Measures **WQ-1** through **WQ-4** and Avoidance and Minimization Measure **WQ-5**, the potential for construction-related surface water pollution would be reduced and water quality in channels would not be compromised by erosion, sedimentation, or chemical pollutants during construction.

Based on the discussion above, with the implementation of Standard Project Measures **WQ-1** through **WQ-4** and Avoidance and Minimization Measure **WQ-5**, no adverse impacts on water quality are anticipated during construction of the Project.

Permanent Impacts

As discussed in Chapter 1, *Proposed Project*, the Project would construct two tolled express lanes in both the northbound and southbound directions, for a total of four lanes, within the median of I-15. In addition, the Project would include widening of up to 15 bridges; potential construction of noise barriers, retaining walls, drainage systems; and implementation of electronic toll collection equipment and signs. Upon completion of construction, the Project would result in approximately 125 acres of new impervious surface, which would include a permanent increase in impervious surface of approximately 82 acres, and approximately 43 acres in replaced impervious surface. The additional increase in impervious surface area would increase the runoff from I-15 within the Project limits. This increase in impervious area would increase peak flows and runoff volumes, increasing the potential for erosion, sediment, and pollution in surface waters. Pollutants in runoff from the new impervious surface areas include sediment, oils and grease, and metals, similar to the contaminants from the existing I-15 within the Project limits. The introduction of substantial amounts of additional pollutants in stormwater runoff could contribute to a violation of water quality standards. However, the Project would include drainage improvements and incorporate onsite stormwater treatment devices to manage the increase in impervious surfaces and runoff.

The proposed drainage would be similar to existing drainage patterns, with the exception of direction of flow related to the existing earthen median that would be removed to construct the tolled express lanes and shoulders, as well as the addition of retaining walls. The Project would also install additional inlets along the new edge of shoulder to collect and convey stormwater throughout the Project limits. These storm drain inlets would be connected by new storm drain pipes, paralleling I-15.

Treatment BMPs use treatment mechanisms to remove pollutants that have entered stormwater runoff, such as biofiltration strips and swale, trash capturing devices, and media filters. When a project is required to provide post-construction treatment, the BMPs must treat an impervious area equal to the post-construction treatment area (PCTA), as required by the Caltrans NPDES permit. The PCTA for the Project is 124.92 acres. To comply with the PCTA requirement, the Project would implement post-construction treatment BMPs consisting of biofiltration swales and strips (Standard Project Measure **WQ-6**); locations of treatment BMPs would be determined during the final design phase. The total area treated by the biofiltration swales and strips would be

approximately 80.87 and 43.71 acres, respectively. It is anticipated the treatment BMPs would be able to accommodate and treat 100 percent of the additional runoff created by the new impervious area within the Project limits; this would also be confirmed during the final design phase.

Existing treatment BMPs within the Project limits, which consist of bioswales and infiltration basins, as identified in the *Water Quality Assessment Report for Interstate 15 Express Lanes Project Southern Extension* (Caltrans 2021), will also be protected in place. In addition, the Project will evaluate the inclusion of trash capture devices since the entire I-15 corridor within the Project limits falls within a STGA (Standard Project Measure **WQ-6**).

The Project would also implement design pollution prevention BMPs (Standard Project Measure **WQ-7**) and maintenance BMPs (Standard Project Measure **WQ-8**) to address the increase in impervious surface areas. Design pollution prevention BMPs are features that focus on reducing or eliminating runoff and controlling sources of pollutants during operation of the Project, such as preserving existing vegetation and slope/surface protection systems. Maintenance BMPs are water quality controls used to reduce pollutant discharges, such as stenciling messages at storm drain inlets accessible to pedestrian and bicycle traffic.

Treatment, design, and maintenance BMPs would be further investigated during the final design phase for feasibility and implementation. Any treatment, design, or maintenance BMPs that are implemented within Caltrans right-of-way as a part of the Project would be selected from the Caltrans SWMP guidance and the Caltrans Project Planning and Design Guide–approved BMP list. With the implementation of treatment, design, and maintenance BMPs, as specified in Standard Project Measures **WQ-6** through **WQ-8**, no adverse impacts on water quality are anticipated to occur during operation of the Project.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no impacts on water quality would occur. The No-Build Alternative would not result in an increase in stormwater runoff or pollutant loading.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

The Project will incorporate Standard Project Measures **WQ-1** through **WQ-4**, **WQ-6** through **WQ-8**, and Avoidance and Minimization Measure **WQ-5**, outlined below, to avoid or minimize any potential water quality impacts from Project construction. Implementation of Mitigation Measure **NC-16 (NES BIO-16, Riparian/Riverine Compensation)** in Section 2.4.1, *Natural Communities,* coordinates the mitigation required for permitting for the California Department of Fish and Wildlife 1602 Streambed Alteration Agreement and the CWA 401 and 404 permitting.

WQ-1. Comply with Construction General Permit. During construction, the Riverside County Transportation Commission (RCTC) will ensure that the Project is in compliance

with the requirements prescribed in the Caltrans NPDES Statewide Stormwater Permit (Order 2022-0033-DWQ, NPDES No. CAS000003, adopted September 22, 2022 and effective January 1, 2023), the NPDES General Permit for Stormwater Discharges of Stormwater Runoff Associated with Construction Activities (Order WQ 2022-0057-DWQ, adopted September 8, 2022 and effective September 1, 2023), and any subsequent permit in effect at the time of construction.

WQ-2. Prepare a Storm Water Pollution Prevention Plan. During final design, RCTC will ensure that a SWPPP will be prepared and implemented to address all construction-related activities, equipment, and materials with the potential to have an impact on water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include the construction site BMPs to control pollutants such as sediment control, catch basin inlet protection, construction materials management, and non-stormwater BMPs. Additional BMP reference material is contained within the Project Planning and Design Guide (Caltrans 2019) and Construction Manual (Caltrans 2023). These BMPs include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling, waste management, materials handling, and other non-stormwater BMPs.

WQ-3. Water Quality Monitoring During Construction. As a requirement of a Risk Level 2, RCTC will ensure that water quality will be monitored by including a Stormwater Annual Report and a Sampling and Analysis Plan as directed by the Construction General Permit.

WQ-4. Batch Plant. If a batch plant or crushing plant is needed for this Project and will be located off site or within the state right-of-way, then RCTC will obtain coverage under the Industrial NPDES permit, Order No. 2014-0057-DWQ, CAS000001, to address discharges from these manufacturing facilities.

WQ-5. Dewatering. During construction, RCTC will ensure that construction site dewatering will comply with the General Waste Discharge Requirements for Discharges to Surface Waters That Pose an Insignificant (*de minimis*) Threat to Water Quality (Order No. R8-2015-0004, NPDES No. CAG998001) and any subsequent updates to the permit at the time of construction. This permit addresses temporary dewatering operations during construction. Dewatering BMPs will be used to control sediment and pollutants, and the discharges will comply with the WDRs issued by the SARWQCB.

WQ-6. Treatment Prevention BMPs. Post-construction, RCTC will ensure that Caltrans-approved treatment BMPs will be implemented and will operate as designed, consistent with the requirements of NPDES Permit and WDRs for Caltrans Order No. 2022-0033-DWQ, NPDES No. CAS000003 (adopted September 22, 2022 and effective January 1, 2023), and any subsequent permits in effect at the time of construction. Treatment BMPs may include, but are not limited to, design pollution prevention infiltration areas, biofiltration strips and swales, trash capturing devices, media filters, and pervious pavement.

WQ-7. Design Pollution Prevention BMPs. Post-construction, RCTC will ensure that design pollution prevention BMPs are implemented. These BMPs will include, but are not limited to, preserving existing vegetation and slope/surface protection systems (benching/terracing, slope rounding, and reducing gradients [incorporate 4:1 slopes or flatter]).

WQ-8. Maintenance BMPs. Post-construction, RCTC will ensure that maintenance BMPs will be implemented. These BMPs will include, but are not limited to, drain inlet stenciling, treatment BMP marker panels, and any others identified by the Caltrans Maintenance Department and consistent with those shown in the Project Planning and Design Guide (Caltrans 2019) and Maintenance Manual (Caltrans 2017).

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2.3.3 Geology, Soils, Seismic, and Topography

2.3.3.1 Regulatory Setting

Federal Requirements

Historic Sites Act of 1935

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 the California Environmental Quality Act (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 the Department's Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

National Natural Landmarks Program

The National Natural Landmarks Program was established in 1962 under the authority of the Historic Sites Act of 1935. Administered by the National Park Service, the program lists sites that represent the nation's "best" examples of various types of biological communities or geologic features (meaning that they are in good condition and effectively illustrate the specific character of a certain type of resource) in the National Registry of Natural Landmarks. At present, the registry includes 587 sites. The goals of the National Natural Landmarks Program are to achieve the following goals.

- Encourage the preservation of sites that illustrate the nation's geological and ecological character.
- Enhance the scientific and educational value of the sites preserved.
- Strengthen public appreciation of natural history and foster increased concern for the conservation of the nation's natural heritage.

State Regulations

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and

strictly regulates construction in the corridors along active faults (referred to as earthquake fault zones). It defines criteria for identifying active faults, giving legal weight to terms such as active, and establishes a process for reviewing building proposals in and adjacent to earthquake fault zones. It also encourages and regulates seismic retrofits of some types of structures.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 (Public Resources Code Sections 2690–2699.6) is intended to avoid or reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground shaking, liquefaction,[1] and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Earthquake Fault Zoning Act (i.e., the state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped seismic hazard zones).

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within seismic hazard zones until appropriate site-specific geologic and/or geotechnical investigations have been carried out and measures to reduce potential damage have been incorporated into the development plans.

Regional and Local Requirements

County of Riverside General Plan

The County of Riverside General Plan Multipurpose Open Space Element (County of Riverside 2015) outlines the following key policies that relate to geology, soils, seismic, and topography.

> **Policy OS 4.8.** Use natural approaches to managing streams, to the maximum extent possible, where groundwater recharge is likely to occur.
>
> **Policy OS 4.9.** Discourage development within watercourses and areas within 100 feet of the outside boundary of the riparian vegetation, the top of the bank, or the 100 year floodplain, whichever is greater.
>
> **Policy OS 5.2.** If substantial modification to a floodway is proposed, design it to reduce adverse environmental effects to the maximum extent feasible, considering the following factors: a. stream scour; b. erosion protection and sedimentation; c. wildlife habitat and linkages; d. cultural resources including

[1] *Liquefaction* is a phenomenon in which the strength and stiffness of a soil are reduced by earthquake shaking or other rapidly applied loading. Liquefaction and related types of ground failure are of greatest concern in areas where well-sorted sandy unconsolidated sediments are present in the subsurface and the water table is comparatively shallow.

human remains; e. groundwater recharge capability; f. adjacent property; and g. design. A site specific hydrologic study may be required.

2.3.3.2 Affected Environment

This section is based on the District Preliminary Geotechnical Report prepared for the Project and the Structure Preliminary Geotechnical Reports prepared for 15 separate bridge widenings analyzed for the Project (Caltrans 2023). This section is also based on the *City of Corona 2020–2040 General Pla*n, *City of Lake Elsinore General Plan Update,* and *Riverside County General Plan* (City of Corona 2023; City of Lake Elsinore 2011; County of Riverside 2015, 2021).

Topography

The Project extends from the Elsinore Trough along Temescal Canyon to the Temescal Valley just south of the Chino Basin. The Temescal Canyon and Elsinore Trough are bounded on the west by the Santa Ana Mountains and on the east by the Perris Block. Topography and the Interstate (I-) 15 vertical alignment generally slopes downs to the north. Temescal Wash generally runs parallel to the alignment, although it crosses the alignment once and drains into the Santa Ana River to the north, which, in turn, flows east-northeast to west-southwest toward the Prado Basin and Prado Dam. Temescal Wash is connected as a spillway to Lake Elsinore on the southern end of the alignment. Topography along the alignment is relatively rugged with bedrock hills and outcrops. Elevations range from 1,314 feet at the southern end near State Route (SR-) 74 (Central Avenue) to approximately 900 feet (NAVD 88) near Cajalco Road.

The Project is in a Valley Lowland that consists of a combination of low and high points typical of this area. Key topographic high and low points along the Project footprint from south to north are shown in Table 2.3.3-1.

Table 2.3.3-1. Project Footprint Topographic High and Low Points

I-15 Feature	Topographic Feature	Point	Elevation (feet)*
Gavilan Wash Bridge	Gavilan Wash	Low	1,255
Lake Street UC	Embankment	High	1,253
Temescal Canyon Road OH	Embankment	High	1,225
Temescal Wash Bridge	Temescal Wash	Low	1,280
Horsethief Canyon Road UC	Embankment	High	1,253
Horsethief Canyon Wash Bridge	Horsethief Canyon Wash	Low	1,217
Indian Wash Bridge	Indian Wash	Low	1,165
Indian Truck Trail UC	Embankment	High	1,180
Temescal Canyon Road UC	Embankment	High	1,075
Mayhew Wash Bridge	Mayhew Wash	Low	1,040
Coldwater Wash Bridge	Coldwater Wash	Low	1,010
Temescal Canyon Road UC	Embankment	High	1,023

I-15 Feature	Topographic Feature	Point	Elevation (feet)*
Brown Canyon Wash Bridge	Brown Canyon Wash	Low	938
Weirick Road UC	Embankment	High	935
Bedford Wash Bridge	Bedford Wash	Low	880

Source: Caltrans 2023: Table 1. Existing I-15 Facilities, and Table 8. Summary of Initial Groundwater Data.
* Ground surface elevations for borings older than 1988 were presumably based on the NGVD29 elevation datum. NAVD 88 elevations are roughly 2.7 feet higher than the NGVD29 elevations.
OH = overhead; UC = undercrossing

Portions of the Project footprint feature steep cuts in igneous and sedimentary bedrock outcrops, most predominantly between Nichols Road and Lake Street, south of Coldwater Wash, between Temescal Canyon Road and Brown Canyon Wash, and between Weirick Road and Bedford Wash. Aside from areas with steep cuts in bedrock outcrops, slopes adjacent to I-15 are generally no steeper than 2:1 (horizontal:vertical).

Regional and Local Geology

The Project is predominantly in Temescal Valley, which is within the Peninsular Ranges Geomorphic Province of California. The Peninsular Ranges are characterized by extensive pre-cretaceous intrusive igneous rocks ranging in composition and age from gabbro to granodiorite, with tonalite being most common. I-15 along the Project alignment runs parallel and east of the Elsinore Fault, east of the Santa Ana Mountains. The regional geology map for the Project alignment is shown on Figure 2.3.3-1.

The Project extends from SR-74 (Central Avenue) in Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to Cajalco Road in Corona. The I-15 corridor traverses valleys and rolling terrain bounded by the Temescal Mountains to the east and the Santa Ana Mountains to the west. There are several drainages in the area, eight of which are within the Project limits. The elevation around the Project varies from approximately 1,320 feet at the southern limits of the Project, near SR-74 (Central Avenue), to 900 feet at the northern limits of the Project, near Cajalco Road.

Temescal Canyon, which intersects the Project footprint, is characterized by mountainous terrain, rugged slopes, and well-cut drainage channels. To the east are the San Jacinto/Perris Plains, a flat, open, alluvial-filled basin with gently rolling hills and agricultural lands. According to the U.S. Department of Agriculture (1997), elevations range from approximately 427 to 792 meters (1,400 to 2,600 feet).

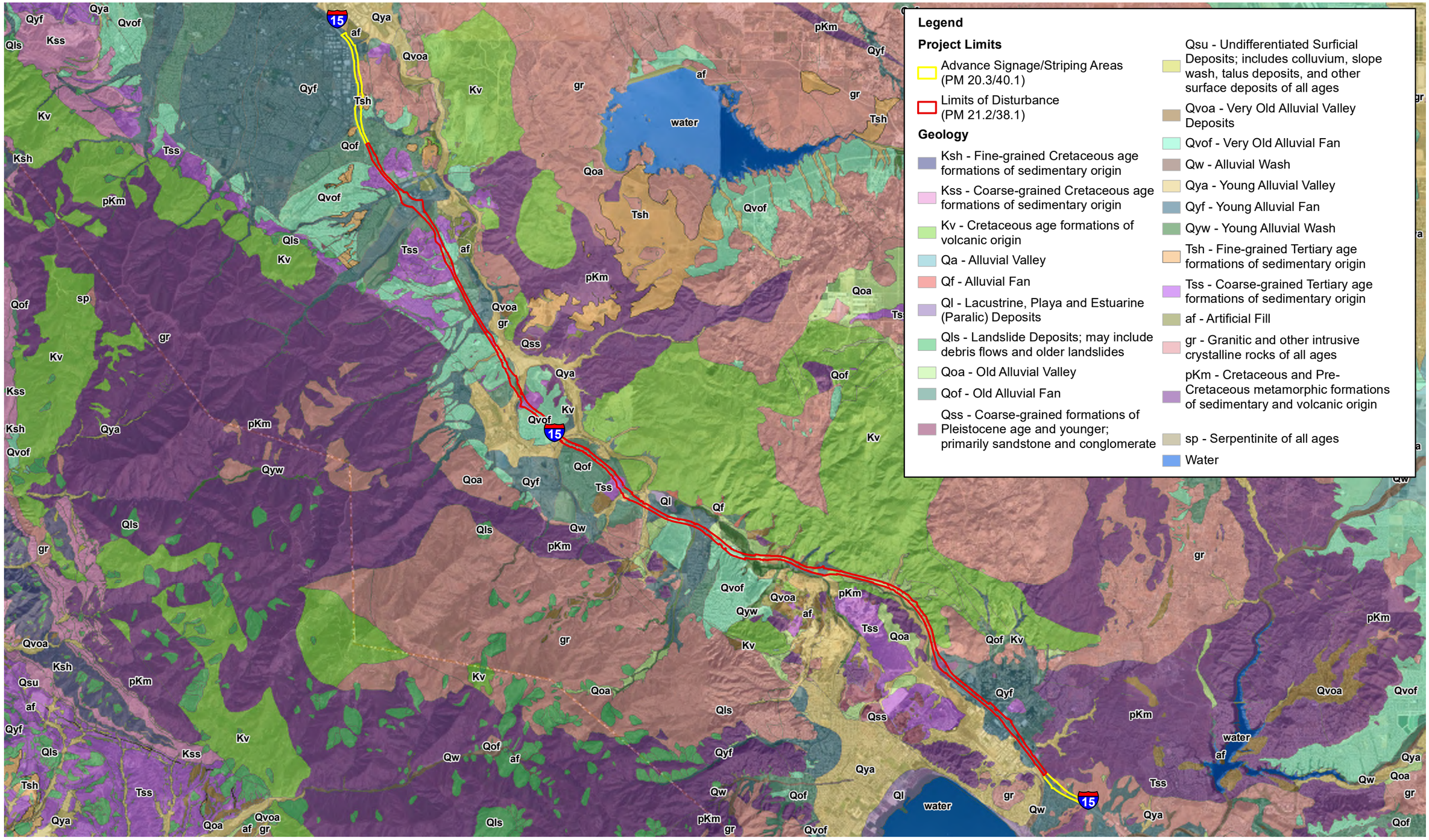

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Figure 2.3.3-1
Geology
Interstate 15 Express Lanes Project Southern Extension

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Soil Conditions

Based on a review of mapping prepared by the U.S. Department of Agriculture's Web Soil Survey web-based application, this 15.8-mile Project alignment encompasses numerous agricultural soil classifications, predominantly consisting of sandy loam, often with gravel and/or cobbles (U.S. Department of Agriculture 2023). There were 88 map unit descriptions along this alignment, ranging from clay pits (Alberhill) to gravel pits and quarries (throughout Temescal Canyon).

The Project traverses igneous (primarily granitic) rock south of the Santa Ana River, with intervening coarse to fine alluvium within transecting drainages. Present local topography along this alignment has been formed by erosion, tectonic forces, and, in more recent times, human activity. Undocumented artificial fill related to past construction of the highway (1988 and earlier in Corona) is present at various bridge approaches.

As shown on Figure 2.3.3-1, earth materials anticipated to be encountered during lane construction in the median would likely consist of undocumented artificial fill (Afu), overlying Quaternary-aged alluvium (Qal), and possibly (at depth) igneous rock, described as follows.

- **Undocumented Artificial Fill (Afu):** Undocumented fill soils consisting of cobbles, gravel, sand, silty sands, and silt are primarily expected along the existing I-15 median, due to past highway grading, including drainage facility construction. Embankment fills approximately 20 to 30 feet deep were placed during past highway grading throughout the various bridges along the alignment.

- **Alluvium (Qal):** Young and old alluvial fan deposits consisting mostly of loose to dense well-graded sands with gravel (SW), silty sands (SM), and sandy silt (ML) are expected to underlie most of this alignment. Cobbles were noted in various Log of Test Borings sheets. Additionally, clayey sand (SC) and sandy lean clay (CL) were reported at select locations.

- **Wash Deposits (Qya):** Wash deposits consisting primarily of loose to dense poorly graded sand with gravel (SP) and silty sand (SM) are expected to be encountered at the various wash areas that cross the Project alignment. A large area of wash deposits associated with the Temescal Wash is mapped toward the southern portion of the alignment. Veneers of riprap are on the side slopes beneath bridges crossing wash areas.

- **Igneous and Sedimentary Bedrock:** Igneous bedrock consisting of Santiago Peak Volcanics and Estelle Mountain Volcanics (Cretaceous) are regionally mapped on the mountains and hills directly west and east of this I-15 segment. Sedimentary rock consisting of Silverado formation sandstone is mapped toward the northern and southern portions of the Project alignment. Outcrops and cut exposures of the bedrock formation are encountered at various locations along the alignment.

Surface Water

As stated in Section 2.3.1, *Hydrology and Floodplain*, the Project is in the Temescal Wash Watershed (Hydrologic Unit Code 10 1807020306), within the larger Santa Ana River Watershed. Temescal Wash generally runs parallel to the Project footprint and crosses under I-15 at Post Mile 28.04 (Temescal Wash Bridge, 56-0680 R/L). The Project crosses 11 streambeds/channels (refer to Table 2.3.3-1 in Section 2.3.1). These channels are tributary to the Temescal Wash and ultimately convey water to the Pacific Ocean via the Santa Ana River.

Groundwater

Groundwater was encountered in borings drilled between 1964 and 2012, as depicted on California Department of Transportation (Caltrans) Log of Test Borings sheets. Generally, sustained shallow groundwater is not expected along the Project alignment. However, substantial seasonal groundwater fluctuations can occur particularly near existing creeks/washes following heavy and persistent rain. Groundwater levels along this alignment will fluctuate due to rainfall, seasonal variation, upstream flood control management, upstream development, nearby construction, irrigation, and numerous other artificial and natural influences. Groundwater seepage may appear in cut and fill slopes and within excavations along earth materials of contrasting permeabilities, particularly immediately after heavy rain. Groundwater conditions vary considerably along the Project alignment commensurate with the topography (Caltrans 2023).

Geologic Hazards

A qualitative assessment of alignment-specific geologic hazards is summarized in Table 2.3.3-2, excluding secondary seismic hazards (e.g., liquefaction and lateral spreading), which are discussed separately.

Table 2.3.3-2. Project-Specific Geologic Hazards and Risk Level

Geologic Hazard	Site-Specific Conditions	Qualitative Risk Level
Landslides	Engineered cut slopes	Low (old alluvium & granite)
Fault-induced ground rupture and seismic shaking	Not within a currently designated State of California or Riverside County Earthquake Fault Zone	Low
Seismically induced flooding	Dams far upstream	Low
Seiche	No adjacent higher waterbodies	None
Tsunami	Inland	None
Volcanoes	No nearby volcanoes	None

Source: Caltrans 2023: Table 9. Closest Caltrans-Identified Faults (Measured from I-15 ELPSE Project South and North Ends).

According to Table 2.3.3-2, these geologic hazards evaluated are considered to have no or low risk for Project-specific geologic hazards. Discussion of specific hazards is provided after the following figure.

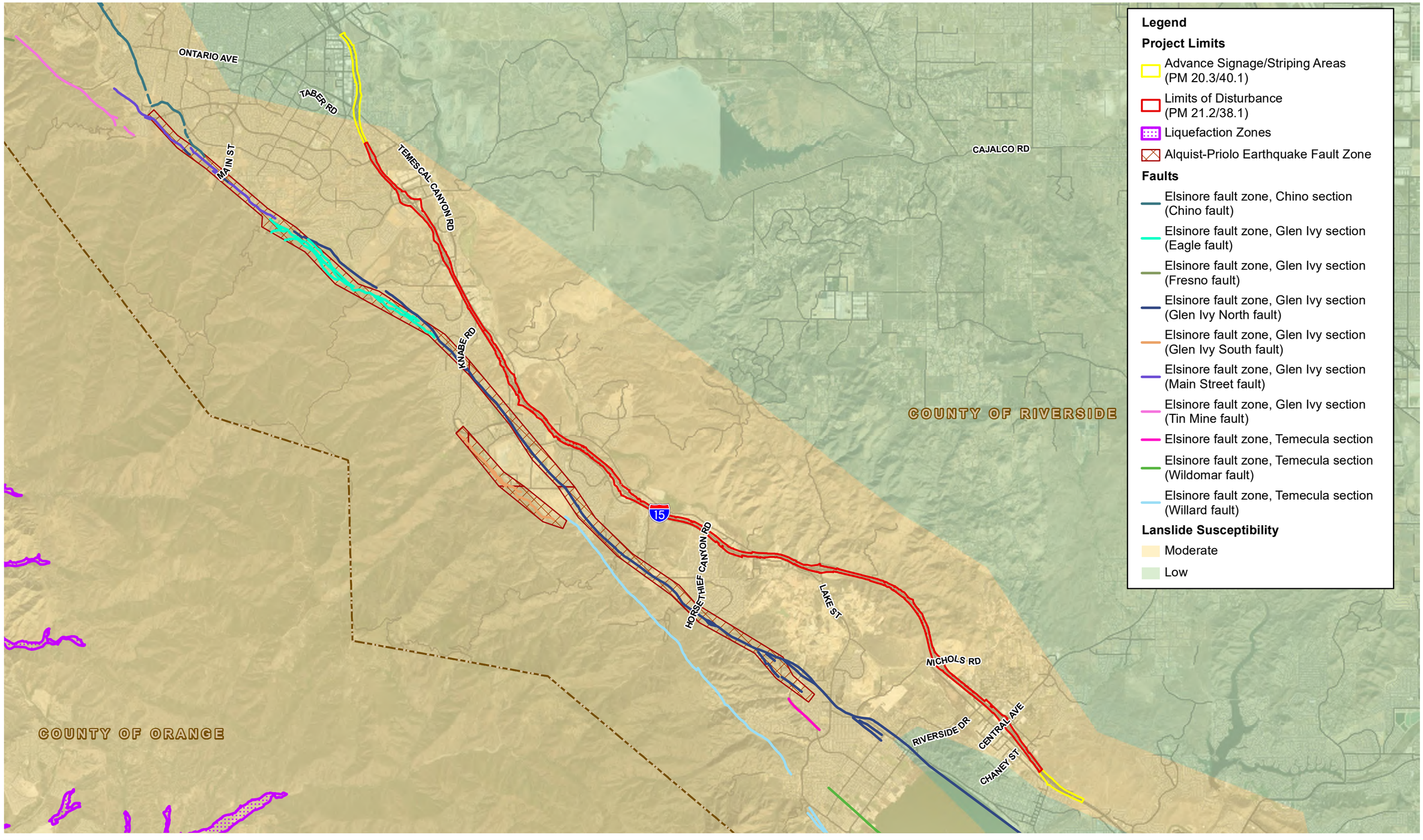

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Figure 2.3.3-2
Geologic Hazards
Interstate 15 Express Lanes Project Southern Extension

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Landslides

The California Geological Survey has not yet mapped landslide hazard zones for the areas within the Project limits. The Project alignment is on a relatively flat area with sporadic slopes most predominantly between Nichols Road and Lake Street, south of Coldwater Wash, between Temescal Canyon Road and Brown Canyon Wash, and between Weirick Road and Bedford Wash. These steep slope cuts in igneous and granitic rock are expected to be stable; however, future erosion could trigger instability.

Land Subsidence

Land subsidence is a process characterized by downward displacement of surface material caused by natural phenomena such as removal of underground fluids, natural consolidation, or dissolution of underground minerals, or by human-made phenomena such as underground mining. Based on the absence of planned large-scale extractions of groundwater, gas, oil, or geothermal energy within the Project limits, the potential for ground subsidence is considered low. Also, the Project area has no known history of subsidence.

Seismicity and Fault Rupture

The principal seismic hazard that could affect the Project is ground shaking resulting from an earthquake occurring along several major active or potentially active faults in Southern California.

As a basis for establishing Project-specific seismic design parameters, faulting needs to be modeled first. Ground shaking along this Project has and will occur from earthquakes occurring along major active or potentially active faults in Southern California. The nearest active faults are the Elsinore and San Jacinto faults. However, these faults do not traverse the Project alignment. There is no known historic surface fault rupture through or adjacent to this alignment (within 1,000 feet).

To protect structures from ground surface rupture hazards along a fault, the California Geological Survey, under the state-mandated Alquist-Priolo Act of 1972, has delineated Earthquake Fault Zones along active or potentially active faults. As mapped on the May 1, 2003 Corona North Quadrangle, Special Studies Zones, Official Map, and the Corona South Quadrangle Revised Official Map, known active fault traces do not cross the Project (Caltrans 2023).

In addition, the County of Riverside has mapped fault zones near the Project footprint, with the nearest mapped fault zone in Temescal Valley at Temescal Canyon Road and Squaw Mountain Road approximately 0.25 mile from the Project footprint (refer to Figure 2.3.3-2). County zones for fault traces run roughly parallel to the Project footprint, but postulated traces do not cross I-15, as shown on Figure 2.3.3-2.

The Project is approximately 15.8 miles long, so distance to faults is variable. However, none of the 15 bridges along the Project alignment are within 1,000 feet of a known active surface fault. Therefore, in accordance with Caltrans MTD 20-10, a surface fault rupture displacement hazard analysis is not required for the 15 existing bridges to be

widened as part of the Project. Nearby active fault distances from the Gavilan Wash Bridge at the south end of the Project and Bedford Wash Bridge at the north end of the Project are listed in Table 2.3.3-3.

Table 2.3.3-3. Nearby Active Caltrans-Identified Faults from the Project (Measured from South and North Ends of the Project Footprint)

Fault Name	Distance (miles)*		Moment Magnitude
	Gavilan Wash*	Bedford Wash*	
Elsinore (Glen Ivy, FID 365)	3.6	2.5	7.7
Elsinore (Temescal, FID 378)	6.7	6.5	7.7
San Jacinto (Anza, FID 362)	30.2	20.4	7.7

Source: Caltrans 2023: Table 9. Closest Caltrans-Identified Faults (Measured from I-15 ELPSE Project South and North Ends).
*Distance between fault and Gavilan Wash on the southern end of the Project footprint and Bedford Wash on the northern end.

Cut and Fill Slopes

Cut and fill slopes are frequently constructed in roadway projects. There are two retaining walls cut into slopes ascending to the west (along the southbound outer shoulder) between Weirick Road and Bedford Wash, where southbound lanes are clearly in a cut zone. Where new cut slopes are anticipated for the proposed improvements, the proper design and analysis would be required. Typically, finish-cut slopes in alluvium or existing soils should be graded no steeper than at a 2:1 (horizontal:vertical) gradient. Existing cuts in granitic and other igneous rock would not likely have to be cut back but should be geotechnically evaluated where changes in cut slope geometry are proposed. New cut slopes are not proposed for the Project. Some fill slope contouring may be required east of northbound I-15 between the Dos Lagos Drive/Weirick Road northbound onramp and the Cajalco Road northbound off-ramp, with slope gradients ranging from 2:1 to 4:1 (horizontal:vertical).

Collapsible and Expansive Soils

Collapsible soils are soils that undergo settlement upon wetting, even without the application of additional loads. Typical collapsible soils are low in plasticity and have relatively low moisture contents and densities. These soils are distributed throughout the southwestern United States, specifically in areas of young alluvial fans, debris flow sediments, and loess (wind-blown sediment) deposits. Near-surface sandy soils that may be present in some areas should be further evaluated during site-specific geotechnical investigation and, if present, may be mitigated by removal and replacement with compacted soils. Expansive soils are generally plastic clays that can undergo a substantial increase in volume with increase in moisture content and a substantial decrease in volume with a decrease in moisture content. Expansive soils can cause uplift pressures that can lead to structural damage.

Liquefaction

Soil liquefaction is the sudden loss in strength of a saturated, cohesionless soil caused by the buildup of pore water pressure during cyclic loading, such as that produced by an earthquake. The effects of liquefaction can include lateral and vertical ground displacements, slope instability and lateral spreading, and bearing failure.

For liquefaction to occur, the following three conditions must occur simultaneously at a site:

1. Shallow groundwater (typically assumed to be within 50 feet of the ground surface)
2. Loose to medium dense cohesionless soils (primarily clean sands)
3. Sustained ground shaking

The California Geological Survey has not yet mapped liquefaction hazard zones for the Project alignment. However, as depicted on the Regional Geologic Hazards Map, the County of Riverside has mapped liquefaction hazard zones for the county (Plate 5, Regional Geologic Hazard Map; Caltrans 2023). Based on historic depth to groundwater and regionally mapped alluvial soils, the County of Riverside regionally maps portions of the Project in lower-lying areas adjacent to Lake Elsinore and Temescal Creek/Wash as susceptible to liquefaction (Caltrans 2023).

2.3.3.3 Environmental Consequences

Build Alternative

Temporary Impacts

The Project is within a seismically active region subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. Direct and indirect impacts related to strong seismic shaking may include ground deformation, which includes fissures, settlement, displacement, and loss of bearing strength. Therefore, the Project may be subject to strong seismic ground shaking during construction.

Compliance with the most current Caltrans procedures regarding seismic design, which is standard practice on all Caltrans projects, is anticipated to prevent any adverse effects related to seismic ground shaking. Conformance with the California Building Code as well as adherence to standard engineering practices and Caltrans design criteria would reduce the effects of seismic ground shaking. In addition, the Project includes Standard Project Measure **GEO-1** to properly assess and minimize potential impacts on geotechnical sites. Therefore, the Project would not result in exposure to or contribute to seismic-related hazards to the degree that would result in an impact on construction workers or the traveling public.

During construction of the Build Alternative, excavated soil would be exposed, thereby increasing the potential for soil erosion. Additionally, during a storm event, unprotected soils, including slopes, would be subject to erosion. Short-term impacts related to construction activities would occur along the Project limits due to grading and

construction of cut and fill slopes. Construction activities may also temporarily disturb soil outside the Project footprint and within the Project right of way, primarily in work areas, heavy equipment traffic areas, and material laydown areas.

The temporary effects of soil erosion within the proposed improvements are discussed in Section 2.3.2, *Water Quality and Stormwater Runoff*. Earth materials anticipated to be encountered during lane construction in the median are anticipated to consist of undocumented artificial fill (Afu), overlying Quaternary-aged alluvium (Qal), and possibly (at depth) igneous rock. Implementation of erosion control measures as required by Caltrans and adherence to all requirements set forth in the National Pollutant Discharge Elimination System permit required for construction activities would address any potential construction-related erosion and siltation impacts. Standard Project Measure **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*) and Avoidance and Minimization Measure **NC-12** (Section 2.4.1, *Natural Communities*) would implement erosion control measures during construction. With implementation of these standardized practices, no short-term direct or indirect adverse impacts related to soil compaction or erosion would occur during construction of the Build Alternative.

Permanent Impacts

The Build Alternative is not anticipated to adversely affect geologic or topographic conditions or be affected by fault rupture within the Project limits. The primary geologic and geotechnical constraints associated with the design and construction of the Build Alternative are landslides, fault-induced group rupture, seismic shaking, soils, liquefaction, subsidence, and settlement.

Landslides

Available site information and the site review performed in support of the Preliminary Geotechnical Design Report indicated low potential for landslides within the Project limits. However, erosion protection would be implemented in design of the Project, in accordance with Caltrans standards and special provisions. No impacts are anticipated.

Fault-Induced Ground Rupture and Seismic Shaking

The Project site is not within a currently designated State of California or Riverside County Earthquake Fault Zone. There are no known active faults projecting toward or extending across the Project LOD. The potential for surface rupture resulting from the movement of nearby major faults is not known with certainty but is considered low.

The Project is situated in a seismically active region. As is the case for most areas of Southern California, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the Project site. During the life of the Project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the site. As stated previously, compliance with the most current Caltrans procedures regarding seismic design, which is standard practice on all Caltrans projects, is anticipated to prevent any adverse effects related to seismic ground shaking. Therefore, the Project would not result in or contribute to seismic-related hazards to the degree that would result in an impact during operation.

Soils

During Project operation, the Project would not result in substantial soil erosion or loss of topsoil past what the Project area already experiences as an existing roadway. Therefore, there would be no impact during Project operation.

Liquefaction

Based on historical depth to groundwater and regionally mapped alluvial soils, the County of Riverside regionally maps portions of the Project site in lower-lying areas adjacent to Lake Elsinore and Temescal Creek/Wash as susceptible to liquefaction. Liquefaction potential is considered to be low due to an absence of shallow groundwater; however, this will need to be confirmed using site-specific soil borings to be performed later during Plans, Specifications, and Estimates phase. The Project would follow Caltrans' latest design requirements to minimize any potential effects related to liquefaction. With implementation of Standard Project Measure **GEO-1**, no direct or indirect, adverse, long-term impacts would occur because of the Project.

Subsidence and Settlement

There is the potential for subsidence to occur, depending on the methods and type of equipment used during the construction period. Settlement can occur quickly when soil is loaded by a structure or by the placement of fill on top of soil. It can also occur gradually when soil pore pressures, increased by vertical loading, gradually dissipate over time. The potential impact and hazards of consolidation settlement due to embankment loading and subsidence will be determined in the Plans, Specifications, and Estimates phase. The Project would follow Caltrans' latest design requirements to minimize any potential effects related to subsidence and settlement. In addition, the Project includes Standard Project Measure **GEO-1** to properly assess and minimize potential impacts on geotechnical sites.

No-Build Alternative

Under the No-Build Alternative, no Project construction would occur; therefore, no impacts related to geology, soils, seismicity, or topography would occur. The No-Build Alternative would not expose construction workers or the traveling public to risks associated with seismic ground shaking. The existing topography and soils would not be affected; however, sedimentation and erosion of existing embankment slopes and exposure to seismic activity and ground shaking could continue.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

The inclusion of Standard Project Measure **WQ-2**, as described in Section 2.3.2, *Water Quality and Stormwater Runoff*, along with Avoidance and Minimization Measure **NC-12**, as described in Section 2.4.1, *Natural Communities*, would implement erosion control measures during construction. With adherence to Caltrans' standard design and construction practices, which are required on all State Highway System projects, impacts related to geology, soils, seismicity, and topography would be avoided or minimized. In addition, the Build Alternative will include Standard Project Measure **GEO-**

1 to properly assess and minimize potential impacts on geotechnical sites as part of the Build Alternative.

GEO-1. Geotechnical Investigation. Under this measure during the Plans, Specifications, and Estimates (PS&E) phase, a detailed geotechnical investigation will be conducted by qualified geotechnical personnel to assess the geotechnical conditions at the Project area. The geotechnical investigation will include exploratory borings to investigate site-specific soils and conditions and to collect samples of subsurface soils for laboratory testing. Those soil samples will be tested to evaluate liquefaction potential, collapsibility potential, stability, and corrosion potential. The review and approval findings and recommendations of the geotechnical investigation will be summarized in a Structure Foundation Report and a Geotechnical Design Report to be submitted to Caltrans for review and approval. Those findings and recommendations will be incorporated in the final design of the Build Alternative.

2.3.4 Paleontology

2.3.4.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

- 16 United States Code (USC) 431-433 (the "Antiquities Act") prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered "objects of antiquity" by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.

- 23 United States Code (USC) 1.9(a) requires that the use of Federal-aid funds must be in conformity with all federal and state laws.

- 23 United States Code (USC) 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 USC 431-433 above and state law.

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA).

Section 5097.5 of the California Public Code protects historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological sites, or any other archaeological, paleontological, or historical feature that is situated on land owned by, or in the jurisdiction of, the State of California or any city, county, district, authority, or public corporation or any agency thereof.

The Riverside County General Plan (RCGP) requires consideration of paleontological resources under its Multipurpose Open Space Element (County of Riverside 2015). RCGP recommendations are based on Society of Vertebrate Paleontology (SVP) guidelines (SVP 2010) for the mitigation of paleontological resources. The Multipurpose Open Space Element (County of Riverside 2015) provides the following requirements for paleontologically sensitive areas within the county but not the areas that fall within the State right of way:

> **OS 19.6:** Whenever existing information indicates that a site proposed for development has high paleontological sensitivity as shown on Figure OS-8, a paleontological resource impact mitigation program (PRIMP) shall be filed with the County Geologist prior to site grading. The PRIMP shall specify the steps to be taken to mitigate impacts to paleontological resources.
>
> **OS 19.7:** Whenever existing information indicates that a site proposed for development has low paleontological sensitivity as shown on Figure OS-8, no direct mitigation is required unless a fossil

is encountered during site development. Should a fossil be encountered, the County Geologist shall be notified and a paleontologist shall be retained by the project proponent. The paleontologist shall document the extent and potential significance of the paleontological resources on the site and establish appropriate mitigation measures for further site development.

OS 19.8: Whenever existing information indicates that a site proposed for development has undetermined paleontological sensitivity as shown on Figure OS-8, a report shall be filed with the County Geologist documenting the extent and potential significance of the paleontological resources on the site and identifying mitigation measures for the fossil and for impacts to significant paleontological resources prior to approval of that department.

OS 19.9: Whenever paleontological resources are found, the County Geologist shall direct them to a facility within Riverside County for their curation, including the Western Science Center in the City of Hemet.

2.3.4.2 Affected Environment

The primary source used in preparation of this section is the approved I*nterstate 15 Express Lanes Project Southern Extension (I-15 ELPSE) Combined Paleontological Identification Report/Paleontological Evaluation Report* (PIR/PER), dated January 2022 (Caltrans 2022).

The Project footprint would be the northbound and southbound directions within the median of Interstate (I-) 15 from State Route (SR-) 74 (Central Avenue) (Post Mile [PM] 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The Project also includes a southbound auxiliary lane between both the Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately 1 mile). An analysis of existing paleontological data was conducted for the Project. The Paleontological Study Area, which includes the Project footprint and a 0.5- to 1.0-mile buffer, was used to determine presence and sensitivity of the Project footprint for paleontological resources. For the geologic map review, the 0.5-mile buffer was used; for the museum records search, the 1.0-mile buffer was used. The analysis of existing data included a geologic map review, a literature search, institutional records searches from the Natural History Museum of Los Angeles County and the Western Science Center in Hemet, online records searches of paleontology databases, and a review of the geotechnical studies conducted for the Project (Caltrans 2022).

A pedestrian field survey was conducted on April 16, 2021. No fossils were observed or collected during the field survey, although the results confirmed the presence of high-sensitivity units, including late to middle Pleistocene-age old alluvial fan deposits (Qof); late to middle Pleistocene-age old axial channel deposits (Qoa); late to middle Pleistocene-age old paralic deposits, undivided (Qop); middle to early Pleistocene-age very old alluvial fan deposits (Qvof); middle to early Pleistocene-age very old axial channel deposits (Qvoa); and Paleocene-age Silverado Formation (Tsi). In addition, although high-sensitivity early Miocene- to Oligocene-age Vaqueros and Sespe Formations, undivided (Tvs), were not observed directly along the survey corridor, these

sediments were observed in nearby hill exposures immediately adjacent to the survey area.

The geotechnical studies for the Project (Caltrans 2022) indicate the presence of Holocene- to late Pleistocene-age young sedimentary deposits, late to middle Pleistocene-age old axial channel deposits, Paleocene-age Silverado Formation, and Cretaceous-age igneous rocks beneath the Project footprint surface. Figure 2.3.4-1 shows the formations and rock units, which are described in further detail below. The subsurface geology documented at each of the study locations—Gavilan Wash (PM 25.55), Horsethief Canyon Wash (PM 29.13), Indian Wash (PM 30.09), Mayhew Wash (PM 31.97), and Temescal Canyon Road (PM 31.90) Bridges; Horsethief Canyon (PM 28.87) and Temescal Canyon (PM 27.78) Roads; Lake Street (PM 26.69); and Indian Truck Trail (PM 30.40)—is summarized below (Caltrans 2022).

- **Gavilan Wash Bridge (PM 25.55):** Holocene- to late Pleistocene-age young axial-channel deposits were encountered, starting at the ground surface and extending down to the anticipated maximum depth affected, an elevation of approximately 1,224 feet above mean sea level (amsl) (approximately 30 feet below ground surface [bgs]).

- **Lake Street Bridge (PM 26.69):** Holocene- to late Pleistocene-age young alluvial fan deposits were encountered, starting at the ground surface and extending down to an elevation of approximately 1,172 feet amsl (approximately 48 feet bgs), where they are underlain by either Cretaceous-age Estelle Mountain volcanics of Herzig or Cretaceous-age Santiago Peak volcanics.

- **Temescal Canyon Road Bridge (PM 27.78):** Late to middle Pleistocene-age old axial channel deposits were encountered, starting at the ground surface and extending down to an elevation of approximately 1,130 feet amsl (approximately 60 feet bgs), where they are underlain by Paleocene-age Silverado Formation. This formation extends down to the maximum depth affected, an elevation of approximately 1,114 feet amsl (approximately 76 feet bgs).

- **Horsethief Canyon Road Bridge (PM 28.87):** Holocene- to late Pleistocene-age young alluvial fan deposits were encountered, starting at the ground surface and extending down to the maximum depth affected, an elevation of approximately 1,131 feet amsl (approximately 102 feet bgs).

- **Horsethief Canyon Wash Bridge (PM 29.13):** Holocene- to late Pleistocene-age young alluvial fan deposits were encountered, starting at the ground surface and extending down to an elevation of approximately 1,175 feet amsl (approximately 25 to 40 feet bgs), where they are underlain by Paleocene-age Silverado Formation (Tsi). This formation extends down to the maximum depth affected, an elevation of approximately 1,160 feet amsl (approximately 40 to 68 feet bgs).

- **Indian Wash Bridge (PM 30.09):** Holocene- to late Pleistocene-age young axial-channel deposits were encountered, starting at the ground surface and extending

down to the maximum depth affected, an elevation of approximately 1,106 feet amsl (approximately 30 to 60 feet bgs). In addition, in several boring holes, Paleocene-age Silverado Formation was affected, starting at an elevation of approximately 1,130 feet amsl (approximately 6 to 36 feet bgs) and extending down to the maximum depth affected, an elevation of approximately 1,116 feet amsl (approximately 20 to 40 feet bgs).

- **Indian Truck Trail Bridge (PM 30.40):** Holocene- to late Pleistocene-age young axial-channel deposits were encountered, starting at the ground surface and extending down to the maximum depth affected, an elevation of approximately 1,093 feet amsl (approximately 80 feet bgs). In addition, in one boring hole, Paleocene-age Silverado Formation was affected, starting at an elevation of approximately 1,132 feet amsl (approximately 18 feet bgs) and extending down to the maximum depth affected, an elevation of approximately 1,091 feet amsl (approximately 41 feet bgs).

- **Temescal Canyon Road Bridge (PM 31.90):** Holocene- to late Pleistocene-age young axial-channel deposits were encountered, starting at the ground surface and extending down to the maximum depth affected, an elevation of approximately 991 feet amsl (approximately 51 feet bgs).

- **Mayhew Wash Bridge (PM 31.97):** Holocene- to late Pleistocene-age young axial-channel deposits were encountered, starting at the ground surface and extending down to the maximum depth affected, an elevation of approximately 989 feet amsl (approximately 56 feet bgs).

Along with the proposed lane modifications, the Project would include the widening of up to 15 bridges to accommodate the express lanes.

Late to middle Pleistocene-age old alluvial fan deposits (Qof) are mapped at the surface of the northern portion of the Project limits and the central portion of the Project limits, south of Bedford Wash, as well as in areas to the north, south, east, and west of the Project limits, within the 0.5-mile buffer. Middle to early Pleistocene-age very old alluvial fan deposits (Qvof) are mapped at the surface of the southern portion of the Project limits as well as in areas to the northwest and south of the Project limits, within the 0.5-mile buffer. Late to middle Pleistocene-age old axial channel deposits (Qoa) are mapped to the north and southwest of the Project limits, within the 0.5-mile buffer, and may underlie younger geologic units within the Project limits. Middle to early Pleistocene-age very old axial channel deposits (Qvoa) are mapped to the east of the Project limits, within the 0.5-mile buffer, and may potentially underlie younger geologic units within the Project limits. (Morton and Miller 2006.)

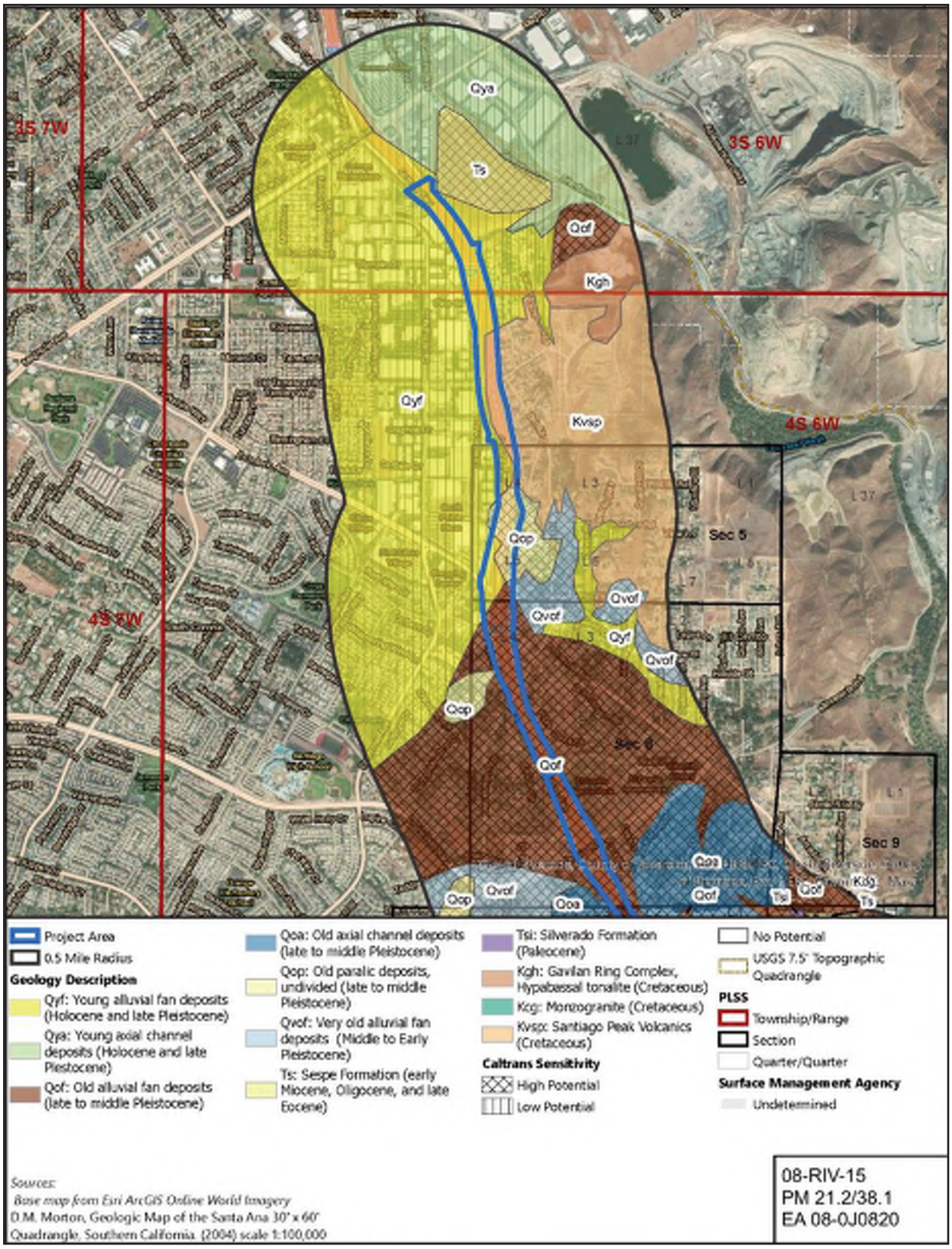

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Figure 2.3.4-1, Sheet 1
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

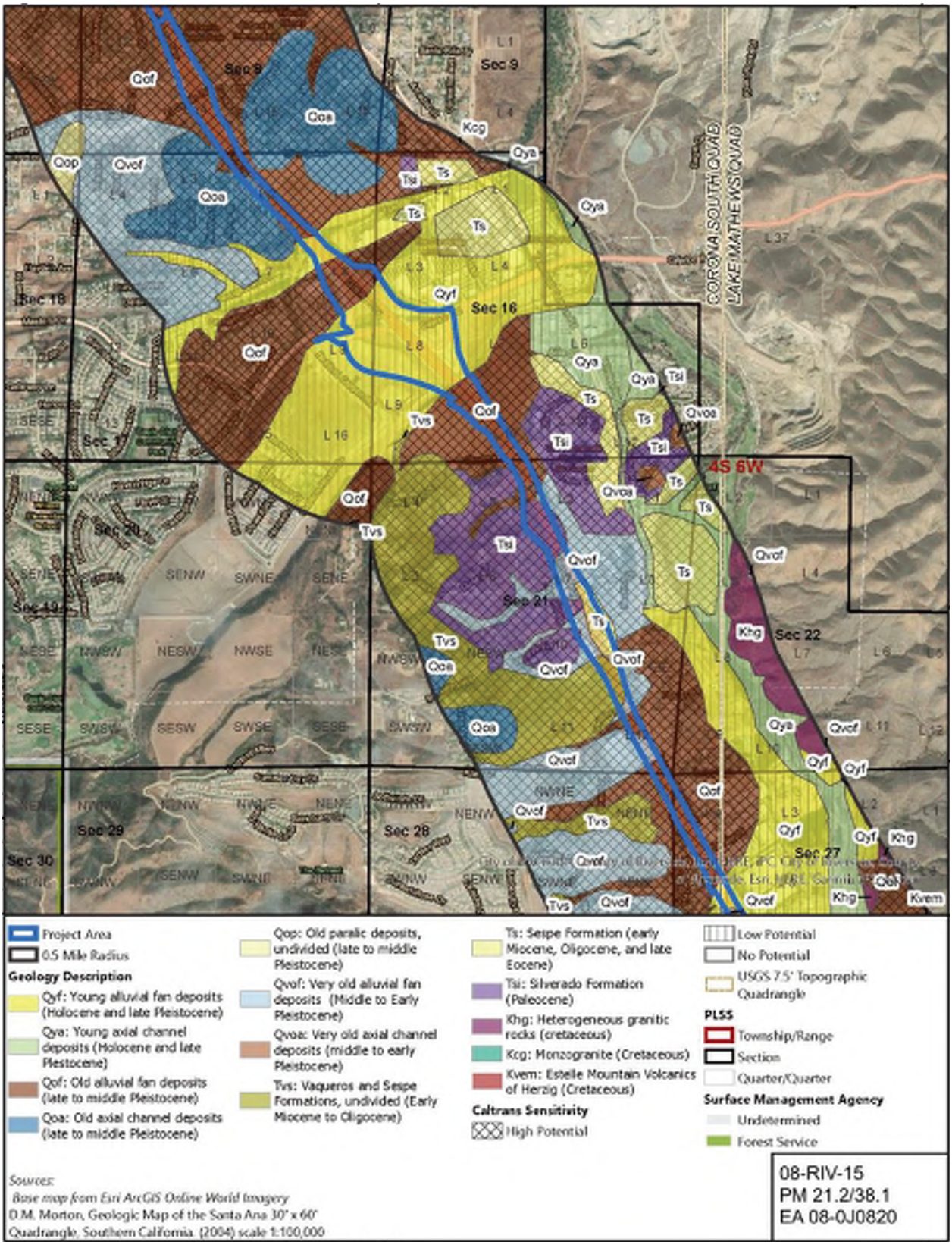

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Figure 2.3.4-1, Sheet 2
Project Geology Map
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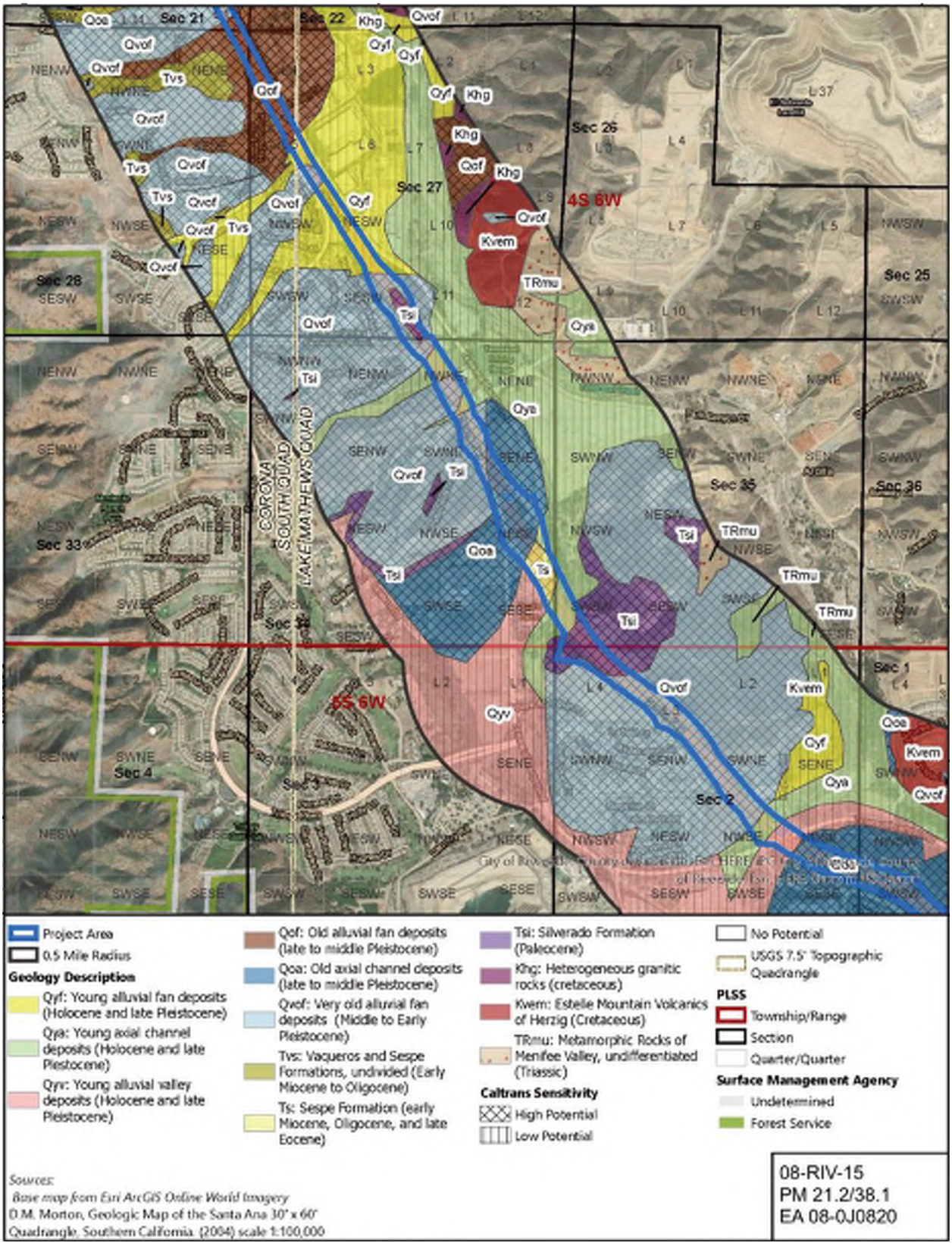

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Figure 2.3.4-1, Sheet 3
Project Geology Map
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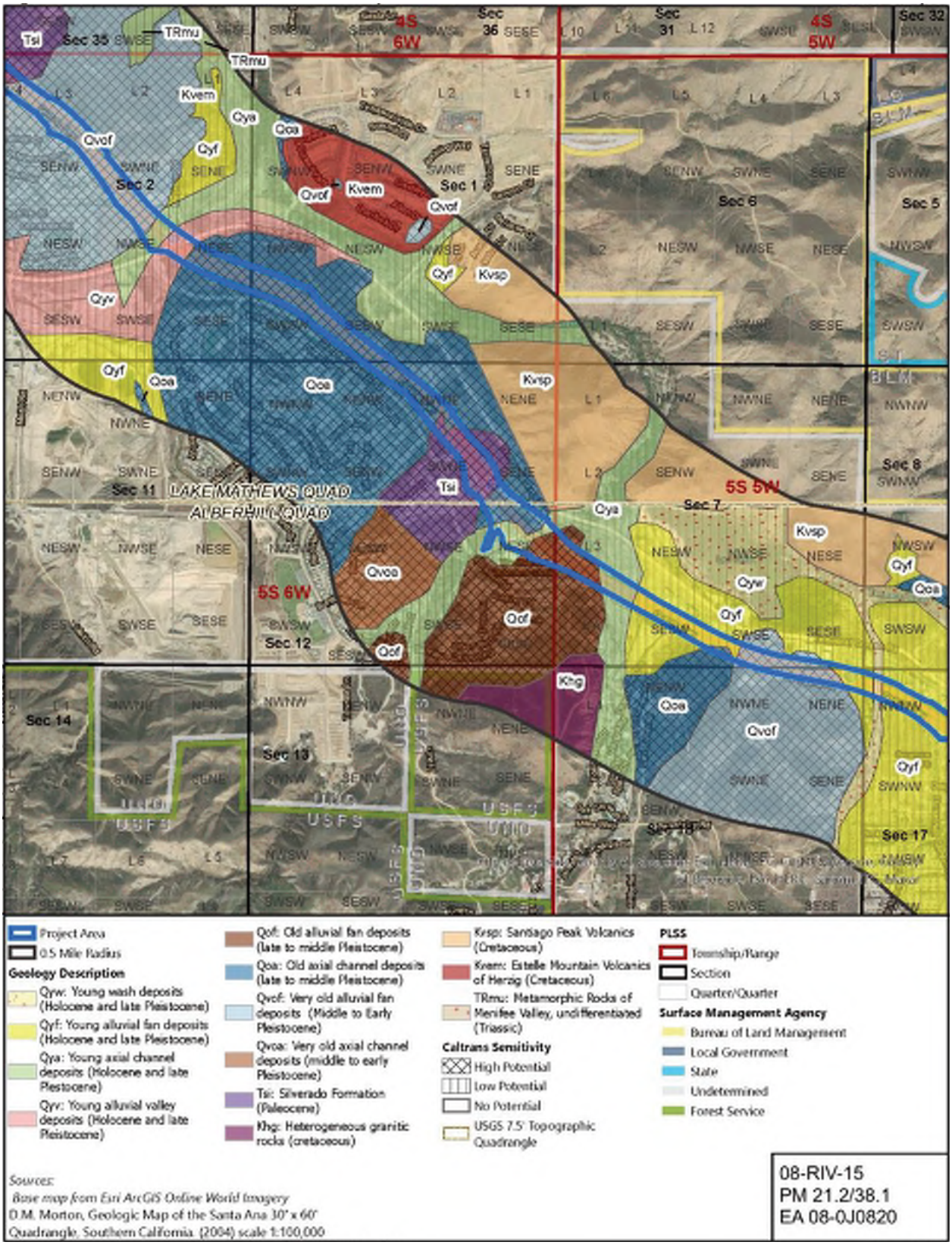

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Figure 2.3.4-1, Sheet 4
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

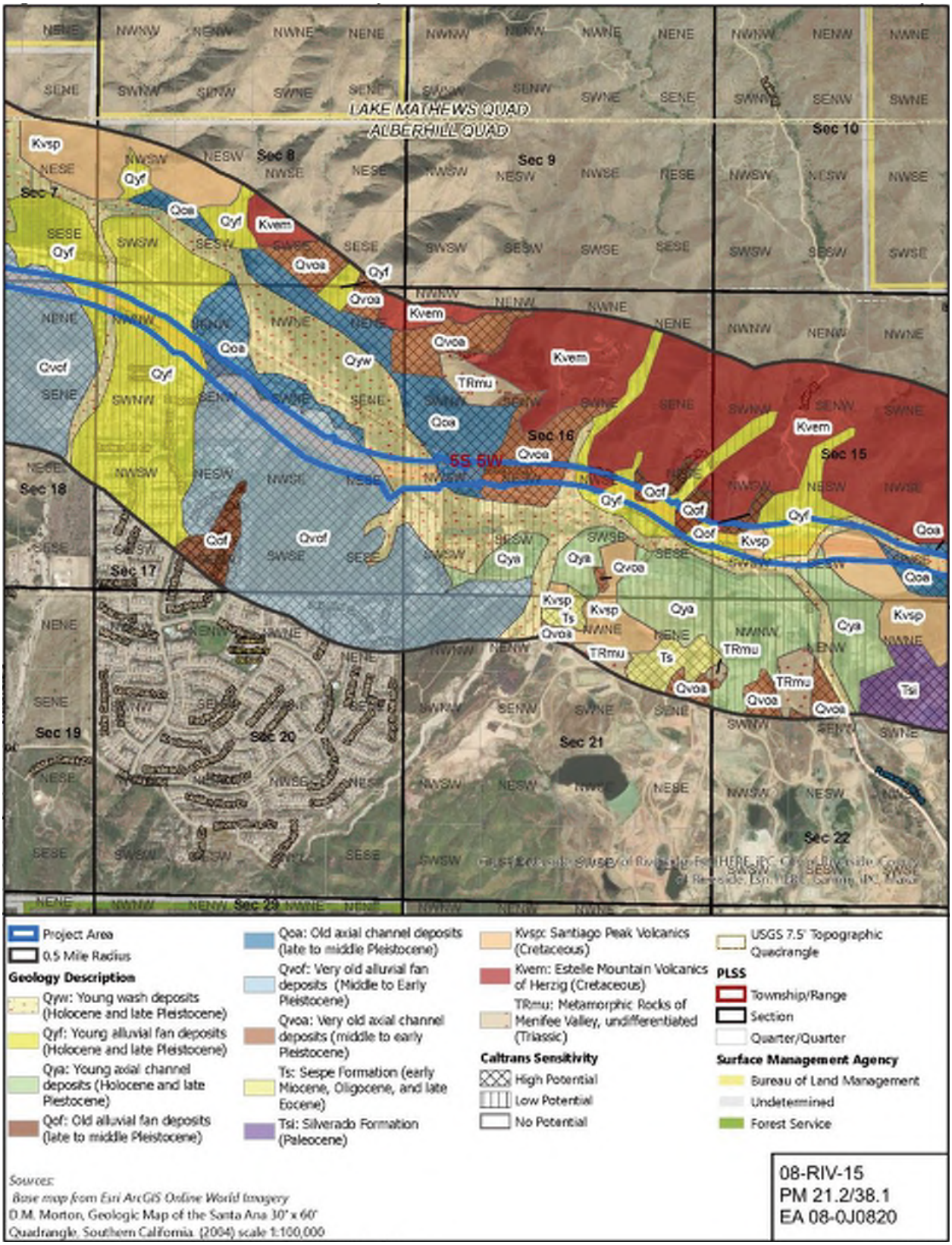

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Figure 2.3.4-1, Sheet 5
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

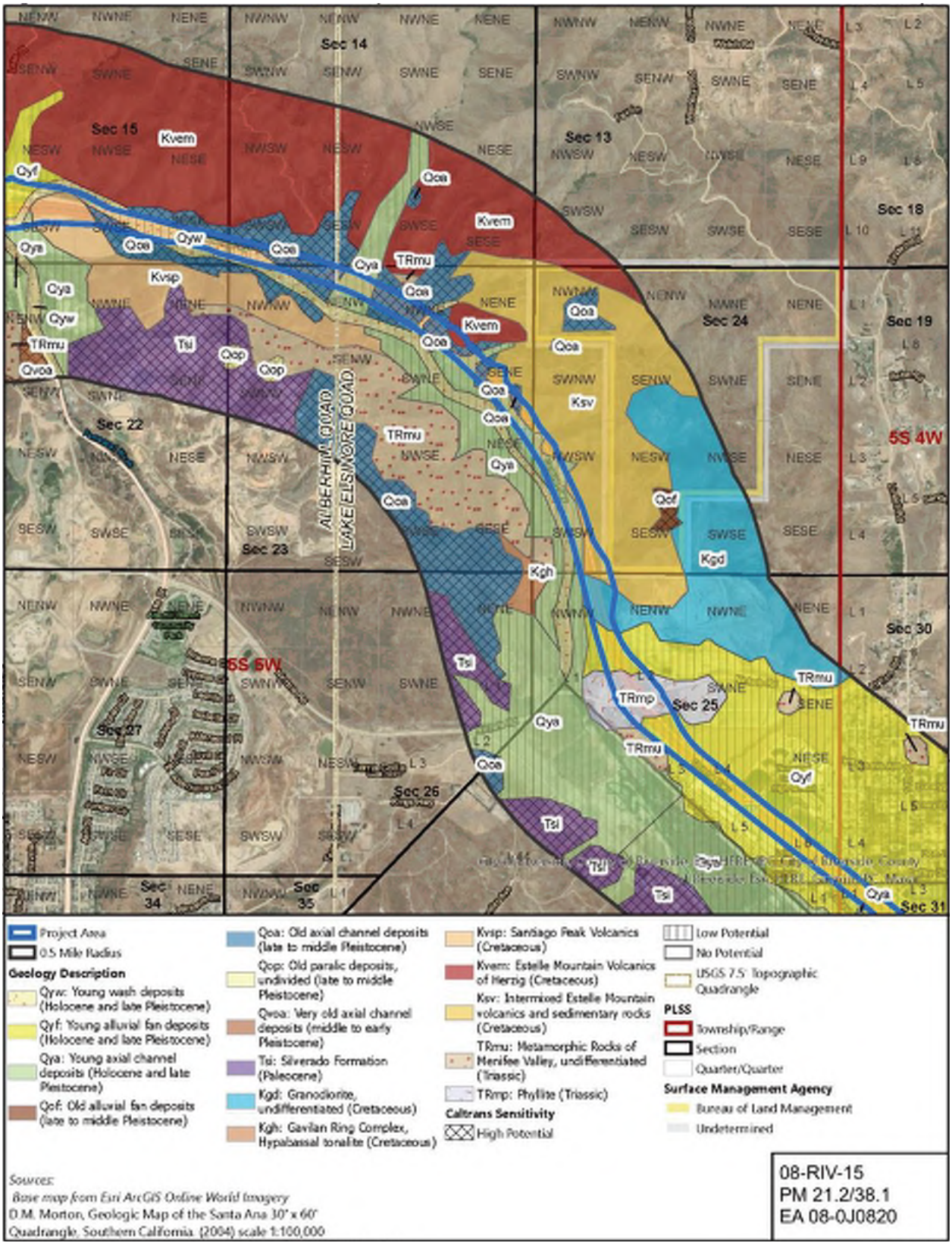

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Figure 2.3.4-1, Sheet 6
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

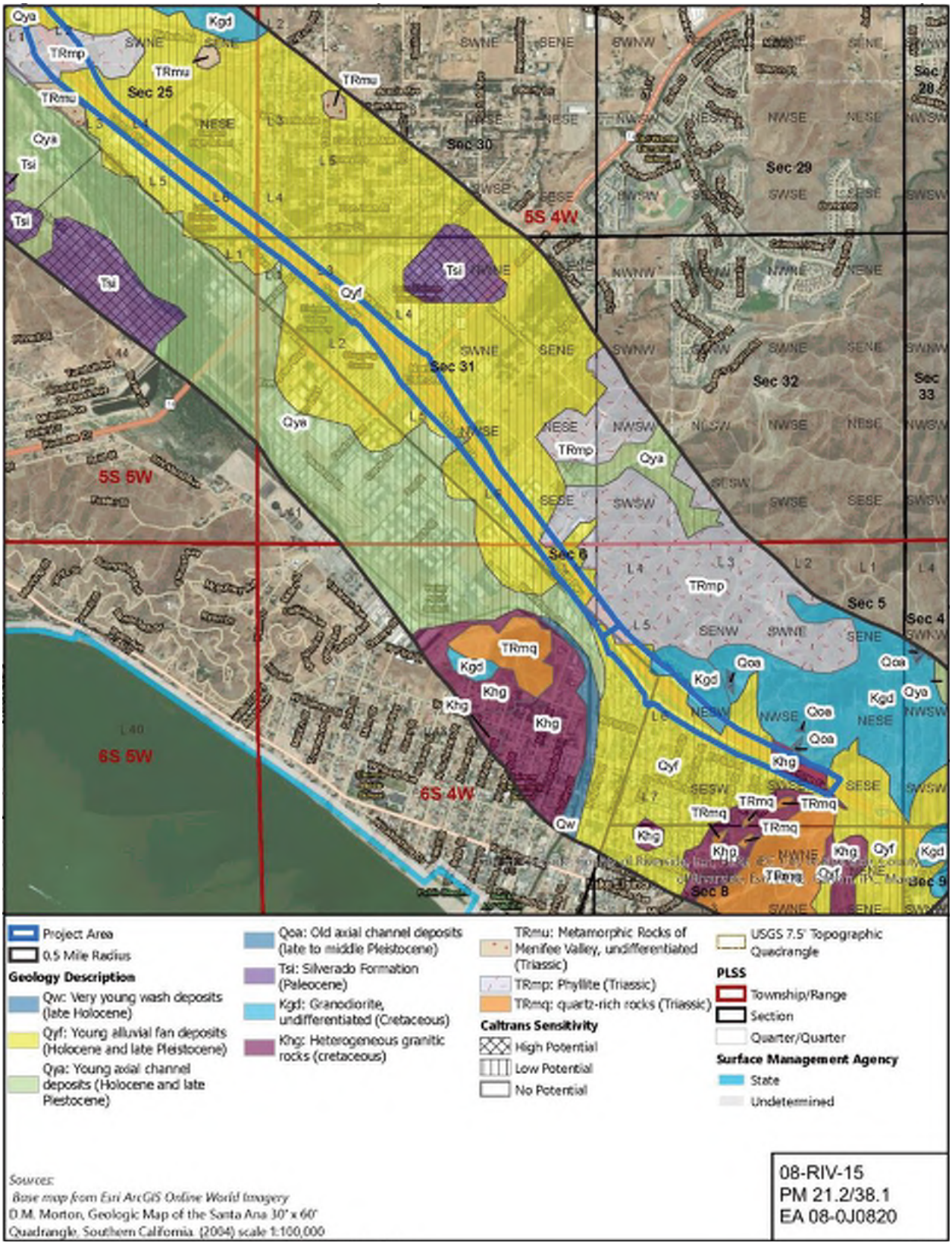

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Figure 2.3.4-1, Sheet 7
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

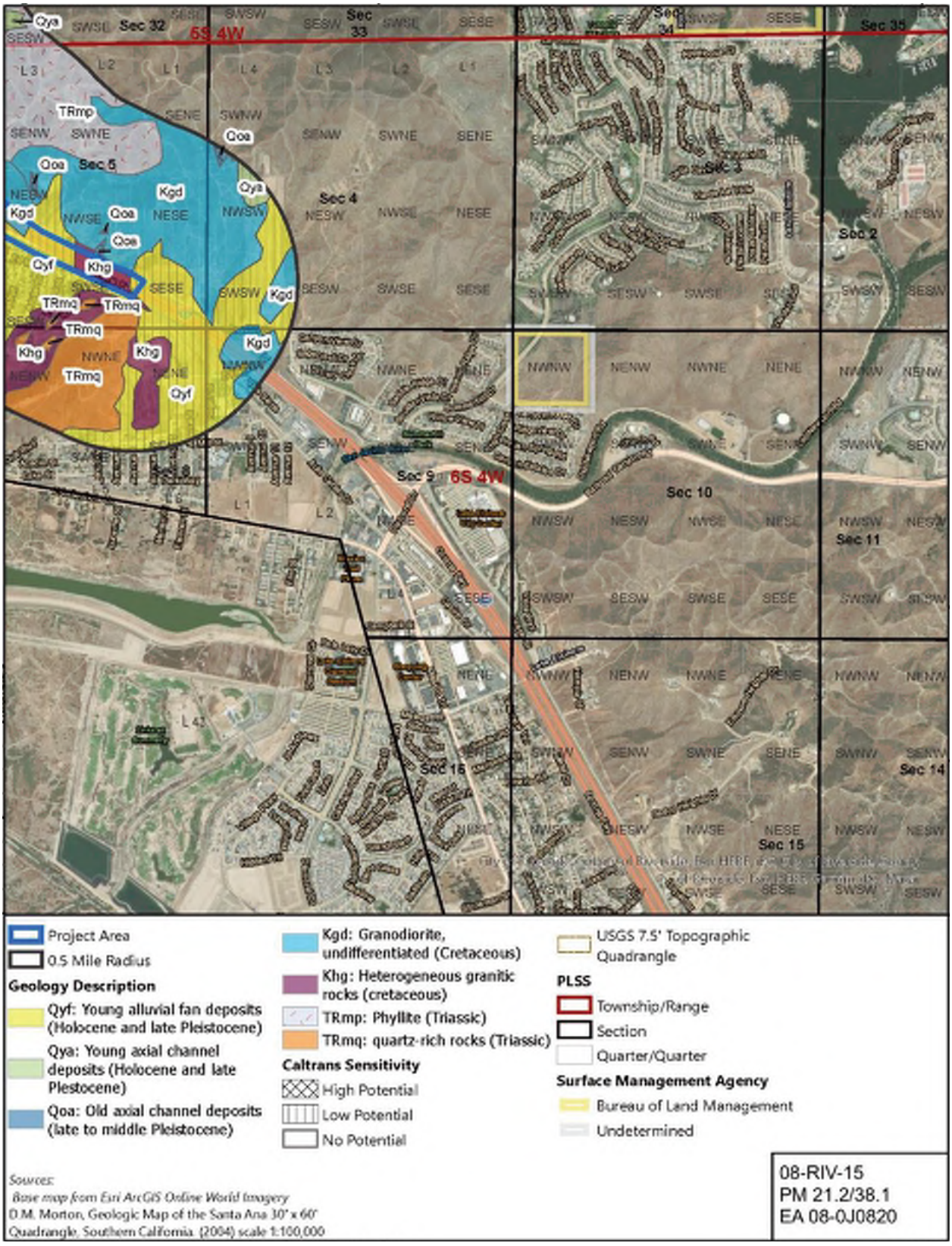

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Figure 2.3.4-1, Sheet 8
Project Geology Map
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

2.3.4.3 Environmental Consequences

Build Alternative

Temporary Impacts

There are no temporary impacts on paleontological resources. Any impacts on such resources during the construction period, should they occur, are considered permanent impacts and are discussed under the *Permanent Impacts* heading below.

Permanent Impacts

The results of the PIR/PER indicate that the Project footprint is underlain, in part, by geologic units with high paleontological sensitivity. These are known to potentially contain scientifically significant paleontological resources. These units consist of the following.

- Late to middle Pleistocene-age old alluvial fan deposits (Qof)
- Late to middle Pleistocene-age old axial channel deposits (Qoa)
- Late to middle Pleistocene-age old paralic deposits, undivided (Qop)
- Middle to early Pleistocene-age very old alluvial fan deposits (Qvof)
- Middle to early Pleistocene-age very old axial channel deposits (Qvoa)
- Paleocene-age Silverado Formation (Tsi).

In addition, although high-sensitivity early Miocene- to Oligocene-age Vaqueros and Sespe Formations, undivided (Tvs), were not observed directly along the survey corridor, these sediments were observed in nearby hill exposures immediately adjacent to the survey area.

Project construction is expected to affect these units and therefore could result in impacts on any resources harbored within, if present. A Paleontological Mitigation Plan (PMP) shall be prepared by a qualified paleontologist, a curation agreement shall be obtained, and paleontological monitoring shall be implemented during ground-disturbing activities in areas of high paleontological sensitivity in order to address impacts on paleontological resources, should they be present, as identified in Avoidance and Minimization Measure **PAL-1** below. Therefore, impacts on paleontological resources, should they occur, would not be substantial.

No-Build Alternative

Under the No-Build Alternative, no effects on paleontological resources would occur.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

The following Avoidance and Minimization Measure would be implemented during construction to minimize or avoid impacts related to paleontological resources.

PAL-1: Paleontological Mitigation Plan. During final design, the Riverside County Transportation Commission (RCTC) will ensure that a PMP is prepared, and that the requirements included are implemented during construction. The PMP will include all elements identified as being required in this document on the Caltrans Standard Environmental Reference (SER), including.

a. Required and recommended monitoring locations

b. A description of, and requirement for all construction personnel to attend, a worker training program, including documentation of completion of the training

c. A signed curation agreement with the Western Science Center or another accredited repository

d. Detailed procedures for monitoring, fossil recovery, laboratory analysis, and museum curation and notification procedures in the event of a fossil discovery by a paleontological monitor or other Project personnel

2.3.5 Hazardous Waste/Materials

2.3.5.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976 (RCRA). The purpose of CERCLA, often referred to as "Superfund," is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include

Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during Project construction.

2.3.5.2 Affected Environment

The primary sources used in preparation of this section are the *I-15 ELPSE Initial Site Assessment* (ISA) (Caltrans 2021), *I-15 ELPSE Aerially Deposited Lead Analysis* (Caltrans 2020a), and the *I-15 ELPSE Limited Asbestos and Lead Chip Assessment* (Caltrans 2020b). The ISA study area consists of the Project limits and a 300-foot buffer to account for adjoining properties. The Project limits include all proposed improvements, which are expected to be constructed primarily within the existing State right of way (ROW), and advanced signage/striping areas, as shown on Figure 2.3.5-1. The land uses within the Project limits consist primarily of transportation uses and vacant land. Land uses adjacent to the Project limits consist of agricultural, commercial, residential, manufacturing/industrial, light industrial, and mining uses.

The ISA was prepared in general accordance with the American Society for Testing and Materials (ASTM) International Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E1527-13 (ASTM Standard) and California Department of Transportation (Caltrans) ISA procedures. The ISA was conducted to identify potential and known contaminant sources or recognized environmental conditions (RECs), historical RECs, and controlled RECs, as defined below in the ASTM Standard, for the Project.

- RECs are defined as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (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. *De minimis* conditions are not RECs.”

- Historical RECs are defined as “a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls.”

- Controlled RECs are defined as “a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.”

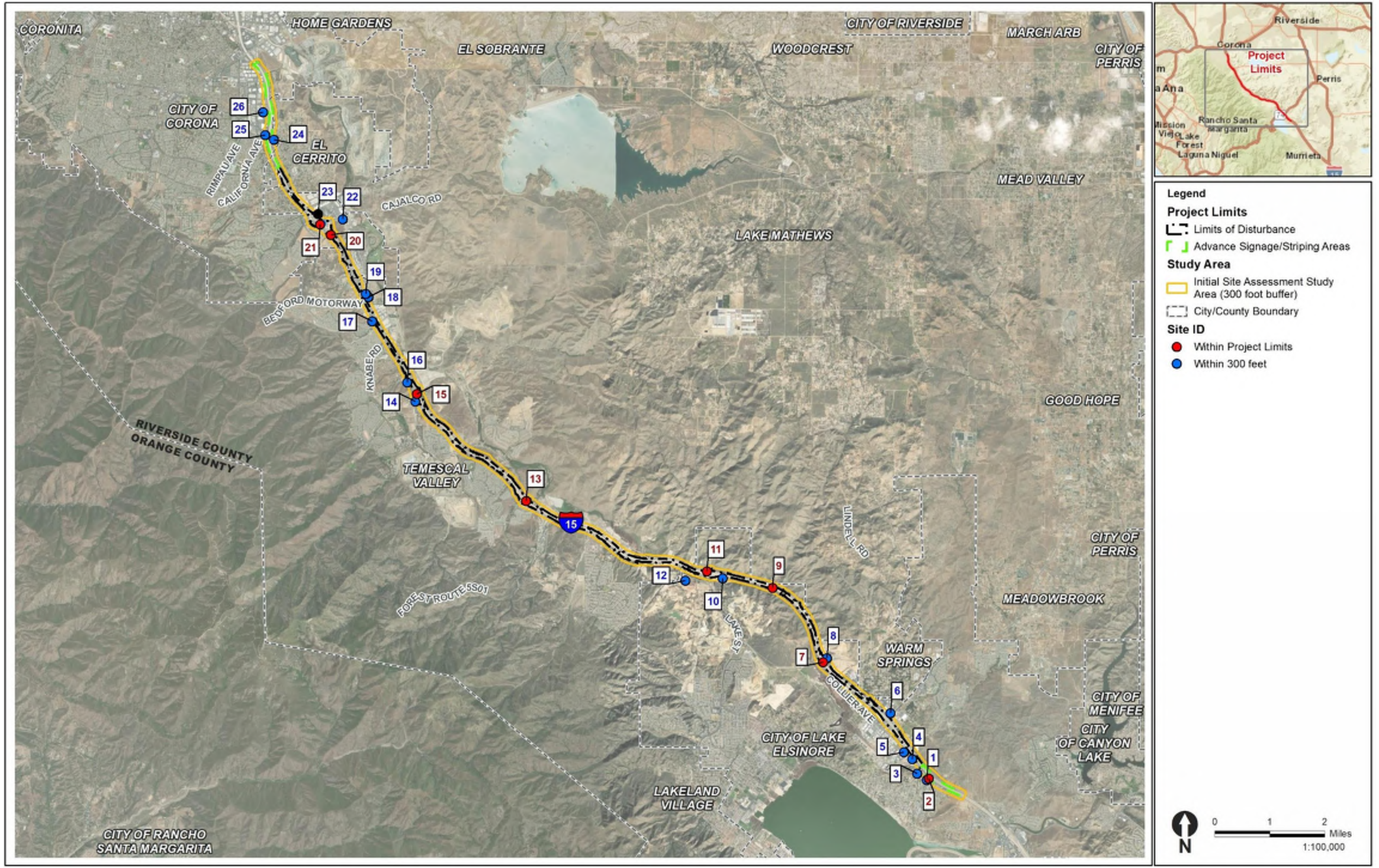

Figure 2.3.5-1
Potential Hazardous Waste/Material Sites
Interstate 15 Express Lanes Project Southern Extension

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The following were conducted as part of the ISA:

- **Hazardous Materials Database Results:** An environmental database search was conducted on November 12, 2020; Environmental Data Resources (EDR) was used to gather government database records. An updated EDR search will be conducted following this draft environmental document and prior to the final environmental document. The search consisted of the Project limits as well as properties up to approximately 1 mile from the Project limits and met the government records search requirements of ASTM E1527-13.
- **Historical Land Use Records Review:** Historical aerial photographs, topographic maps, and Sanborn fire insurance maps were reviewed.
- **User-Provided Reports:** A review of the *I-15 ELPSE Aerially Deposited Lead Analysis* (Caltrans 2020a) and the *I-15 ELPSE Limited Asbestos and Lead Chip Assessment* (Caltrans 2020b) was conducted.
- **Agency Records Review:** Files maintained in the State Water Resources Control Board GeoTracker database and the Department of Toxic Substances Control (DTSC) EnviroStor database were reviewed between February and March 2021, as was the EDR Area/Corridor Report (EDR 2020).
- **Field Reconnaissance:** Field reconnaissance was conducted along the Project corridor on December 10, 11, and 14, 2020, and on April 1, 2021. The purpose was to document current land uses and look for indications of potential contamination issues or releases that may affect the Project. Site reconnaissance involved observation and documentation of existing site conditions. The site visit was limited to observations made from the public ROW and from other publicly accessible areas, when feasible.

Sites of Concern

Based on a review of federal, State, and local environmental databases; Sanborn fire insurance maps; historical aerial photographs; historical topographic maps; available public agency records; and the observations made during field reconnaissance conducted on December 10, 11, and 14, 2020, and April 1, 2021, no RECs were identified within the ISA study area for the Project, as discussed further below.

The ISA identified eight hazardous material sites within the Project limits that have a history of releases to the environment; however, current site conditions and available information do not indicate a REC to the Project. In addition, 92 hazardous material sites within the ISA study area adjoin the Project limits, but only 18 adjoining sites were listed in the databases that indicate release incidents or mining activities that may have occurred on the property. However, the 18 adjoining sites are not considered RECs to the Project because of current site conditions and available information. Information pertaining to the eight sites within the Project limits as well as the 18 adjoining sites is provided in Table 2.3.5-1 and shown on Figure 2.3.5-1. Table 2.3.5-1 also provides information on the potential level of risk a hazardous material site may pose to the Project.

Table 2.3.5-1. Potential Hazardous Waste/Material Sites

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
1	7-Eleven, Inc., #36788 515 N. Main Street Lake Elsinore, CA	Within 300 feet/west	This site is a 7-Eleven gas station. During field reconnaissance, four pump stations, a chemical placard, an AST for a clean-air scrubber, and 5-gallon propane tanks were located on the site. In September 2000, while the site was operating as a 76 gas station, a case was opened after soil and groundwater contamination from petroleum hydrocarbons was discovered during a UST upgrade. Upon completion of site investigation and remediation activities, case closure was granted on July 15, 2014, by the RCDEH LOP.	No	Low
2	UNOCAL #2757 1095 Main Street Lakeport, CA	Within Project limits	This site was not found during field reconnaissance. This site is listed in the RGA LUST database, per the EDR Area/Corridor Report; however, according to the SWRCB UST Cleanup Fund Priority List (dated June 29, 2012), UNOCAL #2757 at 1095 Main Street is in the City of Lakeport and not the City of Lake Elsinore.	No	None
3	City of Lake Elsinore Corporate Yard 521 Langstaff Street Lake Elsinore, CA	Within 300 feet/ southwest	This site is a maintenance yard. During field reconnaissance, a chemical placard was seen on the gated front entrance. No other indication of chemical use was seen on the site to indicate a spill or release. This site has been operated by the City of Lake Elsinore as a maintenance yard since the early 1900s. In 1987, a case was opened involving soil contaminated from petroleum hydrocarbons,	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
			which was discovered during a routine UST inspection. Upon completion of site investigation and remediation activities, case closure was granted on May 3, 1989, by the RCDEH LOP.		
4	Laidlaw Transit (now Steve's Towing) 609 Minthorn Street Lake Elsinore, CA	Within 300 feet/west-southwest	This site is an automotive towing and recovery company. Field reconnaissance found no outward sign of hazardous substance usage on the property. On March 2, 1988, during operation of the site by Laidlaw Transit, a case was opened involving soil contamination, which was discovered during closure of a UST. The soil was contaminated with heating oil/fuel oil; the contamination was due to corrosion in the tank. Case closure was granted on April 4, 1989, by SARWQCB.	No	Low
5	Rightway 653 W. Minthorn Street Lake Elsinore, CA	Within 300 feet/ southwest	This site is a portable toilet service company. During field reconnaissance, a chemical placard was seen on the gated front entrance; a cover for a monitoring well was east of the entrance. On July 24, 1986, during operation of the site by Rightway, a case was opened involving soil contamination, which was discovered during a UST tightness test. The soil was contaminated with gasoline. Case closure was granted on April 4, 1989, by SARWQCB.	No	Low
6	ARCO #5618 29355 Central Avenue Lake Elsinore, CA	Within 300 feet/north-northeast	This site is an ARCO gas station. During field reconnaissance, six pump islands, an AST for a clean-air scrubber, 5-gallon propane tanks, and two 55-gallon metal drums with hazardous waste labels were seen on the site. A cover for a monitoring well	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
			was also seen near the AST. On November 22, 2002, during operation of the site by ARCO, a case was opened involving soil and groundwater contamination, which was discovered during a UST upgrade. However, based on the groundwater monitoring data collected, active remediation was not required to restore or protect groundwater quality. Case closure was granted on June 1, 2010, by the RCDEH LOP.		
7	Unnamed site Nichols Road at I-15 Lake Elsinore, CA	Within Project limits	This site is the Nichols Road/I-15 interchange. During field reconnaissance, a construction laydown area was seen adjacent to the NB I-15 Nichols Road On-Ramp. A spill incident had occurred on October 3, 1996, involving 20 pounds of waste from a drug lab; the spill occurred at Nichols Road/I-15, per the EDR Area/Corridor Report (EDR 2020). The spill incident was found by a sheriff's deputy while on patrol. No additional agency records were available for this site.	No	Low
8	Nichols Canyon Mine (now Chandler Aggregates, Inc.) 10000 Nichols Road Lake Elsinore, CA	Within 300 feet/northeast	The Nichols Canyon Mine covers approximately 199 acres both north and south of Nichols Road, east of I-15. The site at 10000 Nichols Road is an active mining site for sand and gravel; Chandler Aggregates is the operator. During field reconnaissance, a chemical placard was seen on the front gate. No other indication of chemical usage was seen on the site that would indicate a spill or release.	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
9	Bridge maintenance on I-15 (PM 25.55) over Gavilan Wash (now Gavilan Wash Bridge) I-15 (PM 25.55) Lake Elsinore, CA	Within Project limits	This site is the Gavilan Wash Bridge. During field reconnaissance, bridge maintenance work was not occurring and no outward signs were observed to indicate that hazardous materials were stored on the property. This site received Section 401 certification between 2015 and 2020 for the discharge of dredged and fill material, per the EDR Area/Corridor Report (EDR 2020).	No	Low
10	WYROC Lake Street Quarry (now vacant and for sale/lease) 31000 Lake Street Lake Elsinore, CA	Within 300 feet/south	The WYROC Lake Street Quarry is vacant and fenced off. The site is being reclaimed by Lake Street Properties. A portion of the site is designated for future development, including approximately 1 to 1.5 acres that will be sold or leased for a gas station/fast-food establishment. During field reconnaissance, heavy construction equipment, including an excavator, a chemical placard mounted on a fence, three 55-gallon metal drums, and an IBC, were seen on the property. A spoil pile was also seen on the southern end of the property.	No	Low
11	Unnamed site NB I-15 Lake Street On-Ramp Lake Elsinore, CA	Within Project limits	This site is the NB I-15 Lake Street On-Ramp. During field reconnaissance, no outward signs were observed to indicate that hazardous materials were stored on the property. A release/spill incident was reported on February 19, 1988, per the EDR Area/Corridor Report (EDR 2020). No additional agency records were available for this site.	No	Low
12	Pacific Clay Products	Within 300 feet/south	This site is an active clay mine and brick/brick products manufacturing facility, which is operated by	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
	14741 Lake Street Lake Elsinore, CA		Pacific Clay Products. The mailing address for the site is 14741 Lake Street. During field reconnaissance, a chemical placard on the gated front entrance and a pole-mounted transformer were seen. The northern portion of the site contains processing equipment, including kilns, for manufacturing clay products; the southern portion of the site contains the clay mines and mixing pads. Three 10,000-gallon USTs were removed at three locations (Areas 1, 2, and 3) on July 15, 1998; each site had soil contamination involving petroleum hydrocarbons. Upon completion of site investigation and remediation activities, case closure was granted by the RCDEH LOP on March 23, 1999, for both Areas 2 and 3; case closure was granted by the RCDEH LOP on September 8, 2000, for Area 1.		
13	Indian Truck Trail and I-15 interchange Temescal Canyon to Campbell Ranch Road Lake Elsinore, CA	Within Project limits	This site is the Indian Truck Trail and I-15 interchange. During field reconnaissance, no outward signs were observed to indicate that hazardous materials were stored on the property. The site had no violations or enforcement actions listed in the EDR Area/Corridor Report (EDR 2020). No additional agency records were available for this site.	No	Low
14	ARCO AM/PM Mini Mart	Within 300 feet/ southwest	This site is an ARCO AM/PM gas station. During field reconnaissance, six pump islands, an AST for a clean-air scrubber, two 55-gallon metal drums with a hazardous waste label, 5-gallon propane tanks, and	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
	23760 Temescal Canyon Road Corona, CA		a pad-mounted transformer were seen on the site. In August 1998, during operation of the site by ARCO, a case was opened involving MTBE soil and groundwater contamination, which was discovered during UST piping/dispenser upgrades. Upon completion of site investigation and remediation activities, case closure was granted on October 17, 2006, by the RCDEH LOP.		
15	Unnamed site Temescal Canyon Road and I-15 Corona, CA	Within Project limits	This site is the Temescal Canyon Road and I-15 interchange. Per the EDR Area/Corridor Report (EDR 2020), this site is listed in the ERNS database, which records and stores information on reported releases of oil and hazardous substances. No additional agency records were available for this site. During field reconnaissance, no outward signs were observed to indicate that hazardous materials were stored on the property. Furthermore, no open cases involving LUSTs or spills are associated with this property. Therefore, no RECs were identified for this site.	No	Low
16	Rancho Serrano High School (now vacant property) Lawson Drive/ Temescal Canyon Road Corona, CA	Within 300 feet/west-southwest	This approximately 51.5-acre site was previously proposed to be developed as a high school by the Corona-Norco Unified School District. The site is currently vacant and undeveloped. A Phase I Environmental Site Assessment was prepared on September 30, 2004, for the site; it found no RECs in connection with the property.	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
17	Wild Rose Development (now Wild Rose Ranch Community Association) Interstate 15 (near Clay Canyon) Corona, CA	Within 300 feet/ southwest	This site is a residential community with a park. During field reconnaissance, a pad-mounted transformer was seen on the site. In 1990, during operation of the site by Wild Rose Development, a case was opened involving soil and groundwater contaminated with diesel, which was discovered during removal of two ASTs and a partially buried concrete tank. The ASTs were disposed of, and the concrete tank was demolished. The concrete chunks were used as fill material at the site. Remediation activities included the excavation of 10,200 cubic yards of soil, which was stockpiled on site. After extensive soil characterization, the RCDEH LOP approved use of the stockpiled soil for a road base, and the area was subsequently paved. Case closure was granted on July 20, 2004, by SARWQCB.	No	Low
18	Villa Park Trucking (now Vaughan Trucking, LLC) 21880 Temescal Canyon Road Corona, CA	Within 300 feet/east-northeast	This gated site provides trucking to supply aggregate products. Field reconnaissance found no indications of hazardous substances on the property. During operation of the site by Villa Park Trucking, both soil and groundwater with diesel and VOC contamination were detected through sampling after the removal of USTs in 1981 and 2006. Case closure was granted on September 16, 2010, by the RCDEH LOP.	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
19	FST Sand and Gravel, Inc. 21780 Temescal Canyon Road Corona, CA	Within 300 feet/east-northeast	This gated site provides trucking to supply aggregates, including concrete, asphalt, and sand. Field reconnaissance found a chemical placard on the site. During routine site inspections in 2016 and 2017 by the RCDEH LOP, minor site violations were noted. These involved record keeping, annual staff safety training, weekly site inspections, the labeling of containers, and failure to collect hazardous waste in a container in good condition. All site violations were corrected.	No	Low
20	Coronita Ranch Sand Deposit Corona, CA	Within Project limits	This site was not found during field reconnaissance but is listed in the MINES MRDS database, per the EDR Area/Corridor Report (EDR 2020). The primary commodity at the Coronita Ranch Sand Deposit site is silica sand. A review of historical aerials and topographic maps did not indicate that mining activities had occurred within the Project limits. Silica sand is not a CERCLA hazardous substance but can be toxic if made airborne and inhaled. Although there is no clear documentation regarding the presence or absence of silica sand within the Project limits, precaution should be taken if this material is encountered during soil disturbance activities, such as intrusive geotechnical investigations.	No	Low
21	Cajalco Road/I-15 interchange	Within Project limits	This site was previously under construction during the Cajalco Road/I-15 Interchange Improvement Project and had an NPDES permit in 2017 for	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
	Cajalco Road and I-15 Corona, CA		construction stormwater, per the EDR Area/Corridor Report (EDR 2020). Construction of the project was completed in 2019.		
22	Liston Aluminum Brick Company (now unnamed site) 3710 and 20401 Temescal Canyon Road Corona, CA	Within 300 feet/east	This site is at the southwest intersection of Cajalco Road and Temescal Canyon Road and currently used as a construction laydown area, which is owned by RCTC. During operation of the site by the Liston Aluminum Brick Company, soil contamination, including petroleum hydrocarbons, VOCs, and metals, was detected from the surface to 15 feet bgs as part of site investigation activities conducted from 1993 through 2009. The source of the soil contamination was an LUST, which was detected during the removal of two USTs on March 19, 1993, and past site operations. Case closure was granted on July 14, 1993, by the RCDEH LOP after completion of the site investigation and remedial actions associated with the USTs. In addition, “site closure” status and an NFA certificate were granted by DTSC on July 14, 2015.	No	Low
23	Gateway Business Park (now Crossings at Corona) 20325 Temescal Canyon Road Corona, CA	Within 300 feet/northeast	This site is currently a retail shopping center but was formerly a sand and clay mining reclamation site. Mining activities were conducted at this site as early as the 1950s. Contaminated groundwater, consisting of low-level VOCs, was detected in 2000 but may have originated from a localized source within the refuse materials that were formerly buried at the site or an offsite source. Concentrations were	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
			highest near the northern property boundary. Remediation activities included a groundwater treatment system, consisting of granular activated carbon for adsorption and excavation. The site was graded with engineered fill, and VOCs have not been detected in groundwater at the site since 2008. Case closure was granted on August 28, 2015.		
24	ARCO #5676 1402 E. Ontario Avenue Corona, CA	Within 300 feet/west-southwest	This site is an ARCO AM/PM gas station with a car wash. During field reconnaissance, six pump stations and 5-gallon propane tanks were located on the site. Two monitoring wells are near the exit to the car wash. On November 15, 1994, during operation of the site by ARCO, a case was opened involving soil contaminated with gasoline, which was discovered at an LUST. The leak was stopped on the same day. Case closure was granted on March 27, 1996, by SARWQCB. On August 26, 2016, UST vent lines were relocated. A soil sample was collected between the center vent pipes 2 feet below the piping; the results were “non-detect” for all contaminants. No further sampling was required by SARWQCB.	No	Low
25	Northwest Corner Ontario Avenue and State Street (now Corona Cerrito Plaza)	Within 300 feet/east-northeast	This site is a commercial shopping plaza. In 2002, soil staining and a petroleum odor were discovered during rough grading operations at the commercially zoned site. Site investigations indicated that the soil contamination was from smudge pot oil. Upon completion of site investigation and remediation	No	Low

Site ID[1]	Site Name/Address	Distance/ Direction from Project Limits	Site Information	REC	Hazard Risk Ranking
	1535 E. Ontario Avenue Corona, CA		activities, case closure was granted on November 25, 2003. In 2005, soil staining with a hydrocarbon odor was discovered during site grading operations. The location of a former SCE transformer station, which may have leaked after a 1997 explosion, was also identified. Site investigations and health risk analyses were conducted. Stockpiled soils from excavation activities were below case-closure cleanup goals and therefore could be placed under asphalt-covered parking areas where no physical contact with contaminated soil would be possible. The excavation areas would be backfilled with clean fill material. The leave-in-place concentrations were evaluated for site-specific health risk exposure pathways and considered to be safe, given the development proposed. No PCBs were ever detected in any soil sample. Case closure was granted on May 11, 2005, by the RCDEH LOP.		
26	Southern California Edison 2000 Compton Avenue Corona, CA	Within 300 feet/west	This site was not found during field reconnaissance. On June 2, 1992, during operation of the site by SCE, a case was opened involving site contamination associated with petroleum fuel and oil. Upon completion of site investigation and remediation activities, case closure was granted on June 1, 1999, by SARWQCB.	No	Low

Source: Caltrans 2021

[1] Refer to Figure 2.3.5-1 for a map showing the location of each site.

AST = aboveground storage tank; bgs = below ground surface; ERNS = Emergency Response Notification System; I-15 = Interstate 15; IBC = intermediate block container; ID = identification; LUST = leaking underground storage tank; MINES MRDS = Mineral Resources Data System; MTBE = methyl tertiary-butyl ether; NB = northbound; NFA = No Further Action; NPDES = National Pollutant Discharge Elimination System; PCBs = polychlorinated biphenyls; PM = post mile; RCDEH LOP = Riverside County Department of Environmental Health Local Oversight Program; RCTC = Riverside County Transportation Commission; RGA = Recovered Government Archive; SARWQCB = Santa Ana Regional Water Quality Control Board; SCE = Southern California Edison; SWRCB = State Water Resources Control Board; UST = underground storage tank; VOC = volatile organic compound

The review of historical aerial photographs and topographic maps identified one former mining site within the ISA study area that adjoins the Project limits as well as four former mining sites adjacent to the ISA study area. The approximate locations of the mining sites are described below. The former mining sites do not indicate a REC to the Project because Project-related excavation activities, including those associated with bridge widening and the construction of retaining walls, would not occur at these former mining sites.

- **Former Mining Site No. 1:** East of Interstate (I-) 15, near the LATRICRETE property (22740 Temescal Canyon Road, Corona). The site is adjacent to the ISA study area.
- **Former Mining Site No. 2:** East of I-15, at The Shops at Dos Lagos (2780 Cabot Drive, Corona). The site is adjacent to the ISA study area.
- **Former Mining Site No. 3:** East of I-15, at the Crossings at Corona (2470 Tuscany Street, Corona). The site is adjacent to the ISA study area.
- **Former Mining Site No. 4:** East of I-15, extending from the Project limits to the intersection of Bel Air Street and State Street in the City of Corona. The site is within the ISA study area.
- **Former Mining Site No. 5:** East of I-15, approximately 1,000 feet northeast of the intersection of I-15 and Old Temescal Road in the City of Corona. The site is adjacent to the ISA study area.

Other Conditions of Concern

Asbestos-Containing Material

Asbestos is a generic commercial description for a group of naturally occurring mineral substances that is used in buildings and manufacturing because of its fire resistance. Asbestos was commonly used in many building materials prior to 1978 and may have been used up until the early 1980s. Asbestos-containing materials (ACMs) include fireproofing, acoustic ceiling material, transite pipe, roofing materials, thermal insulation, support piers, expansion joint material in bridges, asphalt, concrete, and other building materials. It is of primary concern when it is friable (i.e., material that can be easily crumbled). Asbestos is still used in building materials today, although its use is uncommon because of the associated hazards.

The Project would require widening of up to 15 bridges on both the northbound (NB) and southbound (SB) sides of I-15 between Nichols Road and Cajalco Road in the Cities of Lake Elsinore and Corona, as discussed in Section 1.4.1.1, *Additional Project Features*. ACM surveys were conducted on all 15 bridges for the Project in 2020. According to the *I-15 ELPSE Limited Asbestos and Lead Chip Assessment* (Caltrans 2020b), ACM is present in the gray felt pad along the NB and SB sides of the Brown Canyon Wash Bridge, the Weirick Road undercrossing, and the Bedford Wash Bridge inner guardrails, all of which may be affected by the Project. However, the potential

exists for all 15 bridges to contain ACMs in areas that have not been sampled. No other bridges or buildings would be disturbed by the Project.

Lead-Based Paint

Regulatory actions restricted the amount of lead in paints and primers manufactured after January 1,1978, and limited its use in areas where consumers would have direct access to painted surfaces in non-industrial facilities. Prior to 1978, lead-based paint (LBP) was used during the construction or maintenance of buildings and roads, including bridges. Some sources of LBP include painted curbs, utility poles, and roadway striping.

As previously discussed, the Project would widen up to 15 bridges on both the NB and SB sides of I-15. LBP surveys were conducted on all 15 bridges for the Project in 2020. According to the *I-15 ELPSE Limited Asbestos and Lead Chip Assessment* (Caltrans 2020b), LBP is present in the light gray paint on the railing on the NB side of the Temescal Wash Bridge and in the yellow lane marking on the NB side of the Indian Wash Bridge, both of which may be affected by the Project. In addition, there is potential for all 15 bridges to contain LBP in areas that have not been sampled. No other bridges or buildings would be disturbed by the Project.

Treated Wood Waste

Wooden utility poles, road signs, beam barriers, piles, and railroad ties, as well as the wood used to support metal beam guardrails, may contain preserving chemicals that protect against insects and fungal decay. These chemicals, which may be hazardous, include creosote and pentachlorophenol, along with treatment compounds such as copper azole, alkaline copper quaternary, chromate copper arsenate, and other associated compounds. Wooden guardrail posts are found within the Project limits and may contain creosote and pentachlorophenol (common wood preservatives).

Paint and Thermoplastic Striping

Historically, chrome yellow (containing lead chromate) was used as the primary yellow pigment in traffic lane paint and thermoplastic striping (PTS). Lead chromate varied from approximately 3.5 percent by weight in yellow waterborne paint to 25 percent by weight in yellow epoxy. In California, lead chromate traffic striping was phased out in waterborne traffic paint between 1997 and 2000 and in thermoplastic striping by 2004. The concentrations of lead chromate in the PTS applied to roadways would classify waste PTS as hazardous. Given the recent phase-out of lead chromate–containing PTS, it is generally assumed that existing yellow PTS associated with roadway markings within a given Caltrans construction project area contains lead and chromium, unless it has been demonstrated that lead or chromium are not present (i.e., from analytical data or definitive identification of the PTS source material). Therefore, the potential exists for hazardous thermoplastic striping to be present within the Project limits.

Aerially Deposited Lead

Because of historical use of lead in gasoline, lead may exist in soil near heavily traveled roadways. This specific type of lead contamination is referred to as *aerially deposited lead* (ADL). Sampling by Caltrans throughout the state has shown that ADL is present in soil along major roadways, resulting from the exhaust of automobiles that ran on leaded gasoline. Elevated lead concentrations are generally found within 6 feet of the edge of pavement as well as the top 6 inches of soil. Elevated lead concentrations can also be present as deep as 2 to 3 feet below the surface. The concentration as well as the distribution of ADL in soil are dependent on many variables, but in general, traffic volumes and the age of the roadway are the primary factors.

The U.S. Environmental Protection Agency (U.S. EPA) began requiring gasoline to be unleaded in 1973; by 1996, leaded gasoline for automobiles had been entirely phased out.

The presence of ADL in soil does not necessarily pose a threat. However, the potential exists for it to affect the environment and workers on site during construction activities. Furthermore, disposal methods must be considered if the soil cannot be reused and instead must be moved off site.

Additionally, the soil within the Project limits, including the median, shoulders, and ramps, does not represent a substantial environmental or health hazard. According to the July 1, 2016, ADL agreement between Caltrans and DTSC, it can be classified as unregulated Type X soil, non-hazardous, and reused on site without restriction (DTSC 2016). However, per the soil reuse agreement, a Lead Compliance Plan (LCP) is required for worker safety.

Agency Coordination

Beyond the agency records review, additional coordination with regulatory agencies such as U.S. EPA and/or state agencies such as DTSC and RWQCBs, or local agencies such as county environmental health departments regarding hazardous materials or waste was not warranted and has not been initiated to date.

2.3.5.3 Environmental Consequences

Build Alternative

Temporary Impacts

Sites of Concern

As detailed in Table 2.3.5-1, there are hazardous material sites within and adjoining the Project limits, which were found to either pose no or low potential risk to the Project. In addition, no ROW acquisition would be required at these sites, and no open cases involving leaking underground storage tanks or spills are associated with these properties. Although the ISA identified no open cases involving leaking underground storage tanks or spills associated with sites listed Table 2.3.5-1, there is a potential for the Build Alternative to encounter unexpected or unknown contaminants during soil

disturbance activities. Prior to construction, a Health and Safety Plan (HASP), Contaminated Media Management Plan, and Construction Contingency Plan (CCP) would be prepared to outline specific procedures to follow when encountering expected and unexpected contaminants to help protect worker health and safety, the public, and the environment during construction, as identified in Avoidance and Minimization Measure **HW-5** and Standard Project Measures **HW-6** through **HW-7**.

Other Conditions of Concern

As previously discussed, no RECs have been identified within the ISA study area; however, environmental conditions such as ADL, ACM, LPB, treated wood waste (TWW), PTS, and construction-generated hazardous waste may be encountered during construction activities. Hazardous wastes and materials would be properly handled, contained, transported, and disposed of in compliance with applicable regulations and requirements, which may include those of the RCRA, Clean Air Act, Clean Water Act, DTSC Environmental Health Standards for the Management of Hazardous Waste, provisions of the Riverside County Department of Environmental Health Hazardous Materials Branch, and U.S. Department of Transportation. Standard Project Measures and Avoidance and Minimization Measures **HW-1** through **HW-8** and Standard Project Measures **AQ-4** and **WQ-2** describe the efforts that would be made to avoid or minimize an adverse impact from known or suspected hazardous materials and wastes during construction.

Asbestos-Containing Material

Under the Build Alternative, up to 15 bridges may be widened. ACM is present in the gray felt pad along the NB and SB sides of the Brown Canyon Wash Bridge, the Weirick Road undercrossing, and the Bedford Wash Bridge inner guardrails. However, the potential exists for all 15 bridges to contain ACMs in areas that have not been sampled. Therefore, the ACM content would be sampled in all areas of the 15 affected bridges that would be disturbed by the Build Alternative during the final design phase and prior to any demolition or disturbance activities, as identified in Standard Project Measure **HW-1**.

Lead-Based Paint

Under the Build Alternative, up to 15 bridges may be widened. LBP is present in the light gray paint on the railing on the NB side of the Temescal Wash Bridge and in the yellow lane marking on the NB side of the Indian Wash Bridge. However, the potential exists for all 15 bridges to contain LBP in areas that have not been sampled. LBP content would be sampled in all areas of the 15 affected bridges that would be disturbed by the Build Alternative during the final design phase and prior to any demolition or disturbance activities, as identified in Standard Project Measure **HW-1**. Note that final design will provide the most accurate Project footprint to be analyzed for sampling.

Treated Wood Waste

Wooden guardrail posts are found within the Project limits. Treated wood objects removed from the Project corridor would be classified as TWW. The handling and removal of any TWW would be conducted in accordance with Chapter 34, Title 22, California Code of Regulations Sections 67386.1 through 67386.12, Alternative Management Standards for Treated Wood Waste, and in accordance with Caltrans Standard Specifications, Section 14-11.14, Treated Wood Waste. All TWW would be properly disposed of at a landfill that has been permitted to accept TWW, as identified in Standard Project Measure **HW-2**.

Paint and Thermoplastic Striping

Paint used for traffic striping and pavement marking may contain lead chromate. During construction, the Riverside County Transportation Commission's (RCTC's) resident engineer or designated contractor would ensure that the sampling, analysis, removal, and disposal of any traffic striping and pavement materials would be completed in accordance with Caltrans and DTSC requirements, as identified in Standard Project Measure **HW-3**. Note that final design will provide the most accurate Project footprint to be analyzed for sampling.

Construction Generated Hazardous Waste

Construction of the Project would require the use of hazardous substances and may generate hazardous waste. The use of hazardous materials and generation of hazardous waste are considered temporary construction impacts. Examples of the hazardous materials that are likely to be used during construction of the Project include lubricants (both grease and oils), petroleum fuels, cleaning solvents, and paint. Hazardous wastes generated during construction of the Project would require disposal and could include used oil (not hazardous) and sediment from vehicle washing, as identified in Standard Project Measure **HW-4**.

Aerially Deposited Lead

ADL from the historical use of leaded gasoline exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as a result of ADL on the state highway system right-of-way within the limits of the project alternatives. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, ADL Agreement between Caltrans and the DTSC. This ADL Agreement allows such soils to be safely reused within the project limits as long as all requirements of the ADL Agreement are met.

Under the July 1, 2016, ADL agreement between Caltrans and DTSC, soil within the Project limits, including the median, shoulders, and ramps, is classified as unregulated Type X soil, which is non-hazardous and suitable for reuse on site without restriction. Per the soil reuse agreement, the Build Alternative would require an LCP, as identified in Standard Project Measure **HW-8**, to protect workers from exposure to lead associated with ADL.

Potential impacts from construction-related hazardous waste and materials would be addressed through preparation of a Stormwater Pollution Prevention Plan, as identified in Standard Project Measure **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*). The Stormwater Pollution Prevention Plan would be developed in compliance with the National Pollutant Discharge Elimination System general construction permit and include best management practices to address potential impacts related to the use and potential discharge of construction-related hazardous waste and materials. In addition, all hazardous waste generated during construction would be handled, stored, and disposed of in accordance with Caltrans Standard Specifications, Section 7-107A of the Construction Manual, as identified in Standard Project Measure **HW-4**. Note that final design will provide the most accurate Project footprint to be analyzed for sampling.

Based on the discussion above, with Standard Project Measures **HW-1** through **HW-4**, **HW-6**, **HW-8,** and **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*), as well as Avoidance and Minimization Measures **HW-5** and **HW-7**, the Build Alternative would not result in adverse impacts related to hazardous waste or materials during construction of the Project.

Permanent Impacts

Routine maintenance activities, such as repaving or striping, would be required to follow applicable federal and State regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the Build Alternative would not result in adverse impacts related to hazardous waste or materials during operation of the Project.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no impacts related to hazardous waste or materials would occur. Routine maintenance activities, such as repaving or striping, would be required to follow applicable federal and State regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials or waste.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

Standard Project Measures **HW-1** through **HW-4, HW-6, HW-8**, and **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*), and **AQ-4** (Section 2.3.6, *Air Quality*), as well as Avoidance and Minimization Measures **HW-5** and **HW-7**, would be implemented to help protect worker health and safety, the public, and the environment from hazardous wastes and materials during Project construction. The estimated cost to comply with the Standard Project Measures and Avoidance and Minimization Measures listed below is $700,000.

HW-1. Asbestos-Containing Materials and Lead-Based Paint. The Project would include the widening of up to 15 bridges. ACMs are present in the gray felt pad along the SB and NB Brown Canyon Wash Bridge, Weirick Road undercrossing, and Bedford Wash Bridge inner guardrails. In addition, LBP is present in the light gray paint on the railing of NB Temescal Wash Bridge and in the yellow lane surface paint at NB Indian

Wash Bridge. ACMs and LBP associated with these bridges may be affected by the Project. In addition, there is a potential for all 15 bridges to contain ACMs and LBP in areas that have not been sampled. RCTC's resident engineer or designated contractor will ensure that bridge features with a likelihood to contain ACMs and LBP will be sampled for all areas of the 15 affected bridges that will be disturbed by the Project during the Plans, Specifications, and Estimates phase, prior to any demolition or disturbance activities. RCTC's resident engineer or designated contractor will ensure that the survey will be conducted in conformance with the U.S. Environmental Protection Agency's National Emission Standards for Hazardous Air Pollutants, 40 Code of Federal Regulations, and South Coast Air Quality Management District Rule 1403; and in accordance with Caltrans Standard Specifications Section 14-11.13, Disturbance of Existing Paint Systems on Bridges, and Section 14-11.16, Asbestos-Containing Construction Materials in Bridges.

HW-2. Treated Wood Waste. Wooden guardrail posts may contain creosote and pentachlorophenol. During construction, RCTC's resident engineer or designated contractor will ensure that treated wood objects are handled as TWW and managed per Chapter 34, Title 22 California Code of Regulations Sections 67386.1 through 67386.12, *Alternative Management Standards for Treated Wood Waste*, and in accordance with Caltrans Standard Specifications Section 14-11.14, Treated Wood Waste. All TWW should be properly disposed at a landfill permitted to accept TWW.

HW-3. Paint and Thermoplastic Striping. Paint used for traffic striping and pavement marking may contain lead chromate. During construction, RCTC's resident engineer or designated contractor will ensure that sampling, analysis, removal, and disposal of any traffic striping and pavement materials will be completed in accordance with Construction Program Procedure Bulletin 99 2, and Caltrans Standard Specifications, Section 14-11.12. Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue and Section 36-4 Residue Containing Lead from Paint and Thermoplastic (2018) and be consistent with the requirements within Caltrans Construction Manual, Chapter 7-107E Removing Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue (2019). Before disposal, the contractor is required to sample the removed material for proper waste classification. Yellow traffic stripe and pavement marking that is characterized as hazardous waste requires disposal to a DTSC-permitted Class I disposal facility.

HW-4. Construction-Generated Hazardous Waste. Construction of the Project may generate hazardous waste. Hazardous wastes generated during construction of the Project would require disposal and could include used oil (not hazardous), sediment from vehicle washing, petroleum materials, cleaning solvents, and paint. RCTC's resident engineer or designated contractor will ensure that all hazardous waste generated during construction will be handled, stored, and disposed of in accordance with Caltrans Standard Specifications Section 7-107A of the Construction Manual.

HW-5. Construction Health and Safety Plan. Prior to construction, RCTC's resident engineer or designated contractor will ensure the development of a HASP to be implemented during construction activities. A Certified Industrial Hygienist will review

this plan, based on evaluations of proposed construction activities, the potential hazards identified in this report, and any future assessment prepared for the Project. This plan will contain specific procedures for encountering expected and unexpected contaminants, including silica sand associated with the Coronita Ranch Sand Deposit site. It will prescribe safe work practices, contaminant monitoring, personal protective equipment, emergency response procedures, and safety training requirements to protect construction workers and third parties. The plan will meet the requirements of 29 Code of Federal Regulations 1910 and 1926, and all other applicable federal, State, and local regulations and requirements. The designated contractor will be responsible for preparing the HASP before the start of construction.

HW-6. Contaminated Media Management Plan. Prior to construction, RCTC's resident engineer or designated contractor will ensure the preparation of a Contaminated Media Management Plan. This plan will include procedures for contaminant monitoring and identification, temporary storage, handling, treatment, and disposal of waste and materials (including soil) in accordance with applicable federal, State, and local regulations and requirements. The designated contractor will be responsible for preparing the Contaminated Media Management Plan before the start of construction.

HW-7. Construction Contingency Plan. Prior to construction, RCTC's resident engineer will ensure the preparation of a CCP, in accordance with the guidance provided in Chapter 7-107 of the Caltrans Construction Manual for handling and dealing with unknown hazards (see Figure 7-1.1 of the Caltrans Construction Manual for Caltrans Unknown Hazards Procedure). This plan will include provisions for responding to events such as the discovery of unidentified underground storage tanks, hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes during construction. This plan will address underground storage tank decommissioning, field screening, and material testing methods; mitigation and contaminant management requirements; and health and safety requirements for construction workers. If an unexpected release of hazardous substances is found in reportable quantities, the National Response Center must be notified by calling 1-800-424-8802, and cleanup must be coordinated with environmental agencies. The designated contractor will be responsible for preparing the CCP before the start of construction.

HW-8. Lead Compliance Plan. Soil within the Caltrans ROW of the Project limits, including the median, shoulders and ramps, were sampled for ADL. The ADL survey classified the soil in these areas as unregulated Type X soil, which is non-hazardous and suitable for reuse on site without restriction under the July 1, 2016, ADL Agreement between Caltrans and DTSC. This ADL Agreement allows such soils to be safely reused within the Project limits as long as all requirements of the ADL Agreement are met. Per the soil reuse agreement, an LCP is required for worker safety. Prior to construction, RCTC's resident engineer or designated contractor will ensure that an LCP is developed by a Certified Industrial Hygienist to protect workers from exposure to lead associated with ADL, LBP, and traffic stripe and pavement markings. The LCP will include procedures for the handling, management, sampling, and disposal of material

containing lead. ADL and LBP investigations and traffic striping removal are separate tasks usually conducted by separate contractors, which each require a separate LCP.

2.3.6 Air Quality

2.3.6.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM_{10}) and particles of 2.5 micrometers and smaller ($PM_{2.5}$), lead (Pb), and sulfur dioxide (SO_2). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H_2S), and vinyl chloride. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act (NEPA). In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the U.S. Department of Transportation (USDOT) and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The Project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and in some areas (although not in California), sulfur dioxide (SO_2). California has nonattainment or maintenance areas

for all of these transportation-related "criteria pollutants" except SO_2, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope[1] that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.3.6.2 Affected Environment

The primary source used in preparation of this section was the *Interstate 15 Express Lanes Project – Southern Extension Air Quality Report*, dated July 2022 (Caltrans 2022a).

The Project site is in southwestern Riverside County, in the southeastern portion of the South Coast Air Basin (SCAB or Basin). Air quality regulation in the SCAB is administered by the South Coast Air Quality Management District (SCAQMD), a regional agency created for the Basin.

Climate and Meteorological Conditions

The SCAB is a coastal plain, connecting broad valleys and low hills. The Pacific Ocean forms the southwestern boundary, and high mountains surround the rest of the SCAB. The region lies in the semi-permanent high-pressure zone of the eastern Pacific. The resulting climate is mild and tempered by cool ocean breezes. This climatological

[1] "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, and Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s (measured in degrees Fahrenheit [°F]). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site monitoring temperature is the Elsinore site (WRCC 2016).

Attainment Status

Existing air quality conditions along the Project alignment can be characterized in terms of the ambient air quality standards that the State of California and the federal government have established for several different pollutants. For some pollutants, separate standards have been set for different measurement periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). Table 2.3.6-1 shows the state and federal standards and the attainment status of the Project region of the SCAB.

Table 2.3.6-1. State and Federal Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard[a]	Federal Standard[b]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Ozone (O_3)	1 hour 8 hours	0.09 ppm 0.070 ppm	--[d] 0.070 ppm (4th highest in 3 years)	High concentrations irritate lungs. Long-term exposure could cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic volatile organic compounds (VOCs) could also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases (ROG)/VOC and nitrogen oxides (NO_X) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.	Federal: Extreme Nonattainment (8-hour) State: Nonattainment (1-hour and 8-hour)
Carbon Monoxide (CO)	1 hour 8 hours 8 hours (Lake Tahoe)	20 ppm 9.0 ppm[c] 6 ppm	35 ppm 9 ppm --	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Federal: Attainment/ Maintenance State: Attainment
Respirable Particulate Matter (PM_{10})[e]	24 hours Annual	50 µg/m^3[f] 20 µg/m^3	150 µg/m^3 --[e] (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of PM.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Federal: Attainment/ Serious Maintenance State: Nonattainment

Pollutant	Averaging Time	State Standard[a]	Federal Standard[b]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
Fine Particulate Matter ($PM_{2.5}$)[e]	24 hours Annual 24 hours (conformity process[g]) Secondary Standard (annual; also for conformity process[g])	-- 12 µg/m^3 -- --	35 µg/m^3 12.0 µg/m^3 65 µg/m^3 15 µg/m^3 (98th percentile over 3 years)	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter—a toxic air contaminant—is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of $PM_{2.5}$.	Combustion, including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants, including NO_X, sulfur oxides (SO_X), ammonia, and ROG.	Federal: Serious Nonattainment (24 hour) Moderate Nonattainment (Annual) State: Nonattainment
Nitrogen Dioxide (NO_2)	1 hour Annual	0.18 ppm 0.030 ppm	0.100 ppm[h] (98th percentile over 3 years) 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of storm water. Part of the "NO_X" group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Federal: Attainment/ Maintenance State: Attainment
Sulfur Dioxide (SO_2)	1 hour 3 hours 24 hours Annual	0.25 ppm -- 0.04 ppm --	0.075 ppm[i] (99th percentile over 3 years) 0.5 ppm[j] 0.14 ppm 0.030 ppm (for certain areas)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Federal: Attainment State: Attainment
Lead (Pb)	Monthly Calendar Quarter	1.5 µg/m^3 -- --	--	Disturbs gastrointestinal system. Causes anemia, kidney disease, and	Pb-based industrial processes like battery production and smelters. Pb	Federal: Unclassified

Pollutant	Averaging Time	State Standard[a]	Federal Standard[b]	Principal Health and Atmospheric Effects	Typical Sources	Attainment Status
	Rolling 3-month average		1.5 µg/m^3 (for certain areas) 0.15 µg/$m^{3,l}$	neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	paint, leaded gasoline. ADL from older gasoline use could exist in soils along major roads.	State: Attainment
Sulfate	24 hours	25 µg/m^3	--	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	State Only: Attainment
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm	--	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.	State Only: Attainment
Visibility Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	--	Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the FCAA which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. Would potentially be related more to aerosols than to solid particles.	State Only: Attainment
Vinyl Chloride[k]	24 hours	0.01 ppm	--	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes	State Only: Attainment

Notes: Based on the ARB Air Quality Standards chart (ARB 2016).

[a] State standards are "not to exceed" or "not to be equaled or exceeded" unless stated otherwise.

[b] Federal standards are "not to exceed more than once a year" or as described above.

[c] ppm = parts per million

[d] Prior to June 2005, the 1-hour ozone NAAQS was 0.12 ppm. Emission budgets for 1-hour ozone are still in use in some areas where 8-hour ozone emission budgets have not been developed, such as the San Francisco Bay Area.

[e] Annual PM_{10} NAAQS revoked October 2006; was 50 $\mu g/m^3$. 24-hour $PM_{2.5}$ NAAQS tightened October 2006; was 65 $\mu g/m^3$. Annual $PM_{2.5}$ NAAQS tightened from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ December 2012 and secondary annual standard set at 15 $\mu g/m^3$.

[f] $\mu g/m^3$ = micrograms per cubic meter.

[g] The 65 $\mu g/m^3$ $PM_{2.5}$ (24-hr) NAAQS was not revoked when the 35 $\mu g/m^3$ NAAQS was promulgated in 2006. The 15 $\mu g/m^3$ annual $PM_{2.5}$ standard was not revoked when the 12 $\mu g/m^3$ standard was promulgated in 2012. The 0.08 ppm 1997 ozone standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (July 20, 2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, U.S. EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the "Interim" period prior to availability of emission budgets, conformity tests may include some combination of build vs. no-build, build vs. baseline, or compliance with prior emission budgets for the same pollutant.

[h] Final 1-hour NO_2 NAAQS published in the *Federal Register* on February 9, 2010, effective March 9, 2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot-spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause redesignation to nonattainment in some areas after 2016.

[i] U.S. EPA finalized a 1-hour SO_2 standard of 75 ppb (parts per billion [thousand million]) in June 2010. Nonattainment areas have not yet been designated as of September 2012.

[j] Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.

[k] ARB has identified vinyl chloride and the particulate matter fraction of diesel exhaust as toxic air contaminants. Diesel exhaust particulate matter is part of PM_{10} and, in larger proportion, $PM_{2.5}$. Both ARB and U.S. EPA have identified Pb and various organic compounds that are precursors to ozone and $PM_{2.5}$ as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.

[l] Pb NAAQS are not considered in Transportation Conformity analysis.

ADL = aerially deposited lead

The Project site is in the eastern portion of the SCAB. The monitoring station closest to the Project site is the Lake Elsinore-W Flint Station, approximately 1.2 miles southeast of the start of the Project footprint at the Interstate (I-) 15 and State Route (SR-) 74 junction. Figure 2.3.6-1 shows the location of this monitoring station. This station is representative of the Project area because the climate, topography, and urban setting are similar. During the 2020 to 2022 monitoring period, exceedances were recorded at the monitoring stations for the state 1-hour O_3 standard, state and federal 8-hour O_3 standards, federal $PM_{2.5}$ standard, and state PM_{10} standard (Table 2.3.6-2).

If a pollutant concentration is lower than the state or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated as unclassified. The U.S. EPA has classified the SCAB as attainment/maintenance for CO, PM_{10}, and NO_2, and nonattainment for O_3 and $PM_{2.5}$.

Table 2.3.6-2. Ambient Air Quality Monitoring Data Measured at the Lake Elsinore-W Flint Street Station

Pollutant Standards	2020	2021	2022
1-Hour Ozone			
Maximum 1-hour concentration (ppm)	0.130	0.118	0.121
Number of days standard exceeded			
State (> 0.09 ppm)	18	18	17
8-Hour Ozone			
Maximum 8-hour concentration (ppm)	0.100	0.097	0.091
Number of days standard exceeded			
Federal 8-hour (> 0.070 ppm)	54	44	37
State 8-hour (> 0.070 ppm)	54	44	37
1-Hour Carbon Monoxide			
Maximum 1-hour concentration (ppm)	0.9	0.9	0.9
Number of days standard exceeded			
Federal 1-hour (> 35 ppm)	0	0	0
State 1-hour (> 20 ppm)	0	0	0
8-Hour Carbon Monoxide			
Maximum 8-hour concentration (ppm)	0.7	0.8	0.6
Number of days standard exceeded			
Federal 8-hour (> 9.0 ppm)	0	0	0
State 8-hour (> 9 ppm)	0	0	0
24-hour Particulate Matter (PM10)			
Maximum 24-hour concentration (mg/m^3)	192.4	90.0	91.8
Number of days standard exceeded			
NAAQS 24-hour (> 150 mg/m^3)	1	0	0
CAAQS 24-hour (> 50 mg/m^3)	NA	4	1

Pollutant Standards	2020	2021	2022
Annual Particulate Matter (PM10)			
Annual average (mg/m^3)	23.7	22.4	20.3
Annual average exceeded?			
CAAQS annual average (> 20 mg/m^3)	Yes	Yes	Yes
24-hour Particulate Matter (PM2.5)			
Maximum 24-hour concentration (mg/m^3)	41.6	28.8	16.2
Number of days standard exceeded			
NAAQS 24-hour (> 35 mg/m^3)	2	0	0
Annual Particulate Matter (PM2.5)			
Annual average (mg/m^3)	7	7	7
Annual average exceeded?			
NAAQS annual average (> 12 mg/m^3)	No	No	No
CAAQS annual average (> 12.0 mg/m^3)	No	No	No
1-hour Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppb)	43.6	43.7	37.2
Number of days standard exceeded			
NAAQS 1-hour average (> 100 ppb)	0	0	0
CAAQS 1-hour l average (> 180 ppb)	0	0	0
Annual Nitrogen Dioxide (NO_2)			
Maximum annual concentration (ppb)	7	7	7
Annual average exceeded?			
NAAQS annual average (> 53 ppb)	No	No	No
CAAQS annual average (> 30ppb)	No	No	No

Source: ARB 2024
mg/m^3 = micrograms per cubic meter; CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards; NO_2 = nitrogen dioxide; ppm = parts per million; – = insufficient data available to determine the value

Figure 2.3.6-1. Air Quality Monitoring Stations near the Project

2.3.6.3 Environmental Consequences

Build Alternative

Regional Conformity

The I-15 Express Lanes Project Southern Extension is listed in the 2024–2050 RTP that was approved by the Southern California Association of Governments' (SCAG's) Regional Council in April 2024, and it was found to conform by FHWA and FTA on May 10, 2024. It is also included in SCAG's financially constrained 2023 FTIP Amendment #23-27, adopted on April 25, 2024, and approved by FHWA and FTA on May 10, 2024. The FTIP and RTP listings state the following:

IN WESTERN RIVERSIDE COUNTY - ON I-15, ADD 2 EXPRESS LANES IN EACH DIRECTION, GENERALLY IN THE MEDIAN, FROM SR-74 (CENTRAL AVENUE) IN THE CITY OF LAKE ELSINORE TO EL CERRITO ROAD IN THE CITY OF CORONA. CONSTRUCT SOUTHBOUND AUXILIARY LANE FROM MAIN STREET TO SR-74 (CENTRAL AVENUE) AND FROM SR-74 (CENTRAL AVENUE) TO NICHOLS ROAD. SIGNAGE AND TRANSITION STRIPING EXTENDS TO PM 20.3 TO THE SOUTH AND PM 40.1 TO THE NORTH. TC UTILIZATION FOR CMAQ, STBG, CRP, AND HIP(CPFCD)/EARMARK IN FY22/23.

The design concept and scope of the Project are consistent with the project description in the 2024–2050 RTP/SCS and 2023 FTIP and the open-to-traffic assumptions of the most recent SCAG regional emissions analysis. Table 2.3.6-3 summarizes information about the regional conformity status. Table 2.3.6-4 provides the status of U.S. EPA-approved SIPs relevant to the Project area.

Table 2.3.6-3. Status of Plans Related to Regional Conformity

MPO	Plan/ Transportation Improvement Program	Date of Adoption by MPO	Date of Approval by FHWA	Last Amendment	Date of Approval by FHWA of Last Amendment
SCAG	2024–2050 RTP/SCS	April 2024	May 10, 2024	N/A	N/A
SCAG	2023 FTIP	October 6, 2022	December 16, 2022	23-27	May 10, 2024

Source: SCAG 2024
FHWA = Federal Highway Administration; FTIP = Federal Transportation Improvement Program; MPO = Metropolitan Planning Organization; N/A = Not Applicable; RTP/SCS= Regional Transportation Plan/Sustainable Communities Strategy; SCAG = Southern California Association of Governments

Table 2.3.6-4. Status of State Implementation Plans Relevant to the Project Area

Name/Description	Status
2019 South Coast 8-Hour Ozone SIP Update	Approved November 2019
2018 South Coast SIP Revisions and Updates	Approved December 2018
2016 Ozone and $PM_{2.5}$ Plan for the South Coast Air Basin and Coachella Valley	Approved March 2017
2010 South Coast Air Basin PM_{10} Redesignation Request, Maintenance Plan, and Conformity Budgets	Approved February 2010
2005 South Coast Carbon Monoxide Plan	Approved February 2006

Source: ARB 2019
$PM_{2.5}$ = fine particulate matter; PM_{10} = suspended particulate matter; SIP = State Implementation Project

Project Level Conformity

CO Analysis

The California Project-Level Carbon Monoxide Protocol (CO Protocol) was used to analyze CO impacts for the Project. It provides qualitative and quantitative screening

procedures as well as quantitative (i.e., modeling) analysis methods for assessing Project-level CO impacts. The qualitative screening step is designed to avoid the use of detailed modeling for projects that clearly cannot cause an exceedance of the CO standards or worsen an existing exceedance. Although the protocol was designed to address federal standards, it has been recommended for use by several air pollution control districts in their California Environmental Quality Act (CEQA) analysis guidance documents and should also be valid for California standards because the key criterion (i.e., 8-hour concentration) is similar (i.e., 9 parts per million [ppm] for both the federal and State standard).

The ambient air quality effects of traffic emissions were evaluated qualitatively according to the CO Protocol. The hot-spot analysis covered the most congested intersections affected by the Project in 2030 and 2050. Sections 3 and 4 of the CO Protocol describe the methodology for determining whether a CO hot-spot analysis is required. The CO Protocol provides two conformity-requirement decision flowcharts to assist project sponsors in evaluating the requirements that apply to their projects. The flowchart of the CO Protocol applies to new projects and was used with the analysis of the Project. The Project screens out at Level 7 of the flow chart, included as Figure 3 in the CO Protocol, and therefore would not have the potential for causing or worsening violation of the NAAQS for CO.

3.1.1: Is the Project exempt from all emissions analyses?

3.1.1 Response: No. It is not exempt because it does not fit any of the exemption categories identified in 40 CFR 93.126.

3.1.2: Is the Project exempt from regional emissions analyses?

3.1.2 Response: No. It does not align with any of the project types exempted from regional emissions analyses under 40 CFR 93.127 (proceed to 3.1.3).

3.1.3: Is the Project locally defined as regionally significant?

3.1.3 Response: Yes. It is considered a regionally significant transportation project, according to 40 CFR 93.101, because it is included in the modeling of the area's transportation network (proceed to 3.1.4).

3.1.4: Is the Project in a federal attainment area?

3.1.4 Response: No. It is in the SCAB, which is a federal extreme nonattainment area for O_3 and a serious nonattainment area for $PM_{2.5}$ (see Table 2.3.6-1) (proceed to 3.1.5).

3.1.5: Is there a currently conforming RTP and TIP?

3.1.5 Response: Yes. The 2024–2050 RTP/SCS and 2023 FTIP are conforming programs (proceed to 3.1.6).

3.1.6: Is the Project included in the regional emissions analysis supporting the currently conforming RTP and TIP?

3.1.6 Response: Yes. It is identified in the 2024–2050 RTP/SCS under project number 3160001-RIV170901 and the 2023 FTIP under project number RIV170901 (see Appendix A of the Air Quality Report). Therefore, it has been included in the regional emissions analysis (proceed to 3.1.7).

3.1.7: Has the Project design concept and/or scope changed significantly from that in the regional analysis?

3.1.7 Response: No. Its design concept has not changed significantly from that in the regional analysis (proceed to 3.1.9).

3.1.9: The conclusion from this series of questions and answers is that the Project needs to be examined for its local air impacts (proceed to Section 4, Figure 3, of the CO Protocol).

Based on the answers to the first flowchart, a second flowchart, Figure 3 of the CO Protocol, is used to determine the level of local CO effect analysis required for the improvement. The questions that are applicable to the Project are in the second flowchart (provided in Appendix E of the CO Protocol), and the answers to those questions are as follows:

Level 1: Is the Project in a CO nonattainment area?

Response: No. It and its respective air basin are in an attainment/ maintenance area for the federal CO standards (Table 2.3.6-1).

Level 1: Was the area redesignated as an attainment area after the 1990 Clean Air Act?

Response: Yes. Riverside County was redesignated as an attainment area on June 11, 2007, and the associated maintenance plan will expire in 2027.

Level 1: Has "continued attainment" been verified with the local air district, if appropriate?

Response: Yes. Based on ambient air monitoring data collected by SCAQMD, the SCAB has continually met the NAAQS for CO since 2002 (proceed to Level 7).

Level 7: Does the Project worsen air quality?

Response: Yes. Because two of the following conditions (listed in Section 4.7.1 of the CO Protocol) are met, it could worsen air quality:

- *The Project substantially increases the percentage of vehicles operating in the cold-start mode. Increasing the number of vehicles in cold-start mode by as little as 2 percent should be considered potentially substantial.*

  Though the Project would generate new vehicular traffic trips, it would not construct new homes or businesses, propose any additional access or modifications to interchanges, or provide additional or local access (such as frontage roads), that would boost the development of homes and businesses. Therefore, it is assumed that the number of vehicles operating in cold-start mode would remain the same.

- *The Project substantially increases traffic volumes. Increases in traffic volumes in excess of 5 percent should be considered potentially substantial. Increasing the traffic volume by less than 5 percent may still be potentially substantial if there is also a reduction in average speeds.*

  As shown in Table 2.3.6-5 and Table 2.3.6-6, the Project would increase the peak hour traffic volumes along I-15 by more than 5 percent, which meets this criterion.

- *The Project worsens traffic flow. For uninterrupted roadway segments, a reduction in average speeds (within a range of 3 to 50 miles per hour) should be regarded as worsening traffic flow. For intersection segments, a reduction in average speed or an increase in average delay should be considered a worsening of traffic flow.*

  Under the Design Year (2050) conditions, the Build Alternative would degrade traffic operation service levels at 11 percent of the freeway mainline and ramp locations during the AM and PM peak hour compared to the No-Build Alternative, which meets this criterion.

Level 7 (cont.): Is the Project suspected of resulting in higher CO concentrations than those existing within the region at the time of attainment demonstration?

Response: No. CO concentrations at the intersections under study are projected to be lower than those reported for the maximum of the intersections analyzed in the CO attainment plan because all of the following conditions listed in Section 4.7.2 of the CO Protocol are satisfied:

- The receptor locations at the intersections under study are at the same distance or farther from the traveled roadway than the receptor locations used in the intersections in the attainment plan. The attainment plan evaluates the CO concentrations at a distance of 10 feet from the edge of the roadways. The CO Protocol does not permit the modeling of receptor locations closer than this distance.

- Its intersection traffic volumes and geometries are not substantially different from those included in the attainment plan. Also, the intersections under study have less total traffic and the same number of lanes or fewer than the intersections in the attainment plan.

- The assumed meteorology for the intersections under study is the same as the assumed meteorology for the intersections in the attainment plan. Both use the worst-case scenario meteorology settings in the CALINE4 and/or CAL3QHC models.

- As shown in Table 2.3.6-7 and Table 2.3.6-8, its interchange ramp volumes are similar to or lower than those assumed for the intersection in the attainment plan. Because the volumes in 2030 are lower than those in 2050, the traffic lane volumes listed in Table 2.3.6-8 represent the worst-case scenario for the Project.

- Though the Project would generate new vehicular traffic trips, it would not construct new homes or businesses, propose any additional access or modifications to interchanges, or provide additional or local access (such as frontage roads), that would boost the development of homes and businesses. Therefore, it is assumed that the number of vehicles operating in cold-start mode would remain the same.

- The percentages of heavy-duty gas trucks in the intersections under study are the same or lower than the percentages used for the intersections in the attainment plan analysis. It is assumed that traffic distribution at the intersections under study would not vary from the EMFAC standards.

- Average delay and queue length for each approach are the same or less for the intersections under study compared to those found in the intersections in the attainment plan. The predicted level of service (LOS) for the intersections under study range from A to F. The LOS for the intersections in the attainment plan are not listed; however, the traffic counts and intersection geometries correspond to LOS F for three of the four intersections in the attainment plan.

- As shown in Table 2.3.6-2, the background CO concentrations in the area of the intersections under study are up to 1.6 ppm for 1 hour and 0.8 ppm for 8 hours, which is lower than the background concentrations for the intersections in the attainment plan. These varied from 5.3 to 13.2 ppm for 1 hour and 3.7 to 9.9 ppm for 8 hours.

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Table 2.3.6-5. 2030 Traffic Volumes

I-15 Freeway Segment	No Build			Build			Project Increase		
	ADT	Truck ADT	Truck %	ADT	Truck ADT	Truck %	ADT	Truck ADT	% Increase in Trucks
South of Main Street	173,700	16,230	9.3%	185,200	16,230	8.8%	11,500	0	0%
Main Street to Central Avenue (SR-74)	166,000	15,440	9.3%	178,900	15,440	8.6%	12,900	0	0%
Central Avenue (SR-74) to Nichols Road	149,100	13,740	9.2%	163,200	13,740	8.4%	14,100	0	0%
Nichols Road to Lake Street	147,900	13,610	9.2%	161,700	13,610	8.4%	13,800	0	0%
Lake Street to Horsethief Canyon	155,900	14,460	9.3%	170,400	14,460	8.5%	14,500	0	0%
Horsethief Canyon to Indian Truck Trail	155,900	14,460	9.3%	170,400	14,460	8.5%	14,500	0	0%
Indian Truck Trail to Temescal Canyon Road	158,700	14,650	9.2%	174,200	14,650	8.4%	15,500	0	0%
Temescal Canyon Road to Weirick Road	161,000	14,750	9.2%	176,500	14,750	8.4%	15,500	0	0%
Weirick Road to Cajalco Road	185,000	17,190	9.3%	199,500	17,190	8.6%	14,500	0	0%
Cajalco Road to El Cerrito Road	205,000	19,290	9.4%	222,900	19,290	8.7%	17,900	0	0%
El Cerrito Road to Ontario Avenue	214,200	20,340	9.5%	229,400	20,340	8.9%	15,200	0	0%
Ontario Avenue to Magnolia Avenue	230,500	22,000	9.5%	239,700	22,000	9.2%	9,200	0	0%
Magnolia Avenue to SR-91	251,500	24,020	9.6%	258,200	24,020	9.3%	6,700	0	0%

Source: Caltrans 2022b
ADT = average daily traffic; SR = State Route

Table 2.3.6-6. 2050 Traffic Volumes

I-15 Freeway Segment	No Build			Build			Project Increase		
	ADT	Truck ADT	Truck %	ADT	Truck ADT	Truck %	ADT	Truck ADT	% Increase in Trucks
South of Main Street	178,700	17,270	9.7%	225,300	20,728	7.7%	46,600	0	0%
Main Street to Central Avenue (SR-74)	175,900	16,940	9.6%	227,100	16,942	7.5%	51,200	0	0%
Central Avenue (SR-74) to Nichols Road	158,400	15,060	9.5%	211,000	22,155	7.1%	52,600	0	0%
Nichols Road to Lake Street	159,000	15,150	9.5%	216,800	22,234	7.0%	57,800	0	0%
Lake Street to Horsethief Canyon	167,700	16,080	9.6%	230,400	21,976	7.0%	62,700	0	0%
Horsethief Canyon to Indian Truck Trail	171,500	16,310	9.5%	231,900	22,119	7.0%	60,400	0	0%
Indian Truck Trail to Temescal Canyon Road	176,600	16,720	9.5%	237,700	21,307	7.0%	61,100	0	0%
Temescal Canyon Road to Weirick Road	180,700	17,090	9.5%	242,800	19,636	7.0%	62,100	0	0%
Weirick Road to Cajalco Road	209,300	20,030	9.6%	275,900	19,886	7.3%	66,600	0	0%
Cajalco Road to El Cerrito Road	264,900	25,540	9.6%	330,700	22,061	7.7%	65,800	0	0%
El Cerrito Road to Ontario Avenue	280,600	27,030	9.6%	334,400	21,309	8.1%	53,800	0	0%
Ontario Avenue to Magnolia Avenue	296,400	28,610	9.7%	339,950	21,930	8.5%	44,050	0	0%
Magnolia Avenue to SR-91	314,500	30,520	9.7%	348,200	19,534	8.8%	33,700	0	0%

Source: Caltrans 2022b
ADT = average daily traffic; SR = State Route

Table 2.3.6-7. Peak Hour Approach Lane Volumes Used in the 2003 Air Quality Management Plan Attainment Demonstration

Location	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)
Wilshire and Veteran (4 lanes all directions)	140/233	180/350	1,238/517	458/829

Source: SCAQMD 2003

Table 2.3.6-8. 2050 Build Alternative Lane Volumes

Location	Southbound Off-Ramp (AM/PM)	Southbound On-Ramp AM/PM)	Northbound Off-Ramp (AM/PM)	Northbound On-Ramp (AM/PM)
Magnolia Avenue	695/405	375/580	620/565	485/430
Ontario Avenue	1,120/1,020	370/780	585/515	755/650
El Cerrito Road	420/1,200	745/1,000	1,165/1,420	1,060/780
Cajalco Road	745/1,000	290/790	940/710	1,165/1,420
Weirick Road	700/1,060	65/195	80/400	600/1,010
Temescal Canyon Road	610/650	95/265	650/240	280/670
Indian Truck Trail	300/640	200/190	480/340	260/225
Horsethief Canyon	350/370	280/710	660/430	840/700
Lake Street	240/750	165/145	270/210	620/255
Nichols Road	570/510	620/340	470/450	530/220
Central Avenue (SR-74)	430/705	665/715	405/375	760/910
Main Street	250/700	520/420	590/580	425/270

Source: Caltrans 2022b

Because the Project is not expected to result in any concentrations exceeding the 1-hour or 8-hour CO standards, a quantitative Caline4 CO hot-spot analysis is not required. The Build Alternative would not be expected to result in a new or more severe exceedance of either the NAAQS or CAAQS.

PM Analysis

A conformity hot-spot analysis for PM was prepared according to the procedures and methods provided in the latest version of Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas released by U.S. EPA in October 2021. The Project was submitted to the SCAG Transportation Conformity Working Group for consideration at its meeting on September 28, 2021. At that meeting, members of the Transportation Conformity Working Group confirmed that the Project is not a project of air quality concern (see Appendix B of the Air Quality Report). Therefore, the Project meets the FCAA requirements and 40 CFR 93.116 without any explicit hot-spot analysis and would not create a new, or worsen an existing, $PM_{2.5}$ and PM_{10} violation.

Temporary Impacts (Construction Emissions)

Construction Equipment, Traffic Congestion, and Fugitive Dust

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment also are expected and would include CO, nitrogen oxides (NO_X), volatile organic compounds (VOCs), directly emitted PM (PM_{10} and $PM_{2.5}$), and toxic air contaminants such as diesel exhaust PM. O_3 is a regional pollutant that is derived from NO_X and VOCs in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, improving existing roadways, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough PM_{10}, $PM_{2.5}$, and small amounts of CO, SO_2, NO_X, and VOCs to be of concern. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Under the transportation conformity regulations (40 CFR 93.123(c)(5)), construction-related activities that cause temporary increases in emissions are not required in a hot-spot analysis. These temporary increases in emissions are those that occur only during the construction phase and last 5 years or less at any individual site. They typically fall into two main categories:

- ***Fugitive dust*** is a major emission from construction due to ground disturbance. All air districts and the California Health and Safety Code (Sections 41700–41701) prohibit “visible emissions” exceeding 3 minutes in 1 hour; this applies not only to dust but also to engine exhaust. In general, this is interpreted as visible emissions crossing the right of way line. Sources of fugitive dust include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site may deposit mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions may vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM_{10} emissions depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, whereas fine particles would be dispersed over greater distances from the construction site.

- ***Construction equipment emissions***: Diesel particulate matter (DPM) is a California-identified toxic air contaminant. Localized issues may exist if diesel-powered construction equipment is operated near sensitive receptors.

Construction emissions were estimated for the Project using the latest Road Construction Emission Model (version 9.0) from the Sacramento Metropolitan Air Quality Management District (SMAQMD 2018). Although the model was developed for Sacramento conditions, with respect to fleet emission factors, silt loading, and other model assumptions, it is considered adequate for estimating road construction emissions by SCAQMD in its CEQA guidance and is used for that purpose in this analysis.

Construction emissions were estimated for the Build Alternative using the Project construction scheduling information provided by the Project designer and the model default equipment inventories. Under the Build Alternative, construction activities (e.g., mobilization, auxiliary lane and outside shoulder additions, ramp reconfiguration, demobilization, and final striping) are anticipated to commence in 2025 and be completed by 2028. Construction is planned to last approximately 36 months. Construction-related emissions calculated for the Build Alternative are presented in Table 2.3.6-9.

Table 2.3.6-9. Build Alternative – Construction Emissions Estimates

Project Phases	Reactive Organic Gas (ROG) (lbs/day)	Carbon Monoxide (CO) (lbs/day)	Nitrogen Oxides (NO_X) (lbs/day)	Suspended Particulate Matter (PM_{10}) (lbs/day)	Fine Particulate Matter ($PM_{2.5}$) (lbs/day)	Carbon Dioxide Equivalent (CO_2e) (lbs/day)
Grubbing/land clearing	1.72	19.03	14.04	40.76	8.92	4,882.86
Grading/excavation	5.57	55.43	57.86	42.46	10.33	17,672.36
Drainage/utilities/ sub-grade	5.40	60.68	52.77	42.22	10.22	15,209.53
Paving	2.37	34.73	39.60	1.77	1.18	16,462.55
Maximum	5.57	60.68	57.86	42.46	10.33	17,672.36
Project total (tons)	1.73	19.22	18.71	13.13	3.21	6,001.32

Emissions estimated using the Road Construction Emission Model (version 9.0) from the Sacramento Metropolitan Air Quality Management District and Project-specific data provided by the design staff (see Appendix C of the *Interstate 15 Express Lanes Project – Southern Extension Air Quality Report*).

The emissions presented are based on the best information available from the time when the calculations were performed. The emissions represent the peak daily construction emissions that would be generated during implementation of the Build Alternative.

With the implementation of Standard Project Measure **AQ-1**, fugitive dust and exhaust emissions from construction activities would not result in any adverse air quality

impacts. Standard Project Measure **AQ-2** would ensure ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications. Standard Project Measure **AQ-3** ensures that excavated or graded material from construction activities will not spill onto streets or roadways. Standard Project Measure **AQ-4**, which requires that the Project comply (Caltrans Standard Specification Section 14-9 (2023) with air-pollution-control rules, regulations, ordinances, and statutes, will be implemented during construction activities to minimize and/or avoid impacts related to air quality during construction. In addition, implementation of the following standardized measures listed below, some of which may also be required for other purposes such as stormwater pollution control, would reduce air quality impacts resulting from construction activities. Although these measures are anticipated to reduce construction-related emissions, the reductions cannot be quantified at this time.

The construction contractor must comply with Caltrans Standard Specification Section 14-9 (2023) (**AQ-4**).

- Section 14-9.02 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

Methods of complying with **AQ-4** (SSP 14-9.02) include:

- Water or a dust palliative will be applied to the site and equipment as often as necessary to control fugitive dust emissions.
- Soil binder will be spread on any unpaved roads used for construction purposes and on all Project construction parking areas.
- Trucks will be washed as they leave the right of way as necessary to control fugitive dust emissions.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low-sulfur fuel, as required by California Code of Regulations Title 17, Section 93114.
- A dust control plan will be developed, documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts on existing communities.
- Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Construction areas will be kept clean and orderly.
- Environmentally sensitive areas will be established near sensitive air receptors. Within these areas, construction activities involving extended idling by diesel equipment or vehicles will be prohibited to the extent feasible.
- Track-out reduction measures, such as gravel pads at Project access points to minimize dust and mud deposits on roads affected by construction traffic, will be used.

- All transported loads of soil and wet material will be covered before transport, or adequate freeboard (i.e., space from the top of the material to the top of the truck) will be provided to minimize emissions of dust during transportation.
- Dust and mud deposited on paved public roads due to construction activity and traffic will be promptly and regularly removed to reduce particulate matter emissions.
- To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch will be installed or vegetation planted as soon as practical after grading to reduce windblown particulate matter in the area.

Toxic Air Contaminant Emissions

During the construction period, which is scheduled to last approximately 36 months, short-term generation of pollutants from construction vehicles and equipment would occur. However, the construction period is much shorter than the assumed 30-year exposure period used to estimate lifetime cancer risks, as recommended by the California Office of Environmental Health Hazard Assessment. It is also important to note that there is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime, as cancer potency factors are based on animal lifetime studies where there is long-term exposure. Furthermore, given the linear nature of the Project, equipment would not be operated at a particular location along the alignment for an extended period of time. The DPM generated from construction equipment would be sporadic, transitory, and short term in nature. Therefore, the Project would not expose receptors to acute and/or chronically hazardous toxic air contaminant pollutants.

Odors

The Project is not expected be a substantial source of odors. The Project involves the widening and expanding I-15, and any odors generated by the Project would be similar to odors generated from the existing roadways in the adjacent area. Therefore, the Project is not anticipated to generate substantial odors. Construction of the Project is not expected to create substantial levels of odors in the surrounding area. Exhaust emissions from construction equipment and vehicles and fugitive emissions from construction activities would be tightly controlled. The minor amounts of odors generated by onsite construction activities would be substantially dispersed and diluted to negligible levels in adjacent offsite areas.

Asbestos

No geologic features that are normally associated with naturally occurring asbestos (i.e., serpentine rock or ultramafic rock near fault zones) are present in or near the Project area (U.S. Geological Survey and California Geological Survey 2011). Therefore, the impact from naturally occurring asbestos during Project construction would be minimal to none. However, structures, including buildings and bridges, may contain asbestos-containing materials (ACMs). The use of asbestos, which was found in many building

materials prior to 1978, may have continued until the early 1980s. ACMs are found in fireproofing, acoustic ceiling material, transite pipe, roofing materials, thermal insulation, support piers, expansion joint material in bridges, asphalt, concrete, and other building materials. It is of primary concern when it is friable (i.e., easily crumbled). During demolition, if not properly identified and addressed, asbestos fibers could become airborne.

The Project would include widening and modifying up to 15 bridges. A limited asbestos and Pb chip assessment was conducted for the Project (Caltrans 2020a). Based on the results, asbestos is present in 18 of the 653 samples analyzed. All of these samples, which were considered to be non-friable materials, were obtained from the gray felt pad. If removal of ACMs is required in connection with demolition, such work would be required to comply with the U.S. EPA National Emission Standard for Hazardous Air Pollutants, 40 CFR Part 61; SCAQMD Rule 1403; and Caltrans Standard Special Provisions, Section 14-11.16, *Asbestos-Containing Construction Materials in Bridges*.

Lead

Pb is normally not an air quality issue for transportation projects, unless the project involves disturbing soil with high levels of aerially deposited Pb or painting or modifying structures with Pb-based coatings. An aerially deposited lead analysis was conducted for the Project (Caltrans 2020b). Based on the aerially deposited lead survey data and statistical analysis, tested soil does not represent significant environmental or health hazards and can be classified as nonhazardous.

The lead-based paint (LBP) survey conducted for the Project is summarized in the limited asbestos and Pb chip assessment (Caltrans 2020a). The survey determined that two paint/coating samples at the subject property could be categorized as LBP. If removal of LBP is required in connection with demolition, such work would be required to comply with U.S. EPA and air district rules, pursuant to Caltrans Standard Specification Section 14-9.02. There are no industrial Pb sources in the immediate vicinity of the Project.

Valley Fever

Valley FEVER is not an air pollutant, but a disease caused by inhaling *Coccidioides immitis* (*C. immitis*) spores. The spores are found in certain types of soil and become airborne when the soil is disturbed. Riverside County authorities reported 137 cases in 2018, which is an incidence rate of 5.6 per 100,000 (California Department of Public Health 2019).

The presence of *C. immitis* in Riverside County does not guarantee that construction activities would result in an increased incidence of Valley fever. Propagation of *C. immitis* is dependent on climatic conditions, with the potential for growth and surface exposure highest following early seasonal rains and long dry spells. Although *C. immitis* spores can be released when areas are disturbed by earthmoving activities, receptors must be exposed to and must inhale the spores to have an increased risk of contracting Valley fever. Moreover, exposure to *C. immitis* does not guarantee that an individual will

become ill—approximately 60 percent of people exposed to the fungal spores are asymptomatic and show no signs of an infection (USGS 2000).

Although several factors influence receptor exposure and development of Valley fever, earthmoving activities during construction could release *C. immitis* spores if filaments are present and other soil chemistry and climatic conditions are conducive to spore development. Receptors within several miles of the construction area, particularly adjacent residential receptors, may be exposed to an increased risk from inhaling *C. immitis* spores and subsequently developing Valley fever. Dust control measures are the primary defense against infection (USGS 2000). Implementation of a fugitive dust control plan, as a minimization measure, which is a Standard Project Measure included as part of the Project, would limit dust, and routine watering would reduce the risks associated with contracting Valley fever.

Construction Conformity

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and Project-level conformity analysis (40 CFR 93.123(c)(5)).

Permanent Impacts

Operational emissions take into account long-term changes in emissions due to a project (excluding the construction phase). The operational emissions analysis compares forecast emissions under Existing (2019) conditions to the Build Alternative and No-Build Alternative in the Opening Year (2030) and Design Year (2050).

For roadway improvement projects, regional emissions are a function of regional vehicle miles traveled (VMT) and travel speeds. As such, the operational emissions analysis takes into account long-term changes in VMT and travel speeds expected to occur under the Build Alternative compared to the No-Build Alternative (excluding the construction phase).

The operational emissions analysis compares forecast emissions for existing/baseline conditions, the Build Alternative, and the No-Build Alternative using the VMT estimates discussed above. The regional VMT data for existing conditions, the No-Build Alternative, and the Build Alternative, along with the CT-EMFAC2017 emission rates, were used to calculate the CO, NO_X, PM_{10}, $PM_{2.5}$, and reactive organic gas (ROG) emissions for the Existing (2019) and Opening Year and Design Year conditions. The results of the modeling are summarized in Table 2.3.6-10.

Table 2.3.6-10. Operational Criteria Pollutant Emissions (pounds per day)

Scenario/Analysis Year	PM_{10}	$PM_{2.5}$	CO	NO_X	ROG
Existing Year (2019)	1,594.2	8,015.4	9,049.5	22,446.9	1,848.1
Opening Year (2030) No-Build Alternative	2,326.0	12,381.4	5,765.7	17,172.7	1,417.2
Opening Year (2030) Build Alternative	2,396.3	12,752.0	5,830.8	17,467.2	1,429.4
Design Year (2050) No-Build Alternative	2,449.6	13,179.0	5,464.7	14,394.8	950.0
Design Year (2050) Build Alternative	2,507.2	13,485.3	5,441.7	14,536.9	947.7
Net Emissions Comparison to Existing Conditions					
Opening Year (2030) Build Alternative	802.1	4,736.7	-3,218.8	-4,979.6	-418.8
Design Year (2050) Build Alternative	913.1	5,469.9	-3,607.8	-7,910.0	-900.5
Net Emissions Comparison to No-Build Conditions					
Opening Year (2030) Build Alternative	70.3	370.7	65.1	294.5	12.2
Design Year (2050) Build Alternative	57.6	306.2	-23.0	142.1	-2.3

Source: Modeled using CT-EMFAC2017.

The emissions analysis presented in Table 2.3.6-10 indicates that operation of the Build Alternative under Opening Year (2030) and Design Year (2050) conditions is expected to increase PM_{10} and $PM_{2.5}$ emissions compared with existing conditions and decrease ROG, NO_X, and CO emissions. These results are due to factors both internal and external to the improvements.

- The increase in particulate matter is due partly to background growth and the projected increase in VMT from 2019 to 2050. As VMT increases, particulate matter emissions from fugitive dust increase as well. Although particulate matter emissions from exhaust emission factors, which are also tied to VMT, decrease over time due to improvements in vehicle engine technology and fuel efficiency, fugitive dust particulate matter emission factors remain constant regardless of these improvements. Consequently, total particulate matter emissions increase over time as particulate matter fugitive dust emissions increase from increases in VMT from 2019 to 2050.

- The decreases in other pollutants are due to expected improvements in vehicle engine technology, fuel efficiency, and turnover in vehicles that are older and more heavily polluting, all of which reduce exhaust emissions.

Mobile-Source Air Toxics

FHWA released updated guidance in January 2023 (FHWA 2023) for determining when and how to address mobile-source air toxics (MSAT) impacts in the NEPA process for transportation projects. FHWA identified three levels of analysis.

1. No analysis for exempt projects or projects with no potential for meaningful MSAT effects
2. Qualitative analysis for projects with low potential MSAT effects
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects

Projects with no air quality impacts generally include those that (a) qualify for a categorical exclusion under 23 CFR 771.117, (b) qualify as exempt under the FCAA conformity rule at 40 CFR 93.126, and (c) are not exempt but have no meaningful impacts on traffic volumes or vehicle mix.

Projects with low potential for MSAT effects are those that improve highway, transit, or freight operations or movements without adding substantial new capacity or creating a facility that is likely to increase emissions substantially.

Projects with high potential for MSAT effects are those that:

- Create or significantly alter a major intermodal freight facility with the potential to concentrate high levels of DPM at a single location; or
- Create new or add significant capacity to urban highways, such as interstates, urban arterials, or urban collector-distributor routes, with traffic volumes where annual average daily traffic (AADT) is projected to be in the range of 140,000 to 150,000 or greater by the Design Year; and
- Are near populated areas or, in rural regions, close to concentrations of vulnerable populations (i.e., schools, nursing homes, hospitals).

With respect to the Project, the projected maximum AADT volumes at the Opening Year (2030) and Design Year (2050) would be above the 140,000 to 150,000 AADT criterion established by FHWA for projects considered to have higher potential for MSAT effects. According to FHWA guidance, the Project is classified as a Category 3 project, “projects with higher potential MSAT effects.” The Project meets this category because it has the potential for meaningful differences in VMT and related MSAT emissions among Project alternatives.

The federally approved version of CT-EMFAC, CT-EMFAC2017, released in January 2019 and based on EMFAC and factors provided by ARB and U.S. EPA, was used to estimate emissions of MSATs, including benzene, 1,3-butadiene, formaldehyde, acrolein, naphthalene, DPM, and polycyclic organic matter.

MSAT emissions were estimated for Existing (2019) conditions, No-Build 2030 conditions, and No-Build 2050 conditions as well as the Build Alternative under 2030 Opening Year and 2050 Design Year conditions. Table 2.3.6-11 presents the modeling results for the Existing (2019), 2030 Opening Year, and 2050 Design Year conditions. Emissions were estimated for all MSATs using CT-EMFAC, based on EMFAC and speciation factors provided by ARB and U.S. EPA.

Table 2.3.6-11. Summary of Comparative MSAT Emissions Analysis (pounds per day)

Analysis Scenario	1,3-butadiene	Acetaldehyde	Acrolein	Benzene	Diesel Particulate Matter	Ethyl-benzene	Formaldehyde	Naphthalene	Polycyclic Organic Matter
2019 Existing	5.4	27.0	1.1	36.9	125.9	25.5	62.1	2.2	1.5
2030 Opening Year									
No-Build Alternative	3.3	8.0	0.7	24.5	37.7	21.6	21.1	1.8	0.6
Build Alternative	3.3	8.1	0.7	24.8	40.0	21.8	21.4	1.8	0.6
2030 Opening-Year Net Emissions vs. Existing									
Build Alternative	-2.1	-18.9	-0.4	-12.1	-85.8	-3.8	-40.7	-0.3	-0.9
2030 Opening-Year Net Emissions vs. No-Build Alternative									
Build Alternative	0.1	0.1	0.0	0.3	2.4	0.2	0.3	0.0	0.0
2050 Design Year									
No-Build Alternative	2.5	6.9	0.5	17.5	35.1	14.3	17.5	1.3	0.4
Build Alternative	2.5	6.9	0.6	17.5	37.1	14.3	17.5	1.3	0.4
2050 Design-Year Net Emissions vs. Existing									
Build Alternative	-2.9	-20.2	-0.5	-19.4	-88.8	-11.2	-44.6	-0.9	-1.1
2050 Design-Year Net Emissions vs. No-Build Alternative									
Build Alternative	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0

Source: Emissions modeled using CT-EMFAC20217.

As shown in Table 2.3.6-11, MSAT emissions for the Build Alternative and No-Build Alternative at both the Opening Year (2030) and Design Year (2050) are projected to be less than under Existing (2019) conditions due to improvements in engine emissions technologies as well as the retirement of older vehicles. In addition, minor increases in MSAT emissions are predicted to occur under the Build Alternative relative to the No-Build Alternative in the Opening Year (2030) and Design Year (2050).

To comply with Council on Environmental Quality regulations (40 CFR 1502.22(b)) regarding incomplete or unavailable information, Appendix C, Council on Environmental Quality (CEQ) Provisions Covering Incomplete or Unavailable Information (40 CFR 1502.21) of the Updated Interim Guidance on MSAT Analysis in NEPA Documents, discusses how air toxics analysis is an emerging field and how current scientific techniques, tools, and data are not able to accurately estimate the human health effects that would result from a transportation project in a way that would be useful to decision-makers. This appendix also contains a summary of current studies regarding the health effects of MSATs so that it is in compliance with 40 CFR 1502.22(b).

Regardless of the alternative chosen, emissions in future years would be lower than present levels as a result of U.S. EPA's national control programs, which are projected to reduce annual MSAT emissions by more than 90 percent from 2010 to 2050. Local conditions may differ from these national projections in terms of three factors: fleet mix and turnover, VMT growth rates, and local control measures. However, even after accounting for VMT growth, the magnitude of the U.S. EPA–projected reductions is so great that MSAT emissions in the Project study area are likely to be lower in the future in virtually all locations.

Under the Build Alternative, there would be localized areas where VMT would increase. It is likely that localized increases in some MSAT emissions would occur under the Build Alternative compared to the No-Build Alternative. Mitigation Measure **VMT-1** would mitigate VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. The localized increases in some MSAT emissions would be most pronounced along freeway mainline sections under the Build Alternative. However, they, too, would be substantially reduced in the future due to implementation of U.S. EPA's vehicle and fuel regulations.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, there would be no changes to the Project area and no air quality impacts would occur.

2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures

The Standard Project Measures will be implemented during construction activities to minimize and/or avoid impacts related to air quality (**AQ-1** through **AQ-4**), and Mitigation Measure **VMT-1** would mitigate VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor.

AQ-1. During clearing, grading, earthmoving, or excavation operations, fugitive dust emissions be controlled by regular watering or other dust preventive measures using the following procedures, as specified in SCAQMD Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The areas disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in Project specifications. Visible dust beyond the property line emanating from the Project will be prevented to the maximum extent feasible.

AQ-2. Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.

AQ-3. All trucks that are to haul excavated or graded material on site will 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 will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02) that specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

VMT-1. To reduce VMT and associated impacts, promote travel-mode shift, and reduce bus travel times, RCTC will develop a Vehicle Miles Traveled Mitigation Program (VMTMP) prior to Express Lanes being open to travel that includes the establishment of the Riverside County Free Rail Pass Program and the expansion of the Riverside Transit Agency's (RTA's) CommuterLink Route 206.

The Riverside County Free Rail Pass Program will be an approximately 2-year program beginning in 2025 that will offer temporary free Metrolink passes to Riverside County residents to reduce the cost of using public transportation in order to encourage residents to use public transportation more often on a permanent basis. This program will include public outreach efforts that will maximize the participation of disadvantaged and low-income populations.

RCTC will work with RTA to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses will be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project.

2.3.6.5 Climate Change

Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the Project.

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2.3.7 Noise

2.3.7.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 and the California Environmental Quality Act (CEQA) provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration (FHWA) involvement (and the Department, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 2.3.7-1 lists the noise abatement criteria for use in the NEPA/23 CFR 772 analysis.

Table 2.3.7-1. Noise Abatement Criteria

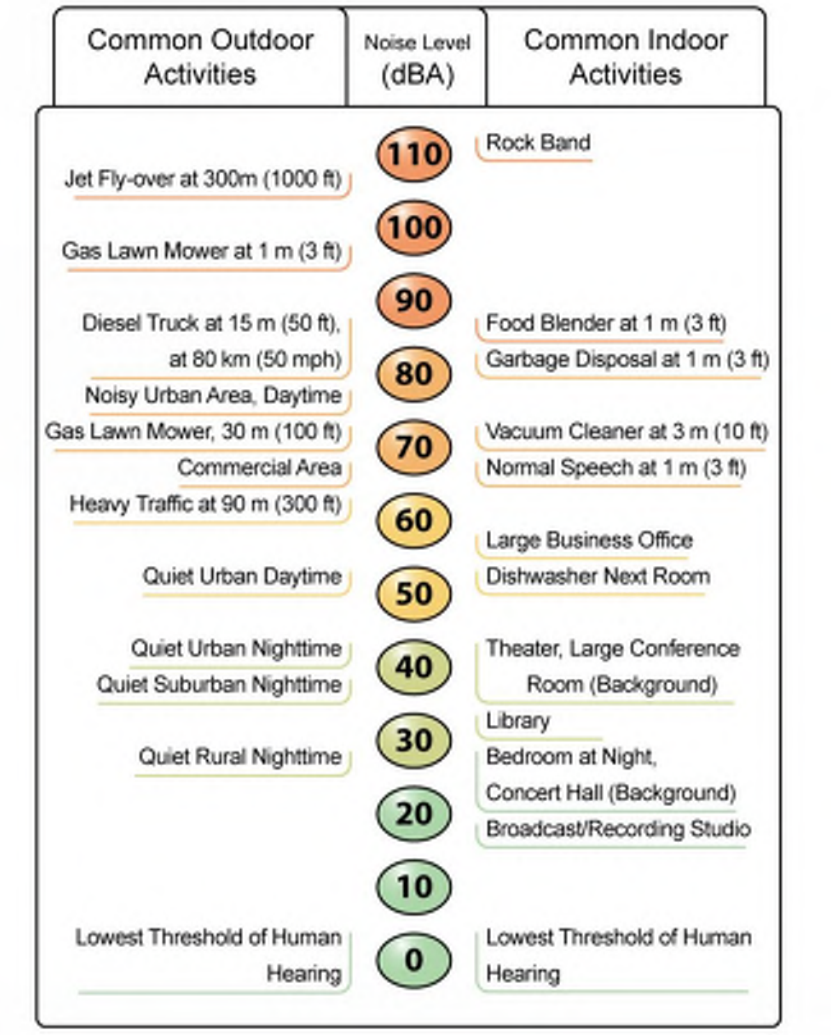
Activity Category	NAC, Hourly A-Weighted Noise Level, $L_{eq}(h)$	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B[1]	67 (Exterior)	Residential.

Activity Category	NAC, Hourly A-Weighted Noise Level, $L_{eq}(h)$	Description of Activity Category
C[1]	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.

[1] Includes undeveloped lands permitted for this activity category.

Figure 2.3.7-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2.3.7-1. Noise Levels of Common Activities



According to the Department's *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, April 2020 (Protocol), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC (Caltrans 2020).

If it is determined that the Project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the Project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the Project.

The Department's *Protocol* sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an

impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

2.3.7.2 Affected Environment

This section is based on the analysis and findings presented in the Project Noise Study Report (NSR) (Caltrans 2024a) and Noise Abatement Decision Report (NADR) (Caltrans 2024b).

Land Uses

Acoustical specialists conducted a detailed field investigation to identify land uses that could be subject to traffic noise impacts from the Project. Land uses identified along the Project alignment included single- and multi-family residences (Activity Category B); places of worship, a cemetery, medical facilities, a school, sports fields, and playgrounds (Activity Category C); the exterior use areas for restaurant/bar, hotels, and offices (Activity Category E) and other non-noise-sensitive land uses including retail, industrial, warehousing, and utilities (Activity Category F); and undeveloped lands (Activity Category G).

Permitted future developments that did not exist at the time of field investigation were included in the analysis. These are independent developments that are not part of the Project but for which a building permit has been issued by the local jurisdiction or the appropriate governing entity. These permitted developments would be constructed within the study area by third parties such as private developers or local public agencies.

As required by the Protocol, noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, this impact analysis focuses primarily on locations with defined outdoor activity areas, such as residential backyards, common-use areas at multi-family residences, parks, schools, and places of worship.

Noise Analysis Areas

For the purpose of this noise analysis, the Project study area is divided into 20 separate Noise Analysis Areas (NAAs) that are based on major local intersections. Land uses within each NAA are described below.

- **NAA 1 – East side of Interstate (I-) 15 between Main Street and State Route (SR-) 74 (Central Avenue):** The land uses in this NAA include large areas of

undeveloped lands that are not permitted (Activity Category G); several restaurants, including one with outdoor seating (Activity Category E); and industrial and retail facilities (Activity Category F). Most of NAA 1 is generally flat and below the elevation of I-15, but the southern end of the NAA contains hills that rise above the elevation of I-15. Three permitted projects are either completely or partially within NAA 1; these are the I-15 Main Street Interchange Project, the Ortega Grid Battery Energy Storage System, and the I-15/SR-74 Interchange Improvement Project (additional details below).

- **NAA 2 – West side of I-15 between Main Street and SR-74 (Central Avenue):** The land uses in this NAA are a mix of residential (Activity Category B); offices and restaurants with outdoor seating (Activity Category E); retail, warehousing, and industrial buildings (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). The area is generally flat with elevations at or below that of I-15. An existing sound wall at the mainline edge of shoulder provides shielding from I-15 at one cluster of residences. Four permitted projects are either completely or partially within NAA 2; these are the I-15 Main Street Interchange Project, the West Minthorn Street Industrial Building, the Central Plaza Project, and the I-15/SR-74 Interchange Improvement Project (additional details below).

- **NAA 3 – East side of I-15 between SR-74 (Central Avenue) and Nichols Road:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a place of worship, parks, and active sport areas at a high school (Activity Category C); interior place of worship (Activity Category D); a food court with outdoor seating and a restaurant (Activity Category E); retail and utilities (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). The area is generally flat with elevations at or above that of I-15. Several existing block walls on private property and one 14-foot-tall replacement sound wall within California Department of Transportation (Caltrans) right of way (ROW) provide shielding from I-15 at the residences. Two permitted projects are either completely or partially within NAA 3; these are the I-15/SR-74 Interchange Improvement Project and the Nichols Ranch Specific Plan (additional details below).

- **NAA 4 – West side of I-15 between SR-74 (Central Avenue) and Nichols Road:** The land uses in this NAA include a cemetery (Activity Category C); developed lands with outdoor seating (Activity Category E); retail (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). The area is generally flat with elevations below that of I-15. One permitted project is partially within NAA 4; this is the I-15/SR-74 Interchange Improvement Project (additional details below).

- **NAA 5 – East side of I-15 between Nichols Road and Lake Street:** The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include agriculture and utility uses (Activity Category F). The topography in this area is hilly and varies drastically, with elevations at or above that of I-15.

- **NAA 6 – West side of I-15 between Nichols Road and Lake Street:** The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include a utility use (Activity Category F). The topography in this area varies drastically, generally dropping toward Temescal Wash to the west, with elevations at or below that of I-15. One permitted project is in NAA 6; this is the Lake Street Storage Project (additional details below).

- **NAA 7 – East side of I-15 between Lake Street and Indian Truck Trail:** The land uses in this NAA are mixed and include offices (Activity Category E), industrial and utility uses (Activity Category F), and large areas of undeveloped lands that are not permitted (Activity Category G). The topography in this area varies from flat to hilly, with elevations ranging above to below that of I-15.

- **NAA 8 – West side of I-15 between Lake Street and Indian Truck Trail:** The land uses in this NAA include residential (Activity Category B), developed lands with outdoor seating areas (Activity Category E), storage and retail facilities (Activity Category F), and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations ranging from above to below that of I-15. One permitted project is in NAA 8; this is the Ranch RV and Self-Storage project (additional details below).

- **NAA 9 – East side of I-15 between Indian Truck Trail and Temescal Canyon Road (underpass):** The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include restaurants (Activity Category E) and a gas station, parking lot, and retail facility (Activity Category F). The topography in this area is hilly and varies drastically, with elevations ranging from above to below that of I-15. One permitted project is in NAA 9; this is the Toscana Village Commercial Center project (additional details below).

- **NAA 10 – West side of I-15 between Indian Truck Trail and Temescal Canyon Road (underpass):** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include emergency services (Activity Category F) and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations ranging from above to below that of I-15. Several existing block walls on private property provide shielding from I-15 at the residences.

- **NAA 11 – East side of I-15 between Temescal Canyon Road (underpass) and Temescal Canyon Road:** The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include industrial (Activity Category F). The topography in this area varies, with elevations ranging from above to below that of I-15.

- **NAA 12 – West side of I-15 between Temescal Canyon Road (underpass) and Temescal Canyon Road:** The land uses in this NAA include residential (Activity Category B), recreation areas (Activity Category C), outdoor seating areas (Activity Category E), retail facilities (Activity Category F), and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations

at or above that of I-15. Several existing block walls on private property provide shielding from I-15 at the residences. One permitted project is in NAA 12; this is the Serrano Single-Family Home Community (additional details below).

- **NAA 13 – East side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive:** The majority of land uses in this NAA are residential (Activity Category B) and industrial/commercial (Activity Category F). Other land uses include a driving range (Activity Category C), outdoor seating areas (Activity Category E), and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations ranging from above to below that of I-15.

- **NAA 14 – West side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include parks (Activity Category C); outdoor seating areas (Activity Category E); industrial, storage, and warehousing (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations at or above that of I-15. Several existing block walls on private property provide shielding from I-15 at the residences.

- **NAA 15 – East side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a playground (Activity Category C), restaurants with outdoor dining, and a hotel with outdoor use areas (Activity Category E). The topography in this area varies. Most of the NAA is flat and sits below the elevation of I-15, but a small area at the north end of the NAA is higher than I-15.

- **NAA 16 – West side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a place of worship (Activity Category C); a hotel with a pool and restaurants with outdoor dining (Activity Category E); retail facilities (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies drastically, with elevations generally above that of I-15. One permitted project is in NAA 16; this is the Bedford Marketplace project (additional details below).

- **NAA 17 – West side of I-15 between Cajalco Road and El Cerrito Road:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include restaurants with outdoor dining (Activity Category E) and undeveloped lands that are not permitted (Activity Category G). The topography in this area varies, with elevations at or above that of I-15. The residences in this area are currently shielded from I-15 by an approximately 12- to 14-foot-tall existing noise barrier along the mainline edge of shoulder.

- **NAA 18 – East side of I-15 between Cajalco Road and El Cerrito Road:** The land uses in this NAA include residential (Activity Category B). Other land uses include outdoor seating (Activity Category E) and retail facilities (Activity Category F). The

topography in this area varies, with elevations at or below that of I-15. Two permitted projects are in NAA 18; these are the Woodsprings Hotel and the Latitude Business Park (additional details below).

- **NAA 19 – West side of I-15 between El Cerrito Road and Ontario Avenue:** The land uses in this NAA are primarily residential (Activity Category B). Other land uses include restaurants with outdoor use areas (Activity Category E) and retail (Activity Category F). The area is generally flat, with elevations at or above that of I-15. One permitted project is in NAA 19; this is the Foothill Center project (additional details below).

- **NAA 20 – East side of I-15 between El Cerrito Road and Ontario Avenue:** The land uses in this NAA are primarily active sport areas (Activity Category C). Other land uses include residential (Activity Category B). The area is generally flat and below the elevation of I-15. The residences in this area are currently shielded from I-15 by an approximately 14-foot-tall existing noise barrier along the mainline edge of shoulder.

Existing Noise Environment

Short-term noise measurements were conducted at various times between September 2020 and January 2022 at 130 representative locations within the Project study area for use in evaluating the existing noise environment and validating the traffic noise model. Short-term measurements (10–15 minutes in duration per measurement) were conducted at areas of frequent human use associated with residential and other noise-sensitive land uses or in locations that were considered acoustically equivalent for traffic noise model validation purposes. At land uses that did not have exterior areas of frequent human use (such as retail or commercial developments, restaurants without exterior dining areas, or undeveloped lands), noise measurements were taken at accessible areas of the property that faced I-15.

Long-term measurements were conducted at various times between September 2020 and October 2022 at 18 representative locations within the Project study area. Long-term measurements were used to determine changes in noise levels within the Project study area throughout a typical day. In particular, the long-term measurements were used to determine whether the worst noise hour occurred during the morning (AM) or afternoon/evening (PM) in order to select which traffic data should be used in the traffic noise modeling.

Additional discussion related to the field measurements can be found in the NSR.

Traffic Noise Model

Traffic Noise Model (TNM) version 2.5 was used for noise level computations. TNM input is based on a three-dimensional grid created for the study area to be modeled. Key geometric inputs for the TNM were ground type and the locations of roadways, shielding features (e.g., topography and buildings), noise barriers (including freeway sound walls and property walls), and receivers.

Geometry associated with the following future permitted projects was also included in the TNM modeling:

- **I-15 Main Street Interchange Project (EA 1G7201):** The project, located in NAA 1 and NAA 2, includes the widening of Main Street through the interchange, new traffic signals at on-ramps and off-ramps on Main Street and at Camino del Norte, northbound and southbound I-15 ramp widening, and metering at on-ramps. This interchange project is currently under construction. Because this project proposes changes to the roadway layout, thus affecting traffic flow under future conditions, it has been included in the analysis of this report. However, the project is not noise sensitive and does not introduce any new receptors or land uses to the study area.

- **West Minthorn Street Industrial Building:** This project, located in NAA 2, includes the construction of an approximately 30-foot-tall industrial building and parking lot partially enclosed by block walls, and is currently under construction. The project is northeast of the I-15 and Main Street interchange. There are no noise-sensitive land uses proposed as part of this project, which would be classified as Activity Category F. However, the project would provide shielding from traffic noise on I-15 at nearby noise-sensitive land uses. Therefore, this project has been included in the analysis of this report.

- **Ortega Grid Battery Energy Storage System:** This project, located in NAA 1, includes the construction of a 20-megawatt Battery Energy Storage System east of I-15 and southeast of the intersection of Camino Del Norte and Ohana Circle. The project, which is currently under construction, consists of battery containers, switch gear, and a transformer, all enclosed within a security fence and block wall. There are no noise-sensitive land uses proposed as part of this project, which would be classified as Activity Category F. The project would not affect any nearby noise-sensitive land uses, as it is surrounded by commercial and industrial land uses and undeveloped lands. Nonetheless, this land use has been included for informational purposes.

- **Central Plaza Project:** This project, located in NAA 2, includes the construction of 53,469 square feet of retail uses and 12,334 square feet of restaurant uses, including outdoor seating, south of Central Avenue and east of Collier Avenue. Much of this project was constructed at the time noise measurements were obtained for this analysis. The remaining restaurant use (Miguel's Jr.), with no outdoor dining, has since been built and included in the analysis of this report. Land uses within this project would be classified as Activity Categories E and F.

- **I-15/SR-74 (Central Avenue) Interchange Improvement Project (EA 0F310):** The City of Lake Elsinore, in cooperation with Caltrans, is proposing improvements to the I-15/SR-74 (Central Avenue) interchange, located in NAAs 1, 2, 3, and 4. The project proposes several improvements to improve traffic conditions, reduce congestion at the interchange, and help alleviate traffic surrounding local intersections within the project area. Three project alternatives are being evaluated as part of that project's NSR. However, only Alternative 3 is being modeled in this

analysis (in both the No-Build and Build scenarios) because Alternative 3 has been selected as the Locally Preferred Alternative by the City of Lake Elsinore. Because this project proposes changes to the roadway layout, thus affecting geometry and traffic flow under future conditions, it has been included in the analysis of this report. However, the project is not noise-sensitive and does not introduce any new receptors or land uses to the study area. The new northbound ramps proposed by this project require the removal of an existing sound wall in NAA 3 (within Caltrans ROW on the east side of I-15 near Dexter Avenue and 11th Street). As a result, the I-15/SR-74 (Central Avenue) project has committed to building a 14-foot-tall replacement wall that meets or exceeds the acoustical performance of the existing wall. Because this wall is included as a Standard Project Measure it is assumed to exist in the future traffic noise modeling for the Project.

- **Nichols Ranch Specific Plan:** This project, located in NAA 3, proposes to construct 168 residential homes on approximately 31.1 acres along with developer block walls, recreational use areas, drainage basins, and open space and is currently under construction. Because this project will introduce several noise-sensitive land uses, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Categories B and C.

- **Lake Street Storage Project:** This project, located in NAA 6, includes an indoor recreational vehicle (RV) and boat storage facility of approximately 80,000 square feet, a 3,528-square-foot gas station/mini mart use, and outdoor RV storage spaces. The project, which is currently under construction, is southeast of the I-15 and Lake Street interchange. There are no noise-sensitive land uses proposed as part of this project and the project would not affect any nearby noise-sensitive land uses, as it is surrounded by undeveloped lands. Nonetheless, this land use has been analyzed for informational purposes. Land uses within this project would be classified as Activity Category F.

- **Ranch RV and Self-Storage:** This project, located in NAA 8, includes several storage buildings and an RV parking area on 7.03 acres of land. The project, which is currently under construction, is on the east side of Temescal Canyon Road, south of Hostettler Road. There are no noise-sensitive land uses proposed as part of this project; however, the project would provide shielding from traffic noise on I-15 at nearby noise-sensitive land uses. Therefore, this project has been included in the analysis of this report. Land uses within this project would be classified as Activity Category F.

- **Toscana Village Commercial Center:** This project, located in NAA 9, includes the construction of several commercial buildings and changes to the existing roadway. The commercial uses include a gas station, restaurants, retail, office, and a supermarket. The project is northeast of the I-15 and Indian Truck Trail interchange. There are no noise-sensitive land uses proposed as part of this project. Nonetheless, this land use has been included for informational purposes. Land uses within this project would be classified as Activity Categories E and F.

- **Serrano Single-Family Home Community:** This project, located in NAA 12, includes the construction of 80 two-story single-family homes, a recreation area, a dog park, and a trail node. The project, which is currently under construction, is north of the Temescal Canyon Road and Campbell Ranch Road intersection. Because this project proposes several noise-sensitive land uses and will change the acoustical shielding of existing homes behind the project, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Categories B and C.

- **Bedford Marketplace:** This project, located in NAA 16, includes the construction of a hotel, several restaurants, and general commercial uses. The project, which is currently under construction, is southwest of the I-15 and Cajalco Road interchange. Because this project proposes several noise-sensitive land uses that will be constructed prior to completion of the Project, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Categories E and F.

- **Woodsprings Hotel:** This project, located in NAA 18, includes the construction of a 48,413-square-foot four-story hotel containing 122 rooms on 5.02 acres with no proposed outdoor use areas. The project, which is currently under construction, is northeast of the I-15 and Cajalco Road interchange. Because this project includes a noise-sensitive land use that will be constructed prior to completion of the Project, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Category E.

- **Latitude Business Park:** This project, located in NAA 18, includes the construction of 13 industrial buildings on 74.49 acres of land with multiple outdoor use areas. The project, which is currently under construction, is east of I-15, between the Cajalco Road and El Cerrito interchanges. Because this project includes several noise-sensitive land uses, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Category E.

- **Foothill Center:** This project, located in NAA 19, includes the construction of an 82,870-square-foot commercial center consisting of a service station, four restaurants with some outdoor seating areas, a 24,000-square-foot in-line tenant building, and a four-story 119-room hotel. The project, which is currently under construction, is northwest of the I-15 and El Cerrito interchange. Because this project includes several noise-sensitive land uses, it has been included in the analysis of this report. Land uses within this project would be classified as Activity Categories E and F.

To ensure the TNM modeling represents actual conditions, the model was validated by comparing measured traffic noise levels to the model's estimate of existing noise levels at field measurement locations. Short-term and long-term noise measurements were used for TNM validation. Model validation showed generally good agreement between the measured and modeled levels with most model validation falling within the acceptable +/-3-decibel (dB) limit. For locations that did not show generally good

agreement, a K-factor was included to adjust the modeling results for each respective measurement location and any other receiver location that was considered to be subject to acoustically equivalent conditions. Detailed information about how traffic noise levels were calculated and the TNM validation process is provided in the NSR (Caltrans 2024a).

2.3.7.3 Environmental Consequences

State highway agencies must complete a noise analysis for a project if the requirements of 23 CFR 772 apply, and the project would include an activity that would qualify the project as a Type I or Type II project, as defined. The Project is considered a Type I project under 23 CFR 772 because the proposed construction would add capacity through the addition of express lane(s) and other improvements, thereby triggering the requirement for noise analysis.

Build Alternative

Temporary Impacts

During construction, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Two types of short-term noise impacts would occur during Project construction. The first type would be from construction crew commutes and the transport of construction equipment and materials to the Project site, which would incrementally raise noise levels on access roads leading to the Project construction site. The pieces of heavy equipment for grading and construction activities would be moved on site, would remain for the duration of each construction phase, and would not add to the daily traffic volume in the Project vicinity. A high single-event noise exposure potential at a maximum level of 87 A-weighted decibels (dBA) maximum noise level (L_{max}) from trucks passing at 50 feet would exist. However, the projected construction traffic would be minimal when compared with existing traffic volumes on I-15 and other affected streets, and the associated noise level change would not be perceptible. Therefore, construction-related worker commutes and equipment transport noise impacts would be short term and would not be adverse.

The second type of short-term noise impact would be from construction activities. Construction is performed in distinct steps, each of which has its own mix of equipment and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated and the noise levels along the Project alignment as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 2.3.7-2 lists typical construction equipment noise levels (L_{max}) recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor.

Table 2.3.7-2. Typical Construction Equipment Noise Levels

Type of Equipment	Range of Maximum Sound Levels (dBA L_{max} at 50 feet)	Suggested Maximum Sound Levels for Analysis (dBA L_{max} at 50 feet)
Pile Drivers	81 to 96	93
Rock Drills	83 to 99	96
Jackhammers	75 to 85	82
Pneumatic Tools	78 to 88	85
Pumps	74 to 84	80
Scrapers	83 to 91	87
Haul Trucks	83 to 94	88
Cranes	79 to 86	82
Portable Generators	71 to 87	80
Rollers	75 to 82	80
Dozers	77 to 90	85
Tractors	77 to 82	80
Front-End Loaders	77 to 90	86
Hydraulic Backhoe	81 to 90	86
Hydraulic Excavators	81 to 90	86
Graders	79 to 89	86
Air Compressors	76 to 89	86
Trucks	81 to 87	86

Source: Bolt Beranek and Newman, Inc. 1987

Typical noise levels at 50 feet from an active construction area could reach 91 dBA L_{max} during the noisiest construction phases. The site preparation phase, which includes grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavation machinery such as backhoes, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings.

Construction of the Project is expected to require the use of earthmovers, bulldozers, paving machines, water trucks, dump trucks, concrete trucks, rollers, and pickup trucks. Noise associated with the use of construction equipment is estimated to be between 79 and 89 dBA L_{max} at a distance of 50 feet from the active construction area for the grading phase. As seen in Table 2.3.7-2, the maximum noise level generated by each earthmover is assumed to be approximately 86 dBA L_{max} at 50 feet from the earthmover

in operation. Each bulldozer would generate approximately 85 dBA L_{max} at 50 feet. The maximum noise level generated by water trucks and pickup trucks is approximately 86 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA.

Each piece of construction equipment operates as an individual point source. The worst-case composite noise level at the nearest residence during this phase of construction would be 91 dBA L_{max} (at a distance of 50 feet from an active construction area). Note that, because the Project consists primarily of inside widening, most of the heavy construction activity would take place in the existing freeway and not directly adjacent to any noise-sensitive receptors.

In addition to the standard construction equipment, the Project would require the use of pile drivers. As shown in Table 2.3.7-2, pile driving generates noise levels of up to 96 dBA L_{max} at 50 feet.

Temporary impacts related to noise during construction would be minimized or avoided with the inclusion of Standard Project Measure **N-1,** which requires compliance with Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications. This includes changing the location of stationary construction equipment, turning off idling equipment during construction activities, rescheduling construction activities as necessary to be in conformance with applicable requirements, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources as necessary in conformance with applicable requirements. Because construction would be conducted in accordance with applicable local noise standards and Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications and applicable local noise standards, no substantial adverse noise impacts from construction are anticipated.

Permanent Impacts

Predicted Design-year traffic noise levels are compared to existing conditions and to the Design-year No-Build conditions. The comparison to existing conditions is included in the analysis to identify "substantial" traffic noise impacts under 23 CFR 772. The comparison to No-Build conditions indicates the direct impact of noise resulting from the Project.

Modeling results summarized in Table 2.3.7-3 and included in the tables in Appendix B of the NSR indicate that calculated worst-hour traffic noise levels (equivalent hourly noise level [$L_{eq}(h)$]) for Design-year Build conditions are predicted to approach or exceed the NAC (67 dBA) at residential and recreational land uses (Activity Categories B and C) in several NAAs throughout the alignment. Additionally, the calculated worst-hour traffic noise levels are predicted to approach or exceed the NAC of 72 dBA for Activity Category E (exterior commercial receivers) land uses. Therefore, traffic noise impacts are predicted to occur at Activity Category B, C, and E land uses within the study area. Table 2.3.7-3 below shows the results of the modeling for the existing, No-Build, and Build conditions. Accordingly, noise abatement must be considered at those locations. The following sections provide additional details regarding the traffic noise

impacts predicted in each NAA. Table 2.3.7-3 below summarizes the existing noise levels, as well as predicted future noise levels at all analyzed receiver locations. The table also includes information about noise barriers that were evaluated as potential noise abatement for impacted receivers. Further discussion of considered abatement (i.e., noise barriers) is provided in Section 2.3.7.4, *Avoidance, Minimization, and/or Abatement Measures*, below.

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Table 2.3.7-3. Project Worst-Hour Noise Levels

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M01.01	ST01.01	1	--	G (-)	75	76	76	NONE	--	--	--	--	--	--	--	--	--
M01.02	ST01.01	1	--	G (-)	74	75	75	NONE	--	--	--	--	--	--	--	--	--
M01.03	ST01.02	1	--	G (-)	72	73	73	NONE	--	--	--	--	--	--	--	--	--
M01.04	ST01.02	1	SW1142A - Mainline EOS	E (72)	71	72	71	A/E	68	67	66	66	65	--	--	--	--
M01.05	ST01.02	1		E (72)	66	68	68	NONE	66	65	64	64	63	--	--	--	--
M01.04	ST01.02	1	SW1142B - ROW	E (72)	71	72	71	A/E	71	70	68	67	66	65	65	64	64
M01.05	ST01.02	1		E (72)	66	68	68	NONE	68	67	66	65	64	64	63	63	63
M01.06	ST01.02	1	--	F (-)	74	75	75	NONE	--	--	--	--	--	--	--	--	--
M01.07	ST01.03	1	--	G (-)	59	61	60	NONE	--	--	--	--	--	--	--	--	--
M01.08	ST01.03	1	--	G (-)	67	68	68	NONE	--	--	--	--	--	--	--	--	--
M01.09	ST01.03	1	--	G (-)	63	65	64	NONE	--	--	--	--	--	--	--	--	--
M01.10	ST01.04	1	--	G (-)	66	67	67	NONE	--	--	--	--	--	--	--	--	--
M01.11	ST01.05	1	--	E (72)	64	66	65	NONE	--	--	--	--	--	--	--	--	--
M01.12	ST01.05	1	--	E (72)	62	64	63	NONE	--	--	--	--	--	--	--	--	--
M01.13	ST01.05	1	--	F (-)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M01.14	ST01.05	1	--	E (72)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M02.01	ST02.01	2	SW1109A - Mainline EOS	B (67)	58	59	58	NONE	58	58	58	58	58	--	--	--	--
M02.02	ST02.01	2		B (67)	65	66	66	A/E	65	64	63	63	63	--	--	--	--
M02.01	ST02.01	2	SW1109B - Ramp EOS	B (67)	58	59	58	NONE	58	58	58	58	58	--	--	--	--
M02.02	ST02.01	2		B (67)	65	66	66	A/E	64	62	61	60	60	--	--	--	--
M02.01	ST02.01	2	SW1109 A+B - Mainline & Ramp EOS	B (67)	58	59	58	NONE	58	58	58	58	58	--	--	--	58
M02.02	ST02.01	2		B (67)	65	66	66	A/E	63	61	60	59	59	--	--	--	59
M02.03	ST02.01	2	--	F (-)	65	66	66	NONE	--	--	--	--	--	--	--	--	--
M02.04	ST02.01	2	--	F (-)	64	62	62	NONE	--	--	--	--	--	--	--	--	--
M02.05	ST02.01	2	--	F (-)	66	68	68	NONE	--	--	--	--	--	--	--	--	--
M02.06	ST02.02	2	--	E (72)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M02.07	ST02.02	2	SW1137A - Mainline EOS	B (67)	68	70	69	A/E	66	65	64	63	63	--	--	--	--
M02.07	ST02.02	2	SW1137B - Private Property	B (67)	68	70	69	A/E	68	66	65	64	63	62	--	--	62
M02.08	ST02.02	2	--	G (-)	69	70	69	NONE	--	--	--	--	--	--	--	--	--
M02.09	ST02.03	2	--	F (-)	60	62	62	NONE	--	--	--	--	--	--	--	--	--
M02.10	ST02.03	2	SW1151A - On Berm	B (67)	66	67	67	A/E	67	66	66	66	66	--	--	--	--
M02.11	ST02.03	2		B (67)	67	68	68	A/E	66	65	65	65	65	--	--	--	--
M02.10	ST02.03	2	SW1151B - Mainline EOS	B (67)	66	67	67	A/E	67	67	67	67	66	--	--	--	--
M02.11	ST02.03	2		B (67)	67	68	68	A/E	67	67	67	66	66	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M02.10	ST02.03	2	SW1151C -Private Property	B (67)	66	67	67	A/E	67	67	67	67	67	67	--	--	--
M02.11	ST02.03	2		B (67)	67	68	68	A/E	68	68	66	66	65	65	--	--	--
M02.12	ST02.04	2	--	G (-)	60	60	60	NONE	--	--	--	--	--	--	--	--	--
M02.13	ST02.05	2	--	F (-)	63	63	62	NONE	--	--	--	--	--	--	--	--	--
M02.14	ST02.05	2	--	E (72)	65	65	65	NONE	--	--	--	--	--	--	--	--	--
M02.15	ST02.05	2	--	E (72)	60	60	60	NONE	--	--	--	--	--	--	--	--	--
M02.16	ST02.05	2	--	E (72)	63	63	63	NONE	--	--	--	--	--	--	--	--	--
M02.17	ST02.05	2	--	E (72)	69	70	70	NONE	--	--	--	--	--	--	--	--	--
M02.18	ST02.05	2	--	E (72)	66	67	66	NONE	--	--	--	--	--	--	--	--	--
M03.01	ST03.01	3	--	E (72)	69	70	70	NONE	--	--	--	--	--	--	--	--	--
M03.02	ST03.01	3	--	F (-)	70	72	72	NONE	--	--	--	--	--	--	--	--	--
M03.03	ST03.02	3	--	E (72)	61	60	60	NONE	--	--	--	--	--	--	--	--	--
M03.04	ST03.04	3	--	G (-)	68	70	68	NONE	--	--	--	--	--	--	--	--	--
M03.05	ST03.03	3	--	C (67)	62	64	64	NONE	--	--	--	--	--	--	--	--	--
M03.05	ST03.03	3	--	D (52)	42	44	44	NONE	--	--	--	--	--	--	--	--	--
M03.06	ST03.03	3	--	C (67)	66	68	67	N/A**	--	--	--	--	--	--	--	--	--
M03.07	ST03.04	3	--	B (67)	64	65	64	NONE	--	--	--	--	--	--	--	--	--
M03.08	ST03.04	3	--	B (67)	64	62	62	NONE	--	--	--	--	--	--	--	--	--
M03.09	ST03.04	3	--	B (67)	61	62	61	NONE	--	--	--	--	--	--	--	--	--
M03.10	ST03.03	3	SW1204 - Private Property	B (67)	68	70	69	A/E	65	62	61	60	59	58	--	--	62
M03.11	ST03.04	3	--	B (67)	63	61	61	NONE	--	--	--	--	--	--	--	--	--
M03.12	ST03.04	3	--	B (67)	66	64	64	NONE	--	--	--	--	--	--	--	--	--
M03.13	ST03.04	3	--	B (67)	66	67	66	N/A**	--	--	--	--	--	--	--	--	--
M03.14	ST03.05	3	SW1226B - Between Mainline EOS and ROW	B (67)	66	65	65	NONE	65	65	65	65	65	--	--	--	65
M03.15	ST03.05	3		B (67)	63	63	63	NONE	62	62	62	61	61	--	--	--	61
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	--	--	--	67
M03.17	ST03.05	3		B (67)	66	67	67	A/E	65	64	63	63	62	--	--	--	62
M03.18	ST03.06	3		B (67)	64	65	65	NONE	65	64	64	64	64	--	--	--	64
M03.19	ST03.06	3		B (67)	63	65	64	N/A**	--	--	--	--	--	--	--	--	--
M03.20	ST03.06	3		B (67)	62	63	62	NONE	62	62	62	61	61	--	--	--	61
M03.21	ST03.06	3		B (67)	64	67	65	NONE	64	63	62	62	61	--	--	--	61
M03.22	ST03.06	3		B (67)	67	68	68	A/E	67	65	64	63	62	--	--	--	62
M03.23	ST03.07	3		C (67)	72	73	73	A/E	72	69	68	66	65	--	--	--	65
M03.24	ST03.07	3		C (67)	69	70	71	A/E	68	67	66	65	63	--	--	--	64
M03.25	ST03.07	3		C (67)	74	74	75	A/E	74	71	69	67	65	--	--	--	67
M03.26	ST03.08	3		C (67)	74	74	75	A/E	75	74	71	69	68	--	--	--	69
M03.27	ST03.08	3		C (67)	74	75	75	A/E	75	75	73	71	69	--	--	--	70

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M03.28	ST03.08	3		C (67)	69	68	70	A/E	68	67	66	66	65	--	--	--	65
M03.14	ST03.05	3	SW1208A - Between Mainline EOS and ROW	B (67)	66	65	65	NONE	64	63	63	63	62	--	--	--	--
M03.15	ST03.05	3		B (67)	63	63	63	NONE	62	61	60	60	60	--	--	--	--
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	--	--	--	--
M03.17	ST03.05	3		B (67)	66	67	67	A/E	65	64	63	62	62	--	--	--	--
M03.18	ST03.06	3		B (67)	64	65	65	NONE	63	62	62	61	60	--	--	--	--
M03.20	ST03.06	3		B (67)	62	63	62	NONE	62	61	60	60	59	--	--	--	--
M03.21	ST03.06	3		B (67)	64	67	65	NONE	65	63	63	62	62	--	--	--	--
M03.22	ST03.06	3		B (67)	67	68	68	A/E	67	65	64	64	63	--	--	--	--
M03.23	ST03.07	3	SW1214A - Between Mainline EOS and ROW	C (67)	72	73	73	A/E	72	70	69	68	67	--	--	--	68
M03.24	ST03.07	3		C (67)	69	70	71	A/E	69	68	66	66	65	--	--	--	66
M03.25	ST03.07	3		C (67)	74	74	75	A/E	74	71	69	67	66	--	--	--	67
M03.26	ST03.08	3		C (67)	74	74	75	A/E	75	74	71	69	68	--	--	--	69
M03.27	ST03.08	3		C (67)	74	75	75	A/E	75	75	73	71	69	--	--	--	70
M03.28	ST03.08	3		C (67)	69	68	70	A/E	68	67	66	66	65	--	--	--	65
M03.14	ST03.05	3	SW1226A - Mainline EOS	B (67)	66	65	65	NONE	65	65	65	65	65	--	--	--	65
M03.15	ST03.05	3		B (67)	63	63	63	NONE	62	62	61	61	61	--	--	--	61
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	--	--	--	67
M03.17	ST03.05	3		B (67)	66	67	67	A/E	65	64	63	63	62	--	--	--	62
M03.18	ST03.06	3		B (67)	64	65	65	NONE	64	63	63	63	62	--	--	--	63
M03.20	ST03.06	3		B (67)	62	63	62	NONE	62	62	61	61	61	--	--	--	61
M03.21	ST03.06	3		B (67)	64	67	65	NONE	63	62	62	61	61	--	--	--	61
M03.22	ST03.06	3		B (67)	67	68	68	A/E	65	64	63	62	61	--	--	--	62
M03.23	ST03.07	3		C (67)	72	73	73	A/E	70	68	66	65	64	--	--	--	65
M03.24	ST03.07	3		C (67)	69	70	71	A/E	67	66	65	63	62	--	--	--	63
M03.25	ST03.07	3		C (67)	74	74	75	A/E	71	69	67	66	64	--	--	--	66
M03.26	ST03.08	3		C (67)	74	74	75	A/E	72	70	68	67	64	--	--	--	66
M03.27	ST03.08	3		C (67)	74	75	75	A/E	73	71	70	68	66	--	--	--	67
M03.28	ST03.08	3		C (67)	69	68	70	A/E	67	66	66	66	65	--	--	--	65
M03.14	ST03.05	3	SW1208C - Mainline EOS	B (67)	66	65	65	NONE	64	63	62	63	62	--	--	--	--
M03.15	ST03.05	3		B (67)	63	63	63	NONE	61	61	60	60	60	--	--	--	--
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	--	--	--	--
M03.17	ST03.05	3		B (67)	66	67	67	A/E	65	63	62	62	61	--	--	--	--
M03.18	ST03.06	3		B (67)	64	65	65	NONE	63	62	61	61	60	--	--	--	--
M03.20	ST03.06	3		B (67)	62	63	62	NONE	61	61	60	59	59	--	--	--	--
M03.21	ST03.06	3		B (67)	64	67	65	NONE	63	62	62	61	61	--	--	--	--
M03.22	ST03.06	3		B (67)	67	68	68	A/E	65	64	63	63	62	--	--	--	--
M03.23	ST03.07	3		C (67)	72	73	73	A/E	70	69	68	67	67	--	--	--	68

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M03.24	ST03.07	3	SW1214C - Mainline EOS	C (67)	69	70	71	A/E	68	66	65	65	64	--	--	--	66
M03.25	ST03.07	3		C (67)	74	74	75	A/E	71	69	67	66	64	--	--	--	67
M03.26	ST03.08	3		C (67)	74	74	75	A/E	72	70	68	67	64	--	--	--	68
M03.27	ST03.08	3		C (67)	74	75	75	A/E	73	71	70	68	67	--	--	--	69
M03.28	ST03.08	3		C (67)	69	68	70	A/E	67	66	66	66	65	--	--	--	65
M03.14	ST03.05	3	SW1226C - ROW	B (67)	66	65	65	NONE	65	65	65	65	65	65	65	65	65
M03.15	ST03.05	3		B (67)	63	63	63	NONE	63	63	62	62	62	61	61	61	61
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	67	67	67	67
M03.17	ST03.05	3		B (67)	66	67	67	A/E	67	67	67	66	65	64	63	62	62
M03.18	ST03.06	3		B (67)	64	65	65	NONE	64	64	64	64	63	62	61	61	61
M03.20	ST03.06	3		B (67)	62	63	62	NONE	62	62	62	61	61	60	60	59	59
M03.21	ST03.06	3		B (67)	64	67	65	NONE	64	63	63	62	62	61	61	61	61
M03.22	ST03.06	3		B (67)	67	68	68	A/E	66	65	64	63	62	61	61	61	61
M03.23	ST03.07	3		C (67)	72	73	73	A/E	71	69	68	67	65	64	63	62	62
M03.24	ST03.07	3		C (67)	69	70	71	A/E	68	68	66	65	64	63	62	61	62
M03.25	ST03.07	3		C (67)	74	74	75	A/E	75	75	75	74	74	73	72	69	70
M03.26	ST03.08	3		C (67)	74	74	75	A/E	75	75	75	75	74	72	70	68	70
M03.27	ST03.08	3		C (67)	74	75	75	A/E	75	75	75	75	75	75	74	73	74
M03.28	ST03.08	3		C (67)	69	68	70	A/E	70	70	70	69	68	66	66	65	65
M03.14	ST03.05	3	SW1208D - ROW	B (67)	66	65	65	NONE	64	63	63	63	63	62	62	62	62
M03.15	ST03.05	3		B (67)	63	63	63	NONE	63	62	61	61	60	60	60	59	60
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	67	67	67	67
M03.17	ST03.05	3		B (67)	66	67	67	A/E	67	67	67	66	65	63	62	62	62
M03.18	ST03.06	3		B (67)	64	65	65	NONE	64	64	64	64	63	62	61	61	61
M03.20	ST03.06	3		B (67)	62	63	62	NONE	62	62	61	61	60	60	59	59	59
M03.21	ST03.06	3		B (67)	64	67	65	NONE	64	64	63	62	62	61	61	61	61
M03.22	ST03.06	3		B (67)	67	68	68	A/E	66	65	64	63	63	62	62	61	61
M03.23	ST03.07	3	SW1214D - ROW	C (67)	72	73	73	A/E	71	70	69	68	67	67	67	67	67
M03.24	ST03.07	3		C (67)	69	70	71	A/E	69	68	67	66	65	64	64	64	64
M03.25	ST03.07	3		C (67)	74	74	75	A/E	75	75	75	74	74	73	72	69	70
M03.26	ST03.08	3		C (67)	74	74	75	A/E	75	75	75	75	74	72	70	68	70
M03.27	ST03.08	3		C (67)	74	75	75	A/E	75	75	75	75	75	75	74	73	74
M03.28	ST03.08	3		C (67)	69	68	70	A/E	70	70	70	69	68	66	66	65	65
M03.14	ST03.05	3	SW1208B - Private Property	B (67)	66	65	65	NONE	63	62	61	59	59	58	--	--	60
M03.15	ST03.05	3		B (67)	63	63	63	NONE	62	61	60	59	59	59	--	--	60
M03.16	ST03.03	3		B (67)	67	69	67	A/E	67	67	67	67	67	67	--	--	67
M03.17	ST03.05	3		B (67)	66	67	67	A/E	63	61	61	60	59	59	--	--	60
M03.18	ST03.06	3		B (67)	64	65	65	NONE	63	62	61	61	60	60	--	--	60

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M03.20	ST03.06	3	SW1212 - Private Property	B (67)	62	63	62	NONE	62	61	60	60	59	59	--	--	59
M03.21	ST03.06	3		B (67)	64	67	65	NONE	63	62	61	61	60	60	--	--	60
M03.22	ST03.06	3		B (67)	67	68	68	A/E	63	62	62	61	60	60	--	--	61
M03.23	ST03.07	3	SW1214B - Private Property	C (67)	72	73	73	A/E	66	65	64	63	62	61	61	60	66
M03.24	ST03.07	3		C (67)	69	70	71	A/E	65	63	63	62	62	61	61	60	65
M03.25	ST03.07	3		C (67)	74	74	75	A/E	75	70	67	64	63	62	60	60	70
M03.26	ST03.08	3		C (67)	74	74	75	A/E	66	65	63	62	61	60	60	59	66
M03.27	ST03.08	3		C (67)	74	75	75	A/E	67	65	64	62	61	60	60	59	67
M03.28	ST03.08	3	SW1238 - Private Property	C (67)	69	68	70	A/E	65	64	63	62	62	62	--	--	63
M03.16	ST03.03	3	SW1210 - Private property	B (67)	67	69	67	A/E	62	61	60	59	59	59	--	--	60
M03.29	ST03.08	3	--	F (-)	70	70	71	NONE	--	--	--	--	--	--	--	--	--
M03.30	ST03.08	3	--	B (67)	65	60	60	NONE	--	--	--	--	--	--	--	--	--
M03.31	ST03.08	3	--	B (67)	62	57	58	NONE	--	--	--	--	--	--	--	--	--
M03.32	ST03.08	3	--	B (67)	60	55	56	NONE	--	--	--	--	--	--	--	--	--
M03.33	ST03.08	3	--	B (67)	58	54	54	NONE	--	--	--	--	--	--	--	--	--
M03.34	ST03.08	3	--	B (67)	57	52	53	NONE	--	--	--	--	--	--	--	--	--
M03.35	ST03.08	3	--	B (67)	55	51	52	NONE	--	--	--	--	--	--	--	--	--
M03.36	ST03.09	3	--	G (-)	61	64	65	NONE	--	--	--	--	--	--	--	--	--
M04.01	ST04.01	4	--	F (-)	65	66	66	NONE	--	--	--	--	--	--	--	--	--
M04.02	ST04.01	4	--	C (67)	69	68	69	N/A**	--	--	--	--	--	--	--	--	--
M04.03	ST04.01	4	--	C (67)	61	62	62	NONE	--	--	--	--	--	--	--	--	--
M04.04	ST04.01	4	--	G (-)	68	70	70	NONE	--	--	--	--	--	--	--	--	--
M04.05	ST04.02	4	--	G (-)	63	63	64	NONE	--	--	--	--	--	--	--	--	--
M04.06	ST04.03	4	--	E (72)	59	60	59	NONE	--	--	--	--	--	--	--	--	--
M04.07	ST04.03	4	--	E (72)	57	58	58	NONE	--	--	--	--	--	--	--	--	--
M04.08	ST04.04	4	--	E (72)	57	58	58	NONE	--	--	--	--	--	--	--	--	--
M04.09	ST04.04	4	--	E (72)	62	63	64	NONE	--	--	--	--	--	--	--	--	--
M04.10	ST04.05	4	--	E (72)	58	58	59	NONE	--	--	--	--	--	--	--	--	--
M04.11	ST04.05	4	--	E (72)	60	60	60	NONE	--	--	--	--	--	--	--	--	--
M04.12	ST04.06	4	--	G (-)	65	65	65	NONE	--	--	--	--	--	--	--	--	--
M04.13	ST04.06	4	--	F (-)	63	64	64	NONE	--	--	--	--	--	--	--	--	--
M05.01	ST05.01	5	--	F (-)	72	73	73	NONE	--	--	--	--	--	--	--	--	--
M05.02	ST05.01	5	--	G (-)	71	72	72	NONE	--	--	--	--	--	--	--	--	--
M05.03	ST05.02	5	--	G (-)	76	77	78	NONE	--	--	--	--	--	--	--	--	--
M05.04	ST05.02	5	--	G (-)	75	76	77	NONE	--	--	--	--	--	--	--	--	--
M05.05	ST05.02	5	--	G (-)	73	73	74	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M05.06	ST05.02	5	--	G (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M05.07	ST05.03	5	--	G (-)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M05.08	ST05.03	5	--	G (-)	69	70	71	NONE	--	--	--	--	--	--	--	--	--
M05.09	ST05.03	5	--	F (-)	66	67	68	NONE	--	--	--	--	--	--	--	--	--
M05.10	ST05.03	5	--	G (-)	69	69	71	NONE	--	--	--	--	--	--	--	--	--
M05.11	ST05.03	5	--	G (-)	71	72	73	NONE	--	--	--	--	--	--	--	--	--
M05.12	ST05.04	5	--	G (-)	70	71	72	NONE	--	--	--	--	--	--	--	--	--
M05.13	ST05.04	5	--	G (-)	60	60	61	NONE	--	--	--	--	--	--	--	--	--
M06.01	ST06.01	6	--	G (-)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M06.02	ST06.01	6	--	G (-)	65	65	66	NONE	--	--	--	--	--	--	--	--	--
M06.03	ST06.02	6	--	G (-)	67	68	68	NONE	--	--	--	--	--	--	--	--	--
M06.04	ST06.02	6	--	G (-)	67	67	67	NONE	--	--	--	--	--	--	--	--	--
M06.05	ST06.02	6	--	G (-)	69	70	70	NONE	--	--	--	--	--	--	--	--	--
M06.06	ST06.03	6	--	F (-)	66	67	67	NONE	--	--	--	--	--	--	--	--	--
M06.07	ST06.04	6	--	G (-)	67	67	68	NONE	--	--	--	--	--	--	--	--	--
M06.08	ST06.04	6	--	G (-)	73	73	74	NONE	--	--	--	--	--	--	--	--	--
M06.09	ST06.04	6	--	F (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M07.01	ST07.01	7	--	G (-)	75	76	77	NONE	--	--	--	--	--	--	--	--	--
M07.02	ST07.01	7	--	F (-)	68	69	71	NONE	--	--	--	--	--	--	--	--	--
M07.03	ST07.01	7	--	G (-)	70	71	71	NONE	--	--	--	--	--	--	--	--	--
M07.04	ST07.02	7	--	F (-)	69	70	71	NONE	--	--	--	--	--	--	--	--	--
M07.05	ST07.02	7	--	G (-)	73	74	75	NONE	--	--	--	--	--	--	--	--	--
M07.06	ST07.03	7	--	G (-)	66	65	66	NONE	--	--	--	--	--	--	--	--	--
M07.07	ST07.03	7	--	G (-)	65	66	66	NONE	--	--	--	--	--	--	--	--	--
M07.08	ST07.03	7	--	F (-)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M07.09	ST07.04	7	--	F (-)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M07.10	ST07.05	7	--	F (-)	61	62	63	NONE	--	--	--	--	--	--	--	--	--
M07.11	ST07.05	7	--	E (72)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M07.12	ST07.06	7	--	G (-)	63	64	64	NONE	--	--	--	--	--	--	--	--	--
M07.13	ST07.07	7	--	F (-)	63	64	65	NONE	--	--	--	--	--	--	--	--	--
M07.14	ST07.07	7	--	F (-)	61	62	63	NONE	--	--	--	--	--	--	--	--	--
M07.15	ST07.08	7	--	G (-)	56	58	58	NONE	--	--	--	--	--	--	--	--	--
M08.01	ST08.01	8	--	G (-)	62	62	63	NONE	--	--	--	--	--	--	--	--	--
M08.02	ST08.01	8	--	G (-)	71	68	68	NONE	--	--	--	--	--	--	--	--	--
M08.03	ST08.02	8	--	G (-)	66	65	65	NONE	--	--	--	--	--	--	--	--	--
M08.04	ST08.02	8	--	G (-)	65	66	66	NONE	--	--	--	--	--	--	--	--	--
M08.05	ST08.03	8	--	F (-)	68	68	68	NONE	--	--	--	--	--	--	--	--	--
M08.06	ST08.03	8	--	F (-)	68	64	65	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M08.07	ST08.03	8	--	F (-)	69	71	70	NONE	--	--	--	--	--	--	--	--	--
M08.08	ST08.04	8	--	B (67)	63	63	63	NONE	--	--	--	--	--	--	--	--	--
M08.09	ST08.04	8	--	G (-)	60	60	60	NONE	--	--	--	--	--	--	--	--	--
M08.10	ST08.05	8	--	G (-)	67	68	68	NONE	--	--	--	--	--	--	--	--	--
M08.11	ST08.05	8	--	G (-)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M08.12	ST08.06	8	--	G (-)	73	74	75	NONE	--	--	--	--	--	--	--	--	--
M08.13	ST08.06	8	--	G (-)	74	75	76	NONE	--	--	--	--	--	--	--	--	--
M08.14	ST08.06	8	SW1521A - Mainline EOS	B (67)	69	70	70	A/E	68	67	67	67	65	--	--	--	--
M08.14	ST08.06	8	SW1521B - ROW	B (67)	69	70	70	A/E	70	70	70	69	68	68	68	67	--
M08.14	ST08.06	8	SW1521C - Private Property	B (67)	69	70	70	A/E	70	67	65	64	64	63	--	--	63
M08.15	ST08.07	8		G (-)	70	72	72	NONE	69	68	68	67	66	--	--	--	--
M08.16	ST08.07	8	SW1539A - Mainline EOS	B (67)	68	69	70	A/E	67	66	66	65	64	--	--	--	--
M08.16	ST08.07	8	SW1539B - ROW	B (67)	68	69	70	A/E	68	68	67	67	66	66	66	66	--
M08.16	ST08.07	8	SW1539C - Private Property	B (67)	68	69	70	A/E	70	69	67	66	65	64	--	--	--
M08.17	ST08.07	8		G (-)	74	75	75	NONE	--	--	--	--	--	--	--	--	--
M08.18	ST08.08	8	--	G (-)	75	77	77	NONE	--	--	--	--	--	--	--	--	--
M08.19	ST08.08	8	--	G (-)	72	74	74	NONE	--	--	--	--	--	--	--	--	--
M08.20	ST08.09	8	--	G (-)	73	75	75	NONE	--	--	--	--	--	--	--	--	--
M08.21	ST08.09	8	--	F (-)	60	62	63	NONE	--	--	--	--	--	--	--	--	--
M08.22	ST08.09	8	--	G (-)	70	71	72	NONE	--	--	--	--	--	--	--	--	--
M08.23	ST08.09	8	--	G (-)	70	71	72	NONE	--	--	--	--	--	--	--	--	--
M08.24	ST08.10	8	--	E (72)	65	66	67	NONE	--	--	--	--	--	--	--	--	--
M08.25	ST08.11	8	--	F (-)	50	52	52	NONE	--	--	--	--	--	--	--	--	--
M08.26	ST08.11	8	--	E (72)	50	52	52	NONE	--	--	--	--	--	--	--	--	--
M08.27	ST08.11	8	--	E (72)	61	62	62	NONE	--	--	--	--	--	--	--	--	--
M09.01	ST09.01	9	--	E (72)	65	69	70	N/A*	--	--	--	--	--	--	--	--	--
M09.02	ST09.01	9	--	F (-)	64	66	67	NONE	--	--	--	--	--	--	--	--	--
M09.03	ST09.01	9	--	F (-)	71	70	72	NONE	--	--	--	--	--	--	--	--	--
M09.04	ST09.01	9	--	F (-)	63	63	64	NONE	--	--	--	--	--	--	--	--	--
M09.05	ST09.01	9	--	E (72)	63	52	53	N/A*	--	--	--	--	--	--	--	--	--
M09.06	ST09.01	9	--	G (-)	60	63	64	NONE	--	--	--	--	--	--	--	--	--
M09.07	ST09.02	9	--	G (-)	54	57	57	NONE	--	--	--	--	--	--	--	--	--
M09.08	ST09.02	9	--	G (-)	59	58	59	NONE	--	--	--	--	--	--	--	--	--
M09.09	ST09.02	9	--	G (-)	66	67	68	NONE	--	--	--	--	--	--	--	--	--
M09.10	ST09.02	9	--	G (-)	60	61	62	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M09.11	ST09.02	9	--	G (-)	60	61	62	NONE	--	--	--	--	--	--	--	--	--
M09.12	ST09.03	9	--	G (-)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M09.13	ST09.03	9	--	G (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M09.14	ST09.03	9	--	G (-)	70	71	72	NONE	--	--	--	--	--	--	--	--	--
M09.15	ST09.04	9	--	G (-)	69	70	71	NONE	--	--	--	--	--	--	--	--	--
M09.16	ST09.05	9	--	G (-)	72	73	74	NONE	--	--	--	--	--	--	--	--	--
M09.17	ST09.05	9	--	G (-)	69	70	71	NONE	--	--	--	--	--	--	--	--	--
M10.01	ST10.02	10	--	G (-)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M10.02	ST10.01	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.03	ST10.01	10	--	B (67)	56	57	57	NONE	--	--	--	--	--	--	--	--	--
M10.04	ST10.01	10	--	B (67)	43	43	44	NONE	--	--	--	--	--	--	--	--	--
M10.05	ST10.01	10	--	B (67)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M10.06	ST10.01	10	--	B (67)	58	60	60	NONE	--	--	--	--	--	--	--	--	--
M10.07	ST10.01	10	--	B (67)	45	45	47	NONE	--	--	--	--	--	--	--	--	--
M10.08	ST10.01	10	--	B (67)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M10.09	ST10.01	10	--	B (67)	60	61	61	NONE	--	--	--	--	--	--	--	--	--
M10.10	ST10.01	10	--	B (67)	53	53	54	NONE	--	--	--	--	--	--	--	--	--
M10.11	ST10.02	10	--	F (-)	64	64	65	NONE	--	--	--	--	--	--	--	--	--
M10.12	ST10.03	10	--	B (67)	57	58	58	NONE	--	--	--	--	--	--	--	--	--
M10.13	ST10.03	10	--	B (67)	47	48	50	NONE	--	--	--	--	--	--	--	--	--
M10.14	ST10.03	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.15	ST10.03	10	--	B (67)	57	58	59	NONE	--	--	--	--	--	--	--	--	--
M10.16	ST10.03	10	--	B (67)	43	44	45	NONE	--	--	--	--	--	--	--	--	--
M10.17	ST10.03	10	--	B (67)	57	58	58	NONE	--	--	--	--	--	--	--	--	--
M10.18	ST10.04	10	--	B (67)	57	58	59	NONE	--	--	--	--	--	--	--	--	--
M10.19	ST10.04	10	--	B (67)	44	45	46	NONE	--	--	--	--	--	--	--	--	--
M10.20	ST10.04	10	--	B (67)	57	58	59	NONE	--	--	--	--	--	--	--	--	--
M10.21	ST10.04	10	--	B (67)	45	46	47	NONE	--	--	--	--	--	--	--	--	--
M10.22	ST10.04	10	--	B (67)	57	58	58	NONE	--	--	--	--	--	--	--	--	--
M10.23	ST10.04	10	--	B (67)	47	48	49	NONE	--	--	--	--	--	--	--	--	--
M10.24	ST10.05	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.25	ST10.05	10	--	B (67)	49	50	52	NONE	--	--	--	--	--	--	--	--	--
M10.26	ST10.05	10	--	B (67)	58	59	60	NONE	--	--	--	--	--	--	--	--	--
M10.27	ST10.05	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.28	ST10.05	10	--	B (67)	41	42	43	NONE	--	--	--	--	--	--	--	--	--
M10.29	ST10.05	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.30	ST10.05	10	--	B (67)	41	42	43	NONE	--	--	--	--	--	--	--	--	--
M10.31	ST10.06	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M10.32	ST10.06	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.33	ST10.06	10	--	B (67)	47	48	49	NONE	--	--	--	--	--	--	--	--	--
M10.34	ST10.06	10	--	B (67)	46	47	49	NONE	--	--	--	--	--	--	--	--	--
M10.35	ST10.06	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.36	ST10.06	10	--	B (67)	48	49	50	NONE	--	--	--	--	--	--	--	--	--
M10.37	ST10.06	10	--	B (67)	55	56	57	NONE	--	--	--	--	--	--	--	--	--
M10.38	ST10.06	10	--	B (67)	45	46	47	NONE	--	--	--	--	--	--	--	--	--
M10.39	ST10.06	10	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.40	ST10.06	10	--	B (67)	55	57	58	NONE	--	--	--	--	--	--	--	--	--
M10.41	ST10.06	10	--	B (67)	47	48	49	NONE	--	--	--	--	--	--	--	--	--
M10.42	ST10.06	10	--	B (67)	55	56	57	NONE	--	--	--	--	--	--	--	--	--
M10.43	ST10.06	10	--	B (67)	52	54	55	NONE	--	--	--	--	--	--	--	--	--
M10.44	ST10.07	10	--	B (67)	53	55	56	NONE	--	--	--	--	--	--	--	--	--
M10.45	ST10.07	10	--	B (67)	49	50	51	NONE	--	--	--	--	--	--	--	--	--
M10.46	ST10.07	10	--	B (67)	53	54	55	NONE	--	--	--	--	--	--	--	--	--
M10.47	ST10.07	10	--	B (67)	40	41	42	NONE	--	--	--	--	--	--	--	--	--
M10.48	ST10.07	10	--	B (67)	52	53	54	NONE	--	--	--	--	--	--	--	--	--
M10.49	ST10.08	10	--	G (-)	66	67	67	NONE	--	--	--	--	--	--	--	--	--
M11.01	ST11.02	11	--	G (-)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M11.02	ST11.02	11	--	F (-)	63	64	65	NONE	--	--	--	--	--	--	--	--	--
M11.03	ST11.02	11	--	F (-)	60	61	62	NONE	--	--	--	--	--	--	--	--	--
M11.04	ST11.02	11	--	G (-)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M11.05	ST11.02	11	--	G (-)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M11.06	ST11.03	11	--	G (-)	75	75	77	NONE	--	--	--	--	--	--	--	--	--
M11.07	ST11.03	11	--	G (-)	77	78	79	NONE	--	--	--	--	--	--	--	--	--
M11.08	ST11.03	11	--	G (-)	63	64	65	NONE	--	--	--	--	--	--	--	--	--
M12.01	ST12.03	12	--	C (67)	66	62	63	NONE	--	--	--	--	--	--	--	--	--
M12.02	ST12.03	12	SW1689 - Mainline EOS	B (67)	68	59	60	NONE	59	59	59	58	57	--	--	--	--
M12.03	ST12.03	12		C (67)	64	73	73	A/E	72	71	70	69	68	--	--	--	--
M12.04	ST12.03	12		B (67)	68	45	46	NONE	46	46	46	46	46	--	--	--	--
M12.05	ST12.03	12		B (67)	70	61	62	NONE	61	60	60	60	59	--	--	--	--
M12.06	ST12.01	12		B (67)	50	43	45	NONE	--	--	--	--	--	--	--	--	--
M12.07	ST12.03	12		B (67)	69	50	51	NONE	51	51	51	51	51	--	--	--	--
M12.08	ST12.01	12		B (67)	63	46	47	NONE	--	--	--	--	--	--	--	--	--
M12.09	ST12.03	12		B (67)	72	47	48	NONE	48	48	48	48	48	--	--	--	--
M12.10	ST12.01	12		B (67)	69	49	50	NONE	50	50	50	50	50	--	--	--	--
M12.11	ST12.03	12		B (67)	76	63	64	NONE	63	63	62	62	62	--	--	--	--
M12.11A	ST12.03	12		C (67)	74	75	76	A/E	75	74	74	73	71	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M12.03	ST12.03	12	SW1691 - Trail Node	C (67)	64	73	73	A/E	65	62	60	59	58	57	--	--	65
M12.11A	ST12.03	12	SW1693 - Dog Park	C (67)	74	75	76	A/E	69	68	68	67	67	67	--	--	69
M12.12	ST12.01	12	--	B (67)	65	40	42	NONE	--	--	--	--	--	--	--	--	--
M12.13	ST12.03	12	--	B (67)	71	45	47	NONE	--	--	--	--	--	--	--	--	--
M12.14	ST12.01	12	--	B (67)	62	46	48	NONE	--	--	--	--	--	--	--	--	--
M12.15	ST12.03	12	--	B (67)	69	59	59	NONE	--	--	--	--	--	--	--	--	--
M12.16	ST12.03	12	--	B (67)	69	62	62	NONE	--	--	--	--	--	--	--	--	--
M12.17	ST12.01	12	--	B (67)	63	47	49	NONE	--	--	--	--	--	--	--	--	--
M12.18	ST12.01	12	--	B (67)	64	50	51	NONE	--	--	--	--	--	--	--	--	--
M12.19	ST12.01	12	--	B (67)	62	50	52	NONE	--	--	--	--	--	--	--	--	--
M12.20	ST12.01	12	--	B (67)	70	65	65	NONE	--	--	--	--	--	--	--	--	--
M12.21	ST12.03	12	--	B (67)	66	59	60	NONE	--	--	--	--	--	--	--	--	--
M12.22	ST12.03	12	--	B (67)	62	59	59	NONE	--	--	--	--	--	--	--	--	--
M12.23	ST12.03	12	--	B (67)	48	49	50	NONE	--	--	--	--	--	--	--	--	--
M12.24	ST12.03	12	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M12.25	ST12.02	12	--	B (67)	45	46	47	NONE	--	--	--	--	--	--	--	--	--
M12.26	ST12.03	12	--	B (67)	60	61	62	NONE	--	--	--	--	--	--	--	--	--
M12.27	ST12.02	12	--	B (67)	53	54	55	NONE	--	--	--	--	--	--	--	--	--
M12.28	ST12.04	12	--	B (67)	60	61	61	NONE	--	--	--	--	--	--	--	--	--
M12.29	ST12.02	12	--	B (67)	51	52	53	NONE	--	--	--	--	--	--	--	--	--
M12.30	ST12.04	12	--	B (67)	61	61	62	NONE	--	--	--	--	--	--	--	--	--
M12.31	ST12.02	12	--	B (67)	54	54	56	NONE	--	--	--	--	--	--	--	--	--
M12.32	ST12.05	12	--	B (67)	61	62	62	NONE	--	--	--	--	--	--	--	--	--
M12.33	ST12.05	12	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M12.34	ST12.02	12	--	F (-)	55	55	56	NONE	--	--	--	--	--	--	--	--	--
M12.35	ST12.05	12	--	B (67)	53	54	55	NONE	--	--	--	--	--	--	--	--	--
M12.36	ST12.02	12	--	B (67)	46	47	48	NONE	--	--	--	--	--	--	--	--	--
M12.37	ST12.02	12	--	B (67)	50	51	52	NONE	--	--	--	--	--	--	--	--	--
M12.38	ST12.05	12	--	B (67)	57	57	58	NONE	--	--	--	--	--	--	--	--	--
M12.39	ST12.06	12	--	B (67)	55	56	57	NONE	--	--	--	--	--	--	--	--	--
M12.40	ST12.07	12	--	G (-)	69	70	71	NONE	--	--	--	--	--	--	--	--	--
M12.41	ST12.07	12	--	C (67)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M12.42	ST12.07	12	--	E (72)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M12.43	ST12.07	12	--	E (72)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M12.44	ST12.07	12	--	E (72)	62	63	64	NONE	--	--	--	--	--	--	--	--	--
M12.45	ST12.08	12	--	E (72)	64	65	66	NONE	--	--	--	--	--	--	--	--	--
M12.46	ST12.08	12	--	E (72)	65	66	67	NONE	--	--	--	--	--	--	--	--	--
M12.47	ST12.08	12	--	F (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M12.48	ST12.09	12	--	F (-)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M12.49	ST12.09	12	--	F (-)	69	70	70	NONE	--	--	--	--	--	--	--	--	--
M12.50	ST12.09	12	SW1751A - ROW	E (72)	70	71	72	A/E	72	71	70	68	68	68	67	67	--
M12.50	ST12.09	12	SW1753B - Ramp EOS	E (72)	70	71	72	A/E	72	72	72	72	72	--	--	--	--
M12.50	ST12.09	12	SW1753A - Mainline EOS	E (72)	70	71	72	A/E	69	69	69	69	69	--	--	--	--
M12.50	ST12.09	12	SW1753A + SW1753B - Combination Mainline & Ramp EOS	E (72)	70	71	72	A/E	69	69	69	69	68	--	--	--	--
M12.50	ST12.09	12	SW1751B - Private Property	E (72)	70	71	72	A/E	66	63	61	60	59	58	--	--	65
M13.01	ST13.01	13	--	E (72)	67	68	68	NONE	--	--	--	--	--	--	--	--	--
M13.02	ST13.01	13	--	E (72)	60	62	62	NONE	--	--	--	--	--	--	--	--	--
M13.03	ST13.01	13	--	G (-)	74	75	76	NONE	--	--	--	--	--	--	--	--	--
M13.04	ST13.01	13	--	F (-)	61	62	62	NONE	--	--	--	--	--	--	--	--	--
M13.05	ST13.02	13	SW1784A - Mainline EOS	E (72)	64	66	66	NONE	65	64	64	64	64	--	--	--	--
M13.06	ST13.02	13		C (67)	68	70	70	A/E	69	69	69	69	69	--	--	--	--
M13.05	ST13.02	13	SW1784B - Private Property	E (72)	64	66	66	NONE	66	66	65	65	65	65	--	--	66
M13.06	ST13.02	13		C (67)	68	70	70	A/E	66	62	61	60	58	58	--	--	62
M13.07	ST13.03	13	--	G (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M13.08	ST13.03	13	--	F (-)	71	73	73	NONE	--	--	--	--	--	--	--	--	--
M13.09	ST13.03	13	--	F (-)	72	74	74	NONE	--	--	--	--	--	--	--	--	--
M13.10	ST13.03	13	--	F (-)	66	68	68	NONE	--	--	--	--	--	--	--	--	--
M13.11	ST13.03	13	--	F (-)	72	74	74	NONE	--	--	--	--	--	--	--	--	--
M13.12	ST13.04	13	--	F (-)	62	64	64	NONE	--	--	--	--	--	--	--	--	--
M13.13	ST13.04	13	--	F (-)	66	67	68	NONE	--	--	--	--	--	--	--	--	--
M13.14	ST13.04	13	--	E (72)	66	68	68	NONE	--	--	--	--	--	--	--	--	--
M13.15	ST13.05	13	--	F (-)	53	54	55	NONE	--	--	--	--	--	--	--	--	--
M13.16	ST13.05	13	--	B (67)	57	59	59	NONE	--	--	--	--	--	--	--	--	--
M13.17	ST13.06	13	--	F (-)	71	72	73	NONE	--	--	--	--	--	--	--	--	--
M13.18	ST13.07	13	--	F (-)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M13.19	ST13.06	13	--	G (-)	67	69	69	NONE	--	--	--	--	--	--	--	--	--
M13.20	ST13.06	13	--	B (67)	62	63	64	NONE	--	--	--	--	--	--	--	--	--
M13.21	ST13.07	13	SW1872 - ROW	B (67)	66	68	68	A/E	66	65	65	64	63	63	62	--	63
M13.22	ST13.07	13		F (-)	65	67	68	NONE	--	--	--	--	--	--	--	--	--
M13.23	ST13.08	13		B (67)	67	69	69	A/E	69	67	65	63	62	61	60	--	62
M13.24	ST13.08	13		B (67)	61	62	62	NONE	61	60	59	58	58	57	57	--	57

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M13.25	ST13.08	13		B (67)	57	59	59	NONE	59	59	58	58	58	58	57	--	58
M13.21	ST13.07	13	SW1874 - Ramp EOS	B (67)	66	68	68	A/E	64	64	63	62	62	--	--	--	63
M13.23	ST13.08	13		B (67)	67	69	69	A/E	64	63	62	61	60	--	--	--	62
M13.24	ST13.08	13		B (67)	61	62	62	NONE	62	61	61	61	61	--	--	--	61
M13.25	ST13.08	13		B (67)	57	59	59	NONE	59	58	58	58	58	--	--	--	58
M13.21	ST13.07	13	SW1878 - Mainline EOS	B (67)	66	68	68	A/E	68	68	68	68	68	--	--	--	--
M13.23	ST13.08	13		B (67)	67	69	69	A/E	67	66	66	66	66	--	--	--	--
M13.24	ST13.08	13		B (67)	61	62	62	NONE	60	60	59	59	59	--	--	--	--
M13.25	ST13.08	13		B (67)	57	59	59	NONE	58	58	58	57	57	--	--	--	--
M13.21	ST13.07	13	SW1874 + SW1878 - Combination Mainline & Ramp EOS	B (67)	66	68	68	A/E	64	64	63	62	62	--	--	--	63
M13.23	ST13.08	13		B (67)	67	69	69	A/E	63	62	61	60	59	--	--	--	61
M13.24	ST13.08	13		B (67)	61	62	62	NONE	59	58	57	57	57	--	--	--	57
M13.25	ST13.08	13		B (67)	57	59	59	NONE	58	57	57	57	56	--	--	--	57
M13.26	ST13.06	13	--	B (67)	59	61	61	NONE	--	--	--	--	--	--	--	--	--
M13.27	ST13.08	13	--	F (-)	61	63	63	NONE	--	--	--	--	--	--	--	--	--
M13.28	ST13.06	13	--	E (72)	65	67	67	NONE	--	--	--	--	--	--	--	--	--
M14.01	ST14.01	14	--	G (-)	74	75	76	NONE	--	--	--	--	--	--	--	--	--
M14.02	ST14.01	14	--	B (67)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M14.03	ST14.01	14	--	G (-)	65	66	66	NONE	--	--	--	--	--	--	--	--	--
M14.04	ST14.01	14	--	G (-)	71	71	72	NONE	--	--	--	--	--	--	--	--	--
M14.05	ST14.02	14	SW1785 - Mainline EOS	B (67)	65	66	65	NONE	64	64	62	61	60	--	--	--	--
M14.06	ST14.02	14		B (67)	65	66	65	NONE	64	64	62	61	60	--	--	--	--
M14.07	ST14.02	14		B (67)	66	67	67	A/E	65	65	64	63	61	--	--	--	--
M14.08	ST14.02	14		B (67)	62	63	63	NONE	62	61	61	60	59	--	--	--	--
M14.05	ST14.02	14	SW1789 - Private Property	B (67)	65	66	65	NONE	65	65	65	65	65	65	--	--	65
M14.06	ST14.02	14		B (67)	65	66	65	NONE	65	65	65	65	65	65	--	--	65
M14.07	ST14.02	14		B (67)	66	67	67	A/E	63	60	59	58	57	56	--	--	60
M14.09	ST14.04	14	--	B (67)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M14.10	ST14.04	14	--	B (67)	52	53	54	NONE	--	--	--	--	--	--	--	--	--
M14.11	ST14.04	14	--	B (67)	55	56	57	NONE	--	--	--	--	--	--	--	--	--
M14.12	ST14.04	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.13	ST14.05	14	--	B (67)	48	49	51	NONE	--	--	--	--	--	--	--	--	--
M14.14	ST14.05	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.15	ST14.05	14	--	F (-)	58	59	60	NONE	--	--	--	--	--	--	--	--	--
M14.16	ST14.03	14	--	B (67)	45	46	46	NONE	--	--	--	--	--	--	--	--	--
M14.17	ST14.05	14	--	B (67)	50	50	51	NONE	--	--	--	--	--	--	--	--	--
M14.18	ST14.05	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.19	ST14.03	14	--	B (67)	41	42	42	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M14.20	ST14.06	14	--	B (67)	56	57	58	NONE	--	--	--	--	--	--	--	--	--
M14.21	ST14.06	14	--	B (67)	55	56	57	NONE	--	--	--	--	--	--	--	--	--
M14.22	ST14.06	14	--	B (67)	57	58	59	NONE	--	--	--	--	--	--	--	--	--
M14.23	ST14.03	14	--	B (67)	51	52	53	NONE	--	--	--	--	--	--	--	--	--
M14.24	ST14.03	14	--	B (67)	47	48	49	NONE	--	--	--	--	--	--	--	--	--
M14.25	ST14.06	14	--	B (67)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M14.26	ST14.03	14	--	B (67)	46	47	47	NONE	--	--	--	--	--	--	--	--	--
M14.27	ST14.07	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.28	ST14.03	14	--	B (67)	53	54	55	NONE	--	--	--	--	--	--	--	--	--
M14.29	ST14.03	14	--	B (67)	50	51	52	NONE	--	--	--	--	--	--	--	--	--
M14.30	ST14.07	14	--	B (67)	58	59	60	NONE	--	--	--	--	--	--	--	--	--
M14.31	ST14.03	14	--	B (67)	59	60	60	NONE	--	--	--	--	--	--	--	--	--
M14.32	ST14.07	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.33	ST14.07	14	--	G (-)	72	73	73	NONE	--	--	--	--	--	--	--	--	--
M14.34	ST14.10	14	--	B (67)	57	59	59	NONE	--	--	--	--	--	--	--	--	--
M14.35	ST14.10	14	--	B (67)	58	59	59	NONE	--	--	--	--	--	--	--	--	--
M14.36	ST14.08	14	--	B (67)	50	51	52	NONE	--	--	--	--	--	--	--	--	--
M14.37	ST14.10	14	--	B (67)	59	60	61	NONE	--	--	--	--	--	--	--	--	--
M14.38	ST14.10	14	SW1829A - Mainline EOS	B (67)	59	61	61	NONE	61	61	61	60	59	--	--	--	--
M14.39	ST14.08	14		B (67)	48	49	50	NONE	50	50	50	50	50	--	--	--	--
M14.40	ST14.10	14		B (67)	59	60	61	NONE	61	61	61	60	59	--	--	--	--
M14.41	ST14.08	14		B (67)	56	56	57	NONE	57	57	57	57	56	--	--	--	--
M14.42	ST14.10	14		B (67)	61	62	62	NONE	62	61	61	60	59	--	--	--	--
M14.43	ST14.08	14		B (67)	52	53	54	NONE	54	54	54	54	53	--	--	--	--
M14.44	ST14.11	14		B (67)	64	65	66	A/E	65	65	65	64	63	--	--	--	--
M14.45	ST14.08	14		B (67)	50	51	52	NONE	52	52	52	52	51	--	--	--	--
M14.46	ST14.11	14		B (67)	65	66	66	A/E	65	65	64	64	62	--	--	--	--
M14.47	ST14.11	14		C (67)	71	72	72	A/E	71	69	69	68	67	--	--	--	--
M14.47A	ST14.11	14		C (67)	68	69	69	A/E	67	66	66	65	64	--	--	--	--
M14.47B	ST14.11	14		C (67)	72	73	73	A/E	71	70	69	69	68	--	--	--	--
M14.48	ST14.09	14		B (67)	53	54	55	NONE	55	55	55	54	53	--	--	--	--
M14.49	ST14.09	14		B (67)	63	64	64	NONE	63	61	61	60	59	--	--	--	--
M14.50	ST14.12	14		B (67)	65	67	67	A/E	66	65	64	63	62	--	--	--	--
M14.50A	ST14.12	14		B (67)	68	69	69	A/E	68	67	66	66	64	--	--	--	--
M14.51	ST14.09	14		B (67)	63	64	64	NONE	63	61	61	61	58	--	--	--	--
M14.52	ST14.12	14		B (67)	65	66	66	A/E	65	65	65	64	62	--	--	--	--
M14.53	ST14.09	14		B (67)	54	55	57	NONE	56	56	56	56	55	--	--	--	--
M14.54	ST14.12	14		B (67)	66	67	68	A/E	65	65	64	64	63	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M14.38	ST14.10	14	SW1829B - ROW	B (67)	59	61	61	NONE	61	61	61	61	60	59	59	59	--
M14.39	ST14.08	14		B (67)	48	49	50	NONE	50	50	50	50	50	50	50	49	--
M14.40	ST14.10	14		B (67)	59	60	61	NONE	61	61	61	61	60	59	58	58	--
M14.41	ST14.08	14		B (67)	56	56	57	NONE	57	57	57	57	57	57	56	56	--
M14.42	ST14.10	14		B (67)	61	62	62	NONE	62	62	62	62	61	60	59	59	--
M14.43	ST14.08	14		B (67)	52	53	54	NONE	54	54	54	54	54	54	53	52	--
M14.44	ST14.11	14		B (67)	64	65	66	A/E	66	65	65	65	64	64	63	62	--
M14.45	ST14.08	14		B (67)	50	51	52	NONE	52	52	52	52	52	52	51	51	--
M14.46	ST14.11	14		B (67)	65	66	66	A/E	66	65	65	64	64	63	62	62	--
M14.47	ST14.11	14		C (67)	71	72	72	A/E	72	71	70	69	69	68	67	67	--
M14.47A	ST14.11	14		C (67)	68	69	69	A/E	68	68	66	66	65	64	63	63	--
M14.47B	ST14.11	14		C (67)	72	73	73	A/E	72	72	70	70	69	68	68	68	--
M14.48	ST14.09	14		B (67)	53	54	55	NONE	55	55	55	55	55	55	54	53	--
M14.49	ST14.09	14		B (67)	63	64	64	NONE	63	63	62	61	60	60	60	59	--
M14.50	ST14.12	14		B (67)	65	67	67	A/E	67	66	65	64	64	63	64	64	--
M14.50A	ST14.12	14		B (67)	68	69	69	A/E	69	69	68	67	66	65	64	64	--
M14.51	ST14.09	14		B (67)	63	64	64	NONE	64	64	63	62	61	59	58	58	--
M14.52	ST14.12	14		B (67)	65	66	66	A/E	66	66	65	65	65	63	63	62	--
M14.53	ST14.09	14		B (67)	54	55	57	NONE	57	57	57	56	56	56	56	55	--
M14.54	ST14.12	14		B (67)	66	67	68	A/E	67	67	66	66	65	65	63	63	--
M14.38	ST14.10	14	SW1823 - Private Property	B (67)	59	61	61	NONE	61	59	57	56	55	54	--	--	56
M14.39	ST14.08	14		B (67)	48	49	50	NONE	50	50	50	50	49	49	--	--	50
M14.40	ST14.10	14		B (67)	59	60	61	NONE	61	58	57	56	55	54	--	--	56
M14.41	ST14.08	14		B (67)	56	56	57	NONE	57	57	57	57	57	57	--	--	57
M14.42	ST14.10	14		B (67)	61	62	62	NONE	62	60	58	57	56	55	--	--	56
M14.43	ST14.08	14		B (67)	52	53	54	NONE	54	54	54	54	54	54	--	--	54
M14.44	ST14.11	14		B (67)	64	65	66	A/E	66	63	61	60	59	58	--	--	59
M14.45	ST14.08	14		B (67)	50	51	52	NONE	52	52	52	52	51	51	--	--	51
M14.46	ST14.11	14		B (67)	65	66	66	A/E	66	64	62	61	60	59	--	--	61
M14.47	ST14.11	14	SW1831 - Private Property	C (67)	71	72	72	A/E	71	68	66	65	64	63	--	--	66
M14.47A	ST14.11	14		C (67)	68	69	69	A/E	67	66	64	63	63	62	--	--	64
M14.47B	ST14.11	14		C (67)	72	73	73	A/E	69	68	65	64	63	62	--	--	65
M14.48	ST14.09	14	SW1833 - Private Property	B (67)	53	54	55	NONE	55	55	55	55	55	55	--	--	55
M14.49	ST14.09	14		B (67)	63	64	64	NONE	64	62	61	60	59	59	--	--	60
M14.50	ST14.12	14		B (67)	65	67	67	A/E	67	65	63	62	61	60	--	--	62
M14.50A	ST14.12	14		B (67)	68	69	69	A/E	69	67	64	62	61	60	--	--	62

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M14.51	ST14.09	14	SW1839 - Private Property	B (67)	63	64	64	NONE	64	62	61	59	58	58	--	--	58
M14.52	ST14.12	14		B (67)	65	66	66	A/E	66	65	64	63	62	61	--	--	61
M14.53	ST14.09	14		B (67)	54	55	57	NONE	57	57	56	56	56	55	--	--	57
M14.54	ST14.12	14		B (67)	66	67	68	A/E	68	64	62	61	60	59	--	--	61
M14.55	ST14.13	14	--	F (-)	66	67	68	NONE	--	--	--	--	--	--	--	--	--
M14.56	ST14.13	14	--	F (-)	66	67	68	NONE	--	--	--	--	--	--	--	--	--
M14.57	ST14.13	14	--	F (-)	63	65	65	NONE	--	--	--	--	--	--	--	--	--
M14.58	ST14.13	14	--	E (72)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M14.59	ST14.14	14	--	E (72)	52	53	53	NONE	--	--	--	--	--	--	--	--	--
M14.60	ST14.14	14	--	F (-)	73	74	75	NONE	--	--	--	--	--	--	--	--	--
M14.61	ST14.14	14	--	F (-)	69	71	70	NONE	--	--	--	--	--	--	--	--	--
M14.62	ST14.14	14	--	B (67)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M14.63	ST14.15	14	SW1875 - Private Property	C (67)	71	72	72	A/E	64	61	60	58	57	56	--	--	64
M14.63	ST14.15	14	SW1881 - Mainline EOS	C (67)	71	72	72	A/E	71	71	71	71	71	--	--	--	--
M14.63	ST14.15	14	SW1877 + SW1881 Combination Mainline & Ramp EOS	C (67)	71	72	72	A/E	71	71	71	70	69	--	--	--	--
M14.63	ST14.15	14	SW1877 - Ramp EOS	C (67)	71	72	72	A/E	72	72	72	71	71	--	--	--	--
M15.01	ST15.01	15	SW1890A - Mainline EOS	B (67)	61	62	62	NONE	62	62	61	61	61	--	--	--	--
M15.02	ST15.01	15		B (67)	61	63	63	NONE	62	62	62	62	62	--	--	--	--
M15.03	ST15.09	15		B (67)	63	64	64	NONE	63	63	63	63	63	--	--	--	--
M15.04-2	ST15.03	15		B (67)	62	64	64	NONE	64	64	64	64	64	--	--	--	--
M15.05-2	ST15.03	15		B (67)	57	58	58	NONE	57	57	56	56	56	--	--	--	--
M15.06-2	ST15.03	15		B (67)	57	58	58	NONE	57	57	56	56	56	--	--	--	--
M15.07-2	ST15.10	15		B (67)	56	57	57	NONE	56	55	55	55	54	--	--	--	--
M15.08-2	ST15.03	15	SW1890A - Mainline EOS	B (67)	65	66	66	A/E	65	65	65	64	64	--	--	--	--
M15.09-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	59	59	59	--	--	--	--
M15.09-3	ST15.11	15		B (67)	65	66	65	NONE	64	63	63	63	62	--	--	--	--
M15.09-4	ST15.12	15		B (67)	67	68	68	A/E	66	65	65	65	65	--	--	--	--
M15.10-2	ST15.03	15		B (67)	60	61	61	NONE	59	58	58	57	57	--	--	--	--
M15.11-2	ST15.03	15		B (67)	61	62	61	NONE	60	59	59	58	58	--	--	--	--
M15.12-2	ST15.10	15		B (67)	61	62	62	NONE	61	60	60	60	59	--	--	--	--
M15.12-3	ST15.11	15		B (67)	64	65	65	NONE	64	63	63	63	62	--	--	--	--
M15.12-4	ST15.12	15		B (67)	67	68	68	A/E	65	65	64	64	64	--	--	--	--
M15.13-2	ST15.10	15		B (67)	55	56	56	NONE	56	56	56	56	56	--	--	--	--
M15.13-3	ST15.11	15		B (67)	58	59	58	NONE	58	58	58	58	58	--	--	--	--
M15.13-4	ST15.12	15		B (67)	60	61	60	NONE	60	60	59	59	59	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.14	ST15.01	15		B (67)	58	59	59	NONE	59	59	59	58	58	--	--	--	--
M15.15	ST15.09	15		B (67)	57	58	58	NONE	57	57	56	56	56	--	--	--	--
M15.16-2	ST15.10	15		B (67)	62	63	63	NONE	61	60	60	59	59	--	--	--	--
M15.16-3	ST15.11	15		B (67)	64	65	65	NONE	63	63	62	62	62	--	--	--	--
M15.16-4	ST15.12	15		B (67)	66	67	67	A/E	65	64	64	64	63	--	--	--	--
M15.17-2	ST15.03	15		B (67)	58	59	59	NONE	57	57	56	56	55	--	--	--	--
M15.18	ST15.01	15		B (67)	54	55	55	NONE	54	54	54	53	53	--	--	--	--
M15.19	ST15.09	15		B (67)	58	59	59	NONE	57	57	57	56	56	--	--	--	--
M15.20-2	ST15.10	15		B (67)	62	63	63	NONE	61	61	60	60	60	--	--	--	--
M15.20-3	ST15.11	15	SW1890A - Mainline EOS	B (67)	64	65	65	NONE	63	63	62	62	62	--	--	--	--
M15.20-4	ST15.12	15		B (67)	66	67	66	A/E	64	64	64	63	63	--	--	--	--
M15.21-2	ST15.10	15		B (67)	46	47	47	NONE	47	46	46	46	46	--	--	--	--
M15.21-3	ST15.11	15		B (67)	50	52	52	NONE	51	51	51	51	51	--	--	--	--
M15.21-4	ST15.12	15		B (67)	56	57	58	NONE	58	58	58	57	57	--	--	--	--
M15.22-2	ST15.10	15		B (67)	55	56	57	NONE	55	55	55	54	54	--	--	--	--
M15.23-2	ST15.03	15		B (67)	58	59	59	NONE	58	57	57	57	57	--	--	--	--
M15.24-2	ST15.03	15		B (67)	56	58	58	NONE	57	57	56	55	55	--	--	--	--
M15.25-2	ST15.03	15		B (67)	53	55	55	NONE	54	53	53	53	52	--	--	--	--
M15.26	ST15.01	15		B (67)	61	62	61	NONE	61	61	60	61	61	--	--	--	--
M15.27	ST15.01	15		B (67)	60	61	60	NONE	60	60	59	59	59	--	--	--	--
M15.28	ST15.01	15		B (67)	56	57	57	NONE	57	56	56	56	56	--	--	--	--
M15.29-2	ST15.10	15		B (67)	54	55	56	NONE	55	55	55	55	55	--	--	--	--
M15.30-2	ST15.03	15		B (67)	54	55	56	NONE	56	56	55	55	55	--	--	--	--
M15.31-2	ST15.03	15		B (67)	58	59	60	NONE	60	60	60	60	60	--	--	--	--
M15.32-2	ST15.03	15		B (67)	60	61	59	NONE	59	59	58	58	58	--	--	--	--
M15.33-2	ST15.10	15		B (67)	46	47	47	NONE	47	46	46	46	45	--	--	--	--
M15.33-3	ST15.11	15		B (67)	51	52	52	NONE	50	50	50	49	49	--	--	--	--
M15.33-4	ST15.12	15		B (67)	58	59	60	NONE	57	57	56	56	56	--	--	--	--
M15.34-2	ST15.10	15		B (67)	61	63	62	NONE	60	60	60	59	59	--	--	--	--
M15.34-3	ST15.11	15	SW1890A - Mainline EOS	B (67)	64	65	64	NONE	63	63	62	62	62	--	--	--	--
M15.34-4	ST15.12	15		B (67)	66	67	66	A/E	65	64	64	64	64	--	--	--	--
M15.35	ST15.02	15		B (67)	55	56	55	NONE	55	55	55	55	55	--	--	--	--
M15.36-2	ST15.03	15		B (67)	62	63	62	NONE	61	61	61	60	60	--	--	--	--
M15.37	ST15.02	15		B (67)	57	58	57	NONE	56	56	56	56	56	--	--	--	--
M15.38	ST15.02	15		B (67)	56	57	57	NONE	56	57	56	55	55	--	--	--	--
M15.39-2	ST15.10	15		B (67)	60	62	61	NONE	60	60	59	59	59	--	--	--	--
M15.39-3	ST15.11	15		B (67)	63	65	64	NONE	63	63	62	62	62	--	--	--	--
M15.39-4	ST15.12	15		B (67)	65	67	66	A/E	65	64	64	64	64	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.40	ST15.09	15		B (67)	57	58	58	NONE	57	57	57	57	56	--	--	--	--
M15.41-2	ST15.03	15		B (67)	54	54	55	NONE	55	55	55	55	55	--	--	--	--
M15.42-2	ST15.03	15		B (67)	58	59	58	NONE	57	57	57	57	57	--	--	--	--
M15.43-2	ST15.10	15		B (67)	45	47	47	NONE	46	46	46	46	45	--	--	--	--
M15.43-3	ST15.11	15		B (67)	48	49	50	NONE	49	49	49	48	48	--	--	--	--
M15.43-4	ST15.12	15		B (67)	53	54	55	NONE	54	53	53	53	53	--	--	--	--
M15.44-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	59	59	59	--	--	--	--
M15.44-3	ST15.11	15		B (67)	63	64	64	NONE	63	63	63	63	62	--	--	--	--
M15.44-4	ST15.12	15		B (67)	65	67	66	A/E	65	65	65	65	64	--	--	--	--
M15.45-2	ST15.03	15		B (67)	61	62	62	NONE	62	62	62	62	61	--	--	--	--
M15.46	ST15.02	15		B (67)	55	56	55	NONE	55	55	54	54	54	--	--	--	--
M15.47	ST15.02	15		B (67)	53	54	55	NONE	55	54	54	54	54	--	--	--	--
M15.48	ST15.02	15		B (67)	57	58	58	NONE	58	58	57	57	57	--	--	--	--
M15.49-3	ST15.11	15	SW1890A - Mainline EOS	B (67)	63	64	64	NONE	63	63	63	63	62	--	--	--	--
M15.50-4	ST15.12	15		B (67)	65	67	66	A/E	65	65	65	65	65	--	--	--	--
M15.51-2	ST15.03	15		B (67)	54	55	55	NONE	55	55	55	55	55	--	--	--	--
M15.52-2	ST15.03	15		B (67)	54	55	56	NONE	56	56	56	56	56	--	--	--	--
M15.53-2	ST15.03	15		B (67)	51	52	53	NONE	53	53	52	52	52	--	--	--	--
M15.54	ST15.09	15		B (67)	56	57	58	NONE	58	58	57	57	57	--	--	--	--
M15.55-2	ST15.10	15		B (67)	58	60	60	NONE	59	59	59	59	59	--	--	--	--
M15.56-2	ST15.03	15		B (67)	55	56	56	NONE	56	56	55	55	55	--	--	--	--
M15.57-2	ST15.03	15		B (67)	61	62	62	NONE	62	62	61	61	61	--	--	--	--
M15.58-2	ST15.03	15		B (67)	56	57	58	NONE	58	57	57	57	57	--	--	--	--
M15.59-2	ST15.10	15		B (67)	53	54	54	NONE	54	53	53	52	52	--	--	--	--
M15.60	ST15.02	15		B (67)	52	53	53	NONE	54	53	53	53	53	--	--	--	--
M15.61-2	ST15.03	15		B (67)	53	54	56	NONE	56	56	55	55	55	--	--	--	--
M15.62	ST15.02	15		B (67)	56	57	58	NONE	58	58	58	58	58	--	--	--	--
M15.63-2	ST15.10	15		B (67)	60	61	61	NONE	61	61	61	61	61	--	--	--	--
M15.64	ST15.04	15		C (67)	56	57	58	NONE	58	58	58	58	58	--	--	--	--
M15.01	ST15.01	15	SW1890B - Ramp EOS	B (67)	61	62	62	NONE	62	62	62	62	62	--	--	--	--
M15.02	ST15.01	15		B (67)	61	63	63	NONE	63	63	63	63	63	--	--	--	--
M15.03	ST15.09	15		B (67)	63	64	64	NONE	64	64	64	64	64	--	--	--	--
M15.04-2	ST15.03	15		B (67)	62	64	64	NONE	64	64	64	64	64	--	--	--	--
M15.05-2	ST15.03	15		B (67)	57	58	58	NONE	58	58	57	57	56	--	--	--	--
M15.06-2	ST15.03	15		B (67)	57	58	58	NONE	58	58	57	57	56	--	--	--	--
M15.07-2	ST15.10	15	SW1890B - Ramp EOS	B (67)	56	57	57	NONE	56	56	56	55	55	--	--	--	--
M15.08-2	ST15.03	15		B (67)	65	66	66	A/E	66	66	65	65	64	--	--	--	--
M15.09-2	ST15.10	15		B (67)	60	61	61	NONE	61	61	61	61	60	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.09-3	ST15.11	15		B (67)	65	66	65	NONE	65	65	65	65	65	--	--	--	--
M15.09-4	ST15.12	15		B (67)	67	68	68	A/E	68	67	67	67	67	--	--	--	--
M15.10-2	ST15.03	15		B (67)	60	61	61	NONE	61	61	60	60	59	--	--	--	--
M15.11-2	ST15.03	15		B (67)	61	62	61	NONE	61	61	61	61	59	--	--	--	--
M15.12-2	ST15.10	15		B (67)	61	62	62	NONE	62	61	61	61	60	--	--	--	--
M15.12-3	ST15.11	15		B (67)	64	65	65	NONE	65	65	65	65	64	--	--	--	--
M15.12-4	ST15.12	15		B (67)	67	68	68	A/E	67	67	67	66	66	--	--	--	--
M15.13-2	ST15.10	15		B (67)	55	56	56	NONE	55	54	53	52	52	--	--	--	--
M15.13-3	ST15.11	15		B (67)	58	59	58	NONE	56	55	55	54	54	--	--	--	--
M15.13-4	ST15.12	15		B (67)	60	61	60	NONE	59	58	58	57	57	--	--	--	--
M15.14	ST15.01	15		B (67)	58	59	59	NONE	59	59	58	58	57	--	--	--	--
M15.15	ST15.09	15		B (67)	57	58	58	NONE	58	58	58	58	57	--	--	--	--
M15.16-2	ST15.10	15		B (67)	62	63	63	NONE	63	62	62	62	62	--	--	--	--
M15.16-3	ST15.11	15		B (67)	64	65	65	NONE	65	65	64	64	64	--	--	--	--
M15.16-4	ST15.12	15		B (67)	66	67	67	A/E	66	66	66	65	65	--	--	--	--
M15.17-2	ST15.03	15		B (67)	58	59	59	NONE	59	59	59	58	57	--	--	--	--
M15.18	ST15.01	15		B (67)	54	55	55	NONE	55	55	54	54	53	--	--	--	--
M15.19	ST15.09	15		B (67)	58	59	59	NONE	58	58	58	58	57	--	--	--	--
M15.20-2	ST15.10	15	SW1890B - Ramp EOS	B (67)	62	63	63	NONE	62	62	62	61	61	--	--	--	--
M15.20-3	ST15.11	15		B (67)	64	65	65	NONE	64	64	64	64	63	--	--	--	--
M15.20-4	ST15.12	15		B (67)	66	67	66	A/E	66	65	65	65	65	--	--	--	--
M15.21-2	ST15.10	15		B (67)	46	47	47	NONE	47	47	47	47	47	--	--	--	--
M15.21-3	ST15.11	15		B (67)	50	52	52	NONE	52	52	52	52	51	--	--	--	--
M15.21-4	ST15.12	15		B (67)	56	57	58	NONE	58	58	58	58	58	--	--	--	--
M15.22-2	ST15.10	15		B (67)	55	56	57	NONE	57	57	57	57	56	--	--	--	--
M15.23-2	ST15.03	15		B (67)	58	59	59	NONE	59	58	57	57	56	--	--	--	--
M15.24-2	ST15.03	15		B (67)	56	58	58	NONE	58	57	57	56	55	--	--	--	--
M15.25-2	ST15.03	15		B (67)	53	55	55	NONE	55	55	55	54	54	--	--	--	--
M15.26	ST15.01	15		B (67)	61	62	61	NONE	59	58	57	57	57	--	--	--	--
M15.27	ST15.01	15		B (67)	60	61	60	NONE	59	57	56	56	55	--	--	--	--
M15.28	ST15.01	15		B (67)	56	57	57	NONE	57	57	56	55	55	--	--	--	--
M15.29-2	ST15.10	15		B (67)	54	55	56	NONE	55	55	55	55	54	--	--	--	--
M15.30-2	ST15.03	15		B (67)	54	55	56	NONE	56	55	54	54	54	--	--	--	--
M15.31-2	ST15.03	15		B (67)	58	59	60	NONE	59	58	58	57	57	--	--	--	--
M15.32-2	ST15.03	15		B (67)	60	61	59	NONE	58	57	56	55	55	--	--	--	--
M15.33-2	ST15.10	15		B (67)	46	47	47	NONE	47	47	47	47	47	--	--	--	--
M15.33-3	ST15.11	15		B (67)	51	52	52	NONE	52	52	52	51	51	--	--	--	--
M15.33-4	ST15.12	15		B (67)	58	59	60	NONE	59	59	59	59	59	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.34-2	ST15.10	15	SW1890B - Ramp EOS	B (67)	61	63	62	NONE	61	61	61	60	60	--	--	--	--
M15.34-3	ST15.11	15		B (67)	64	65	64	NONE	64	63	63	63	62	--	--	--	--
M15.34-4	ST15.12	15		B (67)	66	67	66	A/E	65	65	65	64	64	--	--	--	--
M15.35	ST15.02	15		B (67)	55	56	55	NONE	55	54	53	52	52	--	--	--	--
M15.36-2	ST15.03	15		B (67)	62	63	62	NONE	60	60	58	57	57	--	--	--	--
M15.37	ST15.02	15		B (67)	57	58	57	NONE	55	54	53	53	53	--	--	--	--
M15.38	ST15.02	15		B (67)	56	57	57	NONE	57	56	55	55	54	--	--	--	--
M15.39-2	ST15.10	15		B (67)	60	62	61	NONE	61	61	61	60	60	--	--	--	--
M15.39-3	ST15.11	15		B (67)	63	65	64	NONE	64	63	63	62	62	--	--	--	--
M15.39-4	ST15.12	15		B (67)	65	67	66	A/E	65	65	64	64	64	--	--	--	--
M15.40	ST15.09	15		B (67)	57	58	58	NONE	58	58	58	57	57	--	--	--	--
M15.41-2	ST15.03	15		B (67)	54	54	55	NONE	55	55	54	54	54	--	--	--	--
M15.42-2	ST15.03	15		B (67)	58	59	58	NONE	57	56	56	55	55	--	--	--	--
M15.43-2	ST15.10	15		B (67)	45	47	47	NONE	47	47	46	46	46	--	--	--	--
M15.43-3	ST15.11	15		B (67)	48	49	50	NONE	49	49	49	48	48	--	--	--	--
M15.43-4	ST15.12	15		B (67)	53	54	55	NONE	54	54	54	54	54	--	--	--	--
M15.44-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	60	60	59	--	--	--	--
M15.44-3	ST15.11	15		B (67)	63	64	64	NONE	63	63	63	62	62	--	--	--	--
M15.44-4	ST15.12	15		B (67)	65	67	66	A/E	65	65	64	64	64	--	--	--	--
M15.45-2	ST15.03	15		B (67)	61	62	62	NONE	60	60	59	58	57	--	--	--	--
M15.46	ST15.02	15		B (67)	55	56	55	NONE	54	54	53	53	52	--	--	--	--
M15.47	ST15.02	15		B (67)	53	54	55	NONE	55	55	53	53	54	--	--	--	--
M15.48	ST15.02	15	SW1890B - Ramp EOS	B (67)	57	58	58	NONE	57	57	56	55	55	--	--	--	--
M15.49-3	ST15.11	15		B (67)	63	64	64	NONE	62	62	62	62	61	--	--	--	--
M15.50-4	ST15.12	15		B (67)	65	67	66	A/E	65	65	64	64	64	--	--	--	--
M15.51-2	ST15.03	15		B (67)	54	55	55	NONE	55	54	54	54	53	--	--	--	--
M15.52-2	ST15.03	15		B (67)	54	55	56	NONE	56	56	55	55	55	--	--	--	--
M15.53-2	ST15.03	15		B (67)	51	52	53	NONE	53	53	52	52	51	--	--	--	--
M15.54	ST15.09	15		B (67)	56	57	58	NONE	57	57	57	57	56	--	--	--	--
M15.55-2	ST15.10	15		B (67)	58	60	60	NONE	59	59	58	58	58	--	--	--	--
M15.56-2	ST15.03	15		B (67)	55	56	56	NONE	55	54	53	53	53	--	--	--	--
M15.57-2	ST15.03	15		B (67)	61	62	62	NONE	60	59	58	57	57	--	--	--	--
M15.58-2	ST15.03	15		B (67)	56	57	58	NONE	57	56	56	57	56	--	--	--	--
M15.59-2	ST15.10	15		B (67)	53	54	54	NONE	54	54	54	53	53	--	--	--	--
M15.60	ST15.02	15		B (67)	52	53	53	NONE	52	52	52	51	52	--	--	--	--
M15.61-2	ST15.03	15		B (67)	53	54	56	NONE	55	55	55	55	55	--	--	--	--
M15.62	ST15.02	15		B (67)	56	57	58	NONE	57	57	57	57	57	--	--	--	--
M15.63-2	ST15.10	15		B (67)	60	61	61	NONE	61	61	61	61	60	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.64	ST15.04	15		C (67)	56	57	58	NONE	58	58	58	58	58	--	--	--	--
M15.01	ST15.01	15	SW1890C - ROW	B (67)	61	62	62	NONE	62	62	62	62	62	62	62	62	--
M15.02	ST15.01	15		B (67)	61	63	63	NONE	63	63	63	63	63	62	62	62	--
M15.03	ST15.09	15		B (67)	63	64	64	NONE	64	64	64	64	64	64	64	64	--
M15.04-2	ST15.03	15		B (67)	62	64	64	NONE	64	64	64	64	64	64	64	64	--
M15.05-2	ST15.03	15		B (67)	57	58	58	NONE	57	57	56	56	56	55	55	55	--
M15.06-2	ST15.03	15		B (67)	57	58	58	NONE	58	57	57	56	56	56	56	56	--
M15.07-2	ST15.10	15	SW1890C - ROW	B (67)	56	57	57	NONE	56	56	56	55	55	55	54	54	--
M15.08-2	ST15.03	15		B (67)	65	66	66	A/E	64	64	63	63	63	63	62	62	--
M15.09-2	ST15.10	15		B (67)	60	61	61	NONE	61	61	60	60	60	59	58	58	--
M15.09-3	ST15.11	15		B (67)	65	66	65	NONE	65	65	65	65	64	64	63	62	--
M15.09-4	ST15.12	15		B (67)	67	68	68	A/E	67	67	67	67	67	67	66	66	--
M15.10-2	ST15.03	15		B (67)	60	61	61	NONE	60	59	58	57	57	56	55	55	--
M15.11-2	ST15.03	15		B (67)	61	62	61	NONE	61	60	59	58	58	57	57	57	--
M15.12-2	ST15.10	15		B (67)	61	62	62	NONE	61	61	61	60	59	59	58	58	--
M15.12-3	ST15.11	15		B (67)	64	65	65	NONE	65	65	65	64	64	63	63	62	--
M15.12-4	ST15.12	15		B (67)	67	68	68	A/E	67	67	66	66	66	66	65	65	--
M15.13-2	ST15.10	15		B (67)	55	56	56	NONE	54	53	52	52	51	51	51	51	--
M15.13-3	ST15.11	15		B (67)	58	59	58	NONE	56	55	54	53	53	53	53	52	--
M15.13-4	ST15.12	15		B (67)	60	61	60	NONE	58	58	57	56	56	56	56	56	--
M15.14	ST15.01	15		B (67)	58	59	59	NONE	59	58	57	57	57	57	57	56	--
M15.15	ST15.09	15		B (67)	57	58	58	NONE	58	58	57	57	56	56	56	55	--
M15.16-2	ST15.10	15		B (67)	62	63	63	NONE	62	62	62	61	60	60	60	59	--
M15.16-3	ST15.11	15		B (67)	64	65	65	NONE	65	64	64	64	63	62	62	62	--
M15.16-4	ST15.12	15		B (67)	66	67	67	A/E	66	66	66	65	65	65	64	64	--
M15.17-2	ST15.03	15		B (67)	58	59	59	NONE	58	58	57	56	56	55	55	55	--
M15.18	ST15.01	15		B (67)	54	55	55	NONE	55	55	54	53	53	53	53	53	--
M15.19	ST15.09	15		B (67)	58	59	59	NONE	58	58	57	57	56	56	56	56	--
M15.20-2	ST15.10	15	SW1890C - ROW	B (67)	62	63	63	NONE	62	62	62	61	60	60	59	59	--
M15.20-3	ST15.11	15		B (67)	64	65	65	NONE	64	64	64	63	63	62	62	61	--
M15.20-4	ST15.12	15		B (67)	66	67	66	A/E	65	65	65	65	65	64	64	63	--
M15.21-2	ST15.10	15		B (67)	46	47	47	NONE	47	47	47	47	46	46	46	46	--
M15.21-3	ST15.11	15		B (67)	50	52	52	NONE	52	51	51	51	51	51	51	51	--
M15.21-4	ST15.12	15		B (67)	56	57	58	NONE	58	58	57	57	57	57	57	57	--
M15.22-2	ST15.10	15		B (67)	55	56	57	NONE	57	57	57	56	56	56	55	55	--
M15.23-2	ST15.03	15		B (67)	58	59	59	NONE	58	57	56	56	55	55	55	55	--
M15.24-2	ST15.03	15		B (67)	56	58	58	NONE	56	56	55	55	54	54	54	54	--
M15.25-2	ST15.03	15		B (67)	53	55	55	NONE	55	55	54	54	53	53	53	52	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.26	ST15.01	15		B (67)	61	62	61	NONE	59	58	57	57	57	57	57	57	--
M15.27	ST15.01	15		B (67)	60	61	60	NONE	58	56	56	55	55	55	55	55	--
M15.28	ST15.01	15		B (67)	56	57	57	NONE	57	57	56	55	54	54	54	54	--
M15.29-2	ST15.10	15		B (67)	54	55	56	NONE	55	55	54	54	54	54	54	54	--
M15.30-2	ST15.03	15		B (67)	54	55	56	NONE	55	55	54	54	53	53	53	53	--
M15.31-2	ST15.03	15		B (67)	58	59	60	NONE	58	57	57	56	56	56	56	56	--
M15.32-2	ST15.03	15		B (67)	60	61	59	NONE	58	56	55	55	54	54	54	54	--
M15.33-2	ST15.10	15		B (67)	46	47	47	NONE	47	47	47	47	46	46	46	46	--
M15.33-3	ST15.11	15		B (67)	51	52	52	NONE	52	51	51	51	51	51	51	51	--
M15.33-4	ST15.12	15		B (67)	58	59	60	NONE	59	59	59	59	59	59	59	58	--
M15.34-2	ST15.10	15	SW1890C - ROW	B (67)	61	63	62	NONE	61	61	60	59	58	58	58	58	--
M15.34-3	ST15.11	15		B (67)	64	65	64	NONE	64	63	63	62	62	61	61	61	--
M15.34-4	ST15.12	15		B (67)	66	67	66	A/E	65	64	64	64	63	63	63	62	--
M15.35	ST15.02	15		B (67)	55	56	55	NONE	54	53	52	52	52	52	52	51	--
M15.36-2	ST15.03	15		B (67)	62	63	62	NONE	60	59	58	57	56	56	56	56	--
M15.37	ST15.02	15		B (67)	57	58	57	NONE	54	54	53	53	53	53	53	53	--
M15.38	ST15.02	15		B (67)	56	57	57	NONE	57	56	55	55	54	54	54	54	--
M15.39-2	ST15.10	15		B (67)	60	62	61	NONE	61	61	60	59	58	58	58	58	--
M15.39-3	ST15.11	15		B (67)	63	65	64	NONE	63	63	63	62	61	61	61	61	--
M15.39-4	ST15.12	15		B (67)	65	67	66	A/E	65	64	64	63	63	63	62	62	--
M15.40	ST15.09	15		B (67)	57	58	58	NONE	58	57	57	56	56	56	56	56	--
M15.41-2	ST15.03	15		B (67)	54	54	55	NONE	55	55	54	54	53	53	53	53	--
M15.42-2	ST15.03	15		B (67)	58	59	58	NONE	57	56	55	55	54	54	54	54	--
M15.43-2	ST15.10	15		B (67)	45	47	47	NONE	47	46	46	46	46	46	46	45	--
M15.43-3	ST15.11	15		B (67)	48	49	50	NONE	49	49	48	48	48	48	48	47	--
M15.43-4	ST15.12	15		B (67)	53	54	55	NONE	54	54	54	54	53	53	53	53	--
M15.44-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	59	59	58	58	58	58	--
M15.44-3	ST15.11	15		B (67)	63	64	64	NONE	63	62	62	62	61	61	61	60	--
M15.44-4	ST15.12	15		B (67)	65	67	66	A/E	65	64	64	63	63	63	62	62	--
M15.45-2	ST15.03	15		B (67)	61	62	62	NONE	59	58	57	56	56	56	56	56	--
M15.46	ST15.02	15		B (67)	55	56	55	NONE	54	55	55	55	55	55	55	54	--
M15.47	ST15.02	15		B (67)	53	54	55	NONE	54	54	54	54	53	53	53	53	--
M15.48	ST15.02	15	SW1890C - ROW	B (67)	57	58	58	NONE	57	56	55	55	55	55	55	55	--
M15.49-3	ST15.11	15		B (67)	63	64	64	NONE	62	62	61	61	61	61	60	60	--
M15.50-4	ST15.12	15		B (67)	65	67	66	A/E	65	64	64	63	63	63	62	62	--
M15.51-2	ST15.03	15		B (67)	54	55	55	NONE	54	55	54	53	53	52	52	52	--
M15.52-2	ST15.03	15		B (67)	54	55	56	NONE	55	55	55	54	54	54	54	53	--
M15.53-2	ST15.03	15		B (67)	51	52	53	NONE	52	52	52	51	51	51	51	50	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.54	ST15.09	15		B (67)	56	57	58	NONE	57	57	57	56	56	56	56	56	--
M15.55-2	ST15.10	15		B (67)	58	60	60	NONE	59	58	58	58	58	57	57	57	--
M15.56-2	ST15.03	15		B (67)	55	56	56	NONE	56	56	56	56	56	56	56	56	--
M15.57-2	ST15.03	15		B (67)	61	62	62	NONE	59	58	57	56	56	56	56	56	--
M15.58-2	ST15.03	15		B (67)	56	57	58	NONE	57	56	56	55	55	54	54	54	--
M15.59-2	ST15.10	15		B (67)	53	54	54	NONE	54	54	54	53	53	53	53	53	--
M15.60	ST15.02	15		B (67)	52	53	53	NONE	53	53	53	53	53	53	53	53	--
M15.61-2	ST15.03	15		B (67)	53	54	56	NONE	55	55	55	55	55	55	55	55	--
M15.62	ST15.02	15		B (67)	56	57	58	NONE	57	57	56	56	56	56	56	55	--
M15.63-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	60	60	60	60	60	60	--
M15.64	ST15.04	15		C (67)	56	57	58	NONE	58	57	57	57	57	57	57	57	--
M15.01	ST15.01	15	SW1890 A+B Combination Mainline & Ramp EOS	B (67)	61	62	62	NONE	62	62	61	61	61	--	--	--	61
M15.02	ST15.01	15		B (67)	61	63	63	NONE	62	62	62	62	62	--	--	--	62
M15.03	ST15.09	15		B (67)	63	64	64	NONE	63	63	63	63	63	--	--	--	63
M15.04-2	ST15.03	15		B (67)	62	64	64	NONE	64	64	64	64	64	--	--	--	64
M15.05-2	ST15.03	15		B (67)	57	58	58	NONE	57	57	56	55	55	--	--	--	55
M15.06-2	ST15.03	15		B (67)	57	58	58	NONE	57	56	55	55	55	--	--	--	55
M15.07-2	ST15.10	15	SW1890 A+B Combination Mainline & Ramp EOS	B (67)	56	57	57	NONE	55	55	54	53	53	--	--	--	53
M15.08-2	ST15.03	15		B (67)	65	66	66	A/E	65	64	63	63	63	--	--	--	63
M15.09-2	ST15.10	15		B (67)	60	61	61	NONE	59	59	59	58	58	--	--	--	58
M15.09-3	ST15.11	15		B (67)	65	66	65	NONE	63	63	62	62	61	--	--	--	62
M15.09-4	ST15.12	15		B (67)	67	68	68	A/E	65	65	64	64	63	--	--	--	63
M15.10-2	ST15.03	15		B (67)	60	61	61	NONE	59	58	57	56	56	--	--	--	56
M15.11-2	ST15.03	15		B (67)	61	62	61	NONE	60	59	58	57	56	--	--	--	56
M15.12-2	ST15.10	15		B (67)	61	62	62	NONE	60	60	59	58	57	--	--	--	57
M15.12-3	ST15.11	15		B (67)	64	65	65	NONE	63	62	62	61	61	--	--	--	61
M15.12-4	ST15.12	15		B (67)	67	68	68	A/E	64	64	63	63	62	--	--	--	62
M15.13-2	ST15.10	15		B (67)	55	56	56	NONE	54	54	53	52	51	--	--	--	51
M15.13-3	ST15.11	15		B (67)	58	59	58	NONE	56	55	54	53	52	--	--	--	52
M15.13-4	ST15.12	15		B (67)	60	61	60	NONE	58	57	56	56	55	--	--	--	55
M15.14	ST15.01	15		B (67)	58	59	59	NONE	59	58	57	56	56	--	--	--	56
M15.15	ST15.09	15		B (67)	57	58	58	NONE	57	56	56	55	54	--	--	--	54
M15.16-2	ST15.10	15		B (67)	62	63	63	NONE	61	60	59	58	58	--	--	--	58
M15.16-3	ST15.11	15		B (67)	64	65	65	NONE	62	62	61	60	60	--	--	--	60
M15.16-4	ST15.12	15		B (67)	66	67	67	A/E	64	63	62	62	61	--	--	--	61
M15.17-2	ST15.03	15		B (67)	58	59	59	NONE	57	57	56	55	54	--	--	--	54
M15.18	ST15.01	15		B (67)	54	55	55	NONE	54	54	53	52	52	--	--	--	52
M15.19	ST15.09	15		B (67)	58	59	59	NONE	57	57	56	55	55	--	--	--	55

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.20-2	ST15.10	15	SW1890 A+B Combination Mainline & Ramp EOS	B (67)	62	63	63	NONE	61	60	59	58	58	--	--	--	58
M15.20-3	ST15.11	15		B (67)	64	65	65	NONE	62	61	61	60	59	--	--	--	60
M15.20-4	ST15.12	15		B (67)	66	67	66	A/E	64	63	62	61	61	--	--	--	61
M15.21-2	ST15.10	15		B (67)	46	47	47	NONE	46	46	46	45	45	--	--	--	45
M15.21-3	ST15.11	15		B (67)	50	52	52	NONE	51	51	51	50	50	--	--	--	50
M15.21-4	ST15.12	15		B (67)	56	57	58	NONE	58	58	57	57	57	--	--	--	57
M15.22-2	ST15.10	15		B (67)	55	56	57	NONE	55	55	54	54	53	--	--	--	54
M15.23-2	ST15.03	15		B (67)	58	59	59	NONE	58	57	56	55	54	--	--	--	54
M15.24-2	ST15.03	15		B (67)	56	58	58	NONE	57	56	55	54	53	--	--	--	53
M15.25-2	ST15.03	15		B (67)	53	55	55	NONE	54	53	53	52	51	--	--	--	51
M15.26	ST15.01	15		B (67)	61	62	61	NONE	59	57	56	55	54	--	--	--	54
M15.27	ST15.01	15		B (67)	60	61	60	NONE	59	56	55	53	53	--	--	--	53
M15.28	ST15.01	15		B (67)	56	57	57	NONE	56	56	54	53	53	--	--	--	53
M15.29-2	ST15.10	15		B (67)	54	55	56	NONE	55	55	54	54	54	--	--	--	54
M15.30-2	ST15.03	15		B (67)	54	55	56	NONE	56	55	54	53	53	--	--	--	53
M15.31-2	ST15.03	15		B (67)	58	59	60	NONE	59	58	57	57	56	--	--	--	57
M15.32-2	ST15.03	15		B (67)	60	61	59	NONE	58	56	55	54	53	--	--	--	53
M15.33-2	ST15.10	15		B (67)	46	47	47	NONE	46	46	46	45	44	--	--	--	45
M15.33-3	ST15.11	15		B (67)	51	52	52	NONE	50	50	49	48	48	--	--	--	48
M15.33-4	ST15.12	15		B (67)	58	59	60	NONE	57	56	56	55	55	--	--	--	55
M15.34-2	ST15.10	15	SW1890 A+B Combination Mainline & Ramp EOS	B (67)	61	63	62	NONE	60	59	58	57	57	--	--	--	57
M15.34-3	ST15.11	15		B (67)	64	65	64	NONE	62	61	61	60	60	--	--	--	60
M15.34-4	ST15.12	15		B (67)	66	67	66	A/E	64	63	62	62	61	--	--	--	61
M15.35	ST15.02	15		B (67)	55	56	55	NONE	55	54	52	51	51	--	--	--	51
M15.36-2	ST15.03	15		B (67)	62	63	62	NONE	60	59	58	56	56	--	--	--	56
M15.37	ST15.02	15		B (67)	57	58	57	NONE	54	53	52	51	50	--	--	--	50
M15.38	ST15.02	15		B (67)	56	57	57	NONE	56	56	54	53	53	--	--	--	53
M15.39-2	ST15.10	15		B (67)	60	62	61	NONE	60	59	59	58	58	--	--	--	58
M15.39-3	ST15.11	15		B (67)	63	65	64	NONE	62	61	61	60	60	--	--	--	60
M15.39-4	ST15.12	15		B (67)	65	67	66	A/E	64	63	63	62	62	--	--	--	62
M15.40	ST15.09	15		B (67)	57	58	58	NONE	57	57	56	56	55	--	--	--	55
M15.41-2	ST15.03	15		B (67)	54	54	55	NONE	55	54	54	54	53	--	--	--	53
M15.42-2	ST15.03	15		B (67)	58	59	58	NONE	56	55	55	54	53	--	--	--	53
M15.43-2	ST15.10	15		B (67)	45	47	47	NONE	46	46	45	45	44	--	--	--	44
M15.43-3	ST15.11	15		B (67)	48	49	50	NONE	49	48	48	47	47	--	--	--	47
M15.43-4	ST15.12	15		B (67)	53	54	55	NONE	54	53	53	52	51	--	--	--	52
M15.44-2	ST15.10	15		B (67)	60	61	61	NONE	60	59	59	58	58	--	--	--	58
M15.44-3	ST15.11	15		B (67)	63	64	64	NONE	62	62	61	60	60	--	--	--	60

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.44-4	ST15.12	15		B (67)	65	67	66	A/E	64	63	63	62	62	--	--	--	62
M15.45-2	ST15.03	15		B (67)	61	62	62	NONE	60	59	58	57	57	--	--	--	57
M15.46	ST15.02	15		B (67)	55	56	55	NONE	54	53	52	51	50	--	--	--	50
M15.47	ST15.02	15		B (67)	53	54	55	NONE	55	54	53	52	53	--	--	--	53
M15.48	ST15.02	15	SW1890 A+B Combination Mainline & Ramp EOS	B (67)	57	58	58	NONE	57	56	55	54	54	--	--	--	54
M15.49-3	ST15.11	15		B (67)	63	64	64	NONE	62	61	61	61	60	--	--	--	60
M15.50-4	ST15.12	15		B (67)	65	67	66	A/E	64	64	63	63	62	--	--	--	63
M15.51-2	ST15.03	15		B (67)	54	55	55	NONE	55	54	54	54	53	--	--	--	53
M15.52-2	ST15.03	15		B (67)	54	55	56	NONE	56	56	55	55	55	--	--	--	55
M15.53-2	ST15.03	15		B (67)	51	52	53	NONE	53	52	52	51	51	--	--	--	51
M15.54	ST15.09	15		B (67)	56	57	58	NONE	57	57	57	56	56	--	--	--	56
M15.55-2	ST15.10	15		B (67)	58	60	60	NONE	59	58	58	57	57	--	--	--	57
M15.56-2	ST15.03	15		B (67)	55	56	56	NONE	55	54	53	52	52	--	--	--	52
M15.57-2	ST15.03	15		B (67)	61	62	62	NONE	60	59	58	57	56	--	--	--	56
M15.58-2	ST15.03	15		B (67)	56	57	58	NONE	57	56	55	56	56	--	--	--	56
M15.59-2	ST15.10	15		B (67)	53	54	54	NONE	53	53	52	52	51	--	--	--	51
M15.60	ST15.02	15		B (67)	52	53	53	NONE	52	52	51	51	51	--	--	--	51
M15.61-2	ST15.03	15		B (67)	53	54	56	NONE	55	55	55	55	55	--	--	--	55
M15.62	ST15.02	15		B (67)	56	57	58	NONE	57	57	57	57	57	--	--	--	57
M15.63-2	ST15.10	15		B (67)	60	61	61	NONE	61	61	61	60	60	--	--	--	60
M15.64	ST15.04	15		C (67)	56	57	58	NONE	58	58	58	58	57	--	--	--	57
M15.01	ST15.01	15	SW1890 A+C Combination Mainline EOS & ROW	B (67)	61	62	62	NONE	62	62	61	61	61	61	61	61	61
M15.02	ST15.01	15		B (67)	61	63	63	NONE	62	62	62	62	62	62	62	62	62
M15.03	ST15.09	15		B (67)	63	64	64	NONE	63	63	63	63	63	63	63	63	63
M15.04-2	ST15.03	15		B (67)	62	64	64	NONE	64	64	64	64	64	64	64	64	64
M15.05-2	ST15.03	15		B (67)	57	58	58	NONE	57	56	55	54	54	53	53	53	53
M15.06-2	ST15.03	15		B (67)	57	58	58	NONE	57	56	55	55	54	54	54	54	54
M15.07-2	ST15.10	15	SW1890 A+C Combination Mainline EOS & ROW	B (67)	56	57	57	NONE	55	55	54	53	53	53	53	53	53
M15.08-2	ST15.03	15		B (67)	65	66	66	A/E	64	63	62	61	61	61	61	61	61
M15.09-2	ST15.10	15		B (67)	60	61	61	NONE	59	59	58	58	57	56	56	56	56
M15.09-3	ST15.11	15		B (67)	65	66	65	NONE	63	63	62	61	61	61	61	60	61
M15.09-4	ST15.12	15		B (67)	67	68	68	A/E	65	64	64	63	63	63	63	63	63
M15.10-2	ST15.03	15		B (67)	60	61	61	NONE	58	58	57	55	53	52	52	51	52
M15.11-2	ST15.03	15		B (67)	61	62	61	NONE	59	59	57	56	55	54	54	54	54
M15.12-2	ST15.10	15		B (67)	61	62	62	NONE	60	59	58	57	57	57	56	56	57
M15.12-3	ST15.11	15		B (67)	64	65	65	NONE	63	62	61	61	60	60	60	60	60
M15.12-4	ST15.12	15		B (67)	67	68	68	A/E	64	63	63	62	62	62	62	62	62
M15.13-2	ST15.10	15		B (67)	55	56	56	NONE	54	53	52	51	50	50	50	50	50

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.13-3	ST15.11	15		B (67)	58	59	58	NONE	55	54	53	52	51	51	51	51	51
M15.13-4	ST15.12	15		B (67)	60	61	60	NONE	58	56	56	55	54	54	54	54	54
M15.14	ST15.01	15		B (67)	58	59	59	NONE	58	57	56	55	55	55	55	54	55
M15.15	ST15.09	15		B (67)	57	58	58	NONE	57	56	55	55	54	54	53	53	54
M15.16-2	ST15.10	15		B (67)	62	63	63	NONE	60	60	59	58	58	58	58	57	58
M15.16-3	ST15.11	15		B (67)	64	65	65	NONE	62	61	61	60	60	59	59	59	59
M15.16-4	ST15.12	15		B (67)	66	67	67	A/E	64	63	62	61	61	61	61	61	61
M15.17-2	ST15.03	15		B (67)	58	59	59	NONE	57	57	54	53	52	52	52	51	52
M15.18	ST15.01	15		B (67)	54	55	55	NONE	54	54	53	52	51	51	51	51	51
M15.19	ST15.09	15		B (67)	58	59	59	NONE	57	56	56	55	55	55	54	53	55
M15.20-2	ST15.10	15	SW1890 A+C Combination Mainline EOS & ROW	B (67)	62	63	63	NONE	61	60	59	58	57	57	57	57	57
M15.20-3	ST15.11	15		B (67)	64	65	65	NONE	62	61	60	60	59	59	59	59	59
M15.20-4	ST15.12	15		B (67)	66	67	66	A/E	63	62	62	61	60	60	60	60	60
M15.21-2	ST15.10	15		B (67)	46	47	47	NONE	46	46	46	45	45	45	45	45	45
M15.21-3	ST15.11	15		B (67)	50	52	52	NONE	51	51	50	50	50	49	49	49	50
M15.21-4	ST15.12	15		B (67)	56	57	58	NONE	57	57	57	57	57	57	56	56	57
M15.22-2	ST15.10	15		B (67)	55	56	57	NONE	55	55	54	54	53	52	52	52	52
M15.23-2	ST15.03	15		B (67)	58	59	59	NONE	57	56	55	54	53	53	52	52	53
M15.24-2	ST15.03	15		B (67)	56	58	58	NONE	55	54	53	52	52	51	51	51	51
M15.25-2	ST15.03	15		B (67)	53	55	55	NONE	53	53	52	51	51	51	50	50	51
M15.26	ST15.01	15		B (67)	61	62	61	NONE	58	57	56	55	54	54	54	54	54
M15.27	ST15.01	15		B (67)	60	61	60	NONE	58	55	54	53	52	52	52	52	52
M15.28	ST15.01	15		B (67)	56	57	57	NONE	56	56	54	53	52	52	52	52	52
M15.29-2	ST15.10	15		B (67)	54	55	56	NONE	55	54	54	53	53	53	53	53	53
M15.30-2	ST15.03	15		B (67)	54	55	56	NONE	55	54	54	53	53	53	52	52	53
M15.31-2	ST15.03	15		B (67)	58	59	60	NONE	57	57	56	56	56	55	55	55	55
M15.32-2	ST15.03	15		B (67)	60	61	59	NONE	57	55	54	53	52	52	52	52	52
M15.33-2	ST15.10	15		B (67)	46	47	47	NONE	46	46	45	45	44	44	44	44	44
M15.33-3	ST15.11	15		B (67)	51	52	52	NONE	50	49	49	48	47	47	47	47	47
M15.33-4	ST15.12	15		B (67)	58	59	60	NONE	57	56	56	55	55	55	55	54	55
M15.34-2	ST15.10	15	SW1890 A+C Combination Mainline EOS & ROW	B (67)	61	63	62	NONE	60	59	58	57	56	56	56	56	56
M15.34-3	ST15.11	15		B (67)	64	65	64	NONE	62	61	60	60	59	59	59	59	59
M15.34-4	ST15.12	15		B (67)	66	67	66	A/E	63	62	62	61	60	60	60	60	60
M15.35	ST15.02	15		B (67)	55	56	55	NONE	54	52	52	51	51	51	51	51	51
M15.36-2	ST15.03	15		B (67)	62	63	62	NONE	59	59	57	56	55	55	55	55	55
M15.37	ST15.02	15		B (67)	57	58	57	NONE	54	52	52	51	50	50	50	50	50
M15.38	ST15.02	15		B (67)	56	57	57	NONE	56	56	54	53	52	52	52	52	52
M15.39-2	ST15.10	15		B (67)	60	62	61	NONE	59	59	58	57	57	57	57	57	57

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.39-3	ST15.11	15		B (67)	63	65	64	NONE	62	61	61	60	59	59	59	59	59
M15.39-4	ST15.12	15		B (67)	65	67	66	A/E	63	62	62	61	61	61	60	60	61
M15.40	ST15.09	15		B (67)	57	58	58	NONE	57	56	56	55	55	55	55	54	55
M15.41-2	ST15.03	15		B (67)	54	54	55	NONE	55	54	54	53	53	53	53	53	53
M15.42-2	ST15.03	15		B (67)	58	59	58	NONE	56	55	54	53	52	52	52	52	52
M15.43-2	ST15.10	15		B (67)	45	47	47	NONE	46	46	45	44	44	44	44	44	44
M15.43-3	ST15.11	15		B (67)	48	49	50	NONE	48	48	47	47	46	46	46	46	46
M15.43-4	ST15.12	15		B (67)	53	54	55	NONE	53	53	52	52	51	51	51	51	51
M15.44-2	ST15.10	15		B (67)	60	61	61	NONE	59	59	58	58	57	57	57	57	57
M15.44-3	ST15.11	15		B (67)	63	64	64	NONE	62	61	61	60	60	60	60	59	60
M15.44-4	ST15.12	15		B (67)	65	67	66	A/E	63	63	62	61	61	61	61	61	61
M15.45-2	ST15.03	15		B (67)	61	62	62	NONE	59	58	57	56	55	55	55	55	55
M15.46	ST15.02	15		B (67)	55	56	55	NONE	54	55	55	54	54	53	53	53	54
M15.47	ST15.02	15		B (67)	53	54	55	NONE	54	54	53	53	53	53	52	52	53
M15.48	ST15.02	15	SW1890 A+C Combination Mainline EOS & ROW	B (67)	57	58	58	NONE	56	55	54	53	53	53	53	53	53
M15.49-3	ST15.11	15		B (67)	63	64	64	NONE	61	61	60	60	60	60	60	59	60
M15.50-4	ST15.12	15		B (67)	65	67	66	A/E	64	63	62	62	62	61	61	61	61
M15.51-2	ST15.03	15		B (67)	54	55	55	NONE	54	54	54	53	53	52	52	52	52
M15.52-2	ST15.03	15		B (67)	54	55	56	NONE	55	55	55	54	54	54	54	53	54
M15.53-2	ST15.03	15		B (67)	51	52	53	NONE	52	52	51	51	50	50	50	50	50
M15.54	ST15.09	15		B (67)	56	57	58	NONE	57	56	56	56	56	55	55	55	56
M15.55-2	ST15.10	15		B (67)	58	60	60	NONE	58	58	57	57	57	57	57	57	57
M15.56-2	ST15.03	15		B (67)	55	56	56	NONE	56	56	56	56	55	55	55	55	55
M15.57-2	ST15.03	15		B (67)	61	62	62	NONE	59	58	56	55	54	54	54	54	54
M15.58-2	ST15.03	15		B (67)	56	57	58	NONE	57	56	55	55	54	54	54	54	54
M15.59-2	ST15.10	15		B (67)	53	54	54	NONE	53	53	52	51	51	51	51	51	51
M15.60	ST15.02	15		B (67)	52	53	53	NONE	53	52	53	53	53	53	53	53	53
M15.61-2	ST15.03	15		B (67)	53	54	56	NONE	55	55	55	55	55	55	55	55	55
M15.62	ST15.02	15		B (67)	56	57	58	NONE	57	57	56	56	56	56	56	55	56
M15.63-2	ST15.10	15		B (67)	60	61	61	NONE	60	60	60	60	60	59	59	59	60
M15.64	ST15.04	15		C (67)	56	57	58	NONE	58	57	57	57	57	57	57	57	57
M15.65	ST15.04	15	--	E (72)	60	62	62	NONE	--	--	--	--	--	--	--	--	--
M15.66	ST15.04	15	--	C (67)	56	57	56	NONE	--	--	--	--	--	--	--	--	--
M15.67	ST15.04	15	--	E (72)	45	47	47	NONE	--	--	--	--	--	--	--	--	--
M15.68-2	ST15.06	15	--	B (67)	58	59	58	NONE	--	--	--	--	--	--	--	--	--
M15.68-3	ST15.06	15	--	B (67)	59	60	59	NONE	--	--	--	--	--	--	--	--	--
M15.69	ST15.05	15	--	B (67)	55	56	56	NONE	--	--	--	--	--	--	--	--	--
M15.70-2	ST15.06	15	--	B (67)	58	59	58	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M15.70-3	ST15.06	15	--	B (67)	59	59	58	NONE	--	--	--	--	--	--	--	--	--
M15.71-2	ST15.06	15	--	B (67)	52	53	52	NONE	--	--	--	--	--	--	--	--	--
M15.71-3	ST15.06	15	--	B (67)	54	55	54	NONE	--	--	--	--	--	--	--	--	--
M15.72-3	ST15.06	15	--	B (67)	58	58	58	NONE	--	--	--	--	--	--	--	--	--
M15.73	ST15.07	15	--	E (72)	55	56	56	NONE	--	--	--	--	--	--	--	--	--
M15.74	ST15.07	15	--	E (72)	54	55	55	NONE	--	--	--	--	--	--	--	--	--
M15.75	ST15.08	15	--	G (-)	67	68	69	NONE	--	--	--	--	--	--	--	--	--
M16.01	ST16.01	16	--	G (-)	68	68	68	NONE	--	--	--	--	--	--	--	--	--
M16.02	ST16.01	16	--	C (67)	58	59	59	NONE	--	--	--	--	--	--	--	--	--
M16.03	ST16.02	16	SW1911 - Mainline EOS	B (67)	65	66	67	A/E	67	67	67	67	67	--	--	--	67
M16.04	ST16.02	16		B (67)	69	70	71	N/A*	71	71	71	71	71	--	--	--	71
M16.05	ST16.02	16		B (67)	69	70	72	A/E	72	72	72	72	72	--	--	--	72
M16.06	ST16.02	16		B (67)	62	63	64	NONE	64	63	63	63	62	--	--	--	63
M16.07	ST16.03	16		B (67)	65	66	66	A/E	65	64	64	63	62	--	--	--	62
M16.08	ST16.03	16		B (67)	56	58	58	NONE	57	56	55	55	54	--	--	--	54
M16.09	ST16.03	16		B (67)	68	69	69	A/E	67	66	65	64	62	--	--	--	62
M16.10	ST16.03	16		B (67)	69	70	70	N/A**	--	--	--	--	--	--	--	--	--
M16.11	ST16.04	16		B (67)	64	65	63	NONE	63	63	63	62	62	--	--	--	62
M16.12	ST16.04	16		B (67)	68	68	69	A/E	69	69	69	69	69	--	--	--	69
M16.13	ST16.04	16		B (67)	59	60	62	NONE	61	61	61	60	59	--	--	--	60
M16.03	ST16.02	16	SW1903 - ROW	B (67)	65	66	67	A/E	67	67	67	67	67	67	67	67	67
M16.05	ST16.02	16		B (67)	69	70	72	A/E	72	72	72	72	72	72	72	72	72
M16.06	ST16.02	16		B (67)	62	63	64	NONE	64	64	64	64	64	64	63	63	63
M16.07	ST16.03	16		B (67)	65	66	66	A/E	66	66	65	65	64	64	63	62	64
M16.08	ST16.03	16		B (67)	56	58	58	NONE	58	58	58	58	57	56	55	55	55
M16.09	ST16.03	16		B (67)	68	69	69	A/E	68	68	67	67	66	65	63	62	64
M16.11	ST16.04	16		B (67)	64	65	63	NONE	63	63	63	63	63	63	63	63	63
M16.12	ST16.04	16		B (67)	68	68	69	A/E	69	69	69	69	69	69	69	69	69
M16.13	ST16.04	16		B (67)	59	60	62	NONE	61	61	61	59	58	57	56	55	55
M16.03	ST16.02	16	SW1895 - Private Property	B (67)	65	66	67	A/E	60	56	54	53	52	51	--	--	60
M16.05	ST16.02	16	SW1899 - Private Property	B (67)	69	70	72	A/E	64	63	63	59	63	63	--	--	64
M16.07	ST16.03	16	SW1905 - Private Property	B (67)	65	66	66	A/E	63	59	57	55	53	52	--	--	59
M16.09	ST16.03	16	SW1907 - Private Property	B (67)	68	69	69	A/E	63	61	60	59	59	58	--	--	62
M16.12	ST16.04	16	SW1913 - Private Property	B (67)	68	68	69	A/E	63	60	59	57	56	55	--	--	62

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M16.07	ST16.03	16	SW1905A - Alt. Location	B (67)	65	66	66	A/E	66	66	66	66	66	66	--	--	--
M16.14	ST16.05	16	--	G (-)	69	69	71	NONE	--	--	--	--	--	--	--	--	--
M16.15	ST16.06	16	--	E (72)	74	74	75	N/A**	--	--	--	--	--	--	--	--	--
M16.16	ST16.06	16	--	E (72)	64	64	65	NONE	--	--	--	--	--	--	--	--	--
M16.17	ST16.06	16	--	E (72)	71	70	70	NONE	--	--	--	--	--	--	--	--	--
M16.18	ST16.06	16	--	F (-)	48	46	47	NONE	--	--	--	--	--	--	--	--	--
M16.19	ST16.06	16	--	E (72)	65	67	66	NONE	--	--	--	--	--	--	--	--	--
M17.01	ST17.01	17	--	E (72)	48	50	51	NONE	--	--	--	--	--	--	--	--	--
M17.02	ST17.01	17	--	E (72)	53	56	56	NONE	--	--	--	--	--	--	--	--	--
M17.03	ST17.01	17	--	E (72)	68	69	69	NONE	--	--	--	--	--	--	--	--	--
M17.04	ST17.01	17	--	E (72)	50	52	52	NONE	--	--	--	--	--	--	--	--	--
M17.05	ST17.02	17	--	B (67)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M17.06	ST17.02	17	--	B (67)	63	65	65	NONE	--	--	--	--	--	--	--	--	--
M17.07	ST17.02	17	--	B (67)	67	69	69	A/E	This receiver is shielded by an existing 12- to 14-foot noise barrier along the SB I-15 ROW and EOS. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M17.08	ST17.02	17	--	B (67)	64	66	66	A/E	This receiver is shielded by an existing 12- to 14-foot noise barrier along the SB I-15 ROW and EOS. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M17.09	ST17.02	17	--	B (67)	60	62	62	NONE	--	--	--	--	--	--	--	--	--
M17.10	ST17.03	17	--	B (67)	53	55	55	NONE	--	--	--	--	--	--	--	--	--
M17.11	ST17.03	17	--	B (67)	66	68	68	A/E	This receiver is shielded by an existing 12- to 14-foot noise barrier along the SB I-15 ROW and EOS. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M17.12	ST17.03	17	--	B (67)	58	60	60	NONE	--	--	--	--	--	--	--	--	--
M17.13	ST17.04	17	--	B (67)	65	66	66	A/E	This receiver is shielded by an existing 12- to 14-foot noise barrier along the SB I-15 ROW and EOS. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M17.14	ST17.04	17	--	B (67)	63	65	65	NONE	--	--	--	--	--	--	--	--	--
M17.15	ST17.04	17	--	B (67)	67	68	68	A/E	This receiver is shielded by an existing 12- to 14-foot noise barrier along the SB I-15 ROW and EOS. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M17.16	ST17.04	17	--	G (-)	69	71	71	NONE	--	--	--	--	--	--	--	--	--
M18.01	ST18.01	18	--	E (72)	56	58	58	NONE	--	--	--	--	--	--	--	--	--
M18.02	ST18.01	18	--	F (-)	56	58	58	NONE	--	--	--	--	--	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M18.03	ST18.01	18	--	E (72)	51	53	53	NONE	--	--	--	--	--	--	--	--	--
M18.04	ST18.02	18	--	F (-)	60	62	63	NONE	--	--	--	--	--	--	--	--	--
M18.05	ST18.02	18	--	F (-)	61	64	65	NONE	--	--	--	--	--	--	--	--	--
M18.06	ST18.02	18	--	E (72)	62	63	63	N/A*	--	--	--	--	--	--	--	--	--
M18.07	ST18.02	18	--	E (72)	60	58	59	NONE	--	--	--	--	--	--	--	--	--
M18.08	ST18.02	18	--	E (72)	59	49	50	NONE	--	--	--	--	--	--	--	--	--
M18.09	ST18.02	18	--	E (72)	59	48	48	NONE	--	--	--	--	--	--	--	--	--
M18.10	ST18.02	18	--	E (72)	57	57	57	NONE	--	--	--	--	--	--	--	--	--
M18.11	ST18.02	18		E (72)	74	77	77	N/A*	--	--	--	--	--	--	--	--	--
M18.12	ST18.03	18	SW1996A - Mainline EOS	B (67)	71	73	72	A/E	72	72	72	72	72	--	--	--	--
M18.13	ST18.03	18		B (67)	57	59	59	NONE	59	59	59	59	59	--	--	--	--
M18.14	ST18.03	18		B (67)	67	68	69	N/A**	--	--	--	--	--	--	--	--	--
M18.15	ST18.03	18		B (67)	64	66	67	A/E	67	67	67	67	67	--	--	--	--
M18.16	ST18.04	18		B (67)	65	66	67	A/E	65	65	65	65	64	--	--	--	--
M18.17	ST18.04	18		B (67)	67	69	69	A/E	68	67	66	66	66	--	--	--	--
M18.18	ST18.04	18		B (67)	59	60	60	NONE	60	60	60	59	59	--	--	--	--
M18.19	ST18.04	18		B (67)	67	69	69	A/E	67	67	66	66	66	--	--	--	--
M18.20	ST18.04	18		B (67)	56	58	58	NONE	57	57	57	57	57	--	--	--	--
M18.21	ST18.04	18		B (67)	64	65	65	NONE	63	63	62	62	62	--	--	--	--
M18.22	ST18.04	18		B (67)	65	67	67	A/E	65	64	64	63	63	--	--	--	--
M18.12	ST18.03	18	SW1996B - Ramp EOS	B (67)	71	73	72	A/E	68	67	66	65	64	--	--	--	64
M18.13	ST18.03	18		B (67)	57	59	59	NONE	57	56	56	55	54	--	--	--	54
M18.15	ST18.03	18		B (67)	64	66	67	A/E	62	62	61	60	60	--	--	--	60
M18.16	ST18.04	18		B (67)	65	66	67	A/E	64	64	63	62	61	--	--	--	61
M18.17	ST18.04	18		B (67)	67	69	69	A/E	65	64	63	63	63	--	--	--	63
M18.18	ST18.04	18		B (67)	59	60	60	NONE	60	60	59	59	59	--	--	--	59
M18.19	ST18.04	18		B (67)	67	69	69	A/E	68	68	67	66	64	--	--	--	64
M18.20	ST18.04	18		B (67)	56	58	58	NONE	58	58	58	57	57	--	--	--	57
M18.21	ST18.04	18		B (67)	64	65	65	NONE	65	65	65	65	65	--	--	--	65
M18.22	ST18.04	18		B (67)	65	67	67	A/E	67	67	67	65	64	--	--	--	64
M18.12	ST18.03	18	SW1996C - ROW	B (67)	71	73	72	A/E	71	71	70	69	68	67	66	65	67
M18.13	ST18.03	18		B (67)	57	59	59	NONE	59	58	58	57	57	56	55	55	56
M18.15	ST18.03	18		B (67)	64	66	67	A/E	67	67	67	67	65	63	62	61	62
M18.16	ST18.04	18		B (67)	65	66	67	A/E	67	67	66	66	66	66	66	65	66
M18.17	ST18.04	18		B (67)	67	69	69	A/E	69	66	65	64	63	62	61	61	61
M18.18	ST18.04	18		B (67)	59	60	60	NONE	60	60	60	60	60	60	60	60	60
M18.19	ST18.04	18		B (67)	67	69	69	A/E	68	68	67	65	64	63	62	62	63
M18.20	ST18.04	18		B (67)	56	58	58	NONE	58	58	58	58	58	58	58	58	58

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M18.21	ST18.04	18		B (67)	64	65	65	NONE	65	65	65	65	65	65	64	63	64
M18.22	ST18.04	18		B (67)	65	67	67	A/E	67	67	66	64	63	63	62	62	62
M18.12	ST18.03	18	SW1996 A+B - Combination Mainline & Ramp EOS	B (67)	71	73	72	A/E	68	67	66	65	64	--	--	--	64
M18.13	ST18.03	18		B (67)	57	59	59	NONE	57	56	56	55	54	--	--	--	54
M18.15	ST18.03	18		B (67)	64	66	67	A/E	62	61	60	59	58	--	--	--	59
M18.16	ST18.04	18		B (67)	65	66	67	A/E	63	62	61	60	59	--	--	--	59
M18.17	ST18.04	18		B (67)	67	69	69	A/E	64	62	61	60	59	--	--	--	60
M18.18	ST18.04	18		B (67)	59	60	60	NONE	59	59	58	58	58	--	--	--	58
M18.19	ST18.04	18		B (67)	67	69	69	A/E	66	66	64	63	62	--	--	--	62
M18.20	ST18.04	18		B (67)	56	58	58	NONE	57	57	57	57	57	--	--	--	57
M18.21	ST18.04	18		B (67)	64	65	65	NONE	63	63	63	63	62	--	--	--	62
M18.22	ST18.04	18		B (67)	65	67	67	A/E	64	64	63	62	61	--	--	--	61
M19.01	ST19.01	19	SW2007A - Ramp EOS	E (72)	69	70	70	NONE	70	70	70	70	70	--	--	--	70
M19.02	ST19.01	19		E (72)	70	72	71	N/A**	--	--	--	--	--	--	--	--	--
M19.03	ST19.01	19		E (72)	70	71	70	NONE	70	70	70	70	70	--	--	--	70
M19.04	ST19.01	19		E (72)	62	61	61	N/A*	--	--	--	--	--	--	--	--	--
M19.05	ST19.02	19		B (67)	64	63	63	NONE	62	62	62	61	61	--	--	--	62
M19.06	ST19.01	19		F (-)	52	53	53	NONE	--	--	--	--	--	--	--	--	--
M19.07	ST19.01	19		E (72)	74	75	75	A/E	71	70	70	69	69	--	--	--	70
M19.08	ST19.02	19		B (67)	68	66	66	A/E	63	62	61	61	59	--	--	--	61
M19.09	ST19.01	19		E (72)	75	77	77	A/E	72	70	69	67	66	--	--	--	69
M19.10	ST19.02	19		B (67)	65	67	66	A/E	66	65	64	64	62	--	--	--	64
M19.11	ST19.02	19		B (67)	64	66	65	NONE	65	65	65	65	65	--	--	--	65
M19.01	ST19.01	19	SW2007B - ROW	E (72)	69	70	70	NONE	70	70	70	70	70	70	70	70	70
M19.03	ST19.01	19		E (72)	70	71	70	NONE	70	70	70	70	70	70	70	70	70
M19.05	ST19.02	19		B (67)	64	63	63	NONE	63	63	63	62	62	62	62	62	62
M19.07	ST19.01	19		E (72)	74	75	75	A/E	75	75	73	72	71	70	70	69	70
M19.08	ST19.02	19		B (67)	68	66	66	A/E	66	66	65	65	63	62	61	60	61
M19.09	ST19.01	19		E (72)	75	77	77	A/E	77	77	77	75	71	69	67	66	67
M19.10	ST19.02	19		B (67)	65	67	66	A/E	66	66	66	65	65	64	63	62	63
M19.11	ST19.02	19		B (67)	64	66	65	NONE	65	65	65	65	65	65	65	65	65
M19.01	ST19.01	19	SW2001 - Mainline EOS	E (72)	69	70	70	NONE	69	68	68	68	68	--	--	--	--
M19.03	ST19.01	19		E (72)	70	71	70	NONE	69	69	69	68	68	--	--	--	--
M19.05	ST19.02	19		B (67)	64	63	63	NONE	62	62	62	62	62	--	--	--	--
M19.07	ST19.01	19		E (72)	74	75	75	A/E	74	74	74	74	74	--	--	--	--
M19.08	ST19.02	19		B (67)	68	66	66	A/E	66	66	66	66	66	--	--	--	--
M19.09	ST19.01	19		E (72)	75	77	77	A/E	77	77	76	76	76	--	--	--	--
M19.10	ST19.02	19		B (67)	65	67	66	A/E	66	66	66	66	66	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M19.11	ST19.02	19		B (67)	64	66	65	NONE	65	65	65	65	65	--	--	--	--
M19.01	ST19.01	19	SW2001 + SW2007A - Combination Mainline & Ramp EOS	E (72)	69	70	70	NONE	70	70	70	70	70	--	--	--	70
M19.03	ST19.01	19		E (72)	70	71	70	NONE	70	70	70	70	70	--	--	--	70
M19.05	ST19.02	19		B (67)	64	63	63	NONE	62	62	61	61	61	--	--	--	62
M19.07	ST19.01	19		E (72)	74	75	75	A/E	71	70	70	68	68	--	--	--	70
M19.08	ST19.02	19		B (67)	68	66	66	A/E	63	62	61	61	59	--	--	--	61
M19.09	ST19.01	19		E (72)	75	77	77	A/E	72	70	69	67	66	--	--	--	69
M19.10	ST19.02	19		B (67)	65	67	66	A/E	66	65	64	64	62	--	--	--	64
M19.11	ST19.02	19		B (67)	64	66	65	NONE	65	65	65	65	65	--	--	--	65
M19.08	ST19.02	19	SW2007C - Private Property	B (67)	68	66	66	A/E	61	60	59	58	58	57	--	--	59
M19.10	ST19.02	19		B (67)	65	67	66	A/E	63	62	61	61	60	60	--	--	61
M19.12	ST19.03	19	--	B (67)	64	65	65	NONE	--	--	--	--	--	--	--	--	--
M19.13	ST19.03	19	--	B (67)	66	68	68	A/E	This receiver is shielded by an existing 14- to 16-foot noise barrier along the SB I-15 ROW. This barrier meets the requirements for feasibility and acoustical reasonableness when compared to the no-barrier condition.								--
M20.01	ST20.01	20	SW1998 - Mainline EOS	C (67)	65	67	67	A/E	65	65	65	65	65	--	--	--	--
M20.02	ST20.01	20		C (67)	63	65	65	NONE	63	63	63	63	63	--	--	--	--
M20.03	ST20.01	20		C (67)	64	65	65	NONE	65	65	65	64	64	--	--	--	--
M20.04	ST20.01	20		C (67)	62	64	64	NONE	63	63	63	63	63	--	--	--	--
M20.05	ST20.01	20		C (67)	64	65	65	NONE	65	65	65	65	65	--	--	--	--
M20.06	ST20.01	20		C (67)	64	65	65	NONE	65	65	65	65	65	--	--	--	--
M20.07	ST20.01	20		C (67)	66	67	67	A/E	67	67	67	67	67	--	--	--	--
M20.08	ST20.01	20		C (67)	65	66	66	A/E	66	66	66	66	66	--	--	--	--
M20.09	ST20.01	20		C (67)	65	66	66	A/E	66	66	66	66	66	--	--	--	--
M20.10	ST20.01	20		C (67)	65	66	66	A/E	66	66	66	66	66	--	--	--	--
M20.11	ST20.01	20		C (67)	64	66	66	A/E	66	66	66	66	66	--	--	--	--
M20.01	ST20.01	20	SW2006 - Ramp EOS	C (67)	65	67	67	A/E	66	66	66	65	65	--	--	--	--
M20.02	ST20.01	20		C (67)	63	65	65	NONE	64	64	64	64	63	--	--	--	--
M20.03	ST20.01	20		C (67)	64	65	65	NONE	64	63	62	61	61	--	--	--	--
M20.04	ST20.01	20		C (67)	62	64	64	NONE	62	62	61	60	60	--	--	--	--
M20.05	ST20.01	20		C (67)	64	65	65	NONE	63	63	62	61	60	--	--	--	--
M20.06	ST20.01	20		C (67)	64	65	65	NONE	63	63	62	61	60	--	--	--	--
M20.07	ST20.01	20		C (67)	66	67	67	A/E	65	64	63	62	61	--	--	--	--
M20.08	ST20.01	20		C (67)	65	66	66	A/E	65	64	62	61	61	--	--	--	--
M20.09	ST20.01	20		C (67)	65	66	66	A/E	64	63	62	61	60	--	--	--	--
M20.10	ST20.01	20		C (67)	65	66	66	A/E	65	64	62	61	61	--	--	--	--
M20.11	ST20.01	20		C (67)	64	66	66	A/E	64	63	62	61	60	--	--	--	--

Receiver ID	Measurement Location	NAA	Barrier ID	Activity Category (Noise Abatement Criteria)	Existing (2019) Noise Level (dBA)	Design-year (2050) Noise Level without Project (No-Build) (dBA)	Design-year (2050) Noise Level with Project (Build) (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)								
									6-foot wall	8-foot wall	10-foot wall	12-foot wall	14-foot wall	16-foot wall	18-foot wall	20-foot wall	Design Height wall
M20.01	ST20.01	20	SW1998 + SW2006 - Combination Mainline & Ramp EOS	C (67)	65	67	67	A/E	65	64	64	63	63	--	--	--	--
M20.02	ST20.01	20		C (67)	63	65	65	NONE	63	63	62	61	61	--	--	--	--
M20.03	ST20.01	20		C (67)	64	65	65	NONE	63	63	62	60	60	--	--	--	--
M20.04	ST20.01	20		C (67)	62	64	64	NONE	62	61	60	59	58	--	--	--	--
M20.05	ST20.01	20		C (67)	64	65	65	NONE	63	62	61	60	59	--	--	--	--
M20.06	ST20.01	20		C (67)	64	65	65	NONE	63	62	61	60	59	--	--	--	--
M20.07	ST20.01	20		C (67)	66	67	67	A/E	65	64	63	62	61	--	--	--	--
M20.08	ST20.01	20		C (67)	65	66	66	A/E	65	64	62	61	61	--	--	--	--
M20.09	ST20.01	20		C (67)	65	66	66	A/E	64	63	62	61	60	--	--	--	--
M20.10	ST20.01	20		C (67)	65	66	66	A/E	65	64	62	61	61	--	--	--	--
M20.11	ST20.01	20		C (67)	64	66	66	A/E	64	63	62	61	60	--	--	--	--
M20.12	ST20.02	20		B (67)	62	63	63	NONE	--	--	--	--	--	--	--	--	--
M20.13	ST20.02	20		B (67)	61	62	62	NONE	--	--	--	--	--	--	--	--	--

* The are no outdoor areas of frequent human use that would benefit from a lowered noise level at this receiver. Therefore, no impact is assessed.
** This receiver was used for model validation purposes only and does not accurately represent the primary area of outdoor human use. Nearby modeled receiver(s) are used to assess impacts at this land use.
EOS = edge of shoulder; SB = southbound

NAA 1 – East side of I-15 between Main Street and SR-74 (Central Avenue)

The land uses in this NAA include large areas of undeveloped lands that are not permitted (Activity Category G); several restaurants, including one with outdoor seating (Activity Category E); and industrial and retail facilities (Activity Category F). There are 14 modeled receivers (M01.01 through M01.14) within NAA 1. The predicted worst-hour exterior traffic noise levels range from 59 to 75 dBA L_{eq}(h) for Existing, 61 to 76 dBA L_{eq}(h) for the Design-year No-Build, and 60 to 76 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 0 to 2 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 0 dBA relative to Design-year No-Build worst-hour traffic noise levels. One modeled receiver, M01.04, representing one receptor, would approach or exceed the NAC for Activity Category E; therefore, consideration of noise abatement is required.

NAA 2 – West side of I-15 between Main Street and SR-74 (Central Avenue)

The land uses in this NAA are a mix of residential (Activity Category B); offices and restaurants with outdoor seating (Activity Category E); retail, warehousing, and industrial buildings (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). There are 18 modeled receivers (M02.01 through M02.18) within NAA 2. The predicted worst-hour exterior traffic noise levels range from 58 to 69 dBA L_{eq}(h) for Existing, 59 to 70 dBA L_{eq}(h) for the Design-year No-Build, and 58 to 70 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately -2 (i.e., a 2-dBA decrease) to 2 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 0 dBA relative to Design-year No-Build worst-hour traffic noise levels.[1] Noise levels at four modeled receivers, M02.02, M02.07, M02.10, and M02.11, representing a total of five receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration of noise abatement is required.

NAA 3 – East side of I-15 between SR-74 (Central Avenue) and Nichols Road

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a place of worship, parks, and active sport areas at a high school (Activity Category C); a food court with outdoor seating and a restaurant (Activity Category E); retail and utilities (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). There are 36 modeled receivers (M03.01 through M03.36) within NAA 3. The predicted worst-hour exterior traffic noise levels range from 42 to 74 dBA L_{eq}(h) for Existing and 44 to 75 dBA L_{eq}(h) for Design-year No-Build and Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately -5 (i.e., a 5-dBA decrease) to 4 dBA relative to Existing noise levels and by -2 (i.e., a 2-dBA decrease) to 2 dBA relative to Design-year No-Build noise levels. Large decreases in predicted noise levels under the Design-year condition relative to the Existing condition are due to the construction of the permitted Nichols Ranch Specific Plan, discussed above, which is anticipated to be constructed prior to the

[1] Decreases in predicted noise levels under the design-year condition relative to the existing condition are generally due to changes in the surrounding environment including design of new walls, intervening structures, new berms, a change in the physical alignment of the facility, etc.

Design Year and includes several new homes with private property walls shielding the primary outdoor use areas from traffic noise. Noise levels at 10 modeled receivers, M03.10, M03.16, M03.17, M03.22, M03.23, M03.24, M03.25, M03.26, M03.27, and M03.28, representing a total of 10 receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration for noise abatement is required.

NAA 4 – West side of I-15 between SR-74 (Central Avenue) and Nichols Road

The land uses in this NAA include a cemetery (Activity Category C); developed lands with outdoor seating (Activity Category E); retail (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). There are 13 modeled receivers (M04.01 through M04.13) within NAA 4. The predicted worst-hour exterior traffic noise levels range from 57 to 69 dBA L_{eq}(h) for Existing and 58 to 70 dBA L_{eq}(h) for the Design-year No-Build and Build conditions. Design-year Build noise levels are predicted to increase by approximately 0 to 2 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. The noise level at one modeled location, M04.03 would approach or exceed the NAC for Activity Category C; however, this location was used for model validation purposes only and does not accurately represent the primary area of outdoor human use. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 5 – East side of I-15 between Nichols Road and Lake Street

The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include agriculture and utility uses (Activity Category F). There are 13 modeled receivers (M05.01 through M05.13) within NAA 5. The predicted worst-hour exterior traffic noise levels range from 60 to 76 dBA L_{eq}(h) for Existing, 60 to 77 dBA L_{eq}(h) for the Design-year No-Build, and 61 to 78 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 1 to 2 dBA relative to Existing worst-hour traffic noise levels and by 0 to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 6 – West side of I-15 between Nichols Road and Lake Street

The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include a utility use (Activity Category F). There are nine modeled receivers (M06.01 through M06.09) within NAA 6. The predicted worst-hour exterior traffic noise levels range from 62 to 73 dBA L_{eq}(h) for Existing, 63 to 73 dBA L_{eq}(h) for the Design-year No-Build, and 63 to 74 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 0 to 2 dBA relative to Existing worst-hour traffic noise levels and by 0 to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 7 – East side of I-15 between Lake Street and Indian Truck Trail

The land uses in this NAA are mixed and include offices (Activity Category E), industrial and utility uses (Activity Category F), and large areas of undeveloped lands that are not permitted (Activity Category G). There are 15 modeled receivers (M07.01 through M07.15) within NAA 7. The predicted worst-hour exterior traffic noise levels range from 56 to 75 dBA L_{eq}(h) for Existing, 58 to 76 dBA L_{eq}(h) for the Design-year No-Build, and 58 to 77 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 0 to 3 dBA relative to Existing worst-hour traffic noise levels and by 0 to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 8 – West side of I-15 between Lake Street and Indian Truck Trail

The land uses in this NAA include residential (Activity Category B), developed lands with outdoor seating areas (Activity Category E), storage and retail facilities (Activity Category F), and undeveloped lands that are not permitted (Activity Category G). There are 27 modeled receivers (M08.01 through M08.27) within NAA 8. The predicted worst-hour exterior traffic noise levels range from 50 to 75 dBA L_{eq}(h) for Existing and 52 to 77 dBA L_{eq}(h) for the Design-year No-Build and Build conditions. Design-year Build noise levels are predicted to change by approximately -3 (i.e., a 3-dBA decrease) to 3 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at two modeled receivers, M08.14 and M08.16, representing a total of two receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration for noise abatement is required.

NAA 9 – East side of I-15 between Indian Truck Trail and Temescal Canyon Road (underpass)

The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include restaurants (Activity Category E) and a gas station, parking lot, and retail facility (Activity Category F). There are 17 modeled receivers (M09.01 through M09.17) within NAA 9. The predicted worst-hour exterior traffic noise levels range from 54 to 72 dBA L_{eq}(h) for Existing, 52 to 73 dBA L_{eq}(h) for the Design-year No-Build, and 53 to 74 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately -10 (i.e., a 10-dBA decrease) to 5 dBA relative to Existing worst-hour traffic noise levels and by 0 to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. Large differences in predicted noise levels under the Design-year condition relative to the Existing condition are due to the construction of the permitted Toscana Village Commercial Center development, discussed above, which is anticipated to be constructed prior to the Design Year. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 10 – West side of I-15 between Indian Truck Trail and Temescal Canyon Road (underpass)

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include emergency services (Activity Category F) and undeveloped lands that are

not permitted (Activity Category G). There are 49 modeled receivers (M10.01 through M10.49) within NAA 10. The predicted worst-hour exterior traffic noise levels range from 40 to 68 dBA L_{eq}(h) for Existing, 41 to 69 dBA L_{eq}(h) for the Design-year No-Build, and 42 to 69 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 1 to 3 dBA relative to Existing worst-hour traffic noise levels and by 0 to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 11 – East side of I-15 between Temescal Canyon Road (underpass) and Temescal Canyon Road

The land uses in this NAA are primarily undeveloped lands that are not permitted (Activity Category G). Other land uses include industrial (Activity Category F). There are eight modeled receivers (M11.01 through M11.08) within NAA 11. The predicted worst-hour exterior traffic noise levels range from 59 to 77 dBA L_{eq}(h) for Existing, 60 to 78 dBA L_{eq}(h) for Design-year No-Build, and 61 to 79 dBA L_{eq}(h) for Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately 1 to 2 dBA relative to Existing noise levels and by 0 to 2 dBA relative to Design-year No-Build noise levels. No predicted traffic noise impacts or substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 12 – West side of I-15 between Temescal Canyon Road (underpass) and Temescal Canyon Road

The land uses in this NAA include residential (Activity Category B), recreation areas (Activity Category C), outdoor seating areas (Activity Category E), retail facilities (Activity Category F), and undeveloped lands that are not permitted (Activity Category G). There are 51 modeled receivers (M12.01 through M12.11, M12.11A, and M12.12 through M12.50) within NAA 12. The predicted worst-hour exterior traffic noise levels range from 45 to 76 dBA L_{eq}(h) for Existing, 40 to 75 dBA L_{eq}(h) for the Design-year No-Build, and 42 to 76 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately -24 (i.e., a 24-dBA decrease) to 9 dBA relative to Existing worst-hour traffic noise levels and by 0 to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. Large differences in predicted noise levels under the Design-year condition relative to the Existing condition are due to the construction of the permitted Serrano Single-Family Home Community development, discussed above, which is anticipated to be constructed prior to the Design Year. Noise levels at three modeled receivers, M12.03, M12.11A, and M12.50, representing a total of three receptors, would approach or exceed the NAC for Activity Categories C and E; therefore, consideration for noise abatement is required.

NAA 13 – East side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive

The majority of land uses in this NAA are residential (Activity Category B) and industrial/commercial (Activity Category F). Other land uses include a driving range (Activity Category C), outdoor seating areas (Activity Category E), and undeveloped lands that are not permitted (Activity Category G). There are 28 modeled receivers

(M13.01 through M13.28) within NAA 13. The predicted worst-hour exterior traffic noise levels range from 53 to 74 dBA L_{eq}(h) for Existing, 54 to 75 dBA L_{eq}(h) for the Design-year No-Build, and 55 to 76 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 1 to 3 dBA relative to Existing worst-hour traffic noise levels and by 0 to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at three modeled receivers, M13.06, M03.21, and M03.23, representing a total of three receptors, would approach or exceed the NAC for Activity Categories B and C; therefore, consideration for noise abatement is required.

NAA 14 – West side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include parks (Activity Category C); outdoor seating areas (Activity Category E); industrial, storage, and warehousing (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). There are 67 modeled receivers (M14.01 through M14.47, M14.47A, M14.47B, M14.48 through M14.50, M14.50A, and M14.51 through M14.64) within NAA 14. The predicted worst-hour exterior traffic noise levels range from 41 to 74 dBA L_{eq}(h) for Existing, 42 to 75 dBA L_{eq}(h) for the Design-year No-Build, and 42 to 76 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately 0 to 3 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at 11 modeled receivers, M14.07, M14.44, M14.46, M14.47, M14.47A, M14.47B, M14.50, M14.50A, M14.52, M14.54, and M14.63, representing a total of 17 receptors, would approach or exceed the NAC for Activity Categories B and C; therefore, consideration for noise abatement is required.

NAA 15 – East side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a playground (Activity Category C), restaurants with outdoor dining, and a hotel with outdoor use areas (Activity Category E). There are 100 modeled receivers (M15.01 through M15.75 with multiple receivers representing two or more floor heights) within NAA 15. The predicted worst-hour exterior traffic noise levels range from 45 to 76 dBA L_{eq}(h) for Existing, 47 to 68 dBA L_{eq}(h) for the Design-year No-Build, and 47 to 69 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to change by approximately -1 (i.e., a 1-dBA decrease) to 3 dBA relative to Existing worst-hour traffic noise levels and by -2 (i.e., a 2-dBA decrease) to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at nine modeled receivers, M15.08-2, M15.09-3, M15.09-4, M15.12-4, M15.16-4, M15.20-4, M15.34-4, M15.39, M15.44-4, and M15.50-4, representing a total of 17 receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration for noise abatement is required.

NAA 16 – West side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include a place of worship (Activity Category C); a hotel with a pool and restaurants with outdoor dining (Activity Category E); retail facilities (Activity Category F); and undeveloped lands that are not permitted (Activity Category G). There are 19 modeled receivers (M16.01 through M16.19) within NAA 16. The predicted worst-hour exterior traffic noise levels range from 48 to 74 dBA L_{eq}(h) for Existing, 46 to 74 dBA L_{eq}(h) for the Design-year No-Build, and 47 to 75 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately -1 (i.e., a 1-dBA decrease) to 3 dBA relative to Existing worst-hour traffic noise levels and by -2 (i.e., a 2-dBA decrease) to 2 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at five modeled receivers, M16.03, M16.05, M16.07, M16.09, and M16.12, representing a total of five receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration for noise abatement is required.

NAA 17 – West side of I-15 between Cajalco Road and El Cerrito Road

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include restaurants with outdoor dining (Activity Category E) and undeveloped lands that are not permitted (Activity Category G). There are 16 modeled receivers (M17.01 through M17.16) within NAA 17. The predicted worst-hour exterior traffic noise levels range from 48 to 69 dBA L_{eq}(h) for Existing, 50 to 71 dBA L_{eq}(h) for the Design-year No-Build, and 50 to 71 dBA L_{eq}(h) for the Design-year Build conditions. Design-year Build noise levels are predicted to increase by approximately 1 to 3 dBA relative to Existing worst-hour traffic noise levels and by 0 to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. Noise levels at five modeled receivers, M17.07, M17.08, M17.11, M17.13, and M17.15, representing a total of 11 receptors, would approach or exceed the NAC for Activity Category B; however, these receivers are shielded from I-15 by an approximately 12- to 14-foot-tall existing noise barrier along the mainline edge of shoulder. The existing barrier was evaluated in accordance with the guidelines outlined in the Protocol. The existing barrier meets the feasibility and reasonableness requirements for noise reduction; therefore, no modifications or additional abatement are considered. There are no additional predicted traffic noise impacts and no substantial increases are anticipated; therefore, noise abatement is not considered.

NAA 18 – East side of I-15 between Cajalco Road and El Cerrito Road

The land uses in this NAA include residential (Activity Category B). Other land uses include outdoor seating (Activity Category E) and retail facilities (Activity Category F). There are 22 modeled receivers (M18.01 through M18.22) within NAA 18. The predicted worst-hour exterior traffic noise levels range from 51 to 74 dBA L_{eq}(h) for Existing and 48 to 77 dBA L_{eq}(h) for the Design-year No-Build and Build conditions. Design-year Build noise levels are predicted to increase by approximately -11 (i.e., an 11-dBA decrease) to 4 dBA relative to Existing worst-hour traffic noise levels and by -1 (i.e., a 1-dBA decrease) to 1 dBA relative to Design-year No-Build worst-hour traffic noise levels. Large decreases in predicted noise levels under the Design-year condition relative to

the Existing condition are due to the construction of the permitted Latitude Business Park development, discussed above, which is anticipated to be constructed prior to the Design Year. Noise levels at six modeled receivers, M18.12, M18.15, M18.16, M18.17, M18.19, and M18.22, representing a total of 11 receptors, would approach or exceed the NAC for Activity Category B; therefore, consideration for noise abatement is required.

NAA 19 – West side of I-15 between El Cerrito Road and Ontario Avenue

The land uses in this NAA are primarily residential (Activity Category B). Other land uses include restaurants with outdoor use areas (Activity Category E) and retail (Activity Category F). There are 13 modeled receivers (M19.01 through M19.13) within NAA 19. The predicted worst-hour exterior traffic noise levels range from 52 to 75 dBA L_{eq}(h) for Existing and 53 to 77 dBA L_{eq}(h) for Design-year No-Build and Build conditions. Design-year Build noise levels are predicted to change by approximately -2 (i.e., a 2-dBA decrease) to 2 dBA relative to Existing noise levels and by -1 (i.e., a 1-dBA decrease) to 0 dBA relative to Design-year No-Build noise levels. Noise levels at five modeled receivers, M19.07, M19.08, M19.09, M19.10, and M19.13, representing a total of 18 receptors, would approach or exceed the NAC for Activity Categories B and E; therefore, consideration of noise abatement is required.

NAA 20 – East side of I-15 between El Cerrito Road and Ontario Avenue

The land uses in this NAA are primarily active sport areas (Activity Category C). Other land uses include residential (Activity Category B). There are 13 modeled receivers (M20.01 through M20.13) within NAA 20. The predicted worst-hour exterior traffic noise levels range from 61 to 66 dBA L_{eq}(h) for Existing and 62 to 67 dBA L_{eq}(h) for Design-year No-Build and Build conditions. Design-year Build noise levels are predicted to change by approximately 1 to 2 dBA relative to Existing noise levels. Design-year Build noise levels are not predicted to change relative to Design-year No-Build noise levels. Noise levels at six modeled receivers, M20.01, M20.07, M20.08, M20.09, M20.10, and M20.11, representing a total of six receptors, would approach or exceed the NAC for Activity Category C; therefore, consideration of noise abatement is required.

No-Build Alternative

The No-Build Alternative would maintain the existing lane configuration for I-15. Under the No-Build Alternative, no capital expenditures would be made to implement Express Lanes on I-15 within the Project limits. Additional land areas would not be affected, and existing and projected traffic congestion would continue to deteriorate.

No-Build traffic noise level results presented in Table 2.3.7-3 indicate that 82 modeled locations representative of 54 Activity Category B receptors, 20 modeled locations representative of Activity Category C receptors, and 8 modeled locations representative of Activity Category E receptors would approach or exceed the respective noise abatement criteria (67 dBA L_{eq}[h] for Categories B and C, and 72 dBA L_{eq}[h] for Category E). No abatement would be provided for impacts under the No-Build Alternative.

2.3.7.4 Avoidance, Minimization, and/or Abatement Measures

The following Standard Project Measure will be implemented during construction activities to minimize and/or avoid impacts related to noise.

N-1. The contractor will implement appropriate noise reduction measures to minimize temporary noise impacts, including changing the location of stationary construction equipment, turning off idling equipment during construction activities, rescheduling construction activities as necessary to be in conformance with applicable requirements, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources as necessary in conformance with applicable requirements. To further minimize construction noise impacts on adjacent sensitive land uses, the contractor will ensure that noise levels from contractor operations, between the hours of 9:00 p.m. and 6:00 a.m., do not exceed 86 dBA L_{max} at a distance of 50 feet from the job site, in accordance with Caltrans Standard Specifications Section 14-8.02 and Standard Special Provision 14-8.02.

In addition, noise abatement in the form of noise barriers (i.e., sound walls) was considered for each impacted receiver. Each noise barrier has been evaluated for acoustical feasibility based on achievable noise reduction (5 dB or more) at the outdoor frequent use areas of the representative receivers. For each noise barrier determined to be acoustically feasible, it was determined if the design goal of 7 dB insertion loss could be achieved, then reasonable cost allowances were calculated.

The Protocol defines the procedure for assessing the reasonableness of noise barriers from a cost perspective. An allowance is provided for each benefited receptor (i.e., each receptor that receives at least 5 dB of noise reduction from a noise barrier that also provides at least 7 dB of noise reduction for one or more benefited receptors). The current allowance is $146,000 per benefited receptor. Total allowance for each noise barrier is calculated by multiplying the cost allowance per receptor by the number of benefited receptors. If the estimated construction cost of a barrier is less than the total calculated allowance for the barrier, the barrier is considered reasonable from a cost perspective.

Table 2.3.7-3, above, includes the predicted future noise levels at receiver locations that would receive traffic noise reduction from the evaluated noise barriers. A range of possible noise barrier heights were evaluated with heights ranging from 6 to 20 feet for noise barriers at the ROW, 6 to 16 feet for noise barriers at any private property lines, and 6 to 14 feet for noise barriers at the edge of shoulder. The analysis also considered a “Design Barrier” for each noise barrier (or barrier system). Instead of a single continuous height, the Design Barrier can have different heights at different segments of the noise barrier to allow for an optimized wall design. The preliminary noise abatement decision for each acoustically feasible noise barrier that meets the design goal is discussed in the NSR (Caltrans 2024a) and NADR (Caltrans 2024b) and a summary is provided in Table 2.3.7-4. Additional discussion of the noise abatement measures is provided after the table. The locations of each evaluated noise barrier are shown on Figure 2.3.7-2 at the end of this section.

Table 2.3.7-4. Summary of Noise Barrier Abatement Key Information

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M01.04 M01.05	1	SW1142A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	--	--	--	--
			Yes	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M01.04 M01.05	1	SW1142B - ROW	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			Yes	No	No	14	1	$146,000	$1,122,300	Yes
			Yes	No	No	16	1	$146,000	$1,225,250	Yes
			Yes	No	No	18	2	$292,000	$1,290,500	Yes
			Yes	Yes	No	20	2	$292,000	$1,355,750	Yes
			Yes	Yes	No	Design	2	$292,000	$595,848	Yes
M02.01 M02.02	2	SW1109A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M02.01 M02.02	2	SW1109B - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	--	--	--	--
			Yes	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M02.01 M02.02 M02.03 M02.04	2	SW1109 A+B - Mainline & Ramp EOS	No	No	No	6	--	--	--	--
			Yes	No	No	8	1	$146,000	$1,183,520	Yes
			Yes	No	No	10	1	$146,000	$1,338,480	Yes
			Yes	Yes	No	12	1	$146,000	$1,470,560	Yes
			Yes	Yes	No	14	1	$146,000	$1,609,920	Yes
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$553,750	Yes
M02.07 M02.08	2	SW1137A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	--	--	--	--
			Yes	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M02.07 M02.08	2	SW1137B - Private Property	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			Yes	No	No	12	1	$146,000	$211,083	Yes
			Yes	No	No	14	1	$146,000	$238,986	Yes
			Yes	Yes	No	16	1	$146,000	$271,575	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$153,152	Yes
M02.09 M02.10 M02.11 M02.12	2	SW1151A - On Berm	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M02.09 M02.10 M02.11 M02.12	2	SW1151B - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M02.09 M02.10 M02.11 M02.12	2	SW1151C - Private Property	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			No	No	No	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M03.10	3	SW1204 - Private Property	No	No	No	6	--	--	--	--
			Yes	Yes	No	8	1	$146,000	$179,760	Yes
			Yes	Yes	No	10	1	$146,000	$206,160	Yes
			Yes	Yes	No	12	1	$146,000	$237,840	Yes
			Yes	Yes	No	14	1	$146,000	$269,280	Yes
			Yes	Yes	No	16	1	$146,000	$306,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$180,509	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.14	3	SW1226B - Between Mainline EOS and ROW	No	No	No	6	--	--	--	--
M03.15			No	No	No	8	--	--	--	--
M03.16			Yes	No	No	10	7	$1,022,000	$3,603,600	Yes
M03.17			Yes	Yes	No	12	9	$1,314,000	$3,959,200	Yes
M03.18			Yes	Yes	No	14	12	$1,752,000	$4,334,400	Yes
M03.19			--	--	--	16	--	--	--	--
M03.20			--	--	--	18	--	--	--	--
M03.21			--	--	--	20	--	--	--	--
M03.22			Yes	Yes	No	Design	12	$1,752,000	$4,160,200	Yes
M03.23										
M03.24										
M03.25										
M03.26										
M03.27										
M03.28										
M03.14	3	SW1208A - Between Mainline EOS and ROW	No	No	No	6	--	--	--	--
M03.15			No	No	No	8	--	--	--	--
M03.16			No	No	No	10	--	--	--	--
M03.17			Yes	No	No	12	--	--	--	--
M03.18			Yes	No	No	14	--	--	--	--
M03.19			--	--	--	16	--	--	--	--
M03.20			--	--	--	18	--	--	--	--
M03.21			--	--	--	20	--	--	--	--
M03.22			--	--	--	Design	--	--	--	--
M03.23	3	SW1214A - Between Mainline	No	No	No	6	--	--	--	--
M03.24			No	No	No	8	--	--	--	--
M03.25			Yes	No	No	10	7	$1,022,000	$3,217,500	Yes
M03.26			Yes	Yes	No	12	8	$1,168,000	$3,535,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.27		EOS and ROW	Yes	Yes	No	14	10	$1,460,000	$3,870,000	Yes
M03.28			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	10	$1,460,000	$1,480,153	Yes
M03.14	3	SW1226A - Mainline EOS	No	No	No	6	--	--	--	--
M03.15 M03.16			Yes	No	No	8	8	$1,168,000	$3,243,300	Yes
M03.17 M03.18			Yes	Yes	No	10	10	$1,460,000	$3,667,950	Yes
M03.19 M03.20			Yes	Yes	No	12	10	$1,460,000	$4,029,900	Yes
M03.21 M03.22			Yes	Yes	No	14	12	$1,752,000	$4,411,800	Yes
M03.23 M03.24			--	--	--	16	--	--	--	--
M03.25 M03.26			--	--	--	18	--	--	--	--
M03.27 M03.28			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	12	$1,752,000	$4,125,948	Yes
M03.14	3	SW1208C - Mainline EOS	No	No	No	6	--	--	--	--
M03.15			No	No	No	8	--	--	--	--
M03.16			Yes	No	No	10	--	--	--	--
M03.17			Yes	No	No	12	--	--	--	--
M03.18			Yes	No	No	14	--	--	--	--
M03.19			--	--	--	16	--	--	--	--
M03.20			--	--	--	18	--	--	--	--
M03.21			--	--	--	20	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.22			--	--	--	Design	--	--	--	--
M03.23	3	SW1214C - Mainline EOS	No	No	No	6	--	--	--	--
M03.24			Yes	No	No	8	5	$730,000	$2,845,000	Yes
M03.25			Yes	Yes	No	10	9	$1,314,000	$3,217,500	Yes
M03.26			Yes	Yes	No	12	9	$1,314,000	$3,535,000	Yes
M03.27			Yes	Yes	No	14	10	$1,460,000	$3,870,000	Yes
M03.28			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	10	$1,460,000	$3,345,948	Yes
M03.14	3	SW1226C - ROW	No	No	No	6	--	--	--	--
M03.15			No	No	No	8	--	--	--	--
M03.16			Yes	No	No	10	6	$876,000	$2,431,829	Yes
M03.17			Yes	Yes	No	12	7	$1,022,000	$2,805,521	Yes
M03.18			Yes	Yes	No	14	7	$1,022,000	$3,176,382	Yes
M03.19			Yes	Yes	No	16	7	$1,022,000	$3,609,525	Yes
M03.20			Yes	Yes	No	18	8	$1,168,000	$3,864,315	Yes
M03.21			Yes	Yes	No	20	11	$1,606,000	$4,119,105	Yes
M03.22			Yes	Yes	No	Design	11	$1,606,000	$2,416,633	Yes
M03.23										
M03.24										
M03.25										
M03.26										
M03.27										
M03.28										

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.14	3	SW1208D - ROW	No	No	No	6	--	--	--	--
M03.15			No	No	No	8	--	--	--	--
M03.16			No	No	No	10	--	--	--	--
M03.17			Yes	No	No	12	1	$146,000	$1,084,154	Yes
M03.18			Yes	No	No	14	1	$146,000	$1,227,468	Yes
M03.19			Yes	No	No	16	1	$146,000	$1,394,850	Yes
M03.20			Yes	No	No	18	2	$292,000	$1,493,310	Yes
M03.21			Yes	Yes	No	20	2	$292,000	$1,591,770	Yes
M03.22			Yes	Yes	No	Design	2	$292,000	$938,955	Yes
M03.23	3	SW1214D - ROW	No	No	No	6	--	--	--	--
M03.24			No	No	No	8	--	--	--	--
M03.25			Yes	No	No	10	6	$876,000	$1,946,494	Yes
M03.26			Yes	Yes	No	12	6	$876,000	$2,245,606	Yes
M03.27			Yes	Yes	No	14	6	$876,000	$2,542,452	Yes
M03.28			Yes	Yes	No	16	6	$876,000	$2,889,150	Yes
			Yes	Yes	No	18	7	$1,022,000	$3,093,090	Yes
			Yes	Yes	No	20	9	$1,314,000	$3,297,030	Yes
			Yes	Yes	No	Design	9	$1,314,000	$1,991,944	Yes
M03.14	3	SW1208B - Private Property	No	No	No	6	--	--	--	--
M03.15			Yes	No	No	8	1	$146,000	$280,875	Yes
M03.16			Yes	No	No	10	1	$146,000	$322,125	Yes
M03.17			Yes	Yes	No	12	1	$146,000	$371,625	Yes
			Yes	Yes	No	14	2	$292,000	$420,750	Yes
			Yes	Yes	No	16	2	$292,000	$478,125	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	2	$292,000	$329,121	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.18 M03.19 M03.20 M03.21 M03.22	3	SW1212 - Private Property	Yes	No	No	6	1	$146,000	$310,400	Yes
			Yes	No	No	8	1	$146,000	$363,265	Yes
			Yes	Yes	No	10	1	$146,000	$416,615	Yes
			Yes	Yes	No	12	1	$146,000	$480,635	Yes
			Yes	Yes	No	14	3	$146,000	$544,170	Yes
			Yes	Yes	No	16	3	$146,000	$618,375	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	3	$438,000	$530,620	Yes
M03.23 M03.24 M03.25 M03.26 M03.27	3	SW1214B - Private Property	Yes	Yes	No	6	8	$1,168,000	$1,358,720	Yes
			Yes	Yes	No	8	9	$1,314,000	$1,590,127	Yes
			Yes	Yes	No	10	9	$1,314,000	$1,823,657	Yes
			Yes	Yes	No	12	9	$1,314,000	$2,103,893	Yes
			Yes	Yes	No	14	9	$1,314,000	$2,382,006	Yes
			Yes	Yes	No	16	9	$1,314,000	$2,706,825	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	9	$1,314,000	$1,385,956	Yes
M03.28	3	SW1238 - Private Property	Yes	No	No	6	1	$146,000	$177,510	Yes
			Yes	No	No	8	1	$146,000	$219,705	Yes
			Yes	Yes	No	10	1	$146,000	$249,969	Yes
			Yes	Yes	No	12	1	$146,000	$288,381	Yes
			Yes	Yes	No	14	1	$146,000	$326,502	Yes
			Yes	Yes	No	16	1	$146,000	$371,025	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$232,093	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M03.16	3	SW1210 - Private property	Yes	No	No	6	1	$146,000	$188,000	Yes
			Yes	No	No	8	1	$146,000	$205,000	Yes
			Yes	Yes	No	10	1	$146,000	$220,000	Yes
			Yes	Yes	No	12	1	$146,000	$238,000	Yes
			Yes	Yes	No	14	1	$146,000	$254,000	Yes
			Yes	Yes	No	16	1	$146,000	$273,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$210,000	Yes
M08.14	8	SW1521A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M08.14	8	SW1521B - ROW	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			No	No	No	16	--	--	--	--
			No	No	No	18	--	--	--	--
			No	No	No	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M08.14	8	SW1521C - Private Property	--	--	--	6	--	--	--	--
			--	--	--	8	--	--	--	--
			Yes	No	No	10	1	$146,000	$330,715	Yes
			Yes	No	No	12	1	$146,000	$381,535	Yes
			Yes	No	No	14	1	$146,000	$431,970	Yes
			Yes	Yes	No	16	1	$146,000	$490,875	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$234,009	Yes
M08.16	8	SW1539A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			Yes	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M08.16	8	SW1539B - ROW	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			No	No	No	16	--	--	--	--
			No	No	No	18	--	--	--	--
			No	No	No	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M08.16	8	SW1539C - Private Property	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			Yes	No	No	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M12.02 M12.03 M12.04 M12.05 M12.06 M12.07 M12.08 M12.09 M12.10 M12.11 M12.11A	12	SW1689 - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M12.03	12	SW1691 - Trail Node	Yes	Yes	No	6	1	$146,000	$200,000	Yes
			Yes	Yes	No	8	1	$146,000	$210,000	Yes
			Yes	Yes	No	10	1	$146,000	$220,000	Yes
			Yes	Yes	No	12	1	$146,000	$233,000	Yes
			Yes	Yes	No	14	1	$146,000	$244,000	Yes
			Yes	Yes	No	16	1	$146,000	$258,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
			Yes	Yes	No	Design	1	$146,000	$200,000	Yes
M12.11A	12	SW1693 - Dog Park	Yes	Yes	No	6	1	$146,000	$261,000	Yes
			Yes	Yes	No	8	1	$146,000	$279,000	Yes
			Yes	Yes	No	10	1	$146,000	$296,000	Yes
			Yes	Yes	No	12	1	$146,000	$315,000	Yes
			Yes	Yes	No	14	1	$146,000	$335,000	Yes
			Yes	Yes	No	16	1	$146,000	$355,000	Yes
			--	--	--	18	--	--		
			--	--	--	20	--	--		
			Yes	Yes	No	Design	1	$146,000	$261,000	Yes
M12.50	12	SW1751A - ROW	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			No	No	No	16	--	--	--	--
			Yes	No	No	18	--	--	--	--
			Yes	No	No	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M12.50	12	SW1753B - Ramp EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
			--	--	--	Design	--	--	--	--
M12.50	12	SW1753A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M12.50	12	SW1753A + SW1753B - Combination Mainline & Ramp EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M12.50	12	SW1751B - Private Property	Yes	No	No	6	1	$146,000	$227,000	Yes
			Yes	Yes	No	8	1	$146,000	$241,000	Yes
			Yes	Yes	No	10	1	$146,000	$257,000	Yes
			Yes	Yes	No	12	1	$146,000	$274,000	Yes
			Yes	Yes	No	14	1	$146,000	$293,000	Yes
			Yes	Yes	No	16	1	$146,000	$311,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$230,000	Yes
M13.05 M13.06	13	SW1784A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M13.05 M13.06	13	SW1784B - Private Property	No	No	No	6	--	--	--	--
			Yes	Yes	No	8	1	$146,000	$227,088	Yes
			Yes	Yes	No	10	1	$146,000	$261,136	Yes
			Yes	Yes	No	12	1	$146,000	$301,264	Yes
			Yes	Yes	No	14	1	$146,000	$341,088	Yes
			Yes	Yes	No	16	1	$146,000	$387,600	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$227,088	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M13.21 M13.22 M13.23 M13.24 M13.25	13	SW1872 - ROW	--	--	--	6	--	--	--	--
			--	--	--	8	--	--	--	--
			--	--	--	10	--	--	--	--
			Yes	No	No	12	1	$146,000	$656,042	Yes
			Yes	Yes	No	14	2	$292,000	$742,764	Yes
			Yes	Yes	No	16	3	$438,000	$844,050	Yes
			Yes	Yes	No	18	3	$438,000	$903,630	Yes
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	3	$438,000	$440,812	Yes
M13.21 M13.22 M13.23 M13.24 M13.25	13	SW1874 - Ramp EOS	Yes	No	No	6	1	$146,000	$628,800	Yes
			Yes	No	No	8	1	$146,000	$682,800	Yes
			Yes	Yes	No	10	2	$292,000	$772,200	Yes
			Yes	Yes	No	12	2	$292,000	$848,400	Yes
			Yes	Yes	No	14	2	$292,000	$928,800	Yes
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	2	$292,000	$731,016	Yes
M13.21 M13.22 M13.23 M13.24 M13.25	13	SW1878 - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M13.21 M13.22 M13.23 M13.24 M13.25	13	SW1874 + SW1878 - Combination Mainline & Ramp EOS	Yes	No	No	6	1	$146,000	$1,283,800	Yes
			Yes	Yes	No	8	1	$146,000	$1,394,050	Yes
			Yes	Yes	No	10	3	$438,000	$1,576,575	Yes
			Yes	Yes	No	12	3	$438,000	$1,732,150	Yes
			Yes	Yes	No	14	3	$438,000	$1,896,300	Yes
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	3	$438,000	$546,058	Yes
M14.05 M14.06 M14.07 M14.08	14	SW1785 - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M14.05 M14.06 M14.07	14	SW1789 - Private Property	No	No	No	6	--	--	--	--
			Yes	Yes	No	8	1	$146,000	$305,000	Yes
			Yes	Yes	No	10	1	$146,000	$327,000	Yes
			Yes	Yes	No	12	1	$146,000	$353,000	Yes
			Yes	Yes	No	14	1	$146,000	$378,000	Yes
			Yes	Yes	No	16	1	$146,000	$410,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$305,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M14.38	14	SW1829A - Mainline EOS	No	No	No	6	--	--	--	--
M14.39			No	No	No	8	--	--	--	--
M14.40			No	No	No	10	--	--	--	--
M14.41			No	No	No	12	--	--	--	--
M14.42			Yes	No	No	14	--	--	--	--
M14.43			--	--	--	16	--	--	--	--
M14.44			--	--	--	18	--	--	--	--
M14.45			--	--	--	20	--	--	--	--
M14.46			--	--	--	Design	--	--	--	--
M14.47										
M14.47A										
M14.47B										
M14.48										
M14.49										
M14.50										
M14.50A										
M14.51										
M14.52										
M14.53										
M14.54										

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M14.38	14	SW1829B - ROW	No	No	No	6	--	--	--	--
M14.39			No	No	No	8	--	--	--	--
M14.40			No	No	No	10	--	--	--	--
M14.41			No	No	No	12	--	--	--	--
M14.42			No	No	No	14	--	--	--	--
M14.43			Yes	No	No	16	--	--	--	--
M14.44			Yes	No	No	18	--	--	--	--
M14.45			Yes	No	No	20	--	--	--	--
M14.46			--	--	--	Design	--	--	--	--
M14.47										
M14.47A										
M14.47B										
M14.48										
M14.49										
M14.50										
M14.50A										
M14.51										
M14.52										
M14.53										
M14.54										
M14.38	14	SW1823 - Private Property	No	No	No	6	--	--	--	--
M14.39			No	No	No	8	--	--	--	--
M14.40			Yes	No	No	10	2	$292,000	$1,780,000	Yes
M14.41			Yes	No	No	12	10	$1,460,000	$1,894,000	Yes
M14.42			Yes	Yes	No	14	10	$1,460,000	$2,013,000	Yes
M14.43			Yes	Yes	No	16	10	$1,460,000	$2,151,000	Yes
M14.44			--	--	--	18	--	--	--	--
M14.45			--	--	--	20	--	--	--	--
M14.46			Yes	Yes		Design	10	$1,460,000	$1,908,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M14.47 M14.47A M14.47B	14	SW1831 - Private Property	No	No	No	6	--	--	--	--
			Yes	No	No	8	1	$146,000	$690,000	Yes
			Yes	Yes	No	10	3	$438,000	$743,000	Yes
			Yes	Yes	No	12	3	$438,000	$807,000	Yes
			Yes	Yes	No	14	3	$438,000	$870,000	Yes
			Yes	Yes	No	16	3	$438,000	$945,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	3	$438,000	$736,000	Yes
M14.48 M14.49 M14.50 M14.50A	14	SW1833 - Private Property	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	1	$146,000	$574,000	Yes
			Yes	Yes	No	12	2	$292,000	$606,000	Yes
			Yes	Yes	No	14	4	$584,000	$638,000	Yes
			Yes	Yes	No	16	4	$584,000	$677,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	2	$292,000	$600,000	Yes
M14.51 M14.52 M14.53 M14.54	14	SW1839 - Private Property	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	1	$146,000	$1,398,000	Yes
			Yes	Yes	No	12	3	$438,000	$1,507,000	Yes
			Yes	Yes	No	14	3	$438,000	$1,614,000	Yes
			Yes	Yes	No	16	7	$1,022,000	$1,739,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	7	$1,022,000	$1,452,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M14.63	14	SW1875 - Private Property	Yes	Yes	No	6	1	$146,000	$340,000	Yes
			Yes	Yes	No	8	1	$146,000	$355,000	Yes
			Yes	Yes	No	10	1	$146,000	$370,000	Yes
			Yes	Yes	No	12	1	$146,000	$383,000	Yes
			Yes	Yes	No	14	1	$146,000	$399,000	Yes
			Yes	Yes	No	16	1	$146,000	$415,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$340,000	Yes
M14.63	14	SW1881 - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M14.63	14	SW1877 + SW1881 Combination Mainline & Ramp EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M14.63	14	SW1877 - Ramp EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M15.01–M15.11-2	15	SW1890A - Mainline EOS	No	No	No	6	--	--	--	--
M15.12-2–M15.16-4			No	No	No	8	--	--	--	--
M15.17-2–M15.23-2			No	No	No	10	--	--	--	--
M15.24-2–M15.33-3			No	No	No	12	--	--	--	--
M15.33-4–M15.40			No	No	No	14	--	--	--	--
M15.41-2–M15.48			--	--	--	16	--	--	--	--
M15.49-3–M15.59-2			--	--	--	18	--	--	--	--
M15.60–M15.62			--	--	--	20	--	--	--	--
M15.63-2–M15.64			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M15.01–M15.11-2	15	SW1890B - Ramp EOS	No	No	No	6	--	--	--	--
M15.12-2–M15.16-4			No	No	No	8	--	--	--	--
M15.17-2–M15.23-2			No	No	No	10	--	--	--	--
M15.24-2–M15.33-3			Yes	No	No	12	--	--	--	--
M15.33-4–M15.40			Yes	No	No	14	--	--	--	--
M15.41-2–M15.48			--	--	--	16	--	--	--	--
M15.49-3–M15.59-2			--	--	--	18	--	--	--	--
M15.60–M15.62			--	--	--	20	--	--	--	--
M15.63-2–M15.64			--	--	--	Design	--	--	--	--
	15	SW1890C - ROW	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			Yes	No	No	10	--	--	--	--
			Yes	No	No	12	--	--	--	--
			Yes	No	No	14	--	--	--	--
			Yes	No	No	16	--	--	--	--
			Yes	No	No	18	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M15.01–M15.11-2			Yes	No	No	20	--	--	--	--
M15.12-2–M15.16-4 M15.17-2–M15.23-2 M15.24-2–M15.33-3 M15.33-4–M15.40 M15.41-2–M15.48 M15.49-3–M15.59-2 M15.60–M15.62 M15.63-2–M15.64			--	--	--	Design	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M15.01–M15.11-2	15	SW1890 A+B Combination Mainline & Ramp EOS	No	No	No	6	--	--	--	--
M15.12-2–M15.16-4			No	No	No	8	--	--	--	--
M15.17-2–M15.23-2			Yes	No	No	10	12	$1,752,000	$5,171,000	Yes
M15.24-2–M15.33-3			Yes	Yes	Yes	12	45	$6,570,000	$5,679,000	No
M15.33-4–M15.40			Yes	Yes	Yes	14	65	$9,490,000	$6,126,000	No
M15.41-2–M15.48			--	--	--	16	--	--	--	--
M15.49-3–M15.59-2			--	--	--	18	--	--	--	--
M15.60–M15.62			--	--	--	20	--	--	--	--
M15.63-2–M15.64			Yes	Yes	Yes	Design	65	$9,490,000	$6,039,000	No
	15	SW1890 A+C Combination Mainline EOS & ROW	No	No	No	6	--	--	--	--
			Yes	No	No	8	7	$1,022,000	$4,622,000	Yes
			Yes	No	No	10	31	$4,526,000	$5,120,000	Yes
			Yes	Yes	Yes	12	70	$10,220,000	$5,588,000	No
			Yes	Yes	Yes	14	85	$12,410,000	$6,071,000	No
			Yes	Yes	Yes	16	92	$13,432,000	$6,324,000	No
			Yes	Yes	Yes	18	98	$14,308,000	$6,475,000	No

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M15.01–M15.11-2			Yes	Yes	Yes	20	109	$15,914,000	$6,626,000	No
M15.12-2–M15.16-4 M15.17-2–M15.23-2 M15.24-2–M15.33-3 M15.33-4–M15.40 M15.41-2–M15.48 M15.49-3–M15.59-2 M15.60–M15.62 M15.63-2–M15.64			Yes	Yes	Yes	Design	92	$13,432,000	$6,159,000	No
M16.03	16	SW1911 - Mainline EOS	No	No	No	6	--	--	--	--
M16.04			No	No	No	8	--	--	--	--
M16.05			No	No	No	10	--	--	--	--
M16.06			Yes	No	No	12	1	$146,000	$1,644,482	Yes
M16.07			Yes	Yes	No	14	1	$146,000	$1,800,324	Yes
M16.08			--	--	--	16	--	--	--	--
M16.09			--	--	--	18	--	--	--	--
M16.10			--	--	--	20	--	--	--	--
M16.11			Yes	Yes	No	Design	1	$146,000	$724,632	Yes
M16.12 M16.13										
M16.03	16		--	--	--	6	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M16.04		SW1903 - ROW	--	--	--	8	--	--	--	--
M16.05			--	--	--	10	--	--	--	--
M16.06			--	--	--	12	--	--	--	--
M16.07			--	--	--	14	--	--	--	--
M16.08			Yes	No	No	16	1	$146,000	$1,522,350	Yes
M16.09			Yes	No	No	18	2	$292,000	$1,629,810	Yes
M16.10			Yes	Yes	No	20	2	$292,000	$1,737,270	Yes
M16.11			Yes	Yes	No	Design	2	$292,000	$978,402	Yes
M16.12										
M16.13										
M16.03	16	SW1895 - Private Property	Yes	Yes	No	6	1	$146,000	$369,000	Yes
			Yes	Yes	No	8	1	$146,000	$378,000	Yes
			Yes	Yes	No	10	1	$146,000	$385,000	Yes
			Yes	Yes	No	12	1	$146,000	$395,000	Yes
			Yes	Yes	No	14	1	$146,000	$406,000	Yes
			Yes	Yes	No	16	1	$146,000	$417,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$369,000	Yes
M16.05	16	SW1899 - Private Property	Yes	Yes	No	6	1	$146,000	$345,000	Yes
			Yes	Yes	No	8	1	$146,000	$352,000	Yes
			Yes	Yes	No	10	1	$146,000	$358,000	Yes
			Yes	Yes	No	12	1	$146,000	$366,000	Yes
			Yes	Yes	No	14	1	$146,000	$374,000	Yes
			Yes	Yes	No	16	1	$146,000	$382,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$345,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M16.07	16	SW1905 - Private Property	No	No	No	6	--	--	--	--
			Yes	Yes	No	8	1	$146,000	$317,000	Yes
			Yes	Yes	No	10	1	$146,000	$325,000	Yes
			Yes	Yes	No	12	1	$146,000	$332,000	Yes
			Yes	Yes	No	14	1	$146,000	$340,000	Yes
			Yes	Yes	No	16	1	$146,000	$348,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$315,000	Yes
M16.09	16	SW1907 - Private Property	Yes	No	No	6	1	$146,000	$370,000	Yes
			Yes	Yes	No	8	1	$146,000	$381,000	Yes
			Yes	Yes	No	10	1	$146,000	$391,000	Yes
			Yes	Yes	No	12	1	$146,000	$403,000	Yes
			Yes	Yes	No	14	1	$146,000	$416,000	Yes
			Yes	Yes	No	16	1	$146,000	$430,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$372,000	Yes
M16.12	16	SW1913 - Private Property	Yes	No	No	6	1	$146,000	$1,086,000	Yes
			Yes	Yes	No	8	1	$146,000	$1,106,000	Yes
			Yes	Yes	No	10	1	$146,000	$1,127,000	Yes
			Yes	Yes	No	12	1	$146,000	$1,148,000	Yes
			Yes	Yes	No	14	1	$146,000	$1,172,000	Yes
			Yes	Yes	No	16	1	$146,000	$1,194,000	Yes
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	1	$146,000	$1,088,000	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M16.07	16	SW1905A - Alt. Location	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			No	No	No	16	--	--	--	--
			No	No	No	18	--	--	--	--
			No	No	No	20	--	--	--	--
			No	No	No	Design	--	--	--	--
M18.11 M18.12 M18.13 M18.14 M18.15 M18.16 M18.17 M18.18 M18.19 M18.20 M18.21 M18.22	18	SW1996A - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--
			--	--	--	20	--	--	--	--
			--	--	--	Design	--	--	--	--
M18.11 M18.12 M18.13 M18.14 M18.15 M18.16 M18.17	18	SW1996B - Ramp EOS	Yes	No	No	6	2	$292,000	$1,583,528	Yes
			Yes	No	No	8	6	$876,000	$1,719,518	Yes
			Yes	No	No	10	6	$876,000	$1,944,657	Yes
			Yes	Yes	No	12	8	$1,168,000	$2,136,554	Yes
			Yes	Yes	No	14	13	$1,898,000	$2,339,028	Yes
			--	--	--	16	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M18.18			--	--	--	18	--	--	--	--
M18.19			--	--	--	20	--	--	--	--
M18.20 M18.21 M18.22			Yes	Yes	No	Design	13	$1,898,000	$2,315,385	Yes
M18.11	18	SW1996C - ROW	No	No	No	6	--	--	--	--
M18.12			No	No	No	8	--	--	--	--
M18.13			No	No	No	10	--	--	--	--
M18.14			Yes	No	No	12	1	$146,000	$1,269,471	Yes
M18.15			Yes	No	No	14	3	$438,000	$1,437,282	Yes
M18.16			Yes	Yes	No	16	6	$876,000	$1,633,275	Yes
M18.17			Yes	Yes	No	18	9	$1,314,000	$1,748,565	Yes
M18.18			Yes	Yes	No	20	9	$1,314,000	$1,863,855	Yes
M18.19 M18.20 M18.21 M18.22			Yes	Yes	No	Design	9	$1,314,000	$1,708.386	Yes
M18.11	18	SW1996 A+B - Combination Mainline & Ramp EOS	Yes	No	No	6	3	$438,000	$2,302,174	Yes
M18.12			Yes	Yes	No	8	8	$1,168,000	$2,302,174	Yes
M18.13			Yes	Yes	No	10	10	$1,460,000	$2,603,601	Yes
M18.14			Yes	Yes	No	12	11	$1,606,000	$2,860,522	Yes
M18.15			Yes	Yes	No	14	14	$2,044,000	$3,131,604	Yes
M18.16			--	--	--	16	--	--	--	--
M18.17			--	--	--	18	--	--	--	--
M18.18			--	--	--	20	--	--	--	--
M18.19 M18.20 M18.21 M18.22			Yes	Yes	No	Design	14	$2,044,000	$3,061,447	Yes

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M19.01	19	SW2007A - Ramp EOS	Yes	No	No	6	1	$146,000	$1,225,000	Yes
M19.02			Yes	Yes	No	8	2	$292,000	$1,300,000	Yes
M19.03			Yes	Yes	No	10	5	$730,000	$1,425,000	Yes
M19.04			Yes	Yes	No	12	5	$730,000	$1,532,000	Yes
M19.05			Yes	Yes	No	14	5	$730,000	$1,644,000	Yes
M19.06			--	--	--	16	--	--	--	--
M19.07			--	--	--	18	--	--	--	--
M19.08			--	--	--	20	--	--	--	--
M19.09			Yes	Yes	No	Design	5	$730,000	$1,374,000	Yes
M19.10										
M19.11										
M19.01	19	SW2007B - ROW	No	No	No	6	--	--	--	--
M19.02			No	No	No	8	--	--	--	--
M19.03			No	No	No	10	--	--	--	--
M19.04			No	No	No	12	--	--	--	--
M19.05			Yes	No	No	14	1	$146,000	$916,416	Yes
M19.06			Yes	Yes	No	16	2	$292,000	$1,000,480	Yes
M19.07			Yes	Yes	No	18	5	$730,000	$1,053,760	Yes
M19.08			Yes	Yes	No	20	5	$730,000	$1,107,040	Yes
M19.09			Yes	Yes	No	Design	5	$730,000	$1,010,532	Yes
M19.10										
M19.11										
	19	SW2001 - Mainline EOS	No	No	No	6	--	--	--	--
			No	No	No	8	--	--	--	--
			No	No	No	10	--	--	--	--
			No	No	No	12	--	--	--	--
			No	No	No	14	--	--	--	--
			--	--	--	16	--	--	--	--
			--	--	--	18	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M19.01			--	--	--	20	--	--	--	--
M19.02 M19.03 M19.04 M19.05 M19.06 M19.07 M19.08 M19.09 M19.10 M19.11			--	--	--	Design	--	--	--	--
M19.01	19	SW2001 + SW2007A - Combination Mainline & Ramp EOS	Yes	No	No	6	1	$146,000	$1,015,096	Yes
M19.02			Yes	Yes	No	8	2	$292,000	$1,015,096	Yes
M19.03			Yes	Yes	No	10	5	$730,000	$1,148,004	Yes
M19.04			Yes	Yes	No	12	5	$730,000	$1,261,288	Yes
M19.05			Yes	Yes	No	14	5	$730,000	$1,380,816	Yes
M19.06			--	--	--	16	--	--	--	--
M19.07			--	--	--	18	--	--	--	--
M19.08			--	--	--	20	--	--	--	--
M19.09			Yes	Yes	No	Design	5	$730,000	$1,070,143	Yes
M19.10										
M19.11										
M19.08	19	SW2007C - Private Property	Yes	No	No	6	3	$438,000	$1,673,000	Yes
M19.10			Yes	No	No	8	3	$438,000	$1,757,000	Yes
			Yes	Yes	No	10	6	$876,000	$1,843,000	Yes
			Yes	Yes	No	12	6	$876,000	$1,945,000	Yes
			Yes	Yes	No	14	6	$876,000	$2,048,000	Yes
			Yes	Yes	No	16	6	$876,000	$2,166,000	Yes
			--	--	--	18	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
			--	--	--	20	--	--	--	--
			Yes	Yes	No	Design	6	$876,000	$1,785,000	
M20.01	20	SW1998 - Mainline EOS	No	No	No	6	--	--	--	--
M20.02			No	No	No	8	--	--	--	--
M20.03			No	No	No	10	--	--	--	--
M20.04			No	No	No	12	--	--	--	--
M20.05			No	No	No	14	--	--	--	--
M20.06			--	--	--	16	--	--	--	--
M20.07			--	--	--	18	--	--	--	--
M20.08			--	--	--	20	--	--	--	--
M20.09			--	--	--	Design	--	--	--	--
M20.10										
M20.11										
M20.01	20	SW2006 - Ramp EOS	No	No	No	6	--	--	--	--
M20.02			No	No	No	8	--	--	--	--
M20.03			No	No	No	10	--	--	--	--
M20.04			Yes	No	No	12	--	--	--	--
M20.05			Yes	No	No	14	--	--	--	--
M20.06			--	--	--	16	--	--	--	--
M20.07			--	--	--	18	--	--	--	--
M20.08			--	--	--	20	--	--	--	--
M20.09			--	--	--	Design	--	--	--	--
M20.10										
M20.11										
M20.01	20	SW1998 + SW2006 - Combination Mainline & Ramp EOS	No	No	No	6	--	--	--	--
M20.02			No	No	No	8	--	--	--	--
M20.03			No	No	No	10	--	--	--	--
M20.04			Yes	No	No	12	--	--	--	--

Receiver ID	Area	Barrier ID	Noise Abatement							
			Feasible	Design Goal Met	Reasonable	Barrier Height (Feet)	Number of Benefited Receptors	Total Reasonableness Allowance	Estimated Construction Cost	Construction Cost Exceeds Allowance
M20.05			Yes	No	No	14	--	--	--	--
M20.06			--	--	--	16	--	--	--	--
M20.07			--	--	--	18	--	--	--	--
M20.08			--	--	--	20	--	--	--	--
M20.09			--	--	--	Design	--	--	--	--
M20.10										
M20.11										

EOS = edge of shoulder

Considered Noise Abatement Measures

Based on the studies completed to date, Caltrans considered the following noise abatement measures, and intends to incorporate noise abatement in the form of noise barriers that were found to be both feasible and reasonable.

NAA 1 – East Side of I-15 between Main Street and SR-74 (Central Avenue)

Within NAA 1, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 60 to 76 dBA L_{eq}(h). One receiver, representing one receptor, is predicted to approach or exceed the NAC for Activity Category E. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for two barrier options at the mainline edge of shoulder and at the ROW. One barrier, SW1142A, was found to be feasible but failed to meet the design goal and was not considered as an abatement option. One barrier, detailed below, was found to be feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1142B was evaluated along the ROW between northbound I-15 and Camino Del Norte, from Station 1139+00 to 1146+25 with a total length of approximately 725 feet and modeled in 2-foot increments from 6 to 20 feet.

SW1142B would provide acoustically feasible traffic noise abatement for up to two benefited receptors at barrier heights of 14 to 20 feet, and a barrier height of 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1142B is not recommended as abatement as part of the Project.

NAA 2 – West Side of I-15 between Main Street and Central Avenue (SR-74)

Within NAA 2, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 59 to 70 dBA L_{eq}(h). Four receivers, representing five receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for eight barrier options at the mainline edge of shoulder, off-ramp edge of shoulder, ROW, or private property. One barrier, SW1142A, was found to be feasible but failed to meet the design goal and was not considered as an abatement option. Four noise barriers, SW1109A, SW 1151A, SW1151B, and SW1151C, were found not to be acoustically feasible and two barriers, SW1109B and SW1137A, were found to be acoustically feasible but failed to meet the design goal. These noise barriers were not considered as an abatement option. One barrier and one barrier system, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier System SW1109A + SW1109B was evaluated with the two noise barriers in combination. SW1109A was evaluated along the southbound I-15 edge of shoulder, from Station 1108+00 to 1112+00 with a total length of approximately 407 feet and SW1109B was evaluated along the southbound I-15 Main Street Off-Ramp edge of

shoulder, from Station 1106+69 to 1113+00 with a total length of approximately 633 feet. Both were modeled in 2-foot increments from 6 feet to 14 feet.

Noise barrier system SW1109A + SW1109B would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 8 to 14 feet and combined barrier heights of 12 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier system at constant heights of 12 or 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, Noise Barrier system SW1109A + SW1109B is not recommended as abatement as part of the Project.

Noise Barrier SW1137B was evaluated on private property in place of an existing fence, approximately from Station 1139+50 to 1141+64 with a length of approximately 213 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1137B would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 12 to 16 feet, and a barrier height of 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1137B is not recommended as abatement as part of the Project.

NAA 3 – East Side of I-15 between SR-74 (Central Avenue) and Nichols Road

Within NAA 3, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 48 to 75 dBA L_{eq}(h). Ten receivers, representing ten receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for 15 barrier options at the mainline edge of shoulder, ROW, or private property. Two barriers, SW1208A and SW1208C, were found to be acoustically feasible but failed to meet the design goal. These noise barriers were not considered as an abatement option. Thirteen barriers, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1204 was evaluated on private property in place of an existing fence, from Station 1202+50 to 1204+50 with a total length of approximately 240 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1204 would provide acoustically feasible traffic noise abatement for one benefited receptor and would meet the noise reduction design goal of 7 dBA at barrier heights of 8 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1204 is not recommended as abatement as part of the Project.

Noise Barrier SW1208B was evaluated on private property in place of an existing block wall, from Station 1209+00 to 1211+00 with a total length of approximately 375 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1208B would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 8 to 16 feet, and barrier heights of 12 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1208B is not recommended as abatement as part of the Project.

Noise Barrier SW1208D was evaluated along the ROW between northbound I-15 and Dexter Avenue, from Station 1208+25 to 1219+00 with a total length of approximately 1,094 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1208D would provide acoustically feasible traffic noise abatement for up to two benefited receptors at barrier heights of 12 to 20 feet and a barrier height of 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1208D is not recommended as abatement as part of the Project.

Noise Barrier SW1210 was evaluated on private property in place of an existing fence, from Station 1209+50 to 1210+50 with a total length of approximately 135 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1210 would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 10 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1210 is not recommended as abatement as part of the Project.

Noise Barrier SW1212 was evaluated on private property in place of an existing block wall, from Station 1212+00 to 1215+35 with a total length of approximately 485 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1212 would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 12 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1212 is not recommended as abatement as part of the Project.

Noise Barrier SW1214A was evaluated at an alternative location along the northbound I-15 edge of shoulder, from Station 1214+00 to 1239+00 with a total length of approximately 2,500 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1214A would provide acoustically feasible traffic noise abatement for up to ten benefited receptors at barrier heights of 10 to 14 feet, and barrier heights of 12 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 14 feet nor the Design

Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1214A is not recommended as abatement as part of the Project.

Noise Barrier SW1214B was evaluated on Temescal Valley High School private property in place of an existing fence, from Station 1214+27 to 1235+00 with a total length of approximately 2,123 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1214B would provide acoustically feasible traffic noise abatement for up to 15 benefited receptors and meet the noise reduction design goal of 7 dBA at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1214B is not recommended as abatement as part of the Project.

Noise Barrier SW1214C was evaluated along the northbound I-15 edge of shoulder, from Station 1214+00 to 1239+00 with a total length of approximately 2,500 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW1214C would provide acoustically feasible traffic noise abatement for up to ten benefited receptors at barrier heights of 8 to 14 feet, and barrier heights of 10 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1214C is not recommended as abatement as part of the Project.

Noise Barrier SW1214D was evaluated along the ROW between northbound I-15 and Dexter Avenue, from Station 1214+00 to 1238+75 with a total length of approximately 2,467 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1214D would provide acoustically feasible traffic noise abatement for up to nine benefited receptors at barrier heights of 10 to 20 feet, and barrier heights of 12 to 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1214D is not recommended as abatement as part of the Project.

Noise Barrier SW1226A was evaluated along the northbound I-15 edge of shoulder, from Station 1210+50 to 1239+00 with a total length of approximately 2,850 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1226A would provide acoustically feasible traffic noise abatement for up to 12 benefited receptors at barrier heights of 8 to 14 feet, and barrier heights of 10 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1226A is not recommended as abatement as part of the Project.

Noise Barrier SW1226B was evaluated at an alternative location along the northbound I-15 edge of shoulder, from Station 1211+00 to 1239+00 with a total length of approximately 2,800 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW1226B would provide acoustically feasible traffic noise abatement for up to 12 benefited receptors at barrier heights of 10 to 14 feet, and barrier heights of 12 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1226B is not recommended as abatement as part of the Project.

Noise Barrier SW1226C was evaluated along the ROW between northbound I-15 and Dexter Avenue, from Station 1210+50 to 1238+75 with a total length of approximately 2,831 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1226C would provide acoustically feasible traffic noise abatement for up to 11 benefited receptors at barrier heights of 10 to 20 feet, and barrier heights of 12 to 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1226C is not recommended as abatement as part of the Project.

Noise Barrier SW1238 was evaluated on private property in place of a fence line being built as part of the Nichols Ranch Specific Plan, from Station 1236+00 to 1238+00 with a total length of approximately 291 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1238 would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 10 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1238 is not recommended as abatement as part of the Project.

NAA 8 – West Side of I-15 between Lake Street and Indian Truck Trail

Within NAA 8, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 52 to 77 dBA L_{eq}(h). Two receivers, representing two receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for six barrier options at the mainline edge of shoulder, ROW, or private property. Two barriers, SW1521B and 1539B, were found not to be acoustically feasible. Three barriers, SW1521A, 1539A, and 1539C, were found to be acoustically feasible but failed to meet the design goal. These noise barriers were not considered as an abatement option. One barrier, detailed below, was found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1521C was evaluated on private property in place of an existing fence, from Station 1522+25 to 1519+75 with a total length of approximately 385 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1521C would provide acoustically feasible traffic noise abatement for one impacted receiver at barrier heights of 10 to 16 feet, and a barrier height of 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1521C is not recommended as abatement as part of the Project.

NAA 12 – West Side of I-15 between Temescal Canyon Road (Underpass) and Temescal Canyon Road

Within NAA 12, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 42 to 76 dBA L_{eq}(h). Three receivers, representing three receptors, are predicted to approach or exceed the NAC for Activity Categories C and E. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for eight barrier options at the mainline edge of shoulder, on-ramp edge of shoulder, ROW, or private property. Two noise barriers and one noise barrier system, SW1753A, SW1753B, and Noise Barrier System SW1753A + SW1753B, were found not to be acoustically feasible. Two barriers, SW1689 and SW1751A, were found to be acoustically feasible but failed to meet the design goal. These noise barriers were not considered as an abatement option. Three barriers, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1691 was evaluated on private property near the edge of a retaining structure being built as part of the Serrano Single-Family Home Community, from Station 1690+25 to 1690+75 with a total length of approximately 75 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1691 would provide acoustically feasible traffic noise abatement at one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1691 is not recommended as abatement as part of the Project.

Noise Barrier SW1693 was evaluated on private property in place of a fence being built as part of the Serrano Single-Family Home Community, from Station 1693+00 to 1691+75 with a total length of approximately 150 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1693 would provide acoustically feasible traffic noise abatement at one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost

perspective. Based on studies completed to date, SW1693 is not recommended as abatement as part of the Project.

Noise Barrier SW1751B was evaluated on private property in place of an existing fence, from Station 1751+50 to 1751+50 with a total length of approximately 113 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1751B would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 8 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, 1751B is not recommended as abatement as part of the Project.

NAA 13 – East side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive

Within NAA 13, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 55 to 76 dBA L_{eq}(h). Three receivers, representing three receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for six barrier options at the mainline edge of shoulder, off-ramp edge of shoulder, ROW, or private property. Two noise barriers, SW1784A and SW1878 were found not to be acoustically feasible. These noise barriers were not considered as an abatement option. Three barriers and one noise barrier system, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1784B was evaluated on private property in place of an existing fence, from Station 1780+00 to 1784+00 with a total length of approximately 304 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1784B would provide acoustically feasible traffic noise abatement at one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 8 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1784B is not recommended as abatement as part of the Project.

Noise Barrier SW1872 was evaluated along the ROW between northbound I-15 and Temescal Canyon Road, from Station 1869+44 to 1876+00 with a total length of approximately 662 feet and modeled in 2-foot increments from 6 feet to 18 feet.

SW1872 would provide acoustically feasible traffic noise abatement for up to three benefited receptors at barrier heights of 12 to 18 feet and barrier heights of 14 to 18 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 14 to 18 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1872 is not recommended as abatement as part of the Project.

Noise Barrier SW1874 was evaluated along the northbound I-15 Dos Lagos Drive Off-Ramp, from Station 1869+00 to 1875+00 with a total length of approximately 600 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW1874 would provide acoustically feasible traffic noise abatement for up to two benefited receivers at barrier heights of 6 to 14 feet and barrier heights of 10 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1874 is not recommended as abatement as part of the Project.

Noise Barrier System SW1874 + SW1878 was evaluated with the two noise barriers in combination to provide benefit to as many impacted receptors as possible and to maximize the overall number of benefited receptors (impacted and non-impacted). SW1874 was evaluated along the northbound I-15 Dos Lagos Drive Off-Ramp, from Station 1869+00 to 1876+00 with a total length of approximately 700 feet. SW1878 was evaluated along the northbound I-15 edge of shoulder, from Station 1873+75 to 1878+00 with a total length of approximately 525 feet. Both were modeled in 2-foot increments from 6 feet to 14 feet.

Noise barrier system SW1874 + SW1878 would provide acoustically feasible traffic noise abatement for up to three benefited receptors at barrier heights of 6 to 14 feet and barrier heights of 8 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, noise barrier system SW1874 + SW1878 is not recommended as abatement as part of the Project.

NAA 14 – West Side of I-15 between Temescal Canyon Road and Weirick Road/Dos Lagos Drive

Within NAA 14, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 42 to 76 dBA L_{eq}(h). Eleven receivers, representing seventeen receptors, are predicted to approach or exceed the NAC for Activity Categories B and C. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for 12 barrier options at either the mainline edge of shoulder, off-ramp edge of shoulder, ROW, or private property. Two noise barriers and one noise barrier system, SW1877, SW1881, and Noise Barrier System SW1877 + SW1881, were found not to be acoustically feasible. Three barriers, SW1785, SW1829A, and SW1829B, were found to be acoustically feasible but failed to meet the design goal. These noise barriers were not considered as an abatement option. Six barriers, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1789 was evaluated on private property in place of an existing residential fence line and a block wall used to contain utilities, from Station 1789+00 to 1788+00 with a total length of approximately 164 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1789 would provide acoustically feasible traffic noise abatement for one benefited receptor and meet the noise reduction design goal of 7 dBA, at barrier heights of 8 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1789 is not recommended as abatement as part of the Project.

Noise Barrier SW1823 was evaluated on private property in place of an existing block wall, from Station 1828+00 to 1821+00 with a total length of approximately 743 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1823 would provide acoustically feasible traffic noise abatement for up to ten benefited receptors at barrier heights of 10 to 16 feet, and barrier heights of 14 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 14 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1823 is not recommended as abatement as part of the Project.

Noise Barrier SW1831 was evaluated on private property in place of an existing block wall, from Station 1832+00 to 1829+00 with a total length of approximately 399 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1831 would provide acoustically feasible traffic noise abatement for up to three benefited receptors at barrier heights of 8 to 16 feet, and barrier heights of 10 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1831 is not recommended as abatement as part of the Project.

Noise Barrier SW1833 was evaluated on private property in place of an existing block wall, from Station 1834+00 to 1832+00 with a total length of approximately 205 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1833 would provide acoustically feasible traffic noise abatement for up to four benefited receptors at barrier heights of 10 to 16 feet, and barrier heights of 12 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1833 is not recommended as abatement as part of the Project.

Noise Barrier SW1839 was evaluated on private property in place of an existing block wall, from Station 1841+00 to 1835+00 with a total length of approximately 674 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1839 would provide acoustically feasible traffic noise abatement for up to seven benefited receptors at barrier heights of 10 to 16 feet, and barrier heights of 12 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 16 feet nor the Design

Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1839 is not recommended as abatement as part of the Project.

Noise Barrier SW1875 was evaluated on private property in place of an existing fence on an outdoor dining deck, from Station 1875+75 to 1875+00 with a total length of approximately 120 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1875 would provide acoustically feasible traffic noise abatement for one benefited receptor and meet the noise reduction design goal of 7 dBA, at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1875 is not recommended as abatement as part of the Project.

NAA 15 – East Side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road

Within NAA 15, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 47 to 69 dBA L_{eq}(h). Nine receivers, representing seventeen receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for five barrier options at the mainline edge of shoulder, on-ramp edge of shoulder, or ROW. Three barriers, SW1890A, SW1890B, and SW1890C, were found not to be acoustically feasible. These noise barriers were not considered as an abatement option. Two noise barrier systems were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier System SW1890A + SW1890B was evaluated with the two noise barriers in combination to provide benefit to as many impacted receptors as possible and to maximize the overall number of benefited receptors (impacted and non-impacted). SW1890A was evaluated along the northbound I-15 edge of shoulder, from Station 1874+50 to 1890+00 with a total length of approximately 1,550 feet. SW1890B was evaluated along the northbound I-15 Weirick Road On-Ramp edge of shoulder, from Station 1882+50 to 1894+25 with a total length of approximately 1,194 feet. Both were modeled in 2-foot increments from 6 feet to 14 feet. The location of noise barrier system SW1890A + SW1890B is shown on Sheets 33d and 34d on Figure 2.3.7-2 at the end of this section.

Noise barrier system SW1890A + SW1890B would provide acoustically feasible traffic noise abatement for up to 65 benefited receptors at barrier heights of 10 to 14 feet, and barrier heights of 12 to 14 feet would meet the noise reduction design goal of 7 dBA. As summarized in Table 2.3.7-4, the current estimated construction costs for noise barrier system SW1890A + SW1890B at constant heights of 12 and 14 feet, as well as the Design Barrier option, were less than the total reasonable cost allowance. Therefore, these noise barrier options are considered reasonable to construct.

The barrier system evaluated at a constant height of 14 feet would benefit 65 receptors and is estimated to cost $6,126,000. The Design Barrier, which consists of segments at variable heights between 6 and 14 feet, would benefit the same number of receptors

and is estimated to cost $6,039,000. Because the Design Barrier costs less, the optimized Design Barrier for noise barrier system SW1890A + SW1890B is recommended.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of noise barrier system SW1890A + SW1890B (Design Barrier) at the northbound I-15 edge of shoulder and the northbound I-15 Weirick Road On-Ramp edge of shoulder, with respective lengths of 1,550 feet and 1,194 feet, and heights ranging from 6 to 14 feet. Calculations based on preliminary design data show that the Design Barrier system will reduce noise levels by 5 to 7 dBA L_{eq}(h) for 65 benefited receptors at a cost of $6,039,000. This abatement measure may change based on input received from the public. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the Project design.

Noise Barrier System SW1890A + SW1890C was evaluated with the two noise barriers in combination to provide benefit to as many impacted receptors as possible and to maximize the overall number of benefited receptors (impacted and non-impacted). SW1890A was evaluated along the northbound I-15 edge of shoulder, from Station 1874+00 to 1890+00 with a total length of approximately 1,600 feet and modeled in 2-foot increments from 6 feet to 14 feet. SW1890C was evaluated along the ROW, east of the northbound I-15 Weirick Road On-Ramp edge of shoulder, from Station 1882+00 to 1895+78 with a total length of approximately 1,388 feet and modeled in 2-foot increments from 6 feet to 20 feet. The location of noise barrier system SW1890A + SW1890C is shown on Sheets 33e and 34e on Figure 2.3.7-2 at the end of this section.

Noise barrier system SW1890A + SW1890C would provide acoustically feasible traffic noise abatement for up to 126 benefited receptors at barrier heights of 8 to 14 feet for SW1890A and 8 to 20 feet for SW1890C, and barrier heights of 12 to 14 feet for SW1890A and 12 to 20 feet for SW1890C would meet the noise reduction design goal of 7 dBA. As summarized in Table 2.3.7-4, the current estimated construction costs for noise barrier system SW1890A + SW1890C at constant heights of 12 to 14 feet for SW1890A and 12 to 20 feet for SW1890C, as well as the Design Barrier option, were less than the total reasonable cost allowance. Therefore, these noise barrier options are considered reasonable to construct.

The barrier system evaluated at the maximum allowable constant height would benefit 109 receptors and is estimated to cost $6,626,000 to construct. The Design Barrier option, which consists of segments at variable heights between 10 and 16 feet, would benefit 92 receptors and is estimated to cost $6,159,000 to construct. Because the Design Barrier costs less, the optimized Design Barrier for noise barrier system SW1890A + SW1890C is recommended.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of noise barrier system SW1890A + SW1890C (Design Barrier) as an alternative to noise barrier system SW1890A + SW1890B at the northbound I-15

edge of shoulder and at the ROW, east of the northbound I-15 Weirick Road On-Ramp edge of shoulder, with respective lengths of 1,600 feet and 1,388 feet, and heights ranging from 10 to 16 feet. Calculations based on preliminary design data show that the barrier system will reduce noise levels by 5 to 9 dBA L_{eq}(h) for 92 benefited receptors at a cost of $6,159,000. This abatement measure may change based on input received from the public. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the Project design.

NAA 16 – West side of I-15 between Weirick Road/Dos Lagos Drive and Cajalco Road

Within NAA 16, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 47 to 75 dBA L_{eq}(h). Five receivers, representing five receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for eight barrier options at either the mainline edge of shoulder, ROW, or private property. One noise barrier, SW1905A, was found not to be acoustically feasible. This noise barrier was not considered as an abatement option. Seven barriers, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1895 was evaluated on private property in place of an existing fence, from Station 1895+00 to 1894+75 with a total length of approximately 63 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1895 would provide acoustically feasible traffic noise abatement for one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1895 is not recommended as abatement as part of the Project.

Noise Barrier SW1899 was evaluated on private property in place of an existing fence, from Station 1899+75 to 1899+25 with a total length of approximately 48 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1899 would provide acoustically feasible traffic noise abatement for one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 6 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 6 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1899 is not recommended as abatement as part of the Project.

Noise Barrier SW1903 was evaluated along the ROW west of southbound I-15, from Station 1906+00 to 1918+00 with a total length of approximately 1,194 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1903 would provide acoustically feasible traffic noise abatement for up to two benefited receptors at barrier heights of 16 to 20 feet and a barrier height of 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1903 is not recommended as abatement as part of the Project.

Noise Barrier SW1905 was evaluated on private property on top of a retaining feature, from Station 1905+75 to 1905+25 with a total length of approximately 61 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1905 would provide acoustically feasible traffic noise abatement for one benefited receptor and meet the noise reduction design goal of 7 dBA at barrier heights of 8 to 16 feet. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1905 is not recommended as abatement as part of the Project.

Noise Barrier SW1907 was evaluated on private property in place of an existing fence, from Station 1906+50 to 1906+00 with a total length of approximately 78 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1907 would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 8 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1907 is not recommended as abatement as part of the Project.

Noise Barrier SW1913 was evaluated on private property in place of an existing fence, from Station 1913+00 to 1910+75 with a total length of approximately 172 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW1913 would provide acoustically feasible traffic noise abatement one benefited receptor at barrier heights of 6 to 16 feet, and barrier heights of 8 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1913 is not recommended as abatement as part of the Project.

Noise Barrier SW1911 was evaluated along the southbound I-15 edge of shoulder, from Station 1918+00 to 1906+00 with a total length of approximately 1,163 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW1911 would provide acoustically feasible traffic noise abatement for one benefited receptor at barrier heights of 12 to 14 feet, and a barrier height of 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at a constant height of 14 feet nor the Design Barrier options were

found to be reasonable from a cost perspective. Based on studies completed to date, SW1911 is not recommended as abatement as part of the Project.

NAA 18 – East Side of I-15 between Cajalco Road and El Cerrito Road

Within NAA 18, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 48 to 77 dBA L_{eq}(h). Six receivers, representing eleven receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for four barrier options at either the mainline edge of shoulder, ROW, or private property. One noise barrier, SW1996A was found not to be acoustically feasible. This noise barrier was not considered as an abatement option. Two noise barriers and one noise barrier system, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW1996B was evaluated along the northbound I-15 El Cerrito Road Off-Ramp, from Station 1981+00 to 1996+00 with a total length of approximately 1,511 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW1996B would provide acoustically feasible traffic noise abatement for up to thirteen benefited receptors at barrier heights of 6 to 14 feet and barrier heights of 12 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 12 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1996B is not recommended as abatement as part of the Project.

Noise Barrier SW1996C was evaluated along the ROW east of northbound I-15, from Station 1983+00 to 1995+71 with a total length of approximately 1,281 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW1996C would provide acoustically feasible traffic noise abatement for up to nine benefited receptors at barrier heights of 12 to 20 feet and barrier heights of 16 to 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 16 to 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW1996C is not recommended as abatement as part of the Project.

Noise Barrier System SW1996A + SW1996B was evaluated with the two noise barriers in combination to investigate the possibility of improved acoustical performance compared to each noise barrier alone. SW1996A was evaluated along the northbound I-15 edge of shoulder, from Station 1990+00 to 1995+82 with a total length of approximately 585 feet. SW1996B was evaluated along the northbound I-15 El Cerrito Road Off-Ramp, from Station 1982+00 to 1996+00 with a total length of approximately 1,438 feet. Both were modeled in 2-foot increments from 6 feet to 14 feet.

Noise barrier system SW1996A + SW1996B would provide acoustically feasible traffic noise abatement for up to fourteen benefited receptors at barrier heights of 6 to 14 feet and barrier heights of 8 to 14 feet would meet the noise reduction design goal of 7 dBA.

However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, noise barrier system SW1996A + SW1996B is not recommended as abatement as part of the Project.

NAA 19 – West Side of I-15 between El Cerrito Road and Ontario Avenue

Within NAA 19, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 53 to 77 dBA L_{eq}(h). Five receivers, representing 18 receptors, are predicted to approach or exceed the NAC for Activity Categories B and E. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for five barrier options at either the mainline edge of shoulder, off-ramp edge of shoulder, ROW, or private property. One noise barrier, SW2001, was found not to be acoustically feasible. This noise barrier was not considered as an abatement option. Three noise barriers and one noise barrier system, detailed below, were found to be acoustically feasible and met the noise reduction design goal of 7 dBA.

Noise Barrier SW2007A was evaluated along the southbound I-15 El Cerrito Road Off-Ramp edge of shoulder, from Station 2011+37 to 2004+50 with a total length of approximately 687 feet and modeled in 2-foot increments from 6 feet to 14 feet.

SW2007A would provide acoustically feasible traffic noise abatement for up to five benefited receptors at barrier heights of 6 to 14 feet and barrier heights of 8 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW2007A is not recommended as abatement as part of the Project.

Noise Barrier System SW2001 + SW2007A was evaluated with the two noise barriers in combination to investigate the possibility of improved acoustical performance compared to each noise barrier alone. SW2001 was evaluated along the southbound I-15 edge of shoulder, from Station 2004+54 to 2002+00 with a total length of approximately 255 feet. SW2007A was evaluated along the southbound I-15 El Cerrito Road Off-Ramp edge of shoulder, from Station 2011+37 to 2005+00 with a total length of approximately 637 feet. Both were modeled in 2-foot increments from 6 feet to 14 feet.

Noise barrier system SW2001 + SW2007A would provide acoustically feasible traffic noise abatement for up to five benefited receptors at barrier heights of 6 to 14 feet and combined barrier heights of 8 to 14 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 8 to 14 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, noise barrier system SW2001 + SW2007A is not recommended as abatement as part of the Project.

Noise Barrier SW2007B was evaluated along the ROW west of southbound I-15, from Station 2011+00 to 2005+00 with a total length of approximately 592 feet and modeled in 2-foot increments from 6 feet to 20 feet.

SW2007B would provide acoustically feasible traffic noise abatement for up to five benefited receptors at barrier heights of 14 to 20 feet and barrier heights of 16 to 20 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 16 to 20 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW2007B is not recommended as abatement as part of the Project.

Noise Barrier SW2007C was evaluated on private property in place of existing walls and fences, from Station 2011+00 to 2005+50 with a total length of approximately 638 feet and modeled in 2-foot increments from 6 feet to 16 feet.

SW2007C would provide acoustically feasible traffic noise abatement for up to six benefited receptors at barrier heights of 6 to 16 feet and barrier heights of 10 to 16 feet would meet the noise reduction design goal of 7 dBA. However, as summarized in Table 2.3.7-4, neither the barrier at constant heights of 10 to 16 feet nor the Design Barrier options were found to be reasonable from a cost perspective. Based on studies completed to date, SW2007C is not recommended as abatement as part of the Project.

NAA 20 – East side of I-15 between El Cerrito Road and Ontario Avenue

Within NAA 20, the Design-year Build Alternative exterior traffic noise levels are predicted to range from 62 to 67 dBA L_{eq}(h). Six receivers, representing six receptors, are predicted to approach or exceed the NAC for Activity Category B. Therefore, consideration of noise abatement is required. Detailed modeling analysis was conducted for three barrier options at the mainline edge of shoulder or on-ramp edge of shoulder. One noise barrier, SW1998, was found not to be acoustically feasible. One noise barrier and one noise barrier system, SW2006 and noise barrier system SW1998 + SW2006, were found to be acoustically feasible but failed to meet the noise reduction design goal of 7 dBA. These noise barriers were not considered as an abatement option.

Summary of Build Alternative Abatement

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of the following noise barrier systems:

- SW1890A + SW1890B at the northbound I-15 edge of shoulder and the northbound I-15 Weirick Road On-Ramp edge of shoulder, with respective lengths of 1,550 feet and 1,194 feet, and variable heights ranging from 6 to 14 feet (Design Barrier). Calculations based on preliminary design data show that the barrier system will reduce noise levels by 5 to 7 dBA L_{eq}(h) for 65 benefited receptors at a cost of $6,039,000. For the location of SW1890A + SW1890B, refer to Figure 2.3.7-2, Sheets 33d and 34d.

- SW1890A + SW1890C at the northbound I-15 edge of shoulder and at the ROW, east of the northbound I-15 Weirick Road On-Ramp edge of shoulder, with respective lengths of 1,600 feet and 1,388 feet, and variable heights ranging from 10 to 16 feet (Design Barrier). Calculations based on preliminary design data show that

the barrier system will reduce noise levels by 5 to 9 dBA L_{eq}(h) for 92 benefited receptors at a cost of $6,159,000. For the location of SW1890A + SW1890C, refer to Figure 2.3.7-2, Sheets 33e and 34e.

These abatement measures may change based on input received from the public. Specifically, the viewpoints of benefited receptors (property owners and/or tenants) are gathered during a voting process, as described in the Protocol and summarized below. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement will be made upon completion of the Project design.

Based on Section 5 of the Protocol, noise impact analysis presented in this document is based on preliminary design. If the Project design is changed in such a way that could affect the acoustical performance of the barriers, the barrier design must be modified to achieve the same performance of the barriers outlined in this document. If during final design conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the Project design.

Noise Abatement Voting Process

For each proposed noise abatement measure (i.e., noise barrier system SW1890A + SW1890B and noise barrier system SW1890A + SW1890C), it is necessary to gather the viewpoints of benefited receptors (i.e., each receptor that receives at least 5 dB of noise reduction from the proposed noise barrier) before a final decision is made about the construction of the noise barrier.

A letter and voting ballot will be sent to all property owners and non-owner occupants (e.g., renters) at benefited receptors to solicit for their viewpoints either to approve or oppose the proposed noise abatement. If more than 50 percent of the benefited receptors vote to oppose the abatement, then the abatement will not be considered reasonable.

For owner-occupied dwelling units, the property owner gets one vote. For non-owner-occupied dwelling units, the occupant (e.g., renter) gets 10 percent of one vote and the owner gets 90 percent of one vote.

For noise abatement to be located on private property, 100 percent of owners of property upon which the abatement is to be placed must support the proposed abatement. In the case of proposed noise abatement on private property, no response from a property owner, after a reasonable number of attempts, is considered a no vote because consent from the property owner is required to build on their property.

The polling of benefited receptors will be completed after the public outreach meetings for the public circulation of the Draft Environmental Document and prior to Project approval. A memo documenting the results of the polling will be prepared and sent to the Project file and the results will be included in the Final EIR/EA.

The noise abatement recommendation identified above (and in the NADR) will become the proposed noise abatement decision unless the final design process indicates that it should be changed or if the outcome of the polling of benefited receptors is a rejection of the barrier.

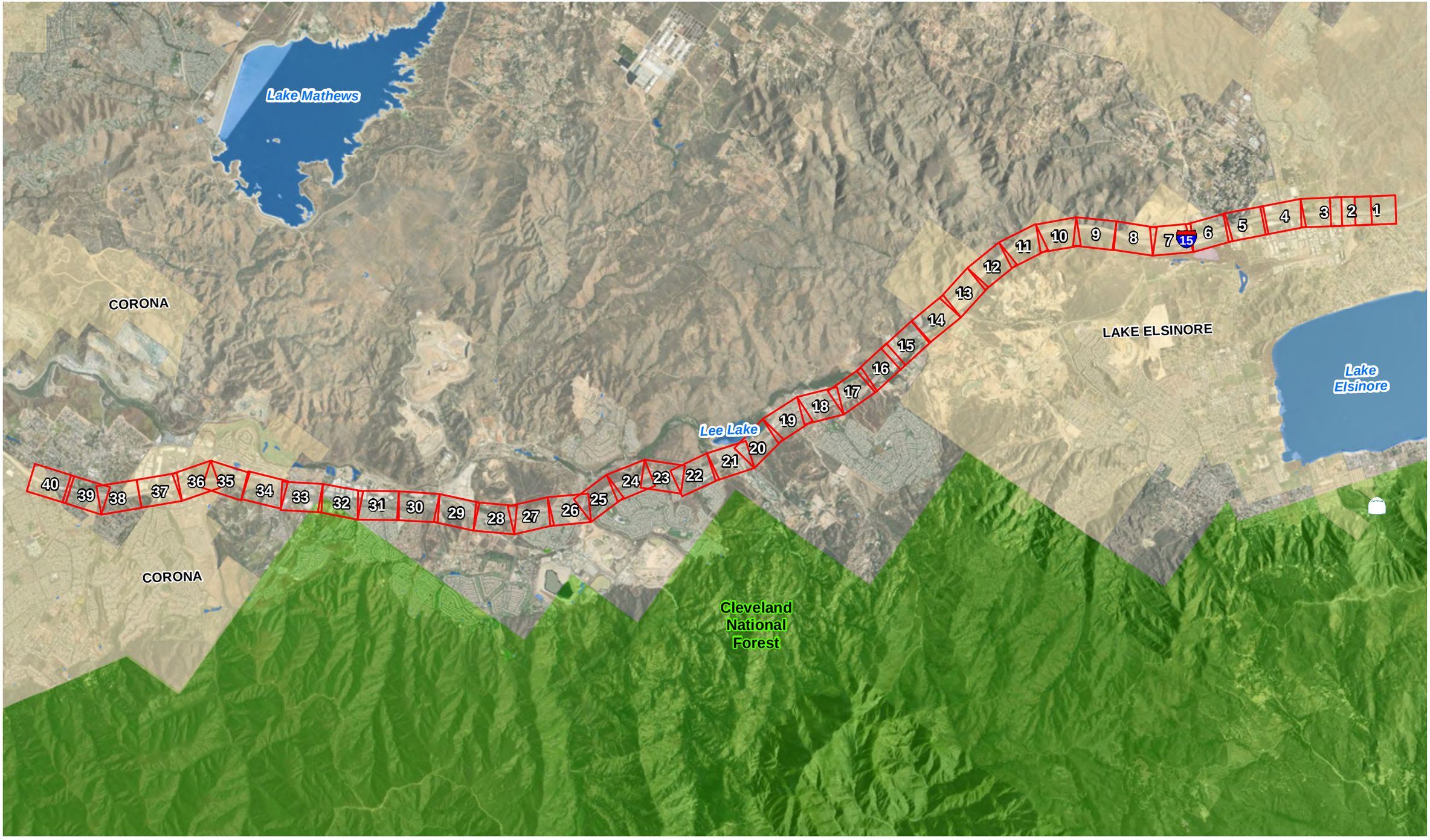

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Figure 2.3.7-2, Index Sheet
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
1:2,400

Figure 2.3.7-2, Sheet 1a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 1b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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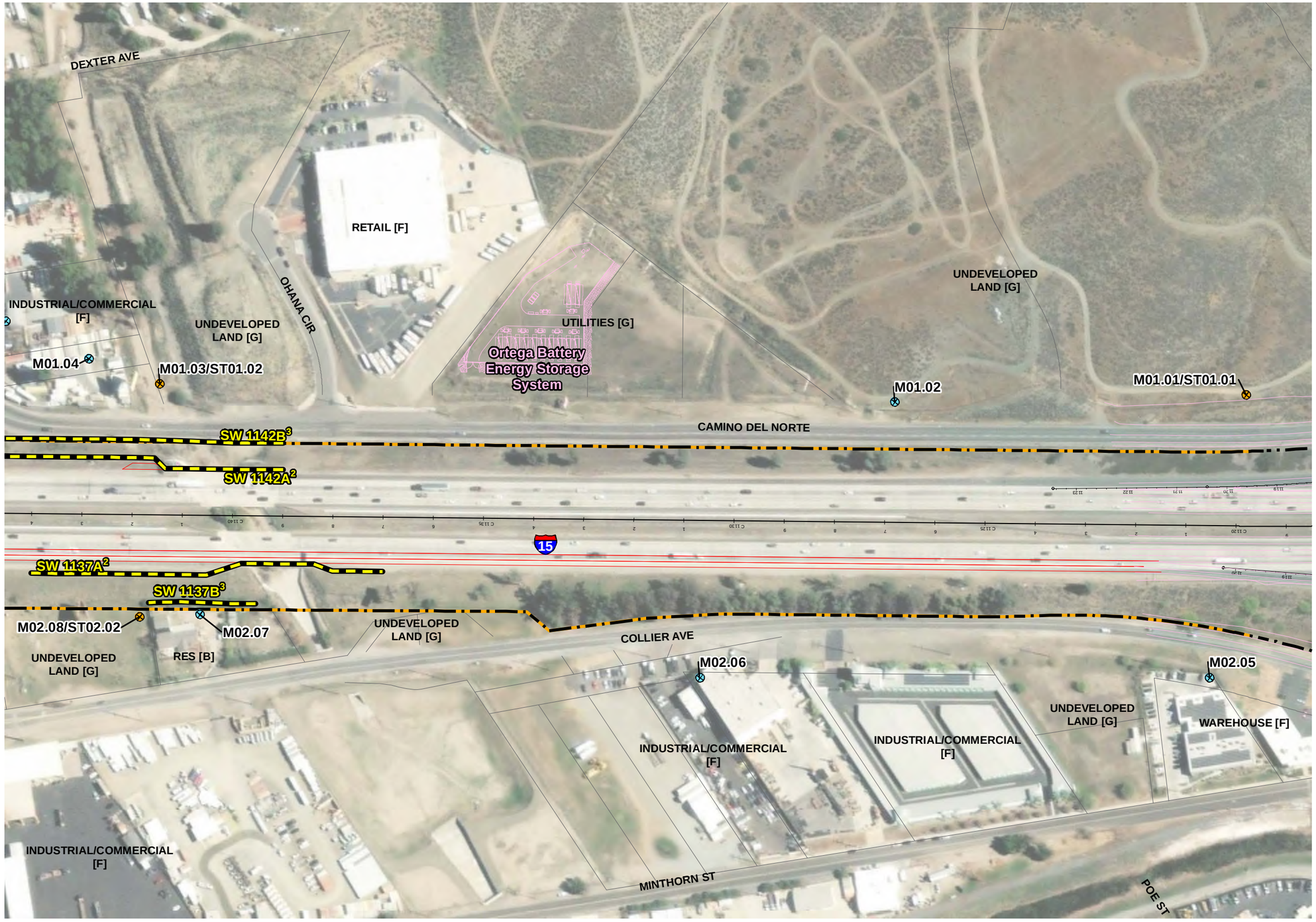

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 2 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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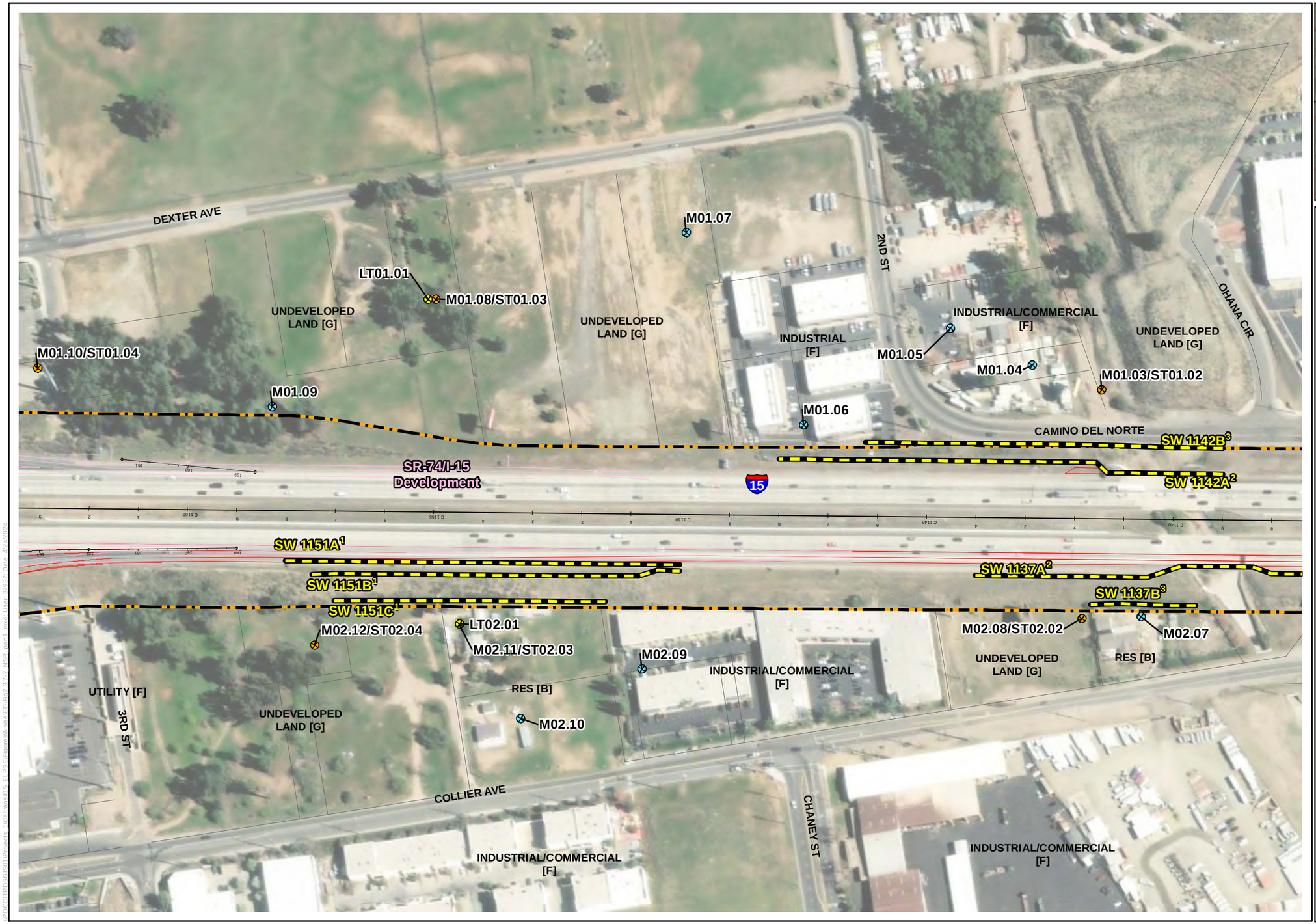

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 3 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
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Figure 2.3.7-2, Sheet 4 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
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Figure 2.3.7-2, Sheet 5a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 5b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 5c of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 6a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 6b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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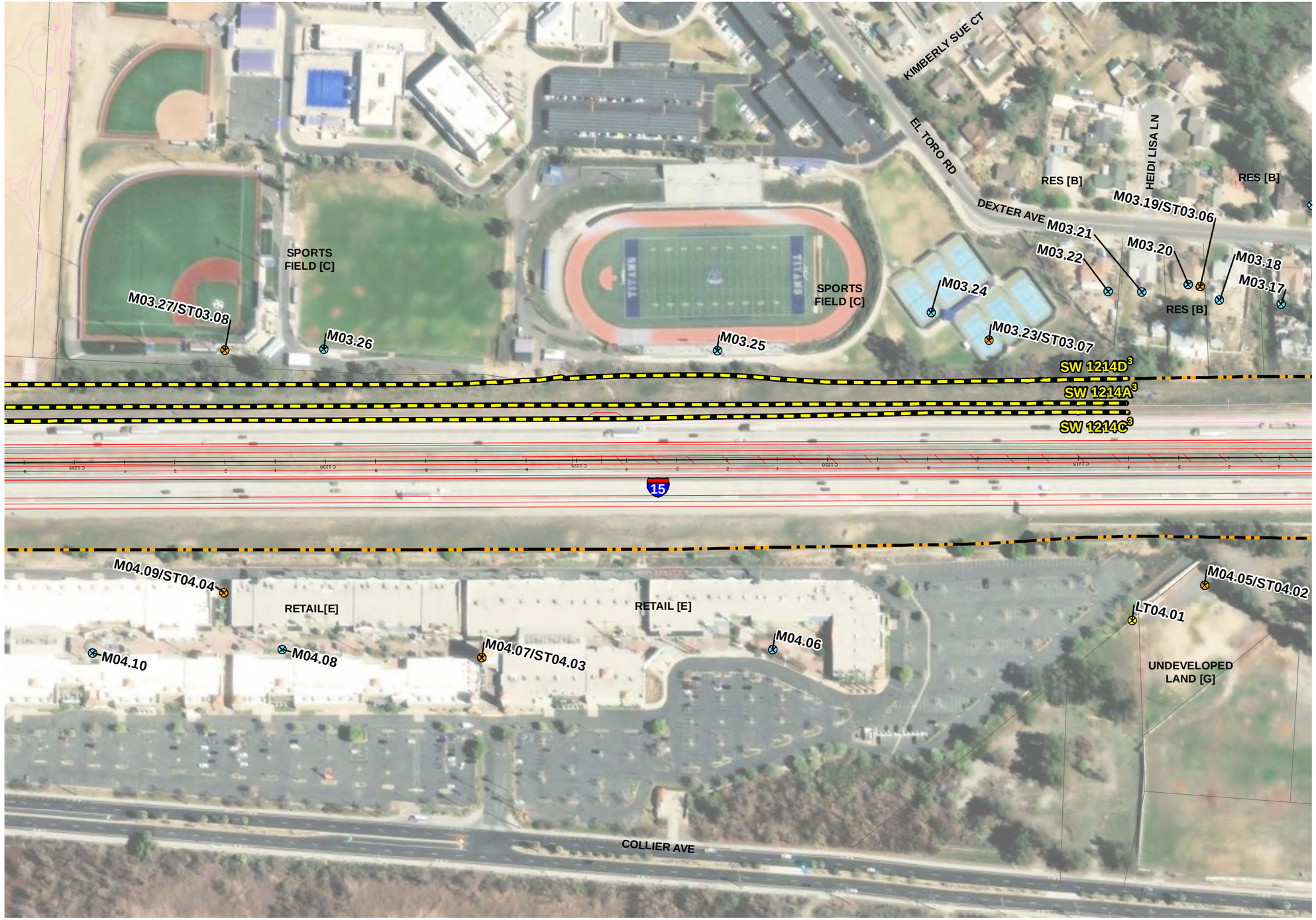

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 6c of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 7a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 7b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 7c of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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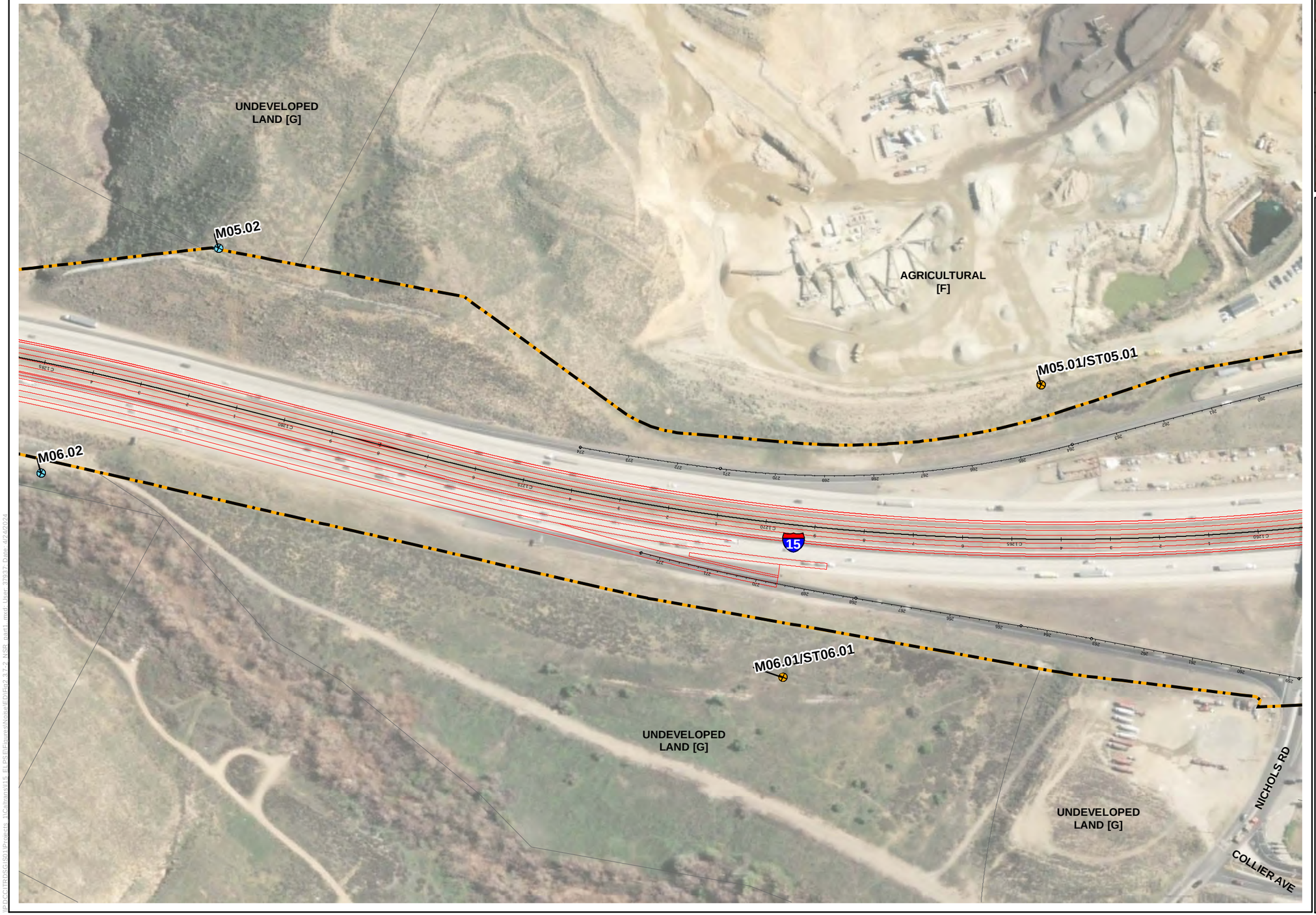

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 8 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 9 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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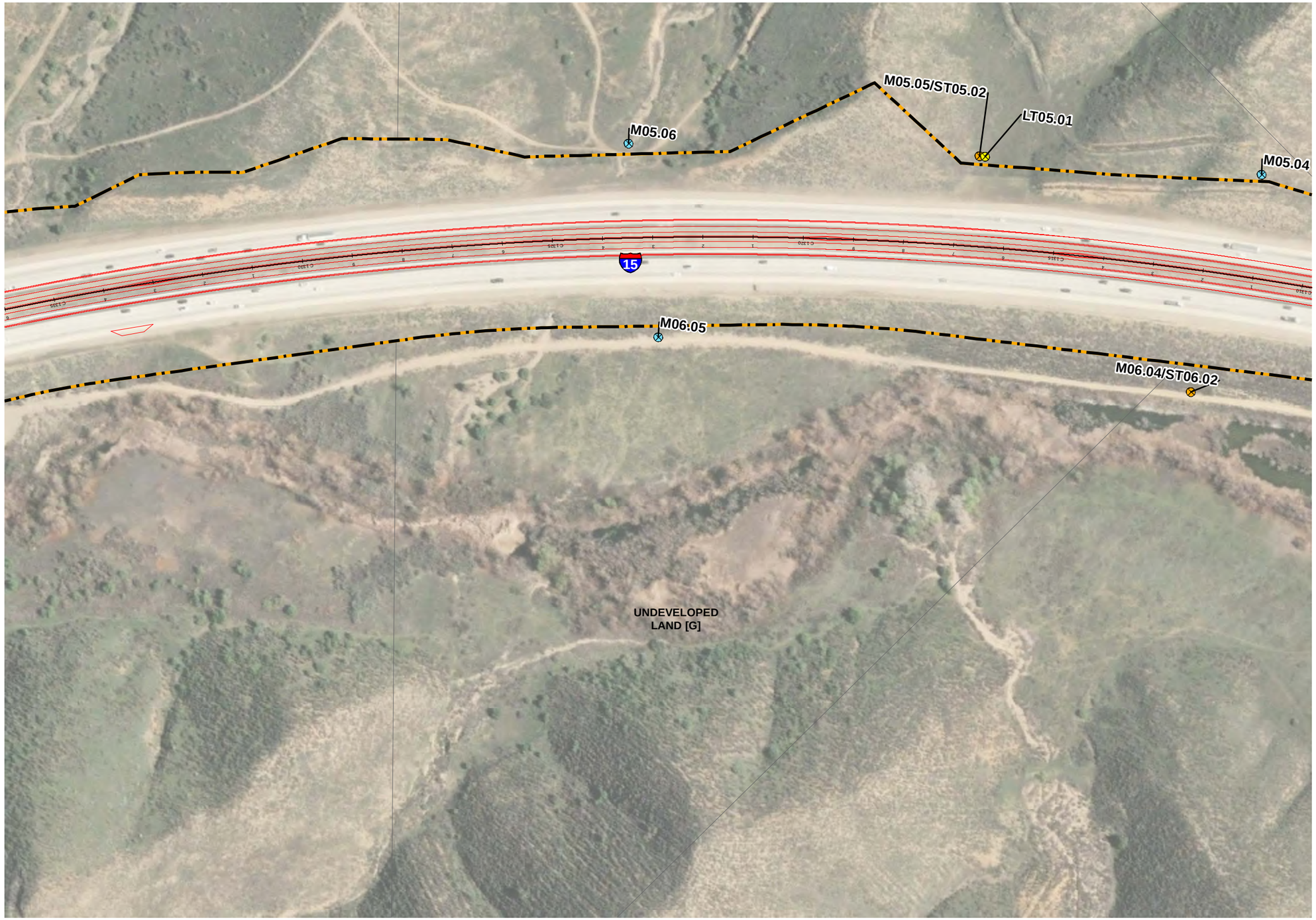

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 10 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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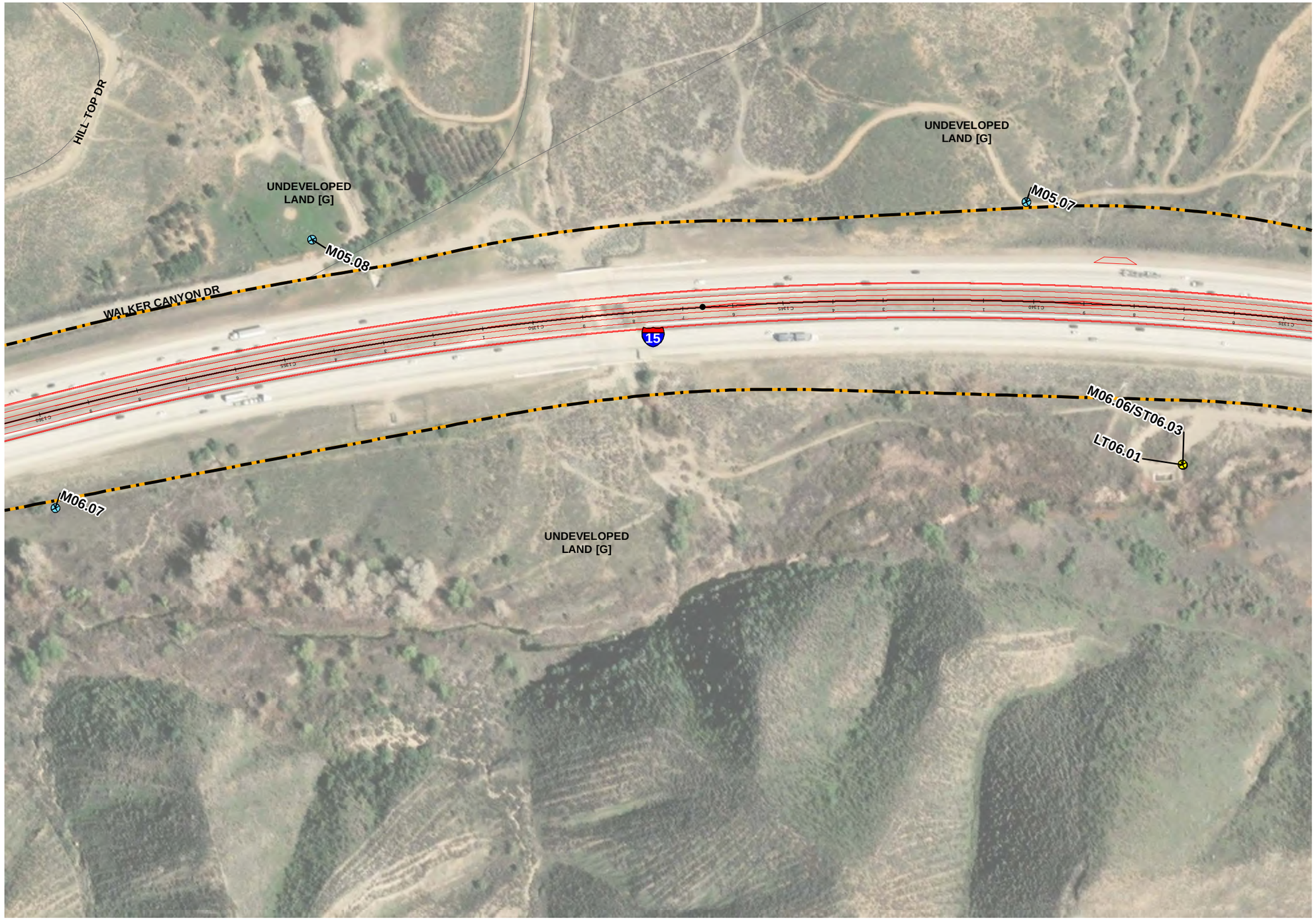

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 11 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 12 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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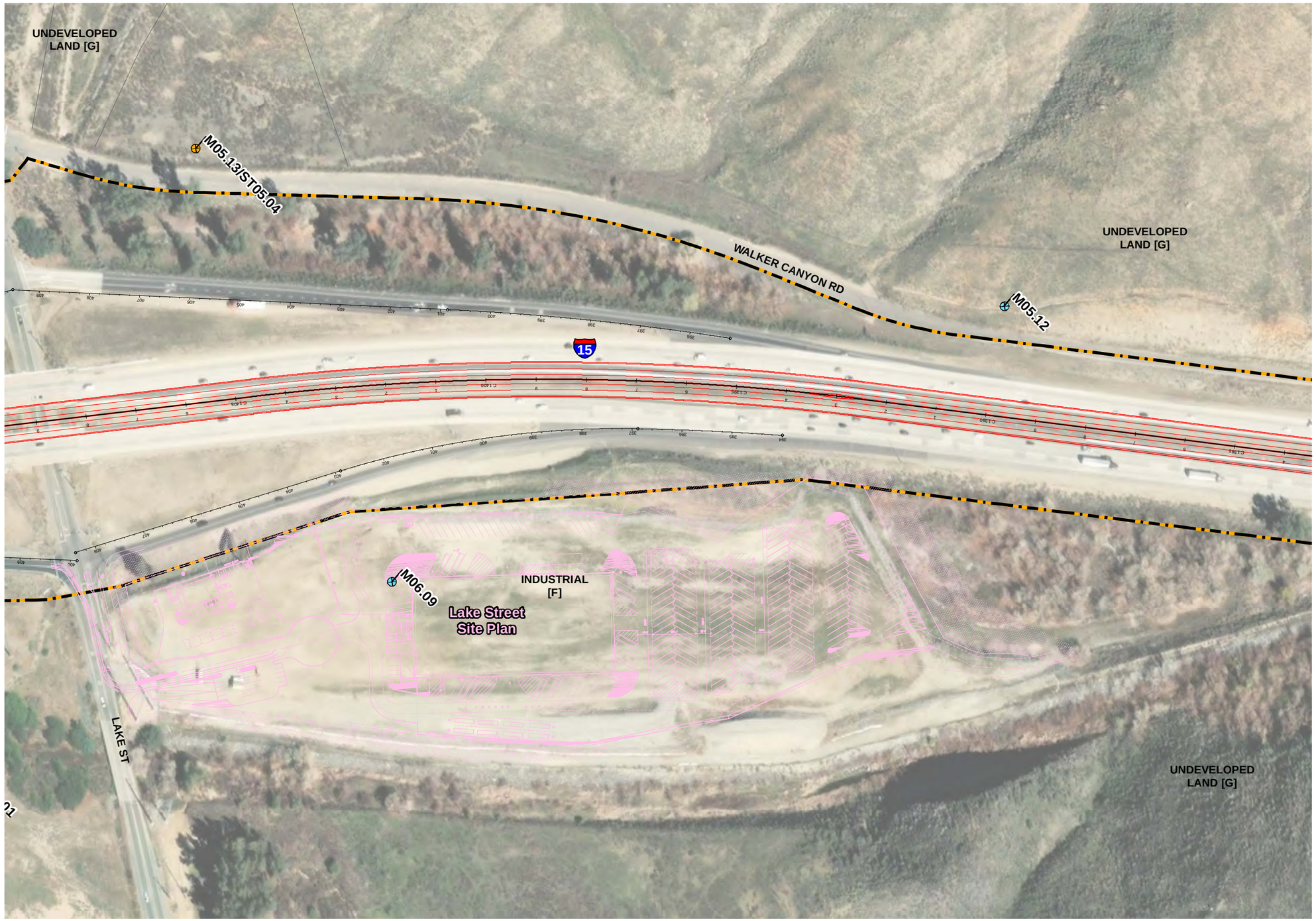

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 13 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 14 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 15 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 16 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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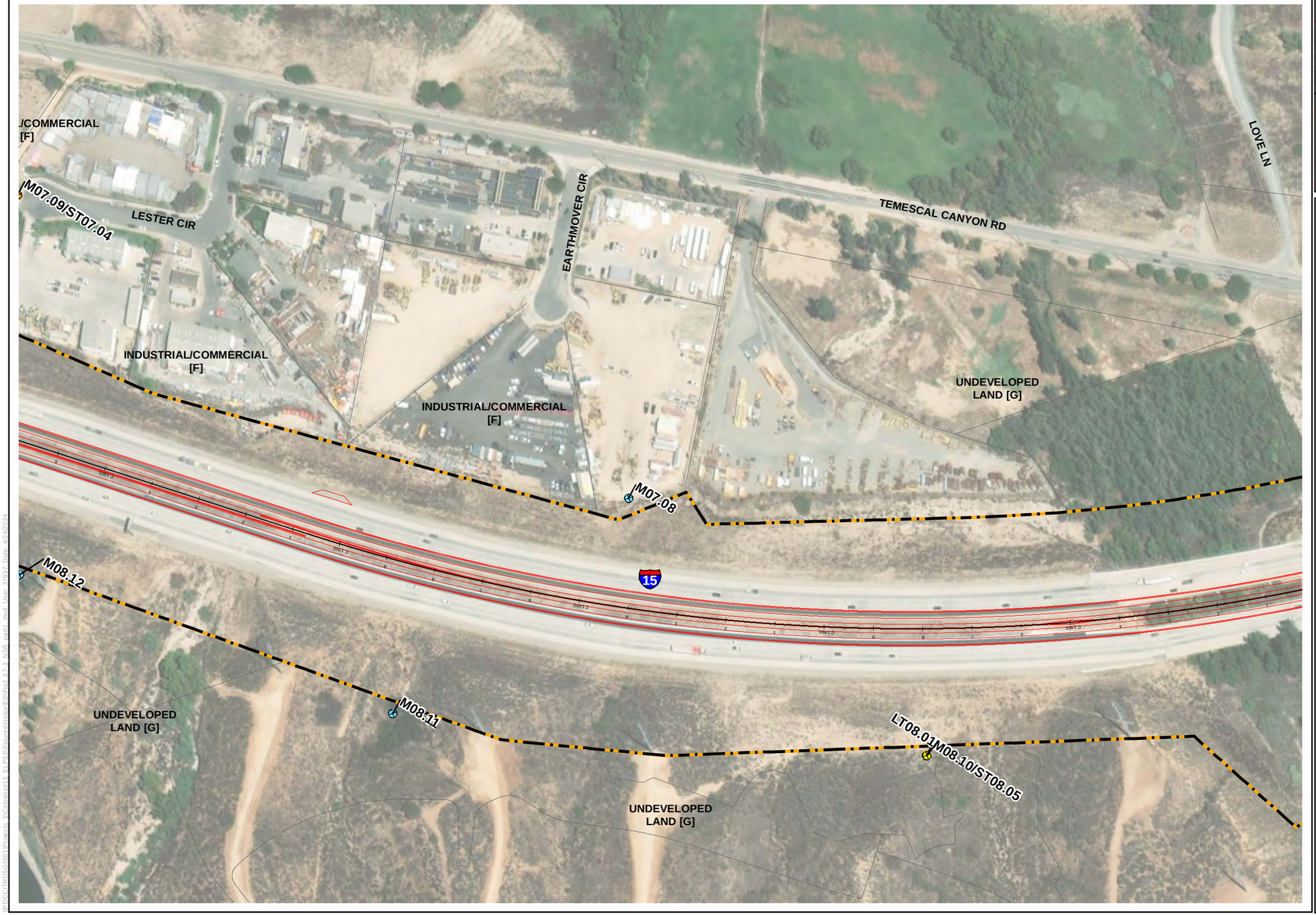

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 17 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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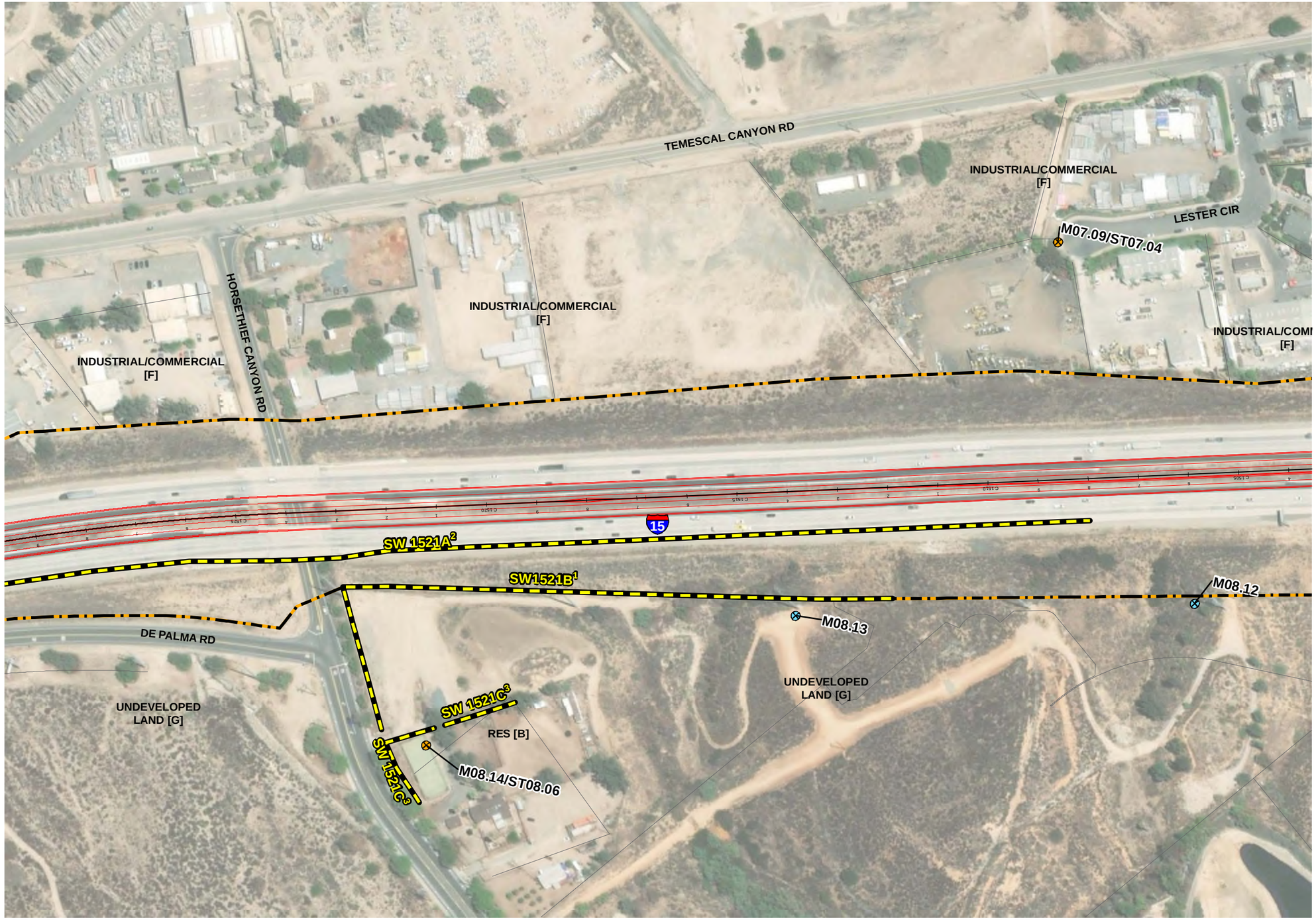

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 18a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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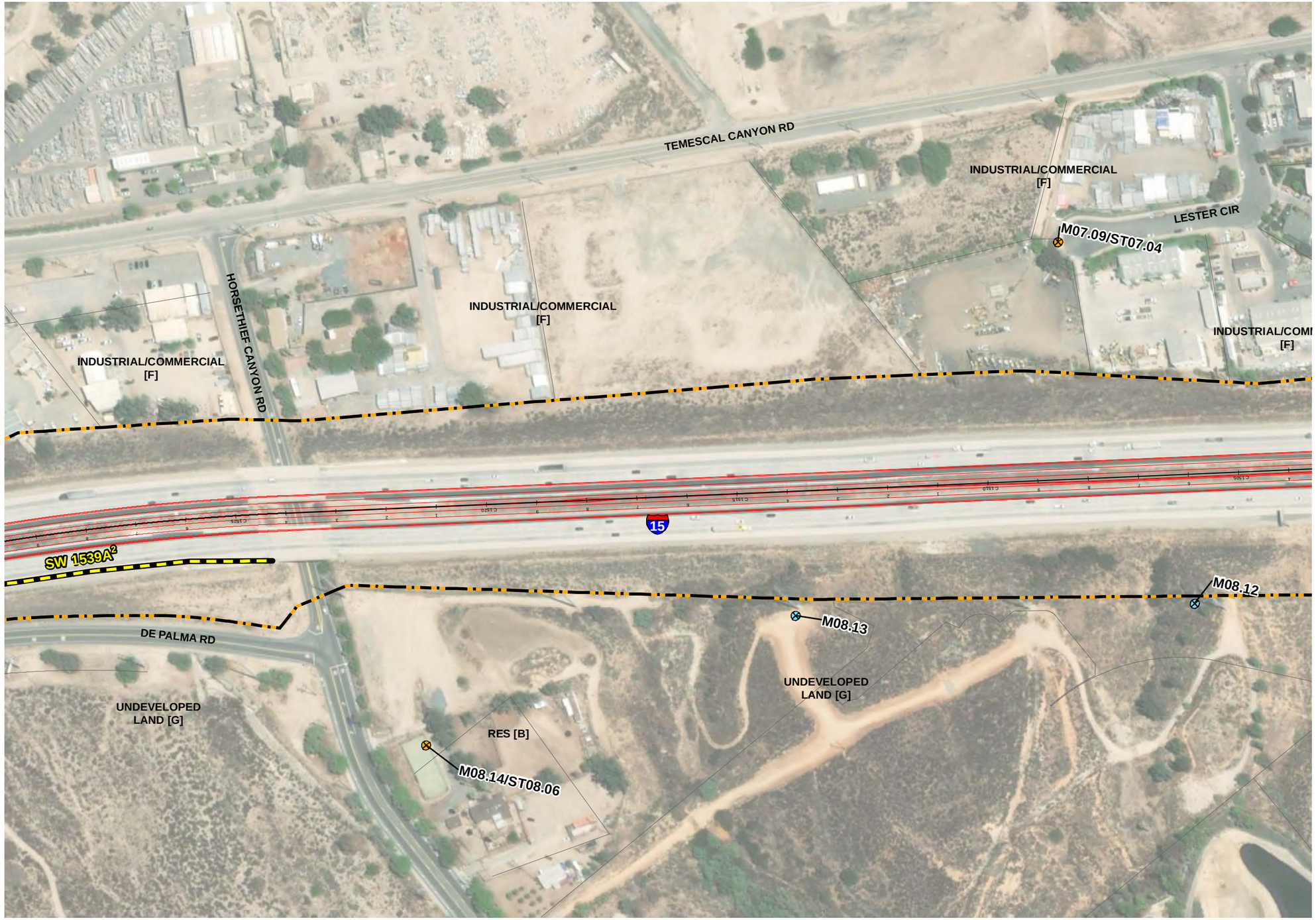

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 18b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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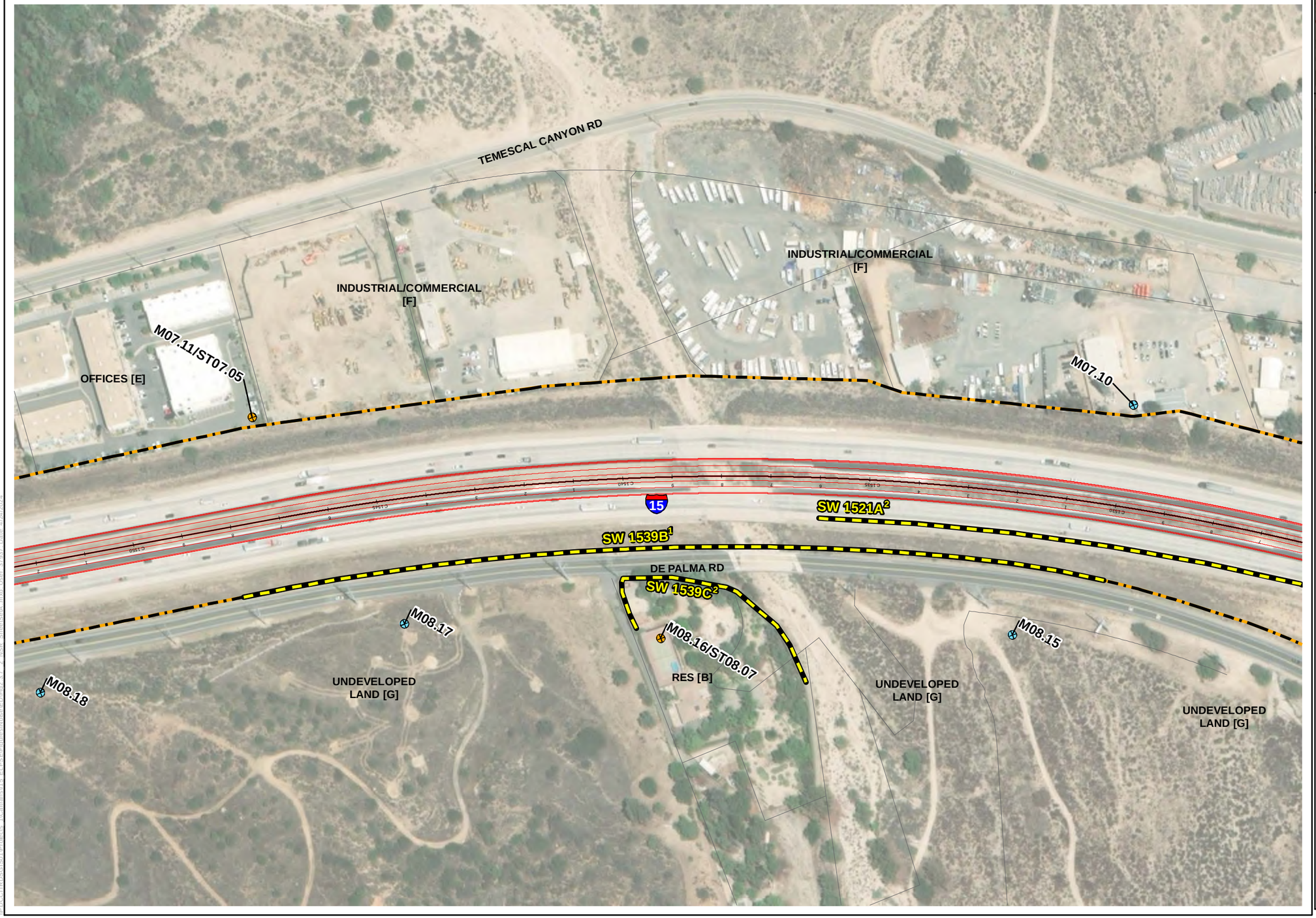

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 19a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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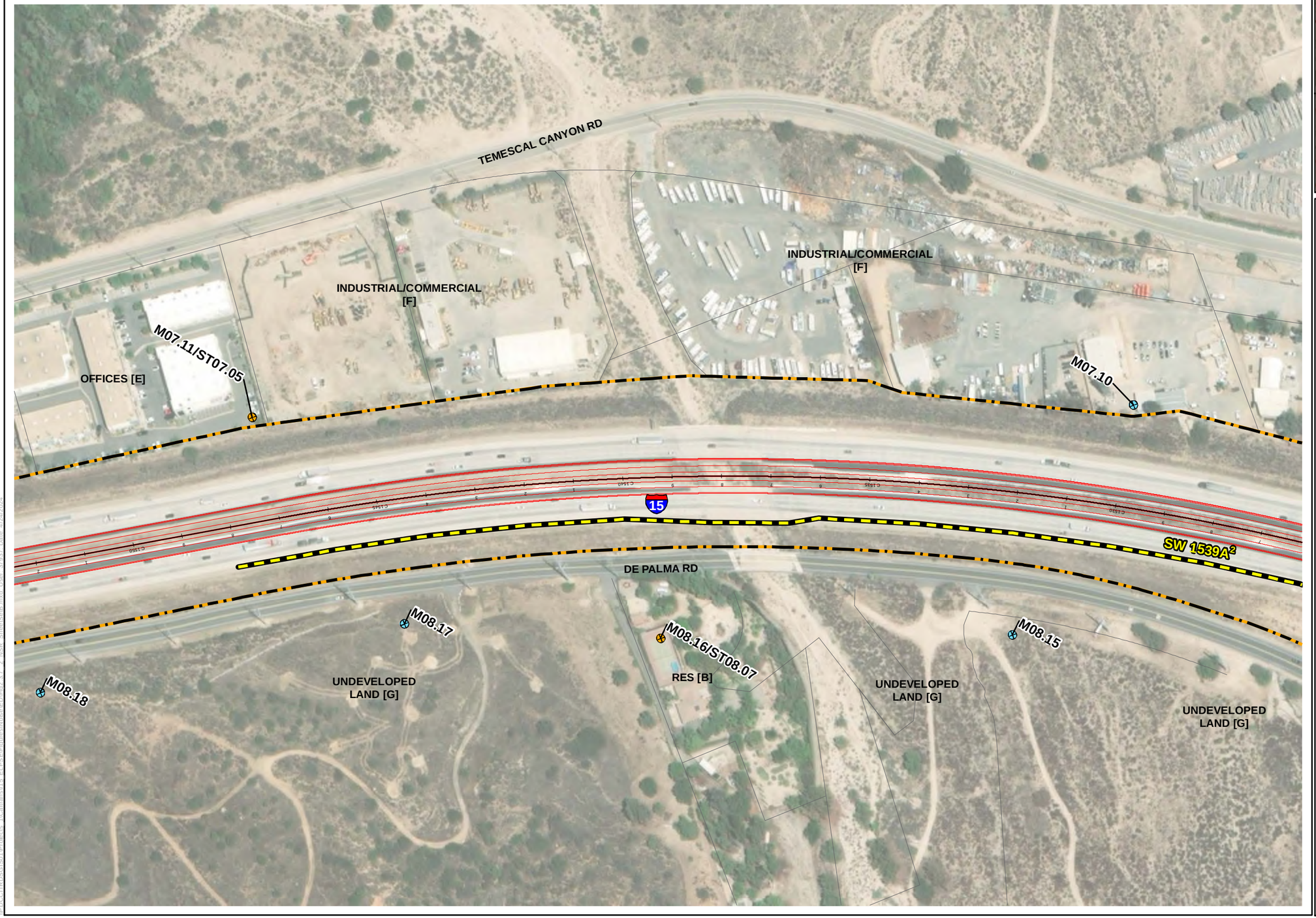

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 19b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
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Figure 2.3.7-2, Sheet 20 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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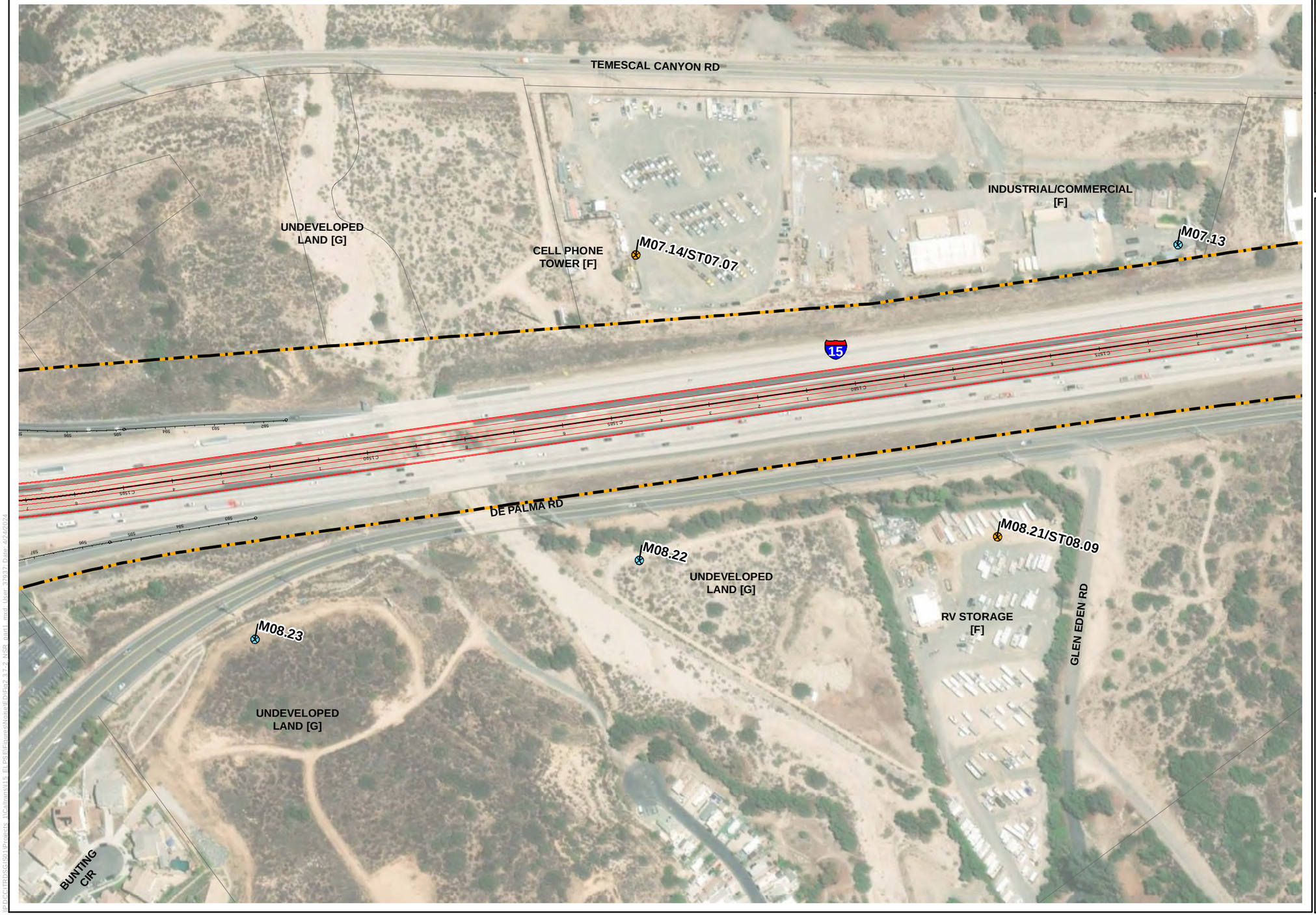

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
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Figure 2.3.7-2, Sheet 21 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 22 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 23 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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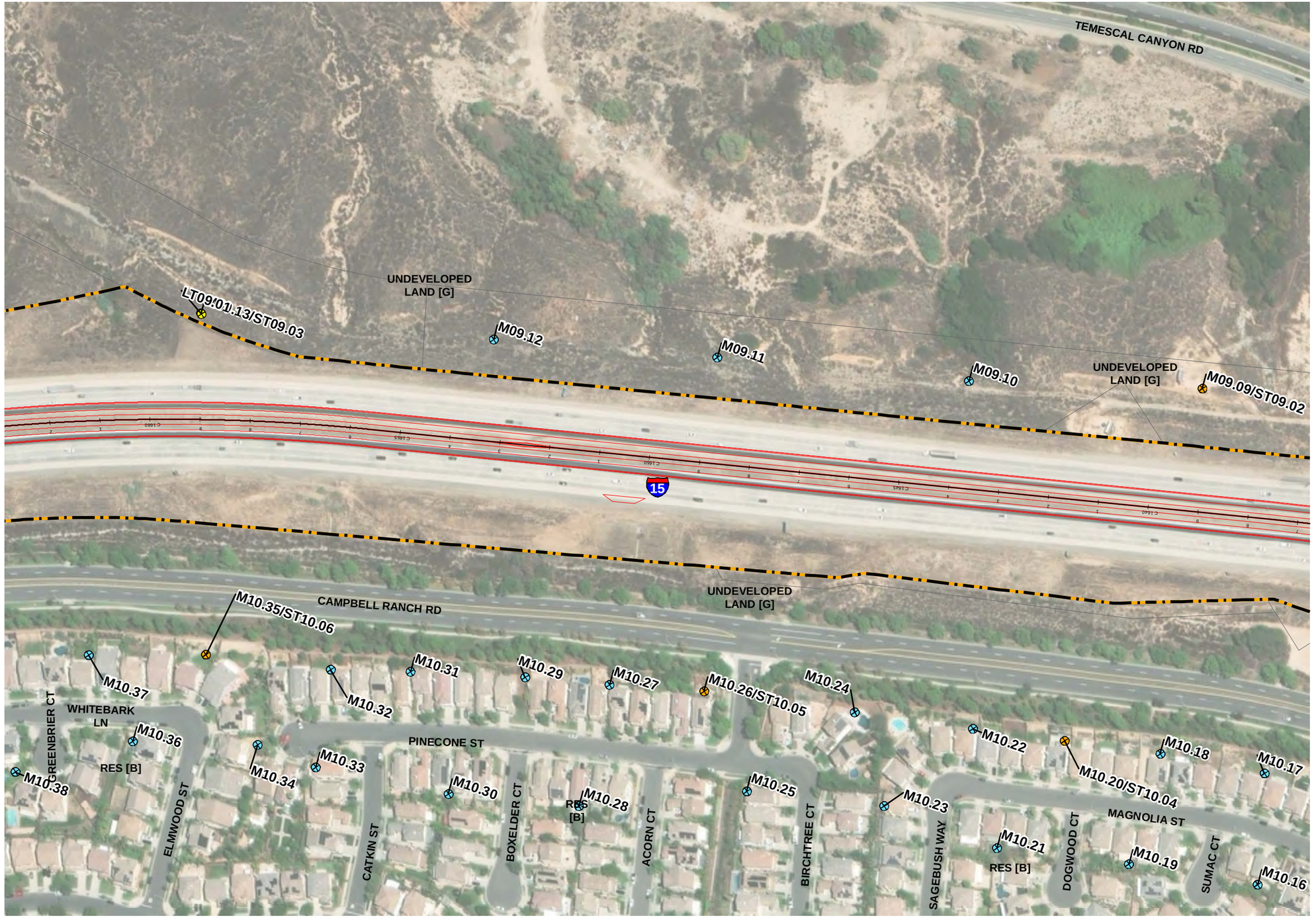

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

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[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 24 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

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[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 25 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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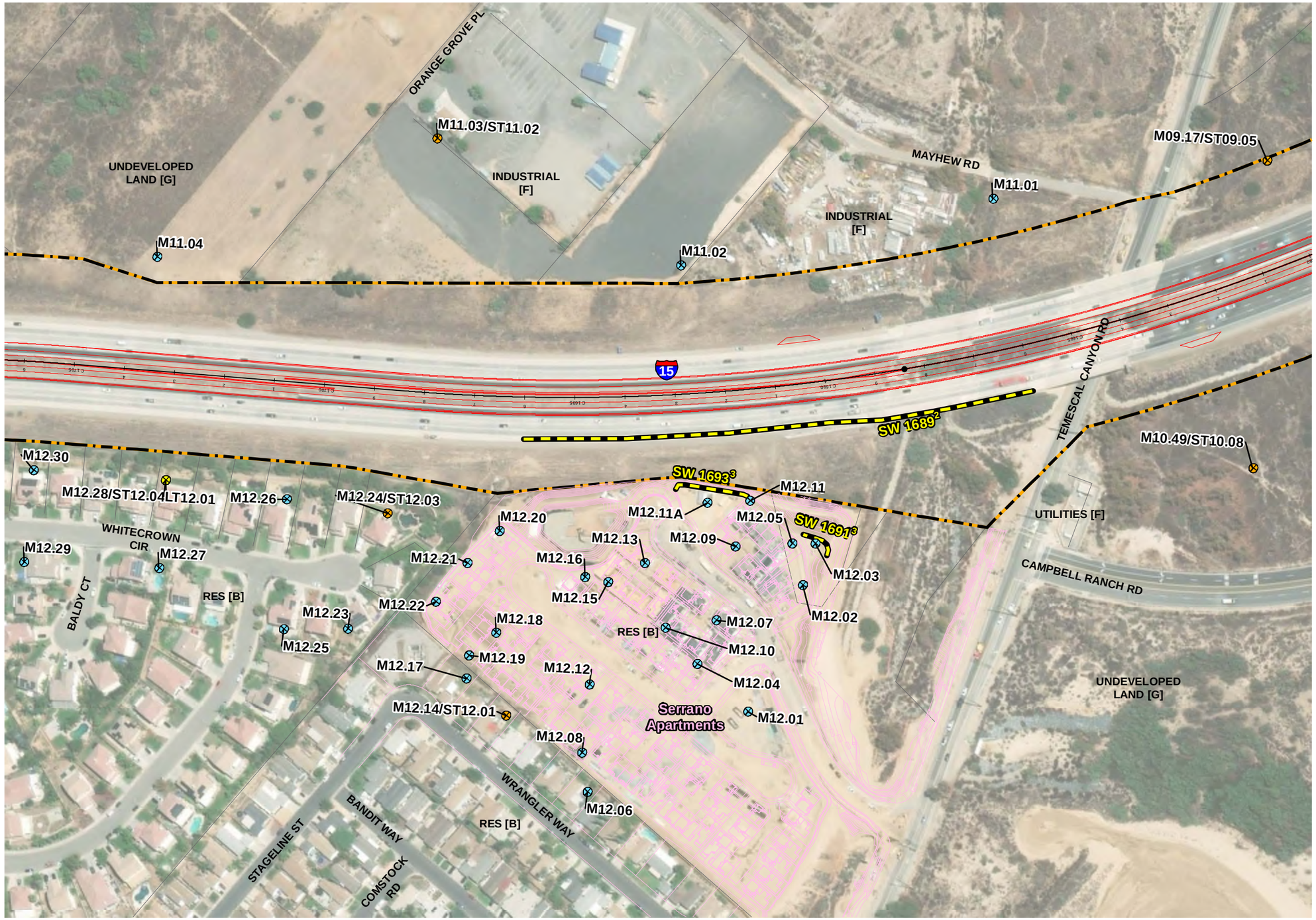

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

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[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 26 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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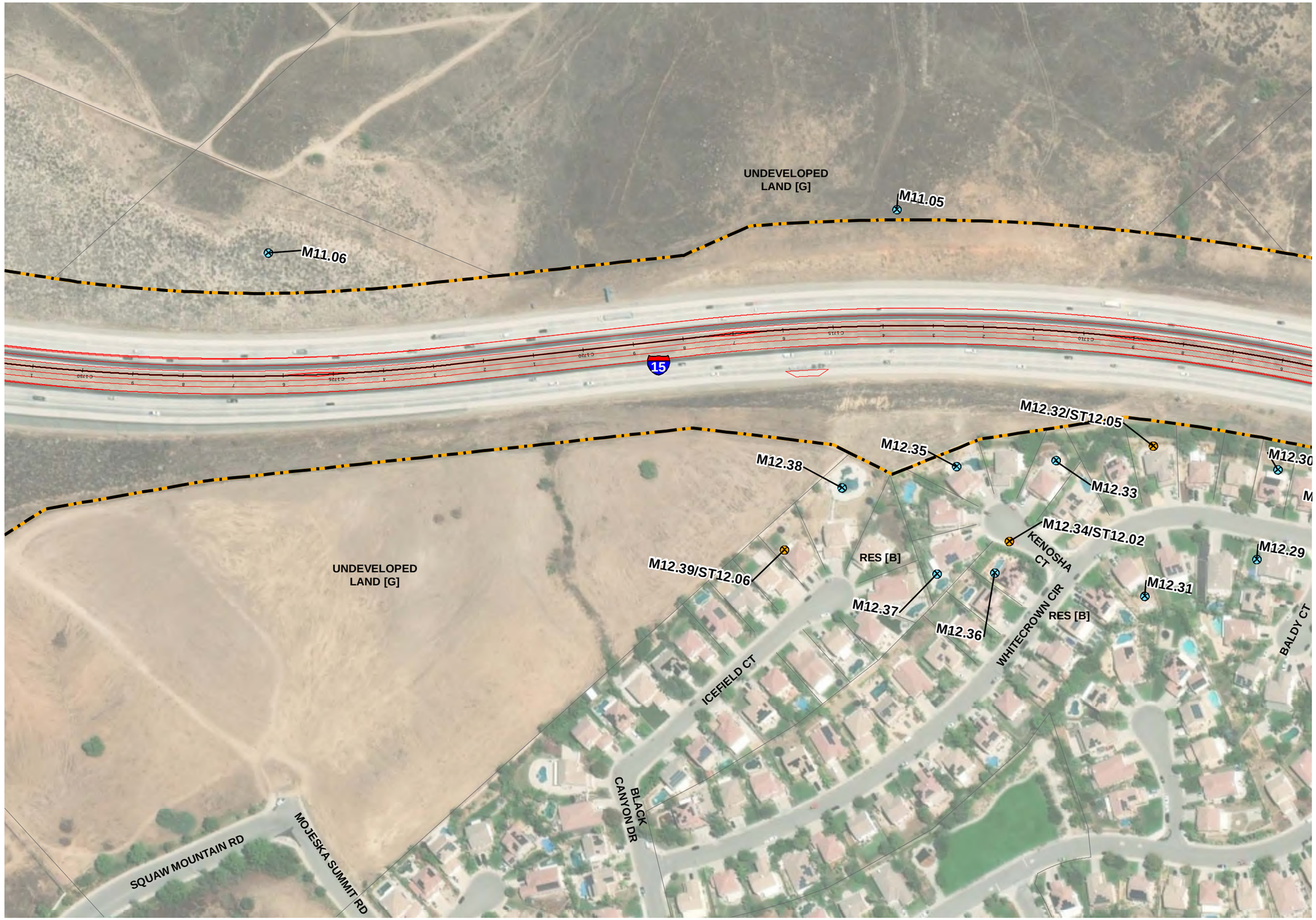

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

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[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 27 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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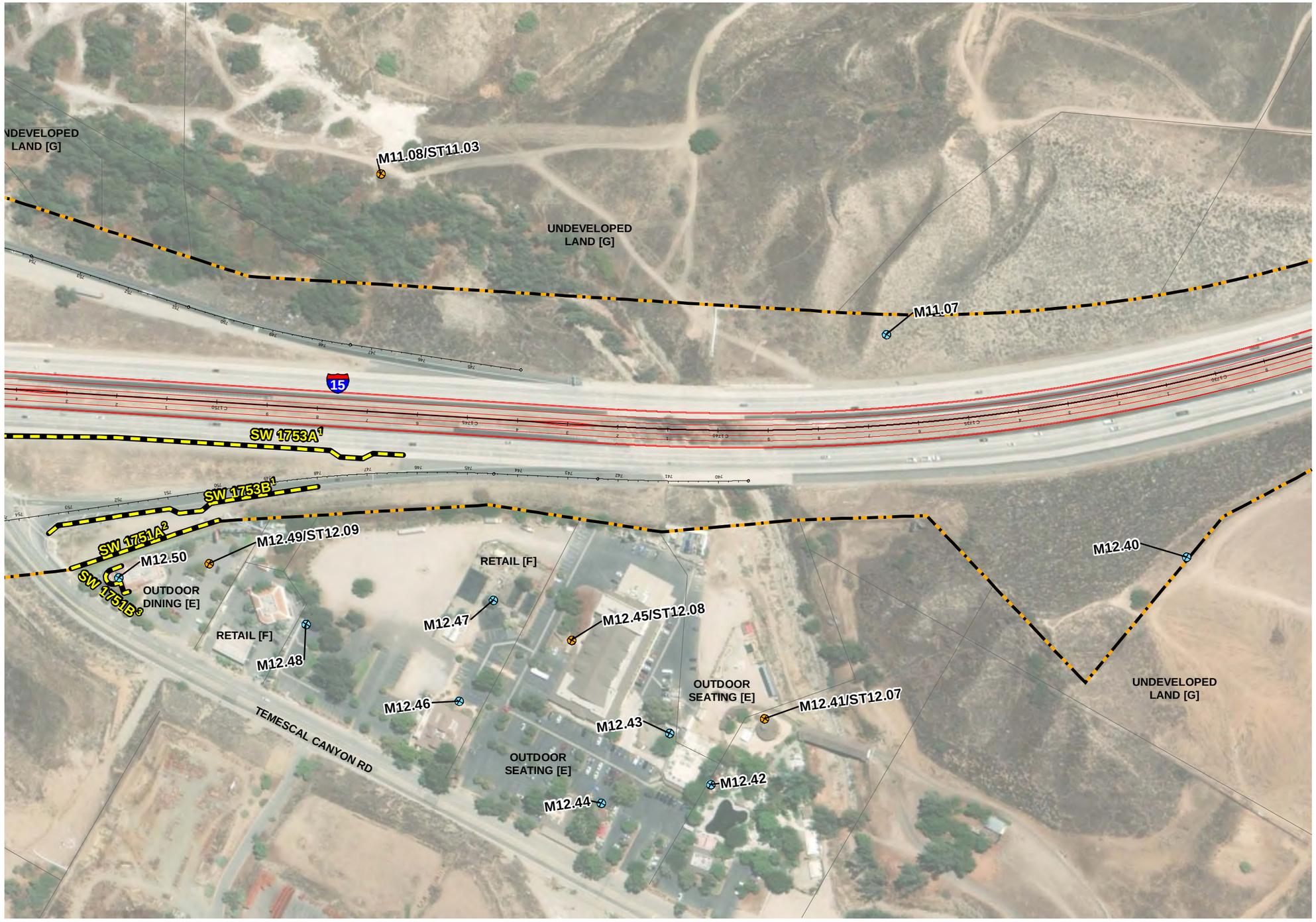

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
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[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 28a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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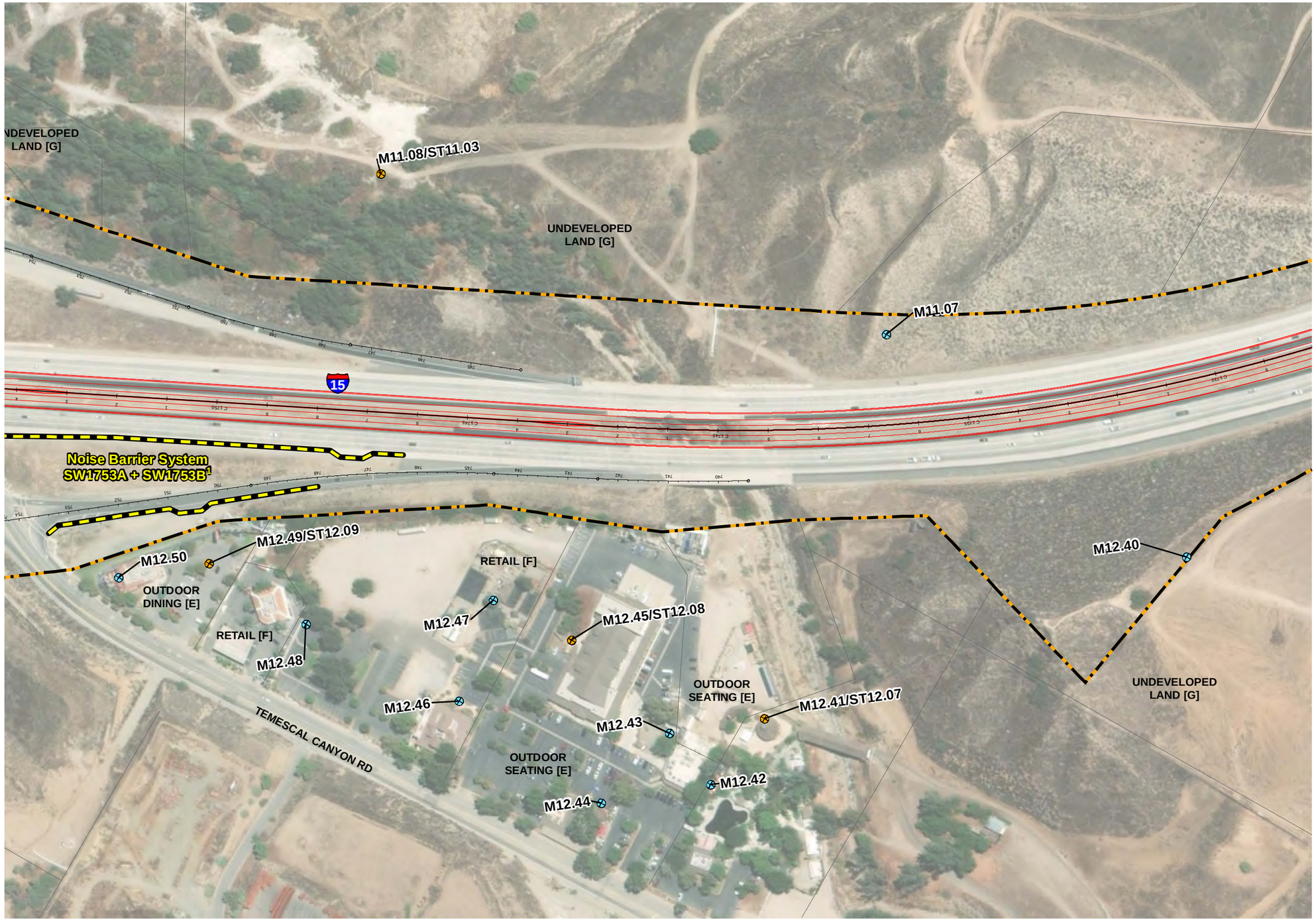

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

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[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 28b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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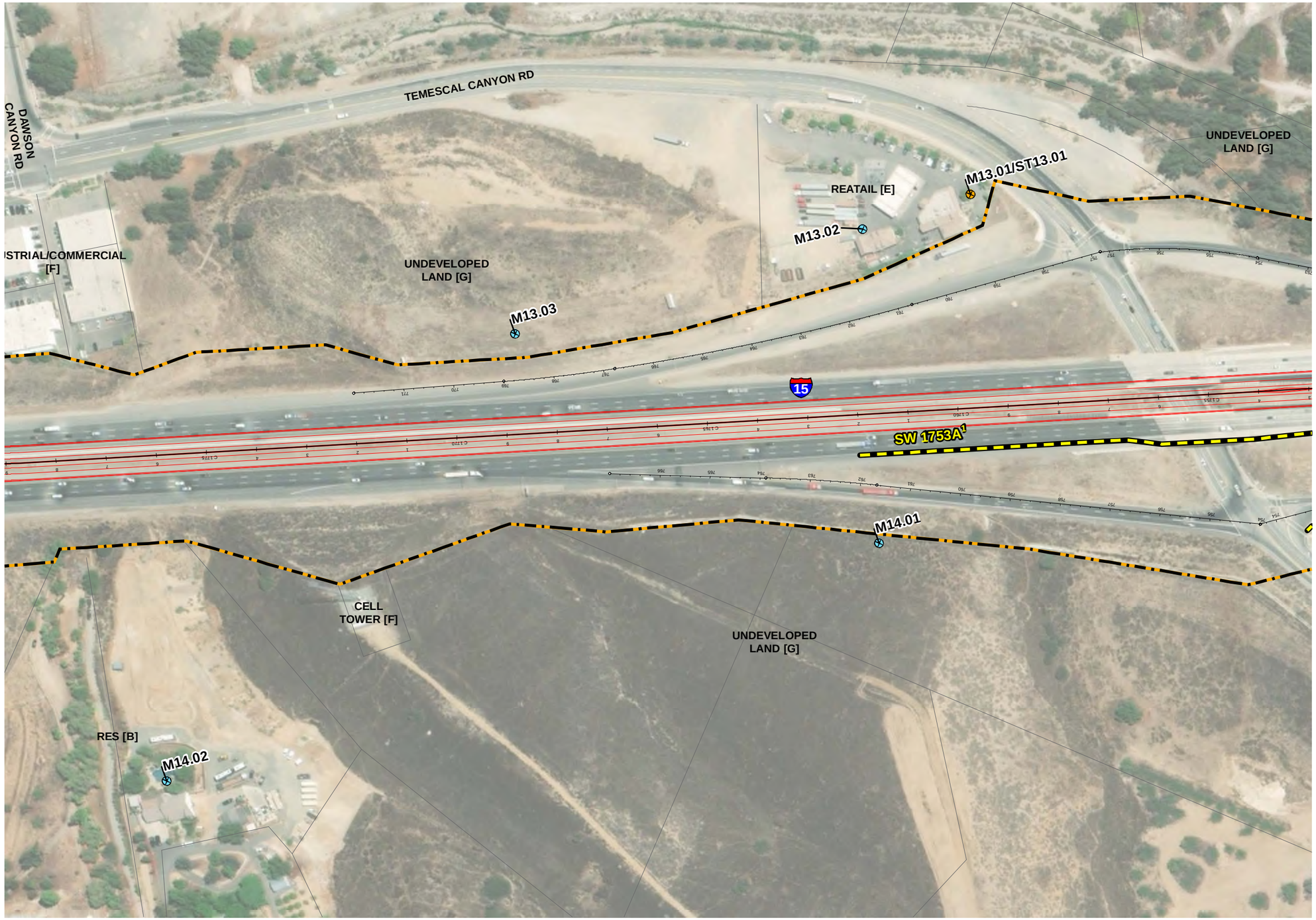

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

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[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 29a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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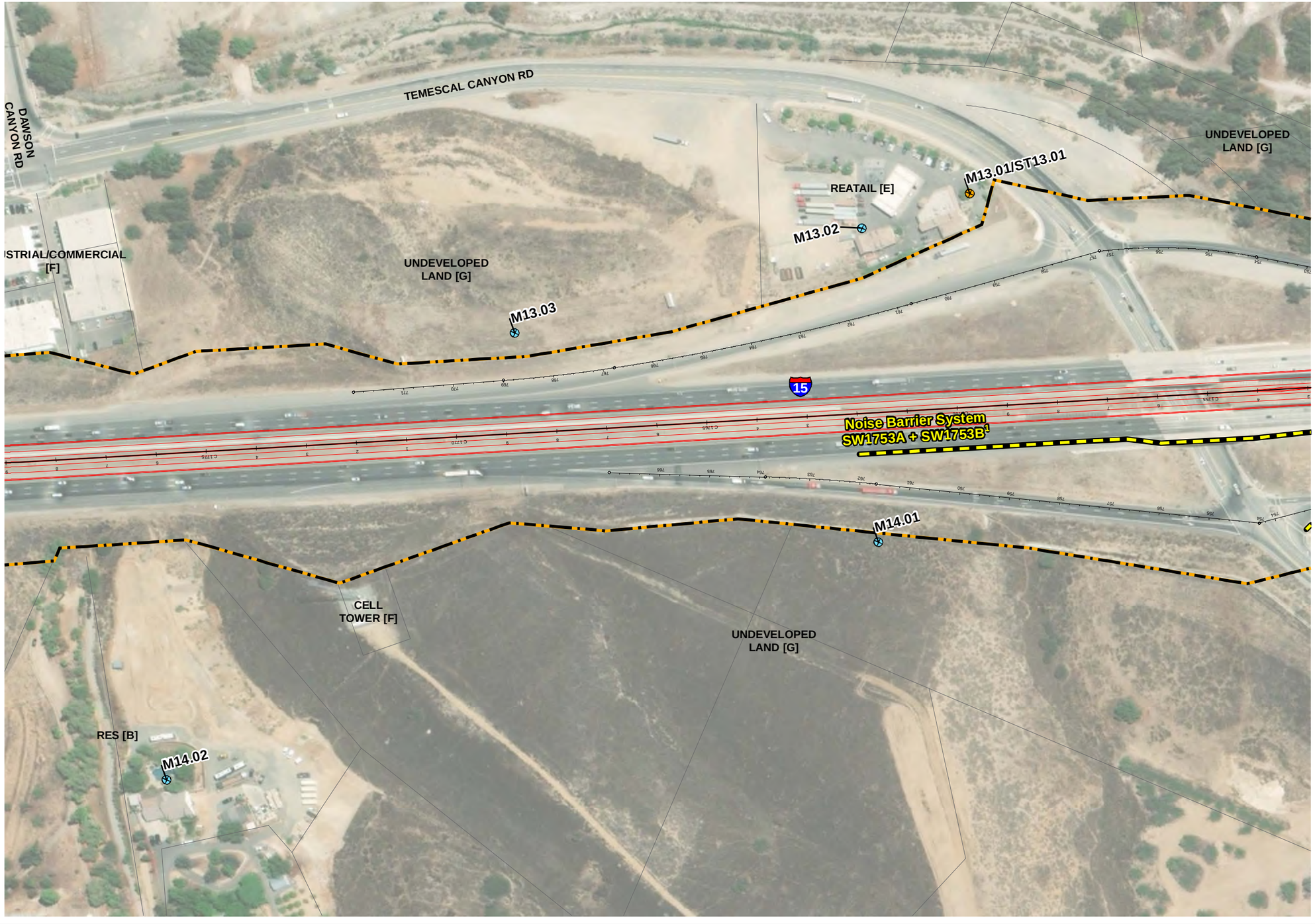

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 29b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 30 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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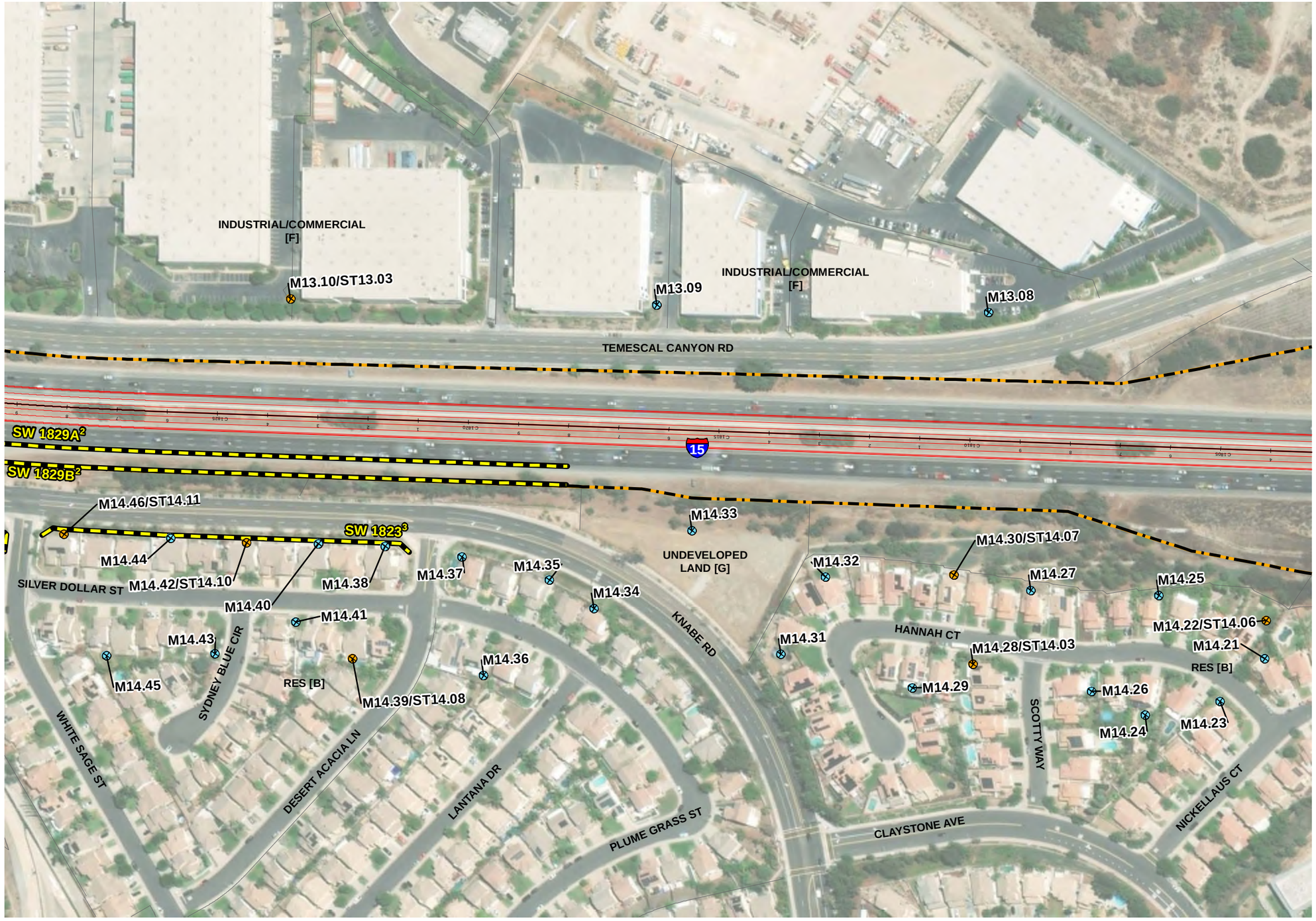

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Feet
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Figure 2.3.7-2, Sheet 31 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 32 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

0 100 200 Feet
1:2,400

Figure 2.3.7-2, Sheet 33a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 33b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 33c of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

[1] Not Acoustically Feasible

[2] Acoustically Feasible but Failed to Meet Design Goal

[3] Acoustically Feasible and Met Design Goal

[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 33d of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
- Planned Future Projects
- Parcel Boundary

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[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 33e of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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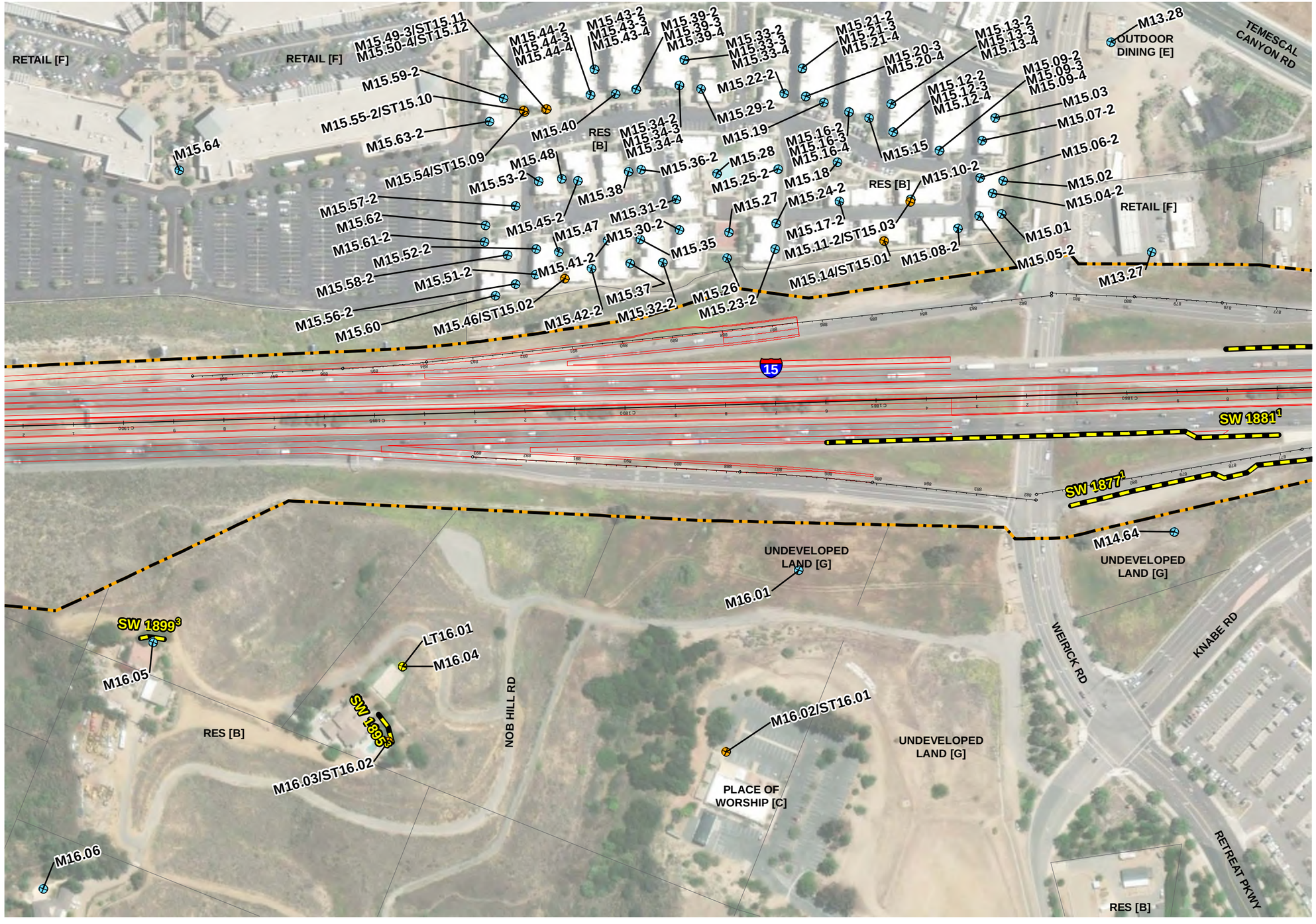

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
- Project Limits/Noise Study Limits
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[A] - Activity Category A Land Uses
[B] - Activity Category B Land Uses
[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 34a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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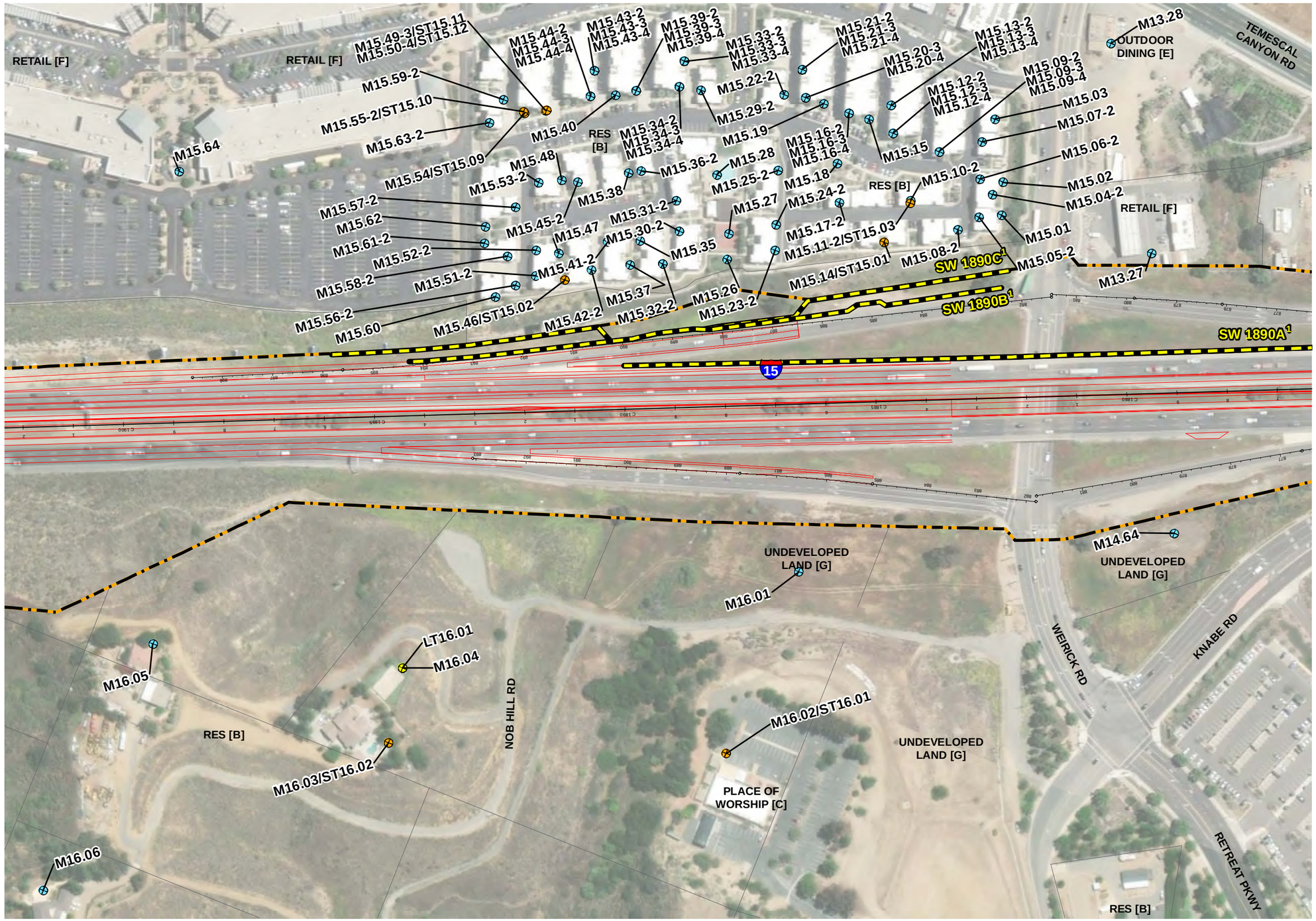

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
- Project Layout
- Existing Right-of-Way (2008)
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[C] - Activity Category C Land Uses
[D] - Activity Category D Land Uses
[E] - Activity Category E Land Uses
[F] - Activity Category F Land Uses
[G] - Activity Category G Land Uses

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Figure 2.3.7-2, Sheet 34b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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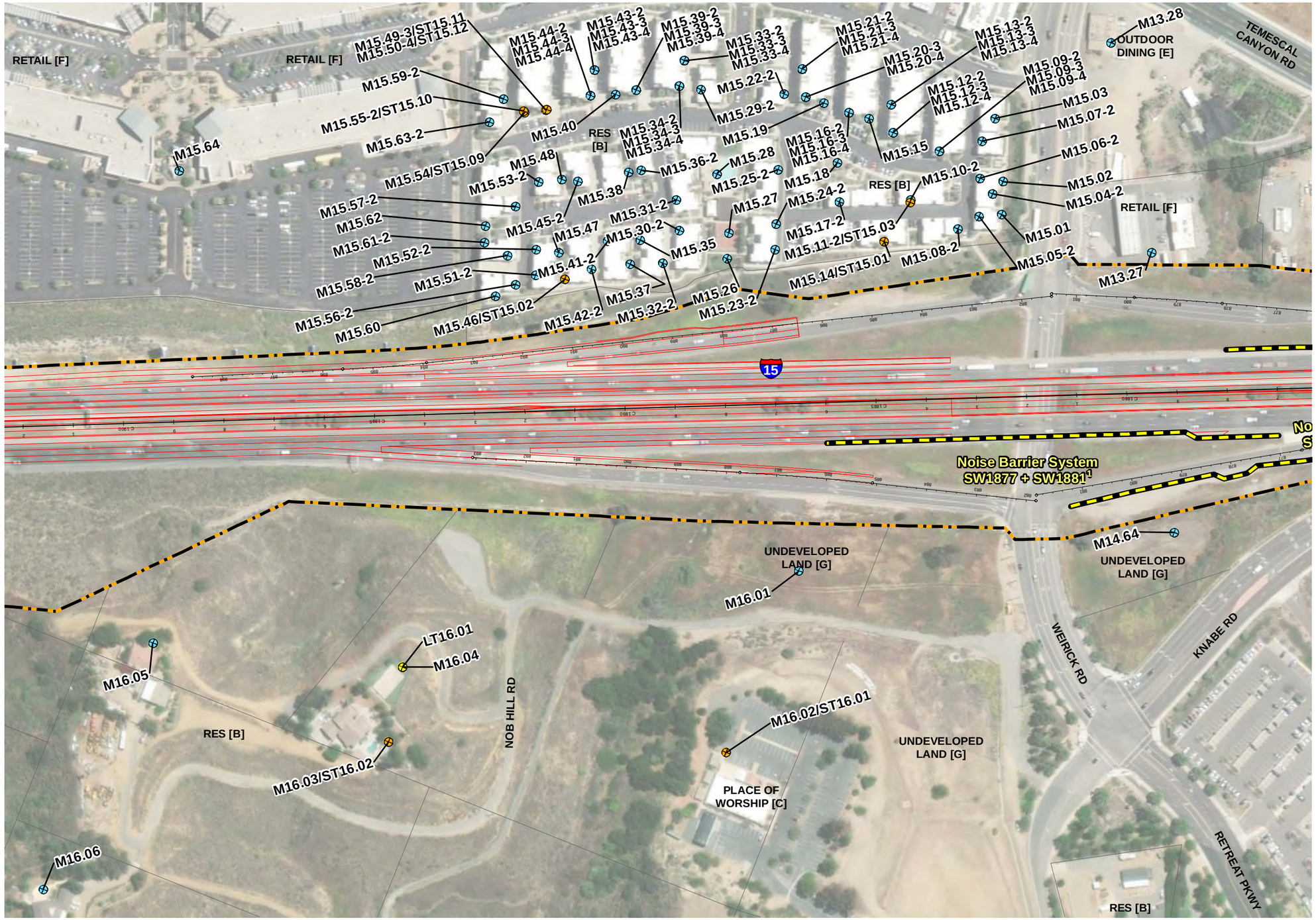

Legend

- Long-term Measurement Location
- Short-term Measurement Location
- Modeled Receiver Location
- Evaluated Barrier Location
- Existing Barrier Location
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Figure 2.3.7-2, Sheet 34c of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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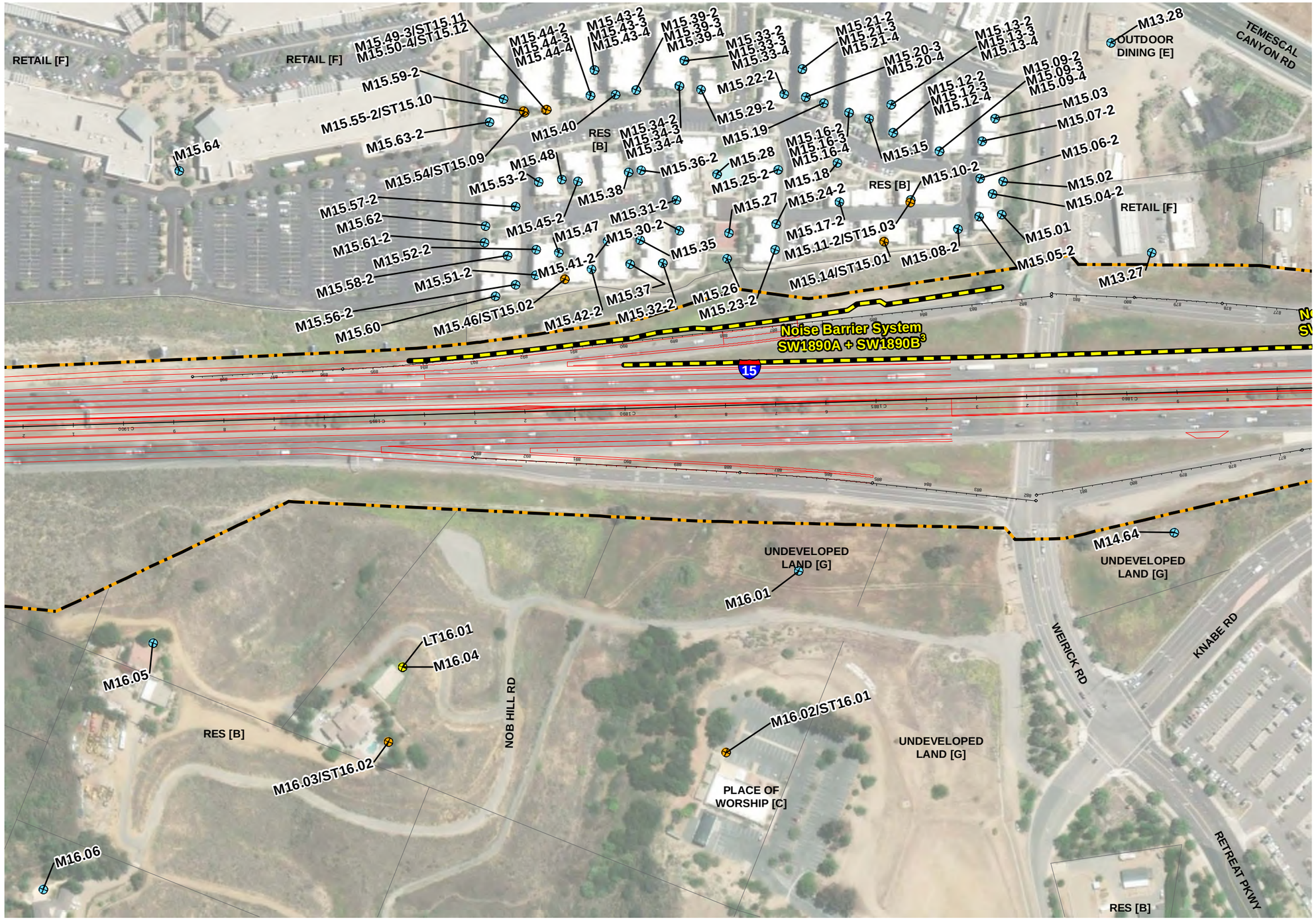

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Figure 2.3.7-2, Sheet 34d of 40
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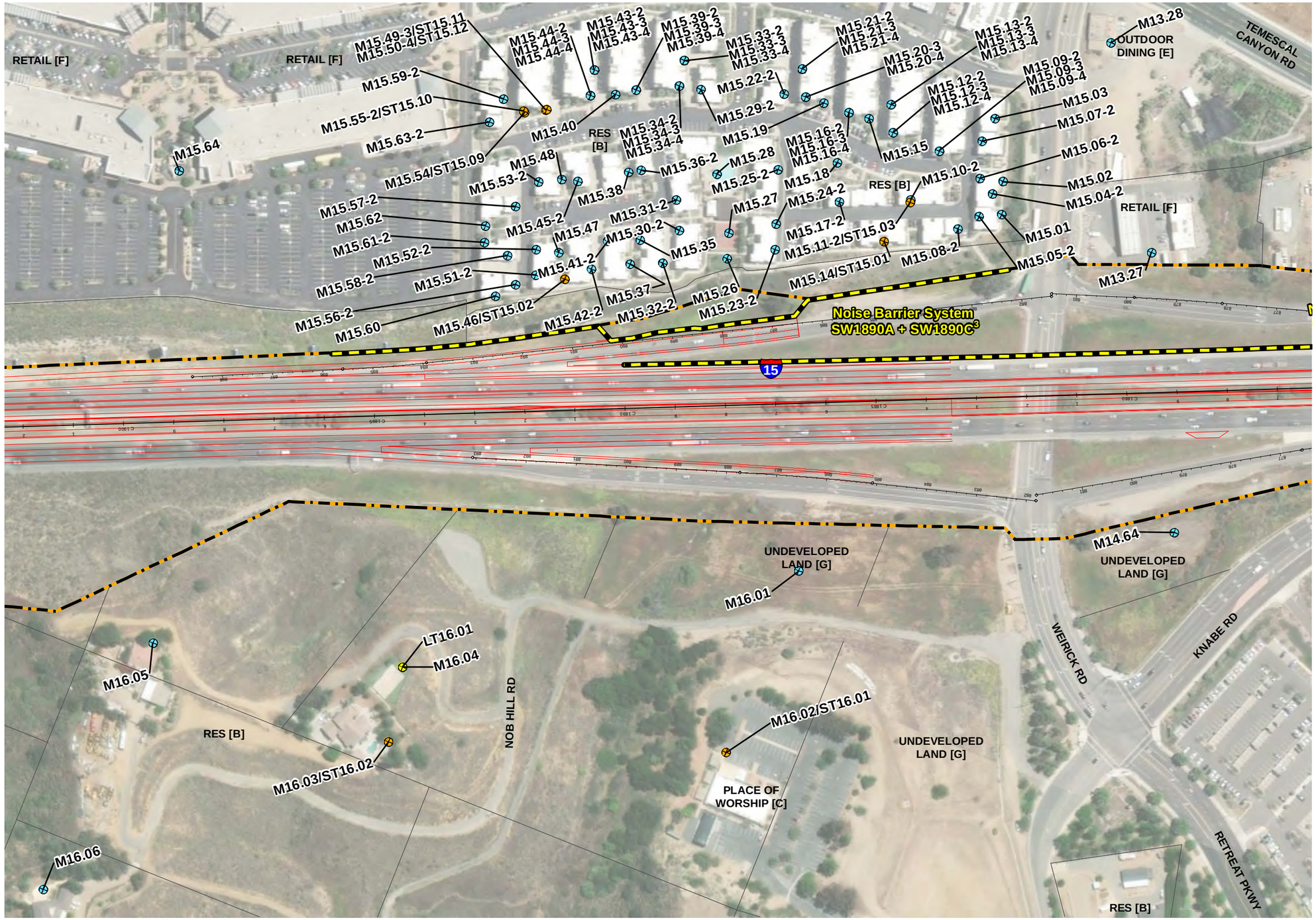

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Figure 2.3.7-2, Sheet 34e of 40
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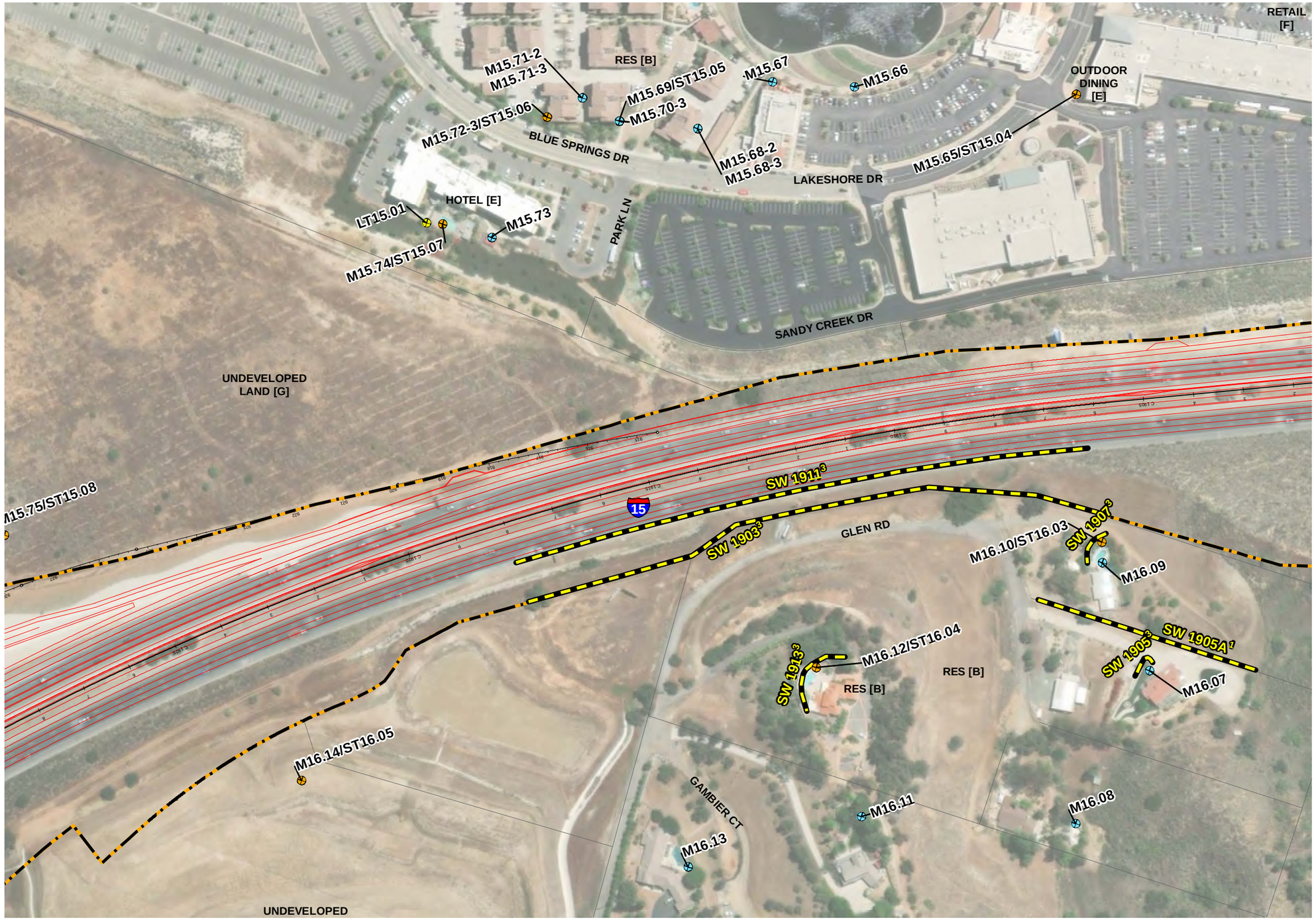

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Figure 2.3.7-2, Sheet 35 of 40
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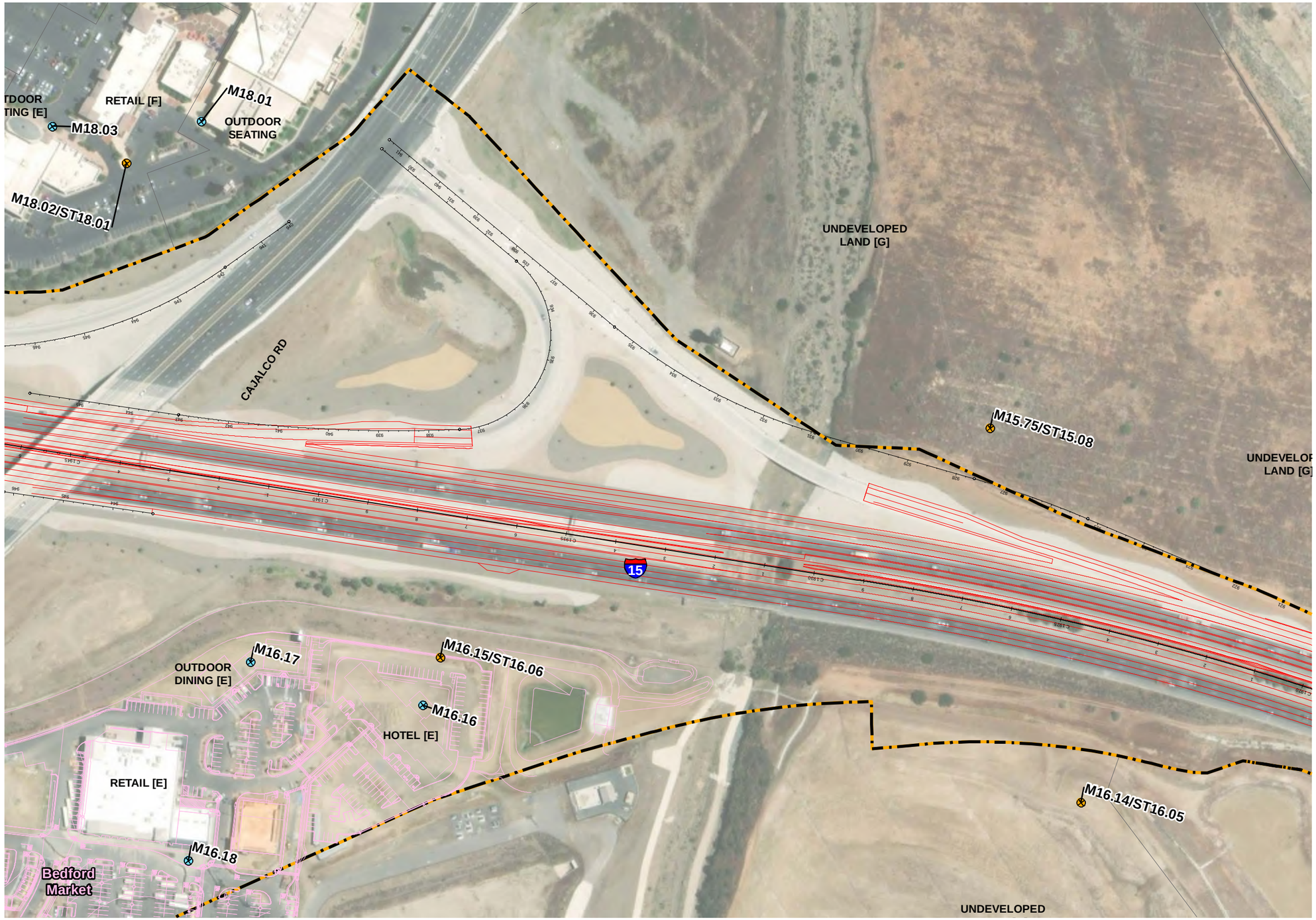

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Figure 2.3.7-2, Sheet 36 of 40
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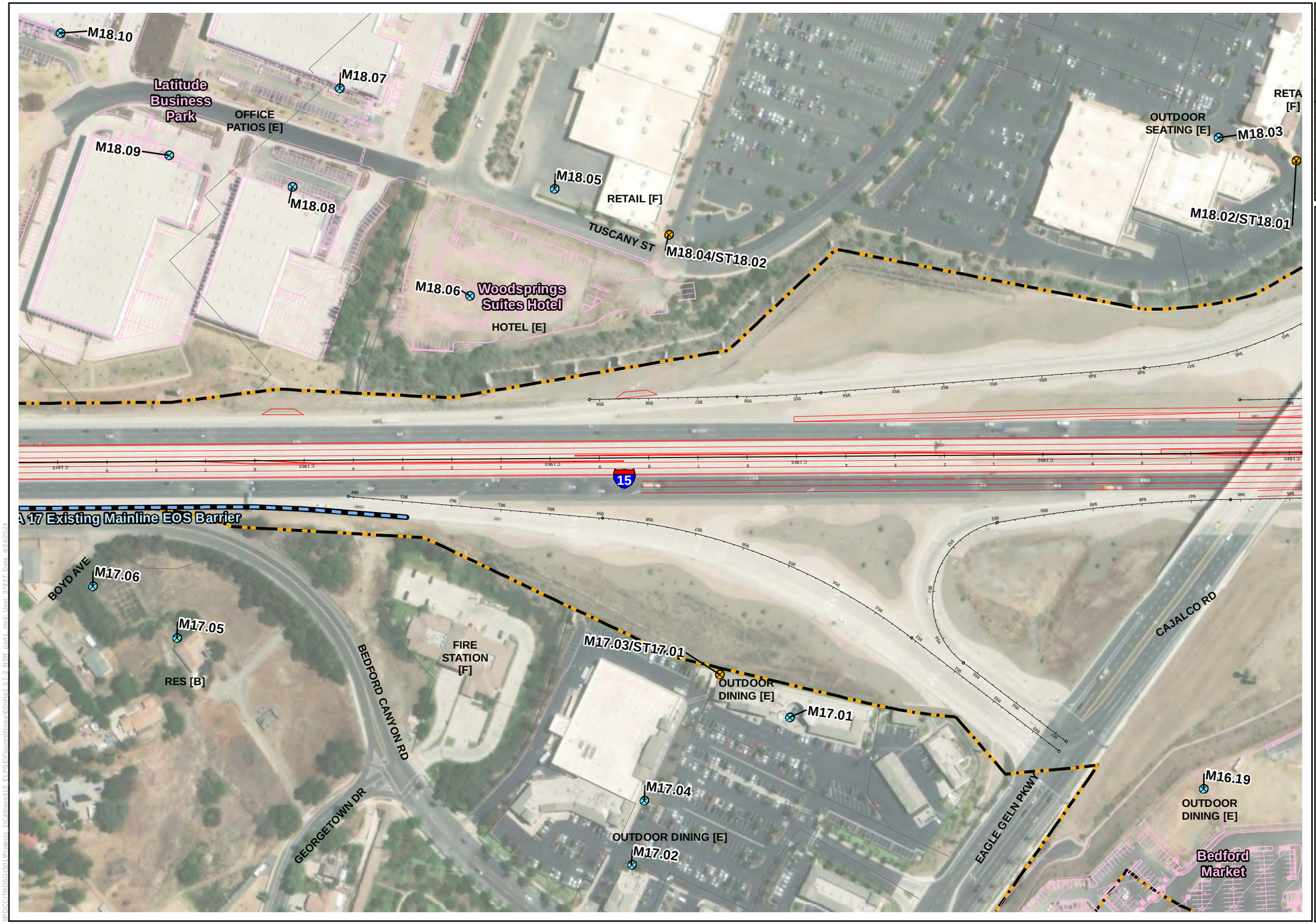

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Figure 2.3.7-2, Sheet 37 of 40
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Figure 2.3.7-2, Sheet 38a of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
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Figure 2.3.7-2, Sheet 38b of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
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Figure 2.3.7-2, Sheet 38c of 40
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Figure 2.3.7-2, Sheet 38d of 40
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Figure 2.3.7-2, Sheet 39a of 40
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Figure 2.3.7-2, Sheet 39b of 40
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Figure 2.3.7-2, Sheet 39c of 40
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Figure 2.3.7-2, Sheet 39d of 40
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Figure 2.3.7-2, Sheet 40 of 40
Noise Measurement and Modeling Locations, and Evaluated Noise Barriers
Interstate 15 Express Lanes Project Southern Extension

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2.3.8 Energy

This section describes existing conditions and the applicable regulatory requirements related to energy and energy service systems as well as the potential for energy impacts on people or the surrounding environment associated with the Project. This section was prepared using information from the I-15 Express Lanes Project Southern Extension Air Quality Report (Caltrans 2022a).

2.3.8.1 Regulatory Setting

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

2.3.8.2 Affected Environment

Interstate (I-) 15 runs north-south to connect Southern California, Nevada, Arizona, Utah, Idaho, and Montana; beginning in San Diego, California, and terminating in Sweet Grass, Montana at the Canadian border. I-15 is a major freeway in western Riverside County that connects San Diego with the Inland Empire. Within the study area, I-15 primarily consists of three general-purpose lanes in each direction, with additional auxiliary lanes at spot locations. Truck traffic currently accounts for approximately 9 percent of the total volume and ranges from 12,000 to 19,000 daily trips, depending on the roadway segment (Caltrans 2022b).

2.3.8.3 Methodology

The energy analysis addresses both direct and indirect energy consumption, which are defined as follows:

- **Direct Energy.** In the context of transportation, direct energy involves all energy consumed by vehicles (e.g., automobiles, trains, airplanes) for propulsion. This energy consumption is a function of traffic characteristics, such as vehicle miles traveled (VMT), speed, vehicle mix, and the thermal value of the fuel being used. In addition, direct energy also includes the one-time energy expenditure involved in construction of the Project. Therefore, analysis of direct energy use includes the following factors:

    - **Direct Energy (Mobile Sources):** The energy consumed by vehicle propulsion within the facility during operation of the Project.

- **Direct Energy (Construction):** The energy consumed by construction vehicles and equipment during construction of the Project.

  Direct energy consumption from mobile sources associated with the Project was estimated using traffic model forecasts for VMT from the Traffic Operations Analysis Report (Caltrans 2021) and the CT-EMFAC2017 air quality model, which provides estimated fuel consumption rates for baseline year 2019, opening year 2030, and design year 2050. Estimated energy consumption in 2050 is considered to be the most conservative (i.e., highest) because population and employment are projected to be higher in that year than in any earlier year. Therefore, the energy consumption of the Project is compared with projected 2050 baseline conditions, which assumes that limited baseline transportation improvements have occurred and that the Project improvements were not implemented. The CT-EMFAC2017 model uses average values of energy consumption for various vehicle types, based on available data; using the level of VMT, it is possible to calculate energy consumption per VMT and, ultimately, per day or per year.

  Direct energy use associated with fuel consumption during Project construction was estimated by converting carbon dioxide (CO_2) emissions generated by diesel and gasoline equipment for the 3-year construction period, using the rate of CO_2 emissions emitted per gallon of combusted gasoline and diesel (Climate Registry 2018). These CO_2 emissions were obtained from the Project Air Quality Report, which quantified CO_2 emissions using the Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model.

- **Indirect energy** includes maintenance activities that would result in long-term indirect energy consumption by equipment required to operate and maintain the roadway. Indirect energy includes the electricity required to operate the lighting, signals, sensors, and changeable message signs, which is anticipated to be minimal.

Study Area

The study area for energy includes the Project construction limits along I-15, several miles upstream and downstream of the Project limits to include the effects of upstream and downstream bottlenecks, as well as interactions with the current State Route (SR-) 91 interchange connectors and the SR-91 Express Lane direct connectors.

2.3.8.4 Environmental Consequences

Build Alternative

Implementation of the Project is expected to affect the use of energy resources in the study area during short-term construction and long-term operations.

The analysis of Project impacts is conducted at the regional level and, therefore, by its nature, is an analysis of cumulative impacts. The analysis that follows discusses the direct and indirect energy use impacts for the Build Alternative.

Temporary Impacts

Direct energy from construction sources is the energy consumed during construction activities by vehicles and equipment. Project construction would involve the following types of diesel-powered equipment during the estimated 3-year construction period:

- Cranes
- Rough-terrain forklifts
- Front-end loaders
- Generators
- Graders
- Rollers
- Pumps
- Air compressors
- Crawler tractors
- Excavators
- Rubber-tired loaders
- Scrapers
- Tractors/loaders/backhoes
- Plate compactors
- Pavers

Construction would also involve the use of on-road gasoline vehicles by construction workers. Overall, construction fuel consumption for the Project was calculated by converting the estimated CO_2 emission levels generated by diesel-powered off-road equipment and on-road gasoline vehicles for the construction period, as provided by the Air Quality Report (Caltrans 2022a), into the number of gallons of diesel and gasoline expected to be consumed during Project construction activities. Fuel consumption for mobile sources was estimated using the CO_2 emission outputs by converting CO_2

emissions estimated using the rate of CO_2 emissions per gallon of combusted gasoline (8.78 kilograms/gallon) and diesel (10.21 kilograms/gallon) (EPA 2022).

As shown in Table 2.3.8-1, construction of the Build Alternative is expected to consume approximately 472,200 gallons of diesel fuel and 58,250 gallons of gasoline, with energy consumption totaling approximately 66.6 billion British thermal units (BTUs) over the 3-year period.

Table 2.3.8-1. Project Energy Requirements during the Construction Period

Overall Construction Energy Use	Diesel Use	Gasoline Use
Fuel (Gallons)	472,200	58,250
BTU (billion)	60.2	6.4
Total BTU (billions)	66.6	

Although construction would result in a short-term increase in energy use, construction design features would help conserve energy. For example, recycled materials, including removed asphalt concrete pavement and cement concrete pavement, would be used where feasible, consistent with Standard Project Measure **EN-1**. Recycled products typically have lower energy costs for manufacturing and transportation because recycled products do not require raw materials, which must be mined and transported to a processing facility. If new materials must be used, a fly ash mix may be considered to lower the heat island effect, depending on what is allowable under California Department of Transportation (Caltrans) specifications. The energy conservation features would be consistent with state and local policies to reduce energy consumption. Therefore, Project construction would not result in the inefficient, wasteful, or unnecessary consumption of energy.

Permanent Impacts

Energy calculations for transportation projects are dependent on VMT and vehicle fuel consumption. For the study area, energy calculations are based on annual VMT, shown in Table 2.3.8-2. VMT for existing (2019), opening-year (2030), and design-year (2050) conditions are shown in the table to provide an overview of VMT by evaluation year and Project alternative. As shown in the table, daily and annual VMT under existing conditions (2019) are lower than daily and annual VMT predicted in the future years 2030 and 2050. The projected increase in daily and annual VMT can be attributed to the projected population growth as well as the expected increase in employment in the region. Table 2.3.8-2 shows that predicted 2030 and 2050 daily and annual VMT for the Build Alternative are greater than the projected daily and annual VMT during the same analysis years under the No-Build Alternative.

Table 2.3.8-2 Operational Vehicle Miles Traveled by Alternative

Study Phase	VMT	No-Build Alternative	Build Alternative
Existing Conditions (2019)	Daily	9,566,440	–
	Annual[a]	3,319,554,680	–
Opening Year (2030)	Daily	15,047,900	15,497,400
	Annual	5,221,621,300	5,377,597,800
Design Year (2050)	Daily	15,649,010	16,011,540
	Annual	5,430,206,470	5,556,004,380

Source: Caltrans 2021

[a.] Annual values were derived by multiplying the daily values by 347, per California Air Resources Board methodology (California Air Resources Board 2008).

The energy consumption is related directly to gasoline and diesel fuel consumption by automobiles and trucks. In addition to VMT, fleet mix and travel speeds also affect fuel consumption. The estimate of operational energy consumption was based on the vehicle types (e.g., automobiles, trucks, light-duty trucks, medium-duty trucks, heavy-duty trucks) traveling in the Project vicinity using the CT-EMFAC2017 model.

Energy use can be represented in terms of the thermal value of the fuel, usually measured in BTUs. Gallons of fuel can be converted to BTUs by using the heat content of the fuel. Diesel fuel has a heat content of 127,460 BTUs per gallon and gasoline has a heat content of 109,772 BTUs per gallon (California Air Resources Board 2018). Table 2.3.8-3 summarizes projected annual energy use under the Build Alternative and No-Build Alternative.

Table 2.3.8-3. Annual Direct Energy Use (Mobile Sources) by Alternative and Study Year

Study Phase	Fuel Usage	No-Build Alternative	Build Alternative
Existing Conditions (2019)	Gasoline	120,502,736	–
	Diesel	30,816,894	–
	BTU (billion)	17,156	–
Opening Year (2030)	Gasoline	134,546,548	138,344,831
	Diesel	38,451,079	39,424,378
	BTU (billion)	19,670	20,211
Design Year (2050)	Gasoline	120,291,547	122,613,105
	Diesel	36,027,613	36,638,960
	BTU (billion)	17,797	18,129

Source: CT-EMFAC2017 and Caltrans 2021

As shown in Table 2.3.8-3, when compared to the Existing Conditions (2019), the Build Alternative would increase the annual energy consumption by 3,055 billion BTUs

(17.8 percent) in 2030 and by 973 billion BTUs (5.7 percent) in 2050. When compared to the Existing Conditions (2019), annual VMT is projected to increase by 62.0 percent in 2030 and by 67.4 percent by 2050. This disparity is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time. These later-model replacement vehicles would also include hybrid and all-electric vehicles. Compared to the No-Build Alternative, the Build Alternative is projected to result in a 541 billion BTU increase (2.8 percent) in 2030 and a 332 billion BTU increase (1.9 percent) in 2050.

Operation of traffic lights, streetlights, sensors, and changeable message signs such as toll pricing signs consumes electricity. These features are required to manage traffic and provide safe driving conditions. Light-emitting diode (LED) fixtures would be used wherever traffic lights or streetlights are installed or replaced (Avoidance and Minimization Measure **EN-2**). LED street lighting consumes up to 70 percent less energy per year as compared to incandescent bulbs (The Climate Group 2023). All new traffic signals would likewise use LED bulbs, which reduce signal energy consumption by up to 80 percent (U.S. DOE 2004). Therefore, Project operation would not result in the inefficient, wasteful, or unnecessary consumption of energy.

No-Build Alternative

The No-Build Alternative would not result in the construction of any improvements to I-15 in the Project area except for ongoing and other planned projects and, therefore, would not result in temporary impacts on energy. The No Build Alternative would not result in permanent adverse energy impacts.

2.3.8.5 Avoidance, Minimization, and/or Mitigation Measures

The following Standard Project Measure and Avoidance and Minimization Measure including Caltrans Standard Specifications will be implemented during construction activities to minimize and/or avoid impacts related to energy demand.

Standard Project Measure **EN-1:** The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)).

Avoidance and Minimization Measure **EN-2:** Light fixtures and traffic signals will be replaced or installed with highly efficient light-emitting diodes (LEDs), including toll pricing signs.

2.4 BIOLOGICAL ENVIRONMENT

2.4.1 Natural Communities

This section discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors, fish passage, and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed in Section 2.4.5, *Threatened and Endangered Species*. Wetlands and other waters are discussed in Section 2.4.2, *Wetlands and Other Waters*.

2.4.1.1 Regulatory Setting

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), a comprehensive regional Habitat Conservation Plan (HCP), was adopted in June 2003 (RCIP 2003). Major participants in the regional planning effort included the California Department of Transportation (Caltrans), Riverside County, California Department of Fish and Wildlife (CDFW), U.S. Fish and Wildlife Service (USFWS), Riverside County Transportation Commission, 18 cities, and interested individuals and groups. The purpose of the plan was to develop methods and procedures that provide for development while protecting environmental resources in the western Riverside County area over a 75-year period. The County signed the Implementation Agreement on December 15, 2003. This plan provides, among other things, impact mitigation for future County projects on circulation element roads in the covered area of western Riverside County.

Participation by the County is intended to streamline the environmental process for future transportation projects in western Riverside County (e.g., through pre-mitigation) and save money over the long term. The Project involves an existing facility and is a Covered Activity under Volume I, Section 7.3.5 (Planned Roads within the Criteria Area) of the MSHCP. The covered transportation routes require discretion by the County with respect to design, construction, and operational decisions to minimize adverse impacts on existing habitat that may be affected by Project activities. For covered projects, compliance with MSHCP Volume I, Sections 7.5.1 (Guidelines for the Siting and Design of Planned Roads within the Criteria Area and Public/Quasi-public Lands), 7.5.2 (Guidelines for Construction of Wildlife Crossings), and 7.5.3 (Construction Guidelines), and Appendix C (Standard Best Management Practices) is required. Where impacts cannot be avoided, the County will make reasonable efforts to mitigate the impacts.

The MSHCP was reviewed because the plan provides specific conservation goals for natural vegetation communities that are rapidly declining throughout the region (e.g.,

Riversidian sage scrub [RSS], riparian/riverine resources); these communities provide suitable habitat for the species covered under the plan.

A consistency review by the Western Riverside County Regional Conservation Authority (RCA), USFWS, and CDFW will be performed to ensure that the Project is consistent with the requirements of the plan. Because there is a federal nexus for the Project, formal consultation would occur through the consistency review performed by USFWS and will result in a streamlined biological opinion from USFWS for covered species. Formal consultation under USFWS Section 7 and/or a CDFW 2081 permit independent of the MSHCP consistency review may be required for non-covered species (i.e., federal candidate species monarch butterfly [*Danaus plexippus*] and state candidate species Crotch bumble bee [*Bombus crotchii*] and mountain lion [*Puma concolor*]; see Section 2.4.4, *Animal Species*, for details).

County of Riverside Oak Tree Management

Riverside County's Oak Tree Management Guidelines are intended to provide long-term protection and conservation of oak trees and oak woodlands and guidance on establishing baseline oak tree data to develop adequate avoidance, minimization, and/or compensation for impacts on this natural resource.

County of Riverside Tree Removal Ordinances

Riverside County's Tree Removal Ordinance Chapter 12.08.050 states that the removal, trimming, or planting of a tree in the right of way (ROW) of any County highway without first obtaining a permit from the County transportation director is prohibited. The permit may include conditions deemed necessary, such as tree relocation or replacement, or that work be done by a qualified tree surgeon or tree trimmer.

Tree Removal Ordinance Chapter 12.24.010 states that no person shall remove any living native tree above 30 feet in height and 12 inches in diameter at breast height on any parcel or property greater than 0.5 acre in size, that is above 5,000 feet in elevation in Riverside County, without first obtaining a permit to do so.

Oak Tree Management Guidelines implemented by Riverside County in 1993 (County of Riverside 1993) to address the treatment of oak woodlands in areas where zoning and/or general plan density restrictions would allow for the use of clustering in Project design.

The Open Space and Conservation Policy states that developments in sensitive vegetation areas, including oak woodlands, must be evaluated individually and cumulatively for potential impacts on vegetation, and impacts on sensitive vegetation must be minimized and mitigation measures implemented.

2.4.1.2 Affected Environment

Unless otherwise noted, the information from this section was based upon the Natural Environment Study (NES) (Caltrans 2023), Determination of Biologically Equivalent or

Superior Preservation (DBESP) Report (Caltrans 2024), and Jurisdictional Delineation Report (Caltrans 2021) prepared for the Project. References used in these reports are not carried over into this section. The analysis in this document focuses on those species and habitats that occur or have the potential to occur in the Biological Study Area (BSA).

Several references were used to determine which natural vegetation communities of concern are present. The California Natural Diversity Database (CNDDB) was reviewed on January 16, 2024 (CDFW 2024) because it tracks natural communities of concern by CDFW. The MSHCP was also reviewed for the sensitive natural vegetation communities that are tracked in the plan (RCIP 2003).

Study Areas

The BSA is a buffered area around the Project limits of disturbance (LOD) comprising the area that was surveyed for biological resources (Figure 2.4.1-1). Direct effects are evaluated within the LOD, which represents the area proposed for direct impact, including permanent and temporary ground disturbances, as well as indirect shading effects from bridge construction and/or widening. Buffers are used to provide context for the resources identified within the BSA, address potential indirect effects, and allow revisions to the Project design while maintaining an adequate representation of the biological resources present. Buffers were applied around the LOD as follows: (1) a 500-foot buffer was used for focused burrowing owl (*Athene cunicularia*) surveys (see Section 2.4.4, *Animal Species*) and general biological resources, including vegetation mapping and wildlife corridors (see below); (2) a 300-foot buffer was used for least Bell's vireo (LBV; *Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) protocol surveys (see Section 2.4.5, *Threatened and Endangered Species*); (3) a 100-foot buffer was used for the focused rare plant surveys (see Section 2.4.3, *Plant Species*), bat habitat assessment and focused surveys (see Section 2.4.4, *Animal Species*), and fairy shrimp protocol surveys (see Section 2.4.5, *Threatened and Endangered Species*); and (4) a 50-foot buffer was used for jurisdictional resources (i.e., waters and wetlands) (see Section 2.4.2, *Wetlands and Other Waters*) and MSHCP riparian/riverine resources (see below) (Figure 2.4.1-1).

The overall 500-foot BSA used for the general biological resources assessment for the Project extends approximately 15.8 linear miles along the Interstate (I-) 15 corridor between Post Mile (PM) 21.2 and PM 38.1 (Figure 2.4.1-1).

The BSA occurs in the South Coast subregion of the southwestern California region and within the California Floristic Province. The natural vegetation of the subregion consists primarily of chaparral, sage scrub, annual grasslands, woodland, and riparian scrub and forest. Much of the natural vegetation occurs in preserved open space or scattered in fragmented patches in areas that are not developed.

The LOD lies within what can generally be considered a topographically flat area, with some upward sloping in a southerly direction along I-15. The BSA extends outward from the LOD and includes some areas of hillside and more rugged terrain. Elevation within the BSA generally increases from the northern end of the Project to the southern end.

Major topographic features in the BSA are the Santa Ana Mountains to the west, Temescal Wash, Estelle Mountain, Gavilan Hills, Corona Lake, and Lake Elsinore. Loamy and sandy soils of various textures make up most of the mapped soil types within the BSA (more than 82 percent) (see Section 2.4.2, *Wetlands and Other Waters*, for details).

Land use varies throughout the LOD and BSA but is dominated by developed areas, grasslands, and shrub/scrub habitats (see Figure 2.4.1-1 for aerial imagery within the BSA and LOD). At the northern end of the Project, within the City of Corona, land use predominantly consists of developed areas. Other highly developed areas include the unincorporated areas of Temescal Valley and Alberhill, as well as the City of Lake Elsinore at the southern end of the BSA. Most of the developed areas lie west of I-15 and are interspersed by grasslands and sage scrub habitats; the land east of I-15 mostly consists of grassland and sage scrub habitats. Temescal Wash drains from Lake Elsinore to the Santa Ana River and runs along and through the BSA; it lies along the eastern side of the BSA at the northern end of the Project, crosses through the BSA and under I-15 at approximately PM 28, then continues along the western side of the BSA near the southern end of the Project. Some wetland, riparian vegetation, and woodland habitats are present along Temescal Wash and other intermittent and ephemeral tributaries.

Conserved lands occur within the BSA and include MSHCP conserved lands that are owned, managed, monitored, or maintained by RCA. The intent of these conserved lands is to secure open space and ecological diversity by conserving species and their associated habitats through land acquisition. Such lands occur within the BSA just north of the City of Lake Elsinore along the western and eastern sides of I-15. Smaller parcels of conserved lands intersect the BSA west of I-15 at the Temescal Wash crossing and between Corona Lake and I-15. Conservation easements under the MSHCP occur at the BSA near the Shops at Sycamore Creek complex, west of I-15. There are no conserved lands within the I-15 median or State ROW where widening will occur.

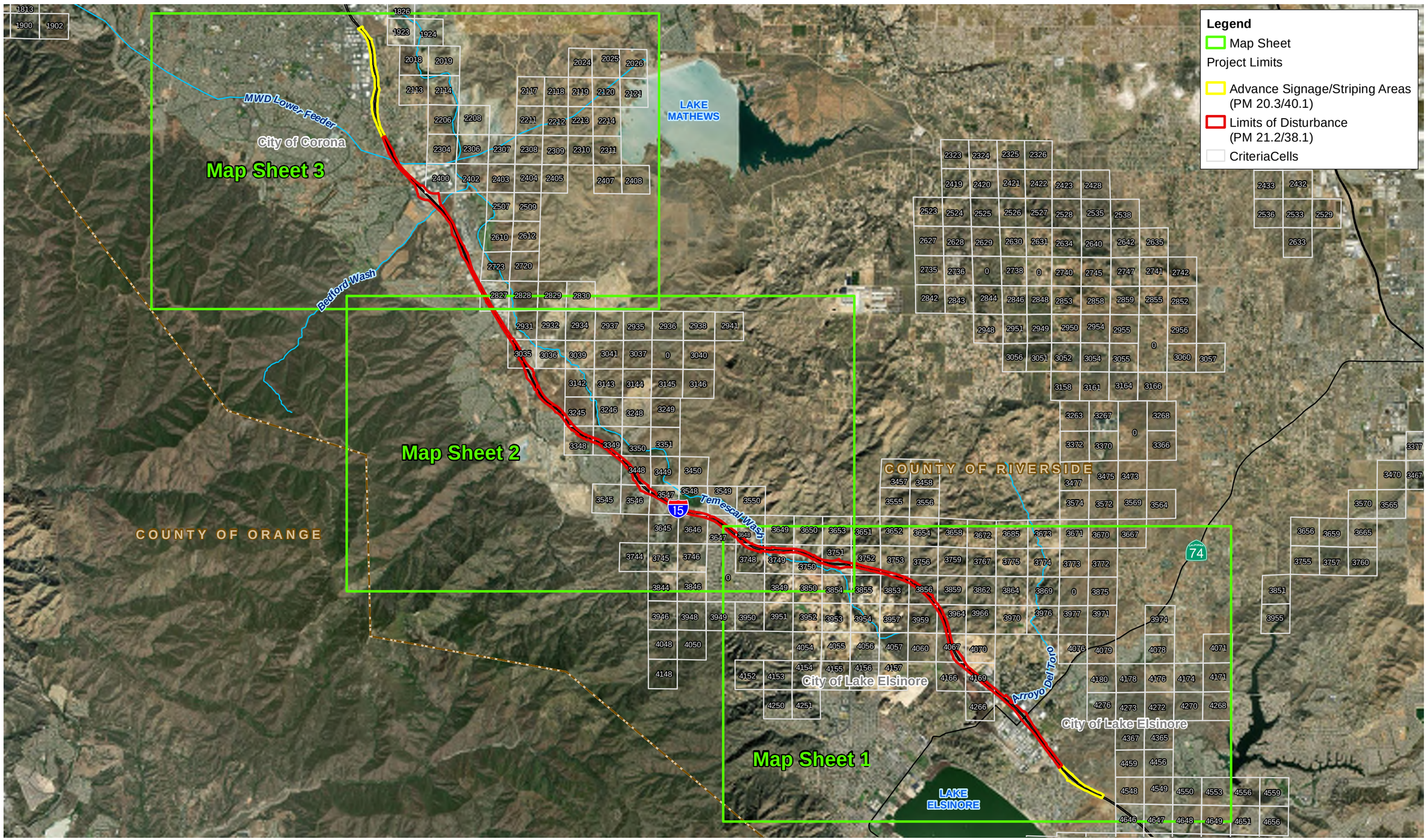

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Figure 2.4.1-1 - Map Index
Biological Study Area
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- BSA - 500-foot Study Area - Burrowing Owl
- 300-foot Study Area - Riparian Birds
- 100-foot Study Area - Fairy Shrimp, Rare Plants and Bats
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

Source: ESRI USA Imagery

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Figure 2.4.1-1 - Sheet 1
Biological Study Area
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

BSA - 500-foot Study Area - Burrowing Owl

300-foot Study Area - Riparian Birds

100-foot Study Area - Fairy Shrimp, Rare Plants and Bats

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

Source: ESRI USA Imagery

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Figure 2.4.1-1 - Sheet 2
Biological Study Area
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)
- BSA - 500-foot Study Area - Burrowing Owl
- 300-foot Study Area - Riparian Birds
- 100-foot Study Area - Fairy Shrimp, Rare Plants and Bats
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

Source: ESRI USA Imagery

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Figure 2.4.1-1 - Sheet 3
Biological Study Area
Interstate 15 Express Lanes Project Southern Extension

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Vegetation Communities/Land Cover Types Within the Biological Study Area

Twenty-five vegetation communities and three land cover types were identified in the BSA. Eleven of these are classified as a sensitive natural community by CDFW (CDFW 2023) and one is considered rare per the MSHCP (see the *Natural Communities of Concern* subsection below for details). Each vegetation community/land cover type is listed in Table 2.4.1-1, along with its acreage in the BSA, and is illustrated on Figure 2.4.1-2.

Table 2.4.1-1. Vegetation Communities and Land Cover Types and Acreages within the Biological Study Area

Vegetation Communities (*Manual of California Vegetation Classification*)	Vegetation Communities (*Holland Classification*)	Biological Study Area, 500-foot Buffer (acres)
Vegetation Communities		
Needle Grass–Melic Grass Grasslands[1]	Valley Needlegrass[1]	1.62
Clustered Tarweed Fields[1]	Wildflower Fields[1]	3.79
Wild Oats and Annual Brome Grasslands[2]	Non-Native Grasslands or Valley and Foothill Grassland[2]	253.66
Upland Mustard and Star Thistle Fields[2]	Non-Native Grasslands[2]	103.28
Wild Tarragon Patches	Central Coast Riparian Scrub	1.18
Brittle Bush Scrub	Riversidian Sage Scrub	383.97
Bush Penstemon Scrub[1]	Coastal Sage-Chaparral Scrub[1]	19.89
California Buckwheat Scrub	Riversidian Sage Scrub	49.18
California Sagebrush–Black Sage Scrub	Riversidian Sage Scrub	193.97
Deer Weed Scrub	Coastal Sage – Chaparral Scrub	38.44
Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral[1]	Southern North Slope Chaparral[1]	15.20
Quailbush Scrub	Desert Saltbush Scrub	0.23
Scrub Oak Chaparral	Scrub Oak Chaparral	0.90
Eucalyptus–Tree of Heaven–Black Locust Groves[2]	Eucalyptus Woodland[2]	48.67
Pepper Tree or Myoporum Forest and Woodland	Non-native Woodland[2]	1.92
Arrow Weed Thickets[1]	Arrow Weed Scrub[1]	2.07

Vegetation Communities (*Manual of California Vegetation Classification*)	**Vegetation Communities (*Holland Classification*)**	**Biological Study Area, 500-foot Buffer (acres)**
Coast Live Oak Woodland and Forest	Southern Coast Live Oak Riparian Forest or Coast Live Oak Woodland	26.77
Fremont Cottonwood Forest and Woodland[1]	Southern Cottonwood–Willow Riparian Forest[1]	35.26
Goodding's Willow–Red Willow Riparian Woodland[1]	Southern Willow Scrub[1]	48.45
Hardstem and California Bulrush Marshes[1]	Coastal and Freshwater Marsh[1]	7.19
Mulefat Thickets	Mulefat Scrub	13.87
Salt Grass Flats[1]	Alkali Meadow[1]	0.08
Tamarisk Thickets[2]	Tamarisk Scrub[2]	9.51
Scale Broom Scrub[1]	Riversidian Alluvial Fan Sage Scrub[1]	31.09
California Sycamore Woodland[1]	Southern Sycamore–Alder Riparian Woodland[1]	2.32
Other Land Cover Types		
Agriculture	N/A	2.39
Developed	N/A	1,295.05
Disturbed	N/A	334.22
Total		**2,924.17**

Sources: Caltrans 2023; CDFW 2023; CNPS 2023
[1] Sensitive natural community
[2] Nonnative vegetation community

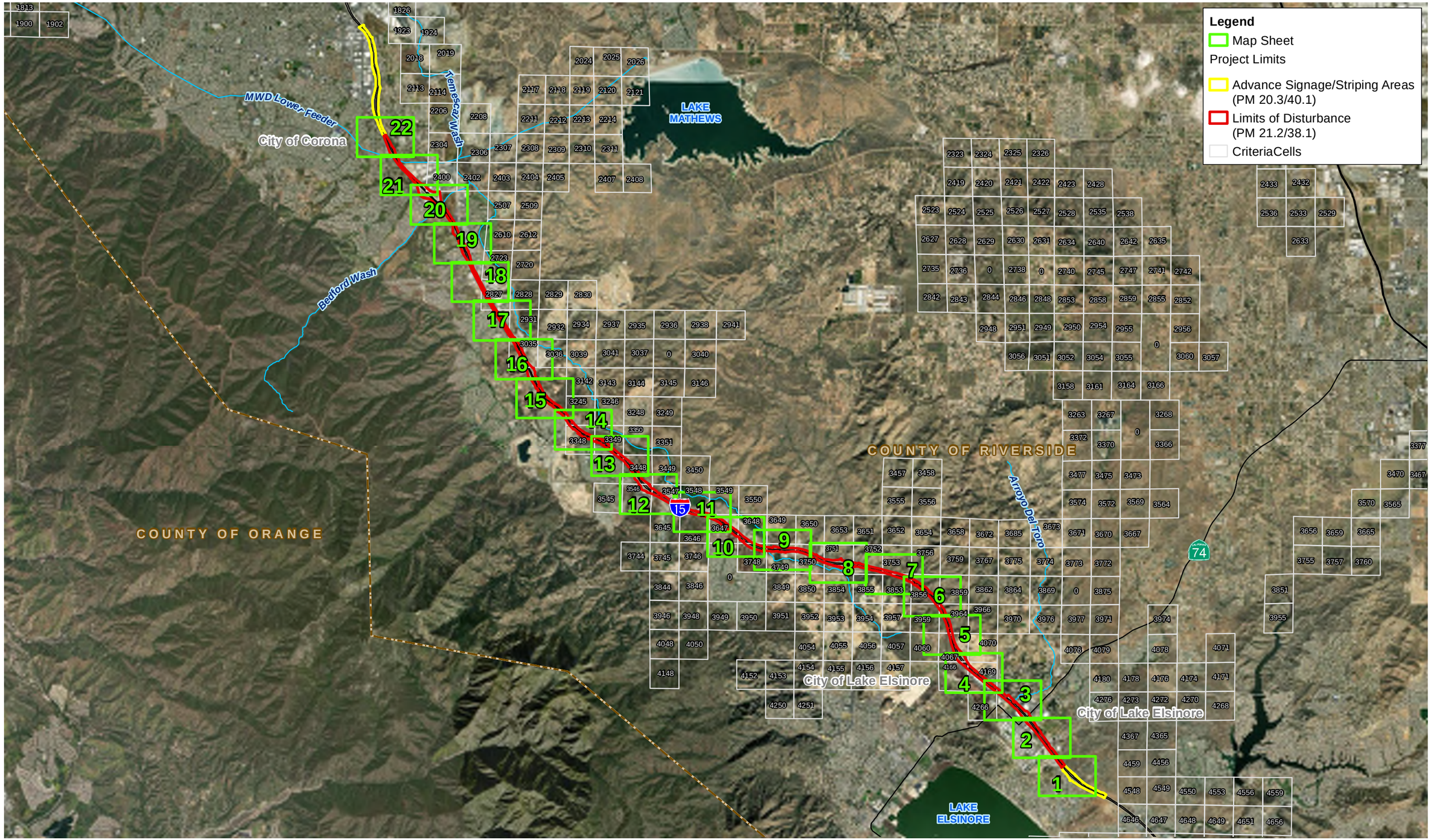

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Figure 2.4.1-2 - Map Index
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Hardstem and California Bullrush Marshes (HCBM)
- Pepper Tree or Myoporum Forest and Woodland (NNW)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 1
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 2
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 3
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Needle grass - Melic grass grassland (NG-MGG)
- Quailbush Scrub (QBS)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 4
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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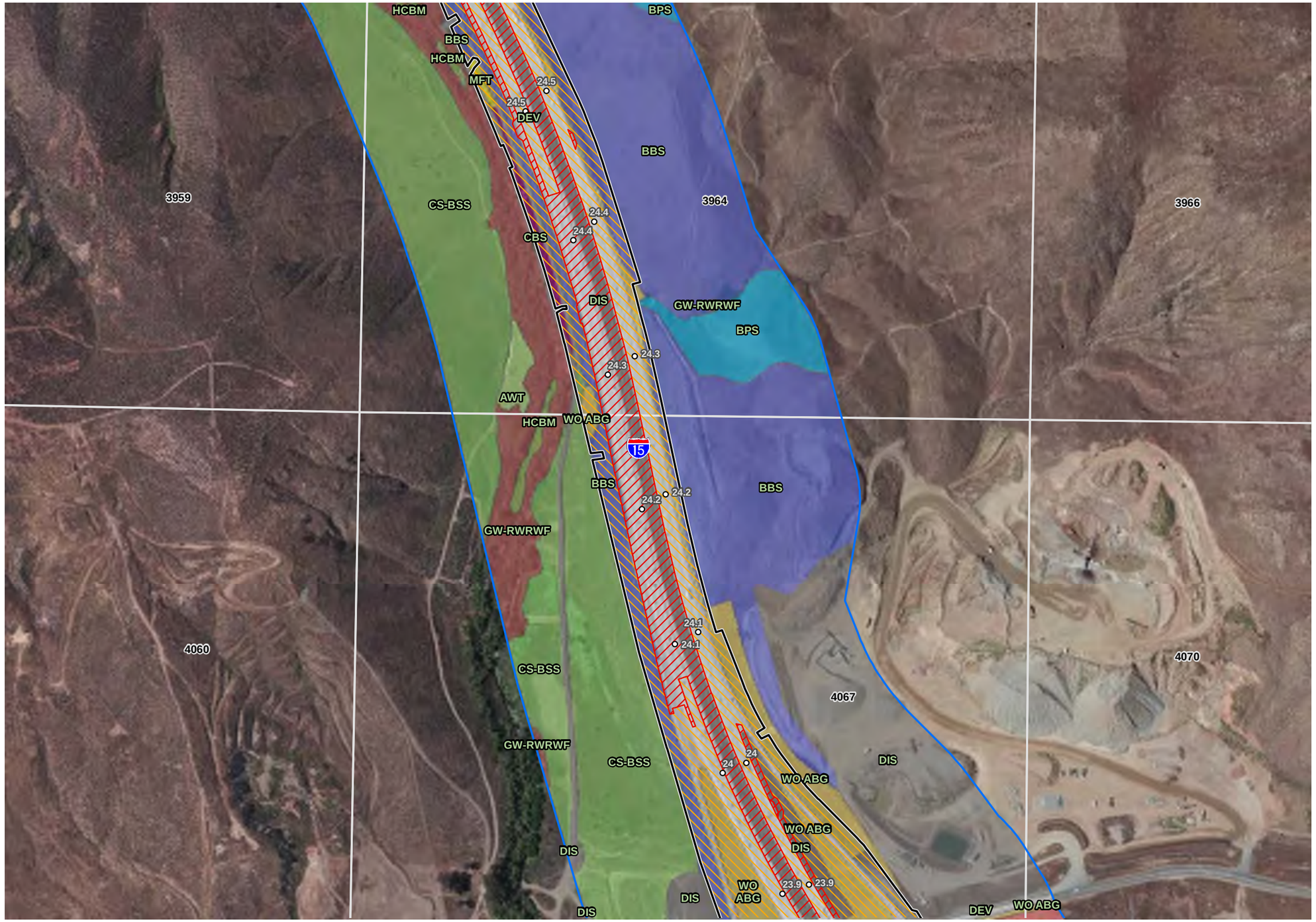

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Arrow Weed Thickets (AWT)
- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Hardstem and California Bullrush Marshes (HCBM)
- Mulefat Thickets (MFT)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 5
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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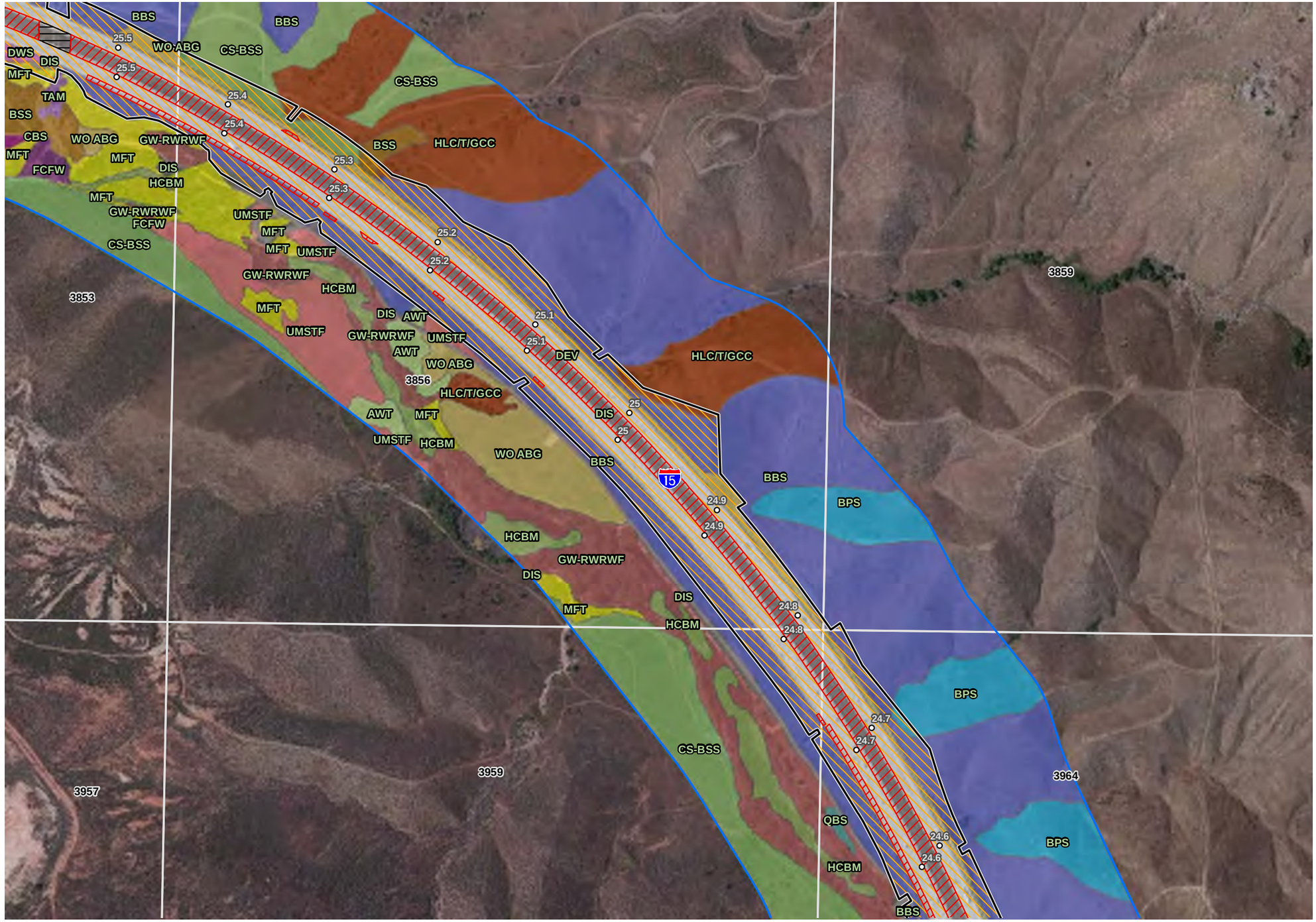

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Arrow Weed Thickets (AWT)
- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Hardstem and California Bullrush Marshes (HCBM)
- Holly Leaf Cherry - Toyon - Greenbark Ceanothus Chaparral (HLC/T/GCC)
- Mulefat Thickets (MFT)
- Quailbush Scrub (QBS)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 6
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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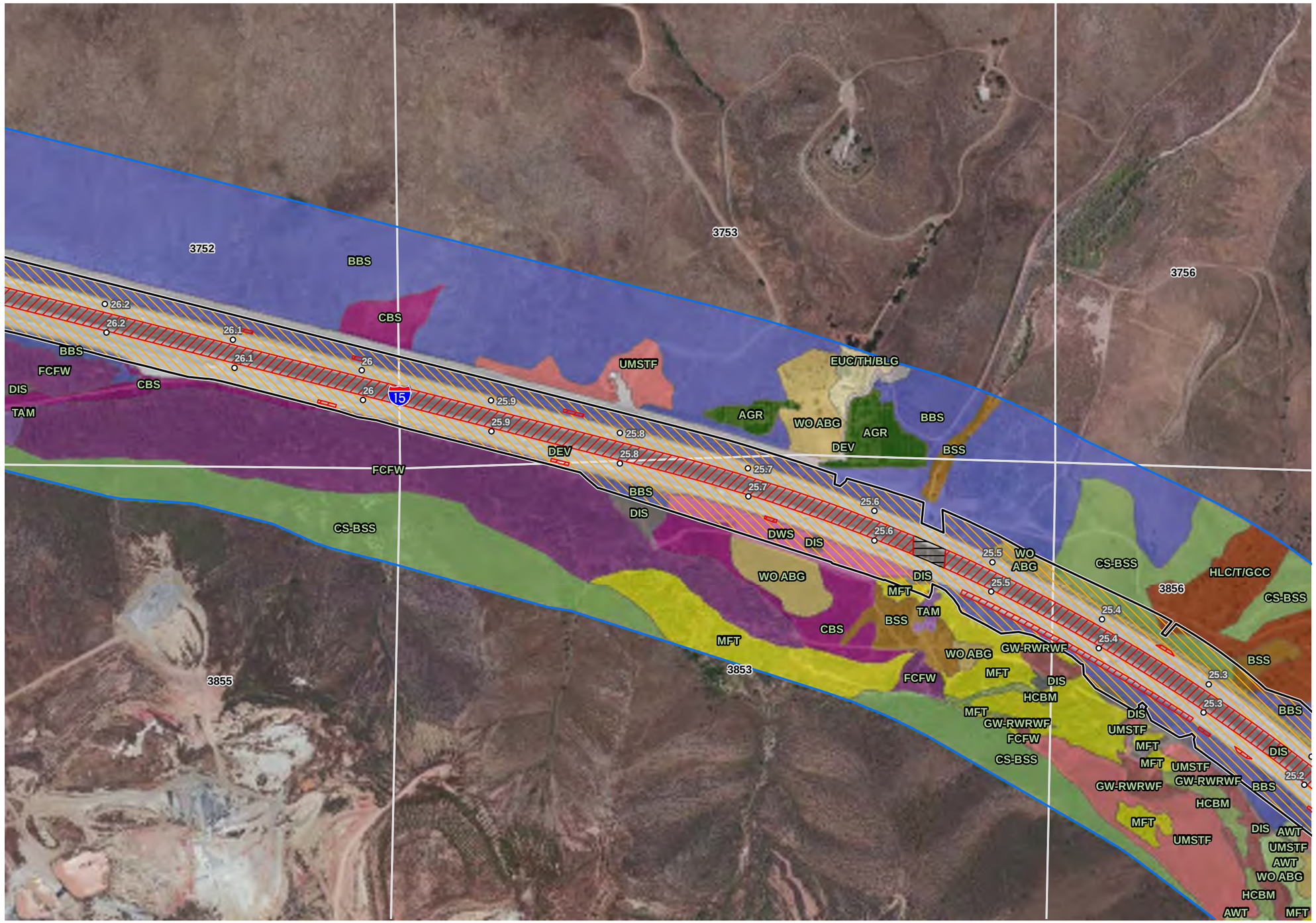

Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Agricultural (AGR)
- Arrow Weed Thickets (AWT)
- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Hardstem and California Bullrush Marshes (HCBM)
- Holly Leaf Cherry - Toyon - Greenbark Ceanothus Chaparral (HLC/T/GCC)
- Mulefat Thickets (MFT)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 7
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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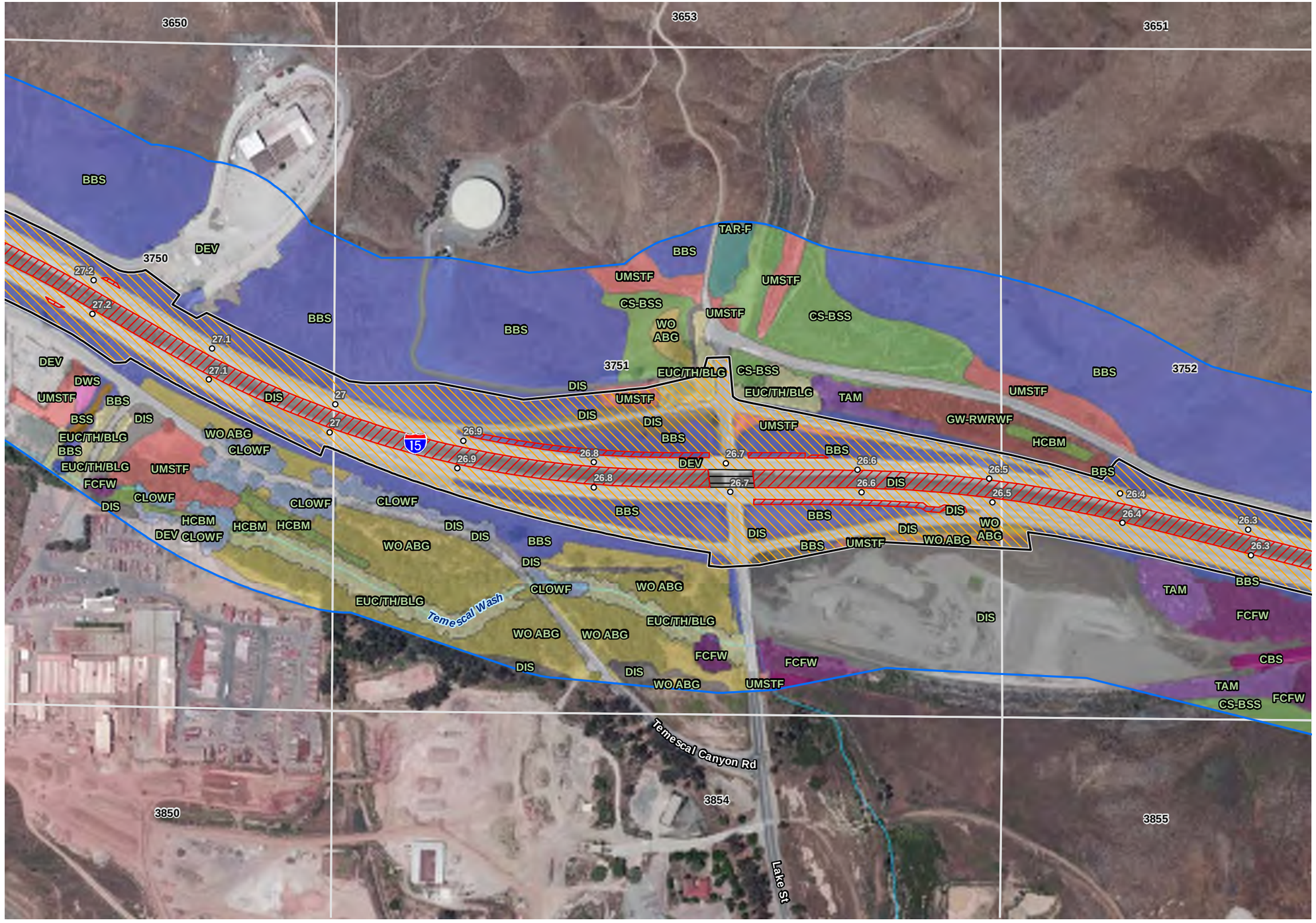

Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Hardstem and California Bullrush Marshes (HCBM)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 8
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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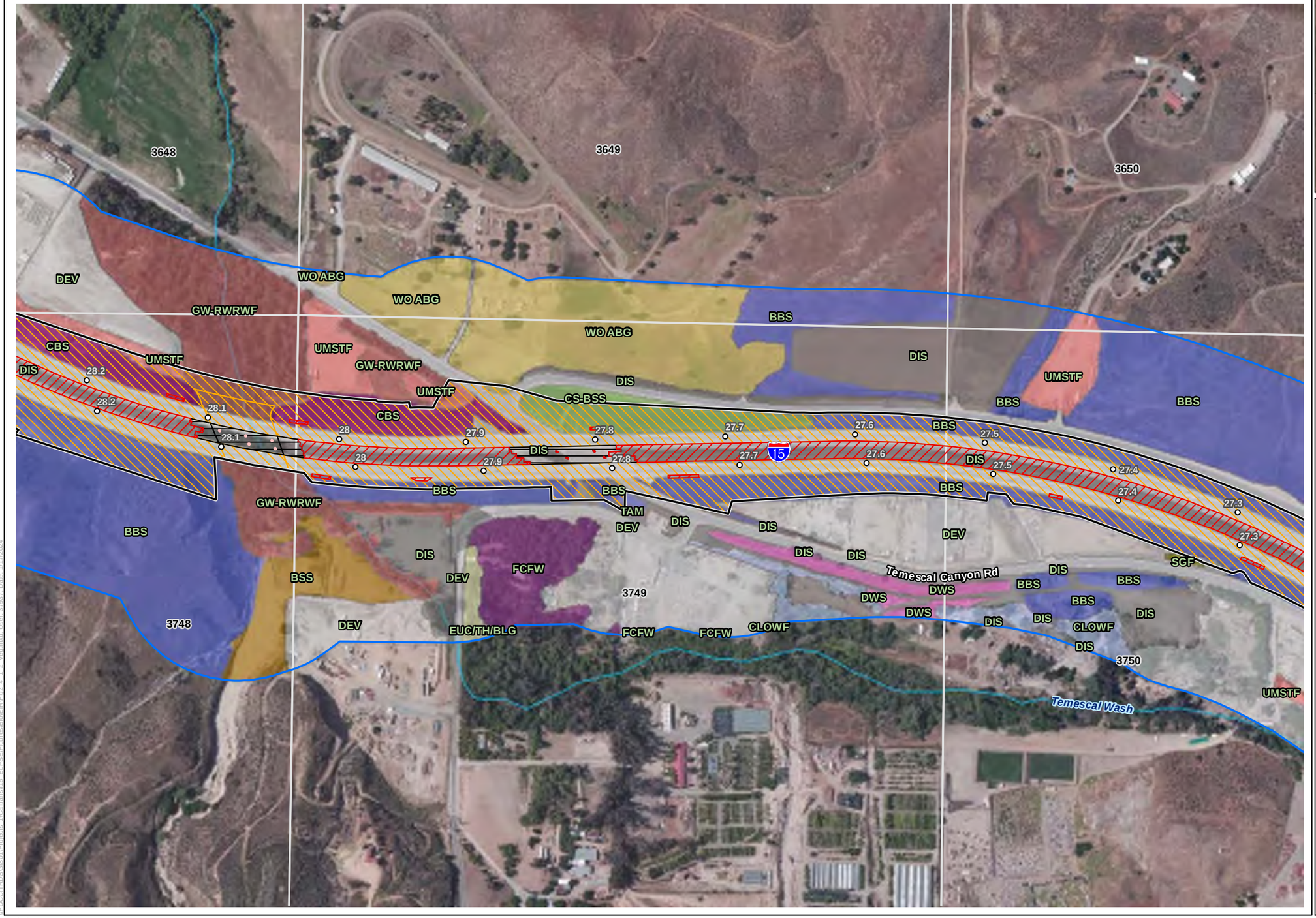

Legend

- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Salt Grass Flats (SGF)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 9
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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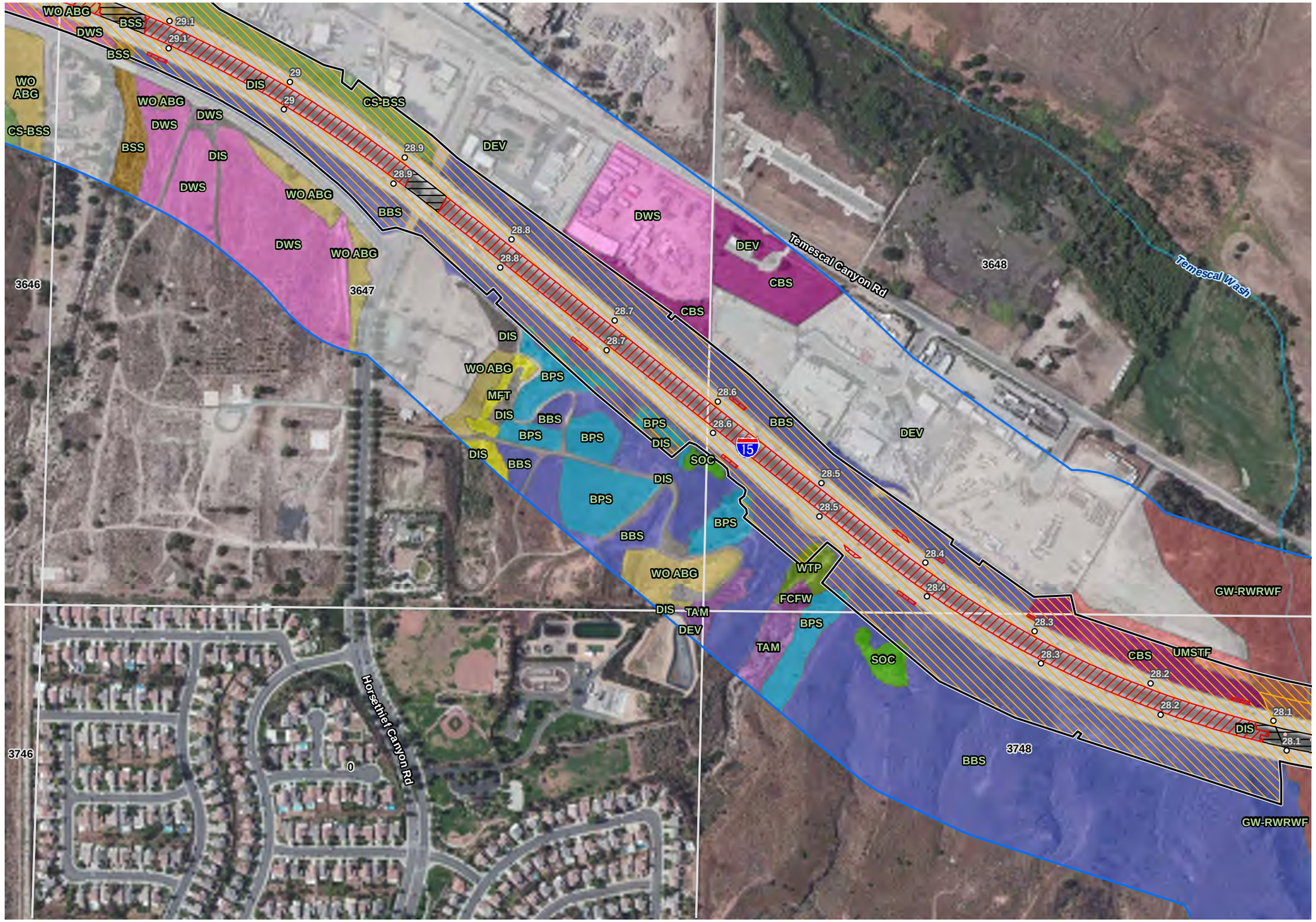

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Mulefat Thickets (MFT)
- Scale Broom Scrub (BSS)
- Scrub Oak Chaparral (SOC)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)
- Wild Tarragon Patches (WTP)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 10
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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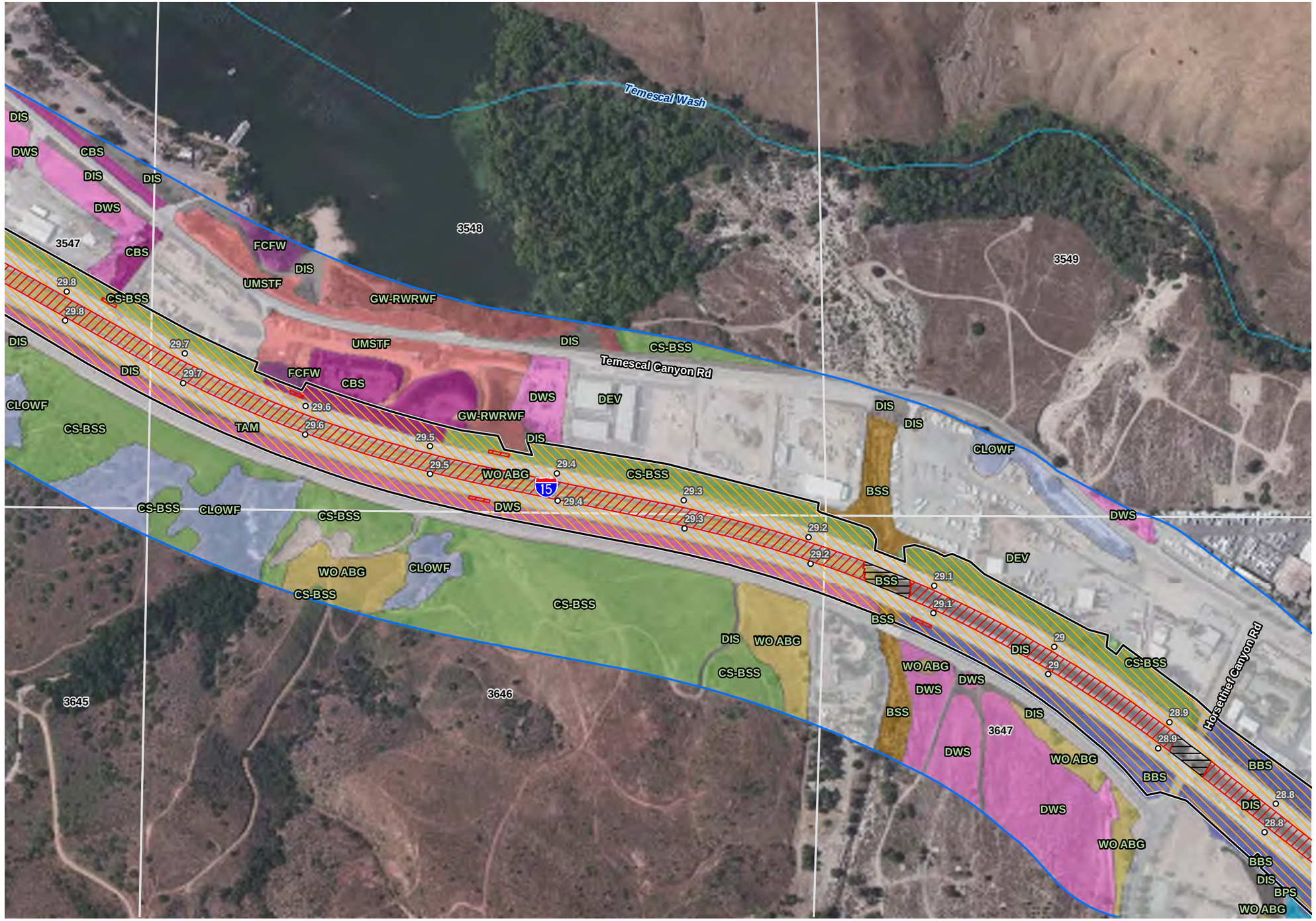

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- Bush Penstemon Scrub (BPS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 11
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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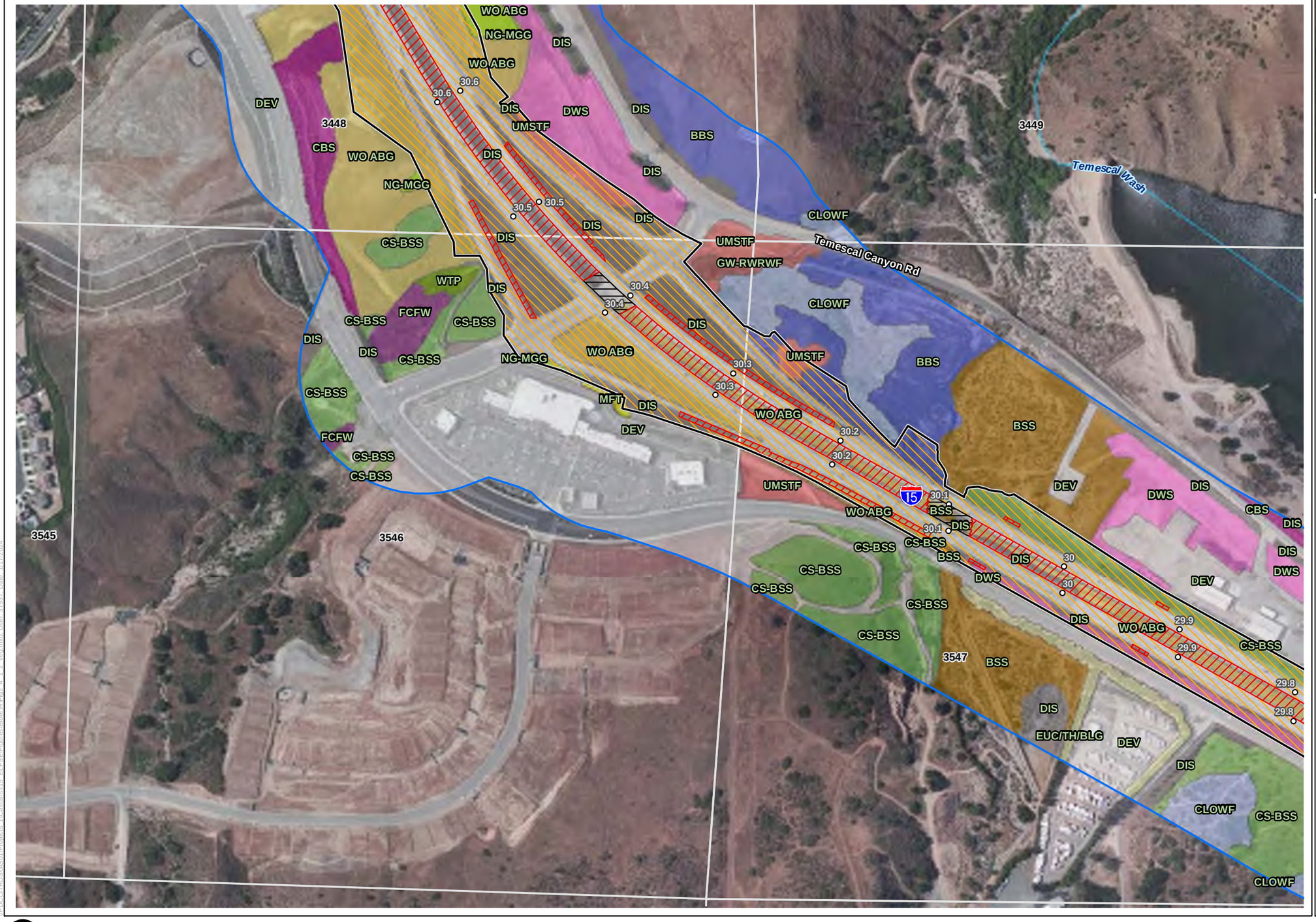

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Mulefat Thickets (MFT)
- Needle grass - Melic grass grassland (NG-MGG)
- Scale Broom Scrub (BSS)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)
- Wild Tarragon Patches (WTP)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 12
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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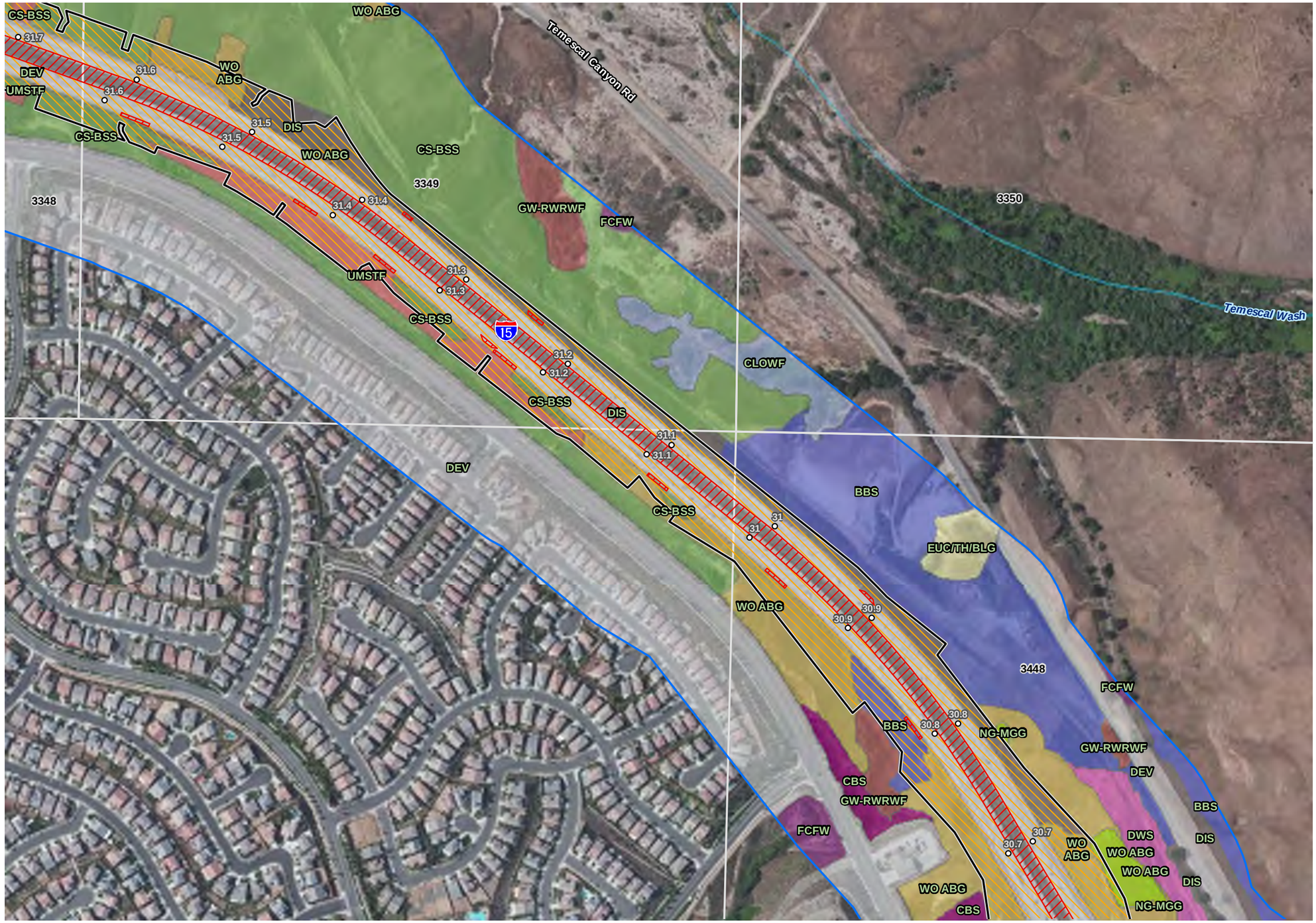

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Deer Weed Scrub (DWS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Needle grass - Melic grass grassland (NG-MGG)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 13
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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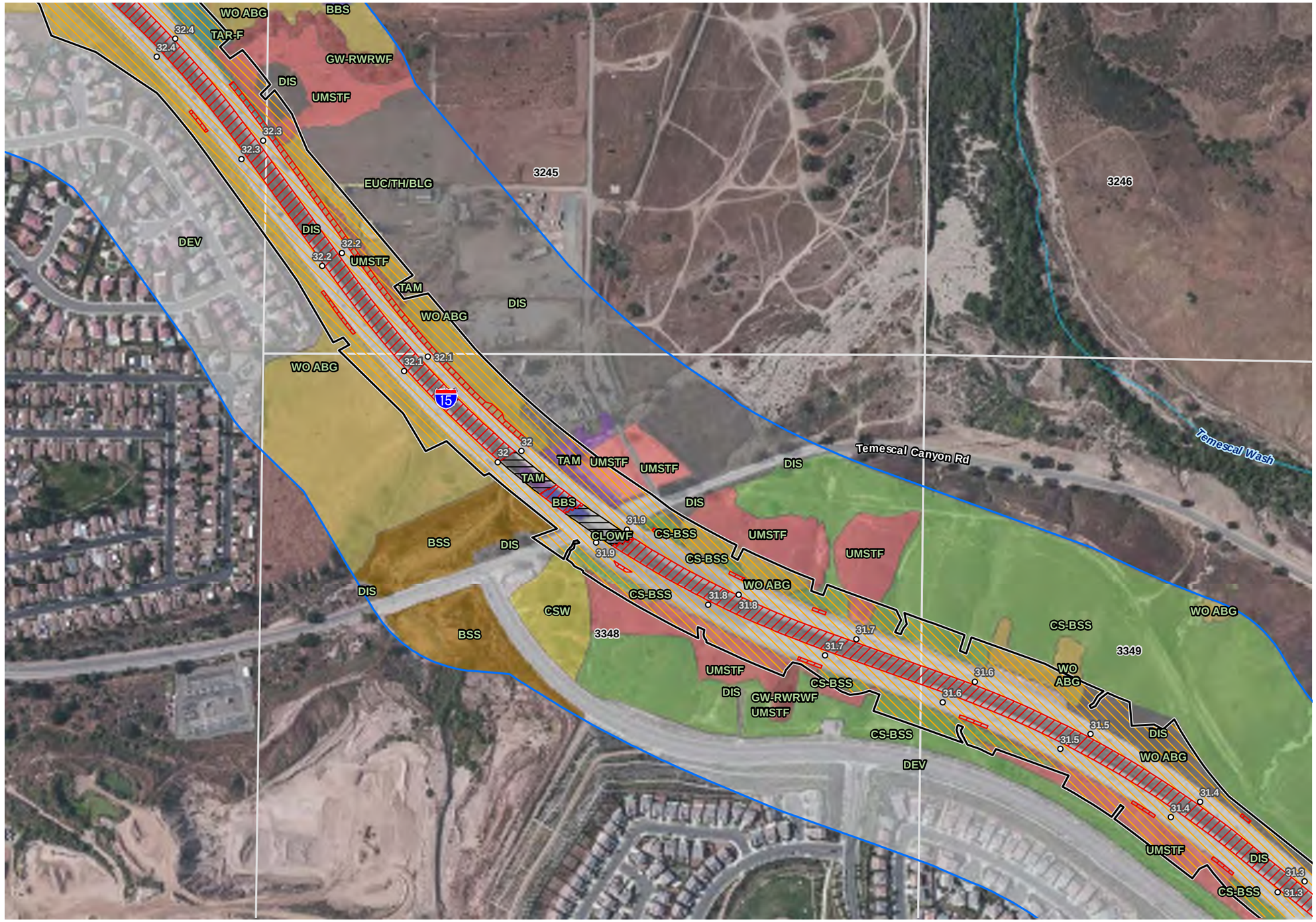

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- California Sycamore Woodlands (CSW)
- Coast Live Oak Woodland and Forest (CLOWF)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Scale Broom Scrub (BSS)
- Tamarisk Thickets (TAM)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 14
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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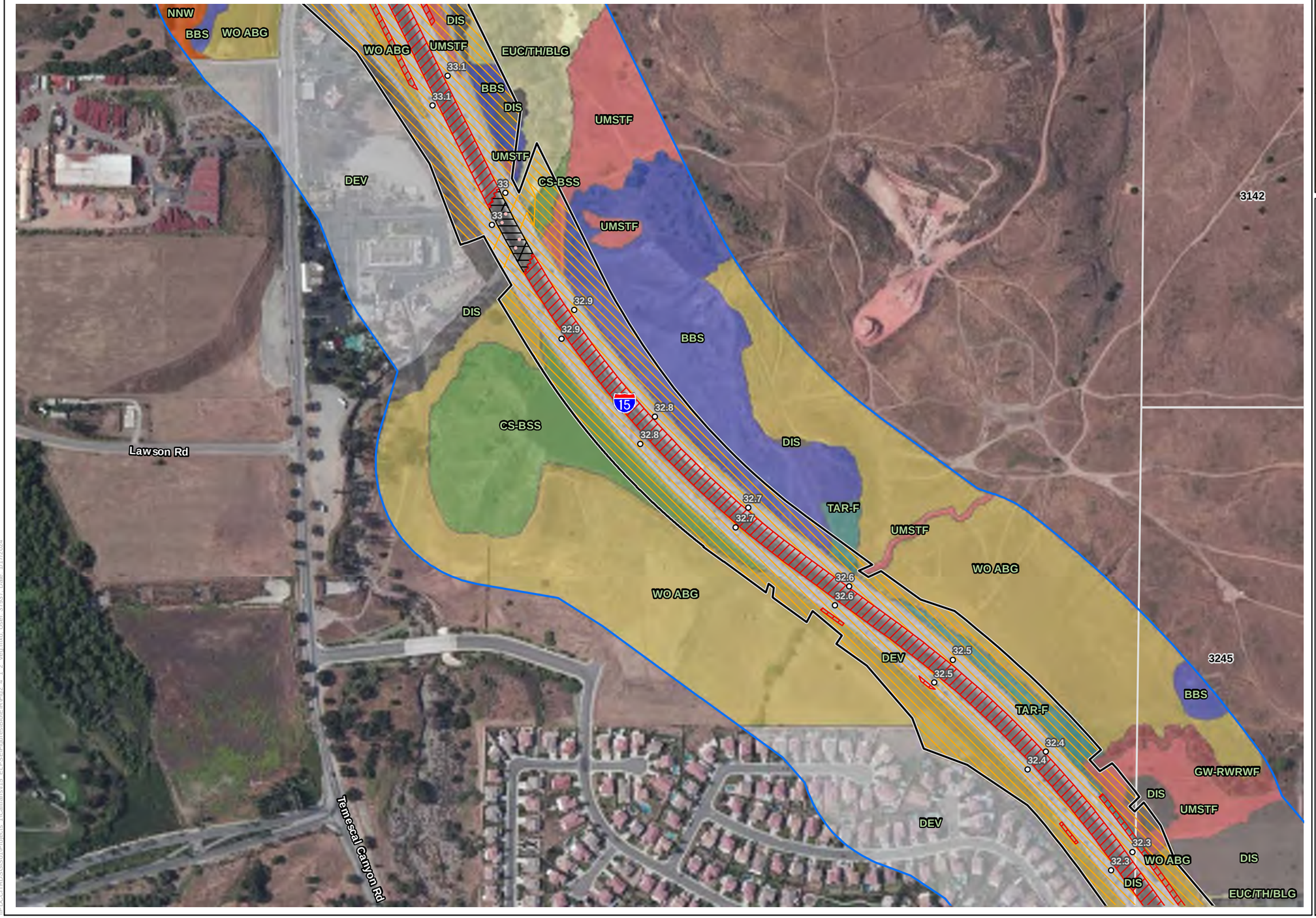

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Pepper Tree or Myoporum Forest and Woodland (NNW)
- Tarweed Fields (TAR-F)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 15
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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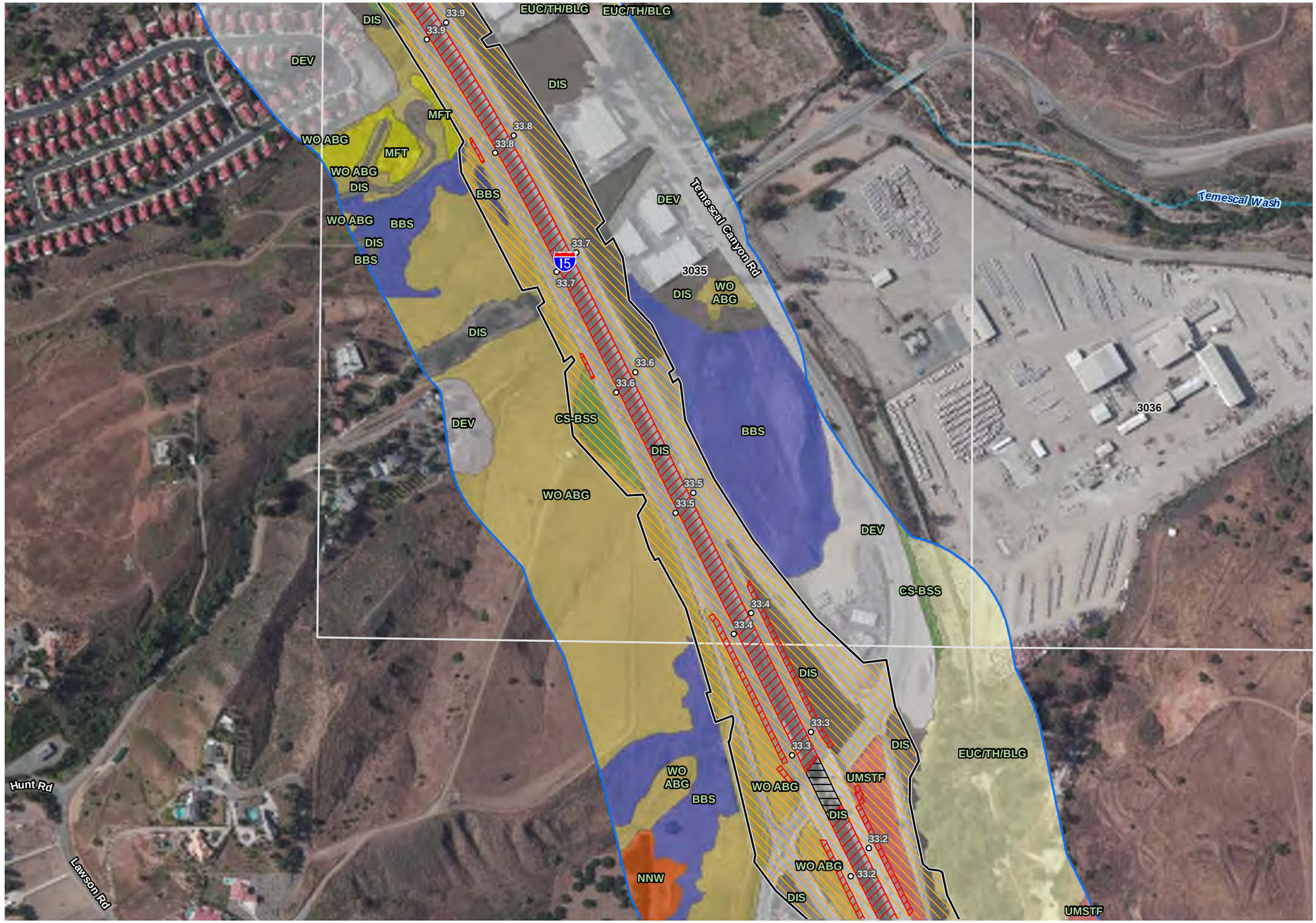

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Mulefat Thickets (MFT)
- Pepper Tree or Myoporum Forest and Woodland (NNW)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 16
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Eucalyptus - Tree of Heaven - Black Locust Groves (EUC/TH/BLG)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 17
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- California Buckwheat Scrub (CBS)
- Developed (DEV)
- Disturbed (DIS)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 18
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- Coast Live Oak Woodland and Forest (CLOWF)
- Developed (DEV)
- Disturbed (DIS)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 19
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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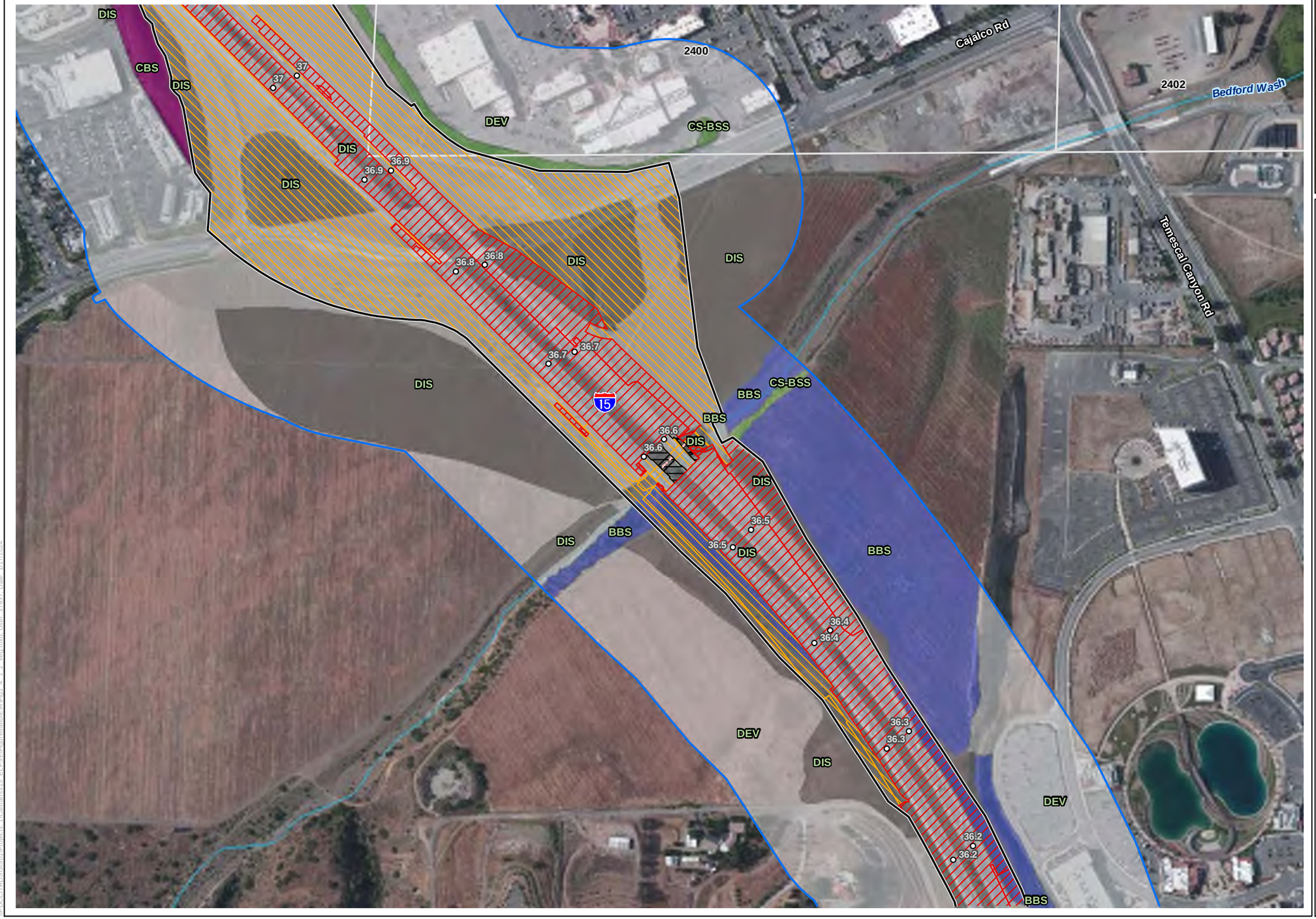

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- Brittle Bush Scrub (BBS)
- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 20
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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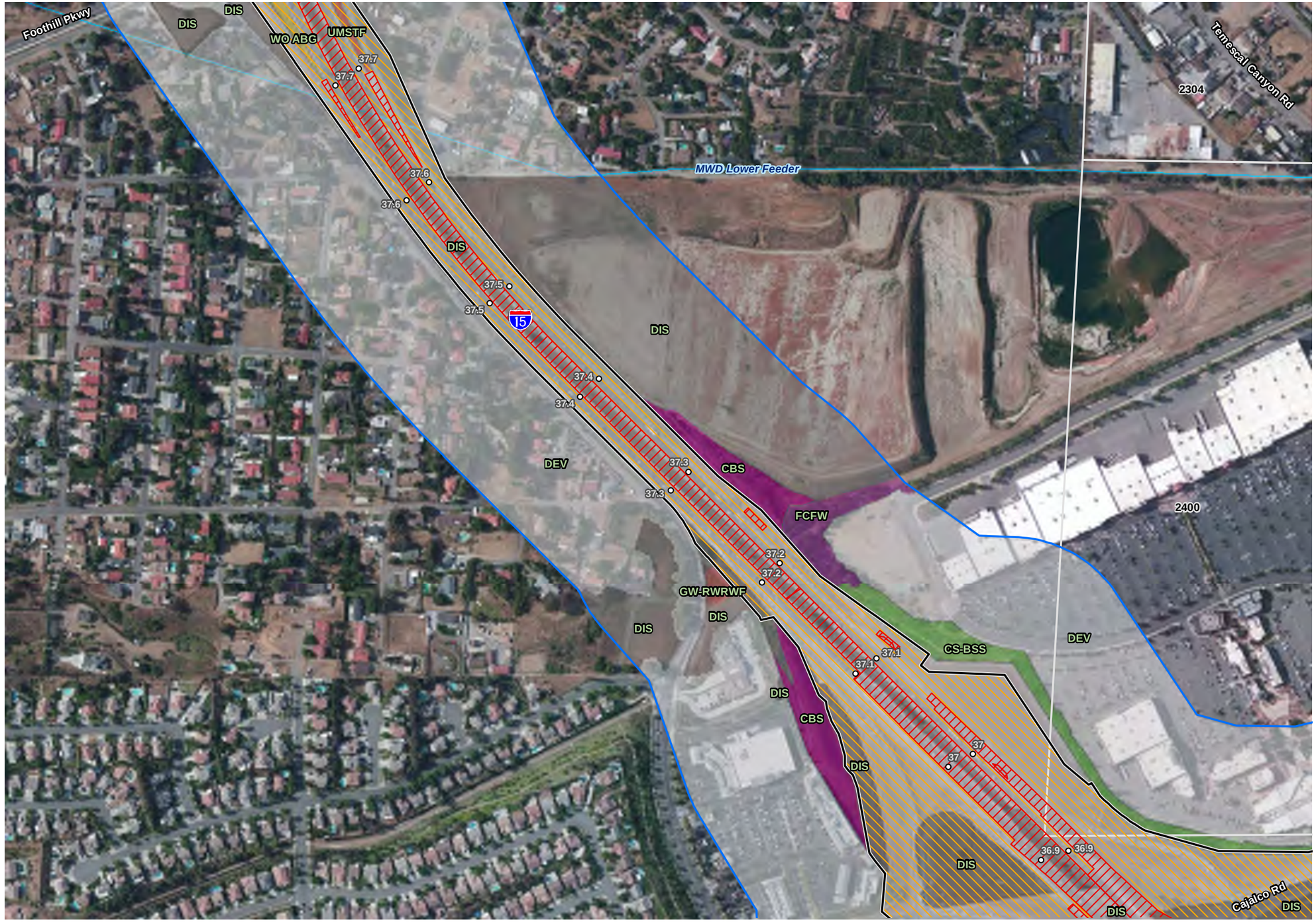

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- California Buckwheat Scrub (CBS)
- California Sagebrush - Black Sage Scrub (CS-BSS)
- Developed (DEV)
- Disturbed (DIS)
- Fremont Cottonwood Forest and Woodland (FCFW)
- Gooding's Willow-Red Willow Riparian Woodland and Forest (GW-RWRWF)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 21
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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- Post Mile

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- BSA - 500-ft Study Area
- CriteriaCells

Vegetation Communities

- California Buckwheat Scrub (CBS)
- Developed (DEV)
- Disturbed (DIS)
- Upland Mustards or Star-Thistle Fields (UMSTF)
- Wild Oats and Annual Brome Grasslands (WO ABG)

Source: ESRI USA Imagery

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Figure 2.4.1-2 - Sheet 22
Vegetation Communities and Project Impacts
Interstate 15 Express Lanes Project Southern Extension

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A general description of each vegetation community and land cover type mapped within the BSA and the dominant plant species in those communities is provided below.

Vegetation Communities

Needle Grass–Melic Grass Grasslands

Needle Grass–Melic Grass Grasslands (*Nasella* spp.–*Melica* spp. Herbaceous Alliance) is a native bunchgrass vegetation community identified by foothill needle grass (*Nasella lepida*) or other needle grass species being characteristically present in the herbaceous layer. The herbaceous cover is open to continuous, typically less than approximately 4 feet in height, and emergent shrubs may be present at low cover (CNPS 2023). Within the BSA, this community is dominated by nodding needle grass (*Nasella cernua*) with a diverse mix of native and nonnative annual grasses and forbs and is found in several patches just north and south of Indian Truck Trail and also just south of Nichols Road. These patches cover approximately 1.62 acres of land (Table 2.4.1-1).

This vegetation is classified as Valley Needlegrass Grassland by Holland (1986). Needle Grass–Melic Grass Grassland Herbaceous Alliance is considered sensitive by CDFW. Foothill needle grass is considered to be a sensitive association by CDFW within the Needle Grass–Melic Grass Grassland Herbaceous Alliance, with a provisional global rank of G3 and a state rank of S3 (CDFW 2023).

Clustered Tarweed Fields

Clustered Tarweed Fields (*Deinandra* spp. Herbaceous Alliance) are characterized as a native herbaceous community where tarweed (*Deinandra* spp.) is dominant within the herbaceous layer. The herbaceous cover is open to continuous, typically less than approximately 3 feet in height, and emergent shrubs and trees may be present at low cover (CNPS 2023). Within the BSA, this herbaceous wildflower community is dominated by Kellogg's tarweed (*Deinandra kelloggii*) and typically associated with a diverse mix of native and nonnative forbs and grasses. Clustered Tarweed Fields occur mainly in the northern portion of the BSA, covering 3.79 acres (Table 2.4.1-1).

This vegetation is classified as Wildflower Fields by Holland (1986). Clustered Tarweed Fields Herbaceous Alliance is considered a sensitive community by CDFW, with a global rank of G2 and a state rank of S2 (CDFW 2023).

Wild Oats and Annual Brome Grasslands

Wild Oats and Annual Brome Grasslands (*Avena* spp.–*Bromus* spp. Herbaceous Semi-Natural Alliance) is characterized as an annual grassland dominated or co-dominated by any of several nonnative oat (*Avena* spp.) and/or brome (*Bromus* spp.) grass species within the herbaceous layer (CNPS 2023). The herbaceous cover is open to continuous, typically less than approximately 4 feet in height, and emergent shrubs and native forbs may be present, but at low cover. Within the BSA, this nonnative annual grassland community is dominated by wild oat (*Avena fatua*) and/or foxtail brome (*Bromus madritensis*). Although this community may support diverse native annuals, Wild Oats and Annual Brome Grasslands within the BSA are typically associated with fallow fields,

vacant lots, along roadsides, and other waste places with little plant diversity. Wild Oats and Annual Brome Grasslands occurs throughout the BSA, covering approximately 253.66 acres (Table 2.4.1-1).

This vegetation is classified as Valley and Foothill Grassland or Non-Native Grassland by Holland (1986). Wild Oats and Annual Brome Grasslands Semi-Natural Alliance is not considered a sensitive community by CDFW. Because this community is designated as a semi-natural stand, it does not have a global or state ranking.

Upland Mustards and Star Thistle Fields

Upland Mustards and Star Thistle Fields (*Brassica nigra–Centaurea* [*solstitialis/ melitensis*] Herbaceous Semi-Natural Alliance) is a ruderal, herbaceous vegetation type strongly dominated by various nonnative, annual, or biennial mustards, such as black mustard (*Brassica nigra*), small-pod mustard (*Hirschfeldia incana*), radish (*Raphanus sativus*), and/or star thistle (*Centaurea solstitialis/melitensis*) or similar nonnative forbs. The herbaceous cover is open to continuous, typically less than approximately 10 feet in height, and native forbs and shrubs may be present, but only at low cover. Within the BSA, this community is typically dominated by black mustard and/or small-pod mustard or star thistle with little to no diversity (CNPS 2023). These stands occupy fallow fields, vacant lots, roadsides, and other disturbed places throughout the BSA, covering approximately 103.28 acres (Table 2.4.1-1).

This vegetation is classified as Non-Native Grassland by Holland (1986). Upland Mustards and Star Thistle Fields Semi-Natural Alliance is not considered a sensitive community by CDFW (CDFW 2023). Because this community is designated as a semi-natural stand, it does not have a global or state ranking.

Wild Tarragon Patches

Wild Tarragon Patches (*Artemisia dracunculus* Herbaceous Alliance) is an herbaceous community that is dominated by or co-dominated by wild tarragon (*Artemisia dracunculus*), with an open to intermittent canopy typically less than approximately 5 feet in height, and emergent shrubs and trees may be present at low cover. Within the BSA, this community is an ecotonal vegetation community between upland and riparian zones and is dominated by tarragon with associated species such as California croton (*Croton californica*), Wright's cudweed (*Pseudognaphalium canescens*), common cryptantha (*Cryptantha intermedia*), and other native forbs and nonnative grasses. Scattered trees and shrubs such as black elderberry (*Sambucus nigra*), mulefat (*Baccharis salicifolia*), saltcedar (*Tamarix ramosissima*), and California buckwheat (*Eriogonum fasciculatum*) are also present within this community (CNPS 2023). Wild Tarragon Patches occur at one location just north of Indian Truck Trail Road within the central portion of the BSA, covering approximately 1.18 acres (Table 2.4.1-1).

This vegetation is classified as Central Coast Riparian Scrub by Holland (1986). It has been included as an upland vegetation community here, as it occurs in an ecotonal area between upland and riparian zones, and in the BSA was determined to be an upland

community. Wild Tarragon Patches Herbaceous Alliance is not considered a sensitive natural alliance, with a global rank of G4 and a state rank of S4 (CDFW 2023).

Brittle Bush Scrub

Brittle Bush Scrub (*Encelia farinosa* Shrubland Alliance) is a native shrub community dominated or co-dominated by brittle bush (*Encelia farinosa*). The shrub cover is open to intermittent, typically less than approximately 7 feet in height, and emergent trees may be present at low cover. Within the BSA, this community is dominated by brittle bush or as a co-dominant alliance of brittle bush and California sage (*Artemisia californica*). Commonly associated species within this community include such species as California buckwheat, common sand aster (*Corethrogyne filaginifolia*), sweetbush (*Bebbia juncea*), desert wishbone bush (*Mirabilis laevis*), and deer weed (*Acmispon glaber*). The understory is primarily composed of a diverse mix of native forbs and nonnative grasses (CNPS 2023). This community is typically found on hillsides and slopes throughout the BSA, covering approximately 383.97 acres (Table 2.4.1-1).

This vegetation is classified as RSS by Holland (1986). Brittle Bush Scrub Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G5 and a state rank of S4 (CDFW 2023). However, it is considered rare per the MSHCP (RCIP 2003).

Bush Penstemon Scrub

Bush Penstemon Scrub (*Keckiella antirrhinoides* Shrubland Alliance) is a native shrub community dominated or co-dominated by bush penstemon (*Keckiella antirrhinoides*) within the shrub layer. The shrub cover is open to continuous, typically less than approximately 7 feet in height, and emergent trees may be present at low cover. Within the BSA, Bush Penstemon Scrub is dominated by bush penstemon with species such as chaparral honeysuckle (*Lonicera subspicata* var*. denudata*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), sticky monkeyflower (*Diplacus aurantiacus*), scrub oak (*Quercus berberidifolia*), and deer weed commonly present. The understory is an intermittent to closed, diverse mix of native and nonnative grasses and forbs (CNPS 2023). This community is limited to a few locations within the central portion of the BSA between Horse Thief Canyon Road and Hostettier Road, covering approximately 19.89 acres (Table 2.4.1-1).

This vegetation is classified as Coastal Sage–Chaparral Scrub by Holland (1986), and Bush Penstemon Scrub Shrubland Alliance is considered a CDFW sensitive natural community, with a global rank of G3 and a state rank of S3.

California Buckwheat Scrub

California Buckwheat Scrub (*Eriogonum fasciculatum* Shrubland Alliance) is a native shrub community dominated or co-dominated by California buckwheat within the shrub layer. The shrub cover is open to intermittent, typically less than approximately 7 feet in height, and emergent trees may be present but at low cover. Within the BSA, California Buckwheat Scrub is typically associated with disturbed environments. This community can form dense monotypic stands of California buckwheat in some areas within the

BSA; however, the shrub cover is typically open to intermittent, dominated by California buckwheat, with associated species such as brittle bush, California sage, and deer weed commonly present. The understory, when present, is intermittent to closed and primarily composed of nonnative grasses and mustards (CNPS 2023). This community occurs throughout the BSA, covering approximately 49.18 acres (Table 2.4.1-1).

California Buckwheat Scrub Shrubland Alliance is classified as RSS by Holland (1986). California Buckwheat Scrub Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G5 and a state rank of S5. However, it is considered rare per the MSHCP.

California Sagebrush–Black Sage Scrub

California Sagebrush–Black Sage Scrub (*Artemisia californica–Salvia mellifera* Shrubland Alliance) is characterized by California sage and black sage scrub (*Salvia mellifera*) being co-dominant within the shrub layer, with chamise, sticky monkeyflower, brittlebush scrub, California buckwheat, deer weed, white sage, chaparral yucca (*Hesperoyucca whipplei*), laurel sumac (*Malosma laurina*), lemonade berry (*Rhus integrifolia*), and sugar bush (*Rhus ovata*) present. The scrub cover is intermittent to continuous, typically less than approximately 7 feet in height, and taller shrubs may be present at low cover, with a variable herbaceous layer (CNPS 2023). California Sagebrush–Black Sage Scrub occurs on hillsides throughout the BSA, covering approximately 193.97 acres (Table 2.4.1-1).

This vegetation is classified as RSS by Holland (1986). California Sagebrush–California Buckwheat Scrub Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S4 (CDFW 2023). However, it is considered rare per the MSHCP (RCIP 2003).

Deer Weed Scrub

Deer Weed Scrub (*Acmispon glaber* [previously *Lotus scoparius*] Shrubland Alliance) is a native shrub community commonly associated with disturbed environments and is dominated or co-dominated by deer weed. The shrub cover is open to intermittent, typically less than approximately 7 feet in height, and emergent trees may be present at low cover. Within the BSA, this community is strongly dominated by deer weed with species such as California buckwheat, common sand aster, brittle bush, and California sage commonly present. The understory cover is intermittent to closed and primarily composed of nonnative grasses and mustards (CNPS 2023). This community occurs throughout the BSA and is typically associated with previously or routinely disturbed areas, covering approximately 38.44 acres (Table 2.4.1-1).

This vegetation is classified as Coastal Sage–Chaparral Scrub by Holland (1986). Deer Weed Scrub Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G5 and a state rank of S5 (CDFW 2023). However, it is considered rare per the MSHCP (RCIP 2003).

Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral

Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral (*Prunus ilicifolia–Heteromeles arbutifolia–Ceanothus spinosus* Shrubland Alliance) is dominated by one of the following shrub species: greenbark (*Ceanothus spinosus*), toyon (*Heteromeles arbutifolia*), or holly leaf cherry (*Prunus ilicifolia*), or a co-dominant combination of two or more of these species within the shrub canopy. The shrub cover is open to continuous and is typically less than approximately 49 feet in height, and emergent trees may be present at low cover. Within the BSA, this community is dominated by holly leaf cherry with species such as scrub oak, hoary leaved ceanothus (*Ceanothus crassifolius*), chamise, redberry (*Rhamnus crocea*), and California buckwheat commonly present. The understory cover is typically sparse to continuous and composed mainly of nonnative grasses and forbs, but areas of diverse native annuals also occur (CNPS 2023). Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral appears in several large patches within the southern-central portion of the BSA between Lake Street and Nichols Road, covering approximately 15.20 acres (Table 2.4.1-1).

This vegetation is classified as Southern North Slope Chaparral by Holland (1986), and Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral Shrubland Alliance is considered a CDFW sensitive natural community, with a global rank of G3 and a state rank of S3 (CDFW 2023).

Quailbush Scrub

Quailbush Scrub (*Atriplex lentiformis* Shrubland Alliance) is characterized by quailbush (*Atriplex lentiformis*) being dominant or co-dominant within the shrub layer. The shrub cover is open to intermittent, typically less than approximately 10 feet in height, and emergent trees may be present at low cover. Within the BSA, this community is strongly dominated by quailbush, forming a monotypic vegetation community with little diversity. The herbaceous cover is sparse and primarily composed of native saltgrass (*Distichlis spicata*) and nonnative grasses (CNPS 2023). Quailbush Scrub occurs at one location within the BSA adjacent to the cottonwood riparian forest between Lake Street and Nichols Road in Lake Elsinore, covering approximately 0.23 acre (Table 2.4.1-1).

This vegetation community is classified as Desert Saltbush Scrub by Holland (1986). Quailbush Scrub Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S4 (CDFW 2023).

Scrub Oak Chaparral

Scrub Oak Chaparral (*Quercus berberidifolia* Shrubland Alliance) is a native shrub community dominated or co-dominated by scrub oak with an open to continuous cover and is typically less than approximately 20 feet in height. Emergent trees may be present at low cover and may include coast live oak (*Quercus agrifolia*) and black elderberry. Within the BSA, this community is dominated by scrub oak with species such as chamise, white sage, sticky monkeyflower, and deer weed commonly present. The understory, when present, is a mix of native and nonnative grasses and forbs (CNPS 2023). Scrub Oak Chaparral is limited to a few locations between Horse Thief

Canyon Road and Hostettier Road and between Lake Street and Nichols Road, covering approximately 0.90 acre (Table 2.4.1-1).

This vegetation is classified as Scrub Oak Chaparral by Holland (1986). Scrub Oak Chaparral Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S4 (CDFW 2023).

Eucalyptus–Tree of Heaven–Black Locust Groves

Eucalyptus–Tree of Heaven–Black Locust Groves (*Eucalyptus* spp.–*Ailanthus altissima–Robinia pseudoacacia* Woodland Semi-Natural Alliance) is a nonnative woodland community characterized by eucalyptus trees (*Eucalyptus* spp.), tree of heaven (*Ailanthus altissima*), and/or black locust (*Robinia pseudoacacia*) being strongly dominant or co-dominant within the tree canopy. The tree canopy is open to continuous, reaching heights up to approximately 197 feet, and the shrub layer is sparse to intermittent with a herbaceous layer that is sparse to intermittent. Within the BSA, this community is dominated by eucalyptus trees but often occurs with other nonnative and ornamental trees, such as paperbark (*Melaleuca quinquenervia*) and honey-myrtle (*Melaleuca* spp.), Mexican fan palm (*Washingtonia robusta*), pepper tree (*Schinus* spp.), eucalyptus, and ornamental pines. These groves are strongly dominated by nonnative trees but may have native trees and tall shrubs, such as coast live oak, elderberry, laurel sumac, and sugar bush at very low cover. The shrub layer, if present, is typically sparse, and the herbaceous layer is variable and typically composed of nonnative grasses (CNPS 2023). Eucalyptus–Tree of Heaven–Black Locust Groves are commonly encountered throughout the BSA, covering approximately 48.67 acres (Table 2.4.1-1).

This vegetation is classified as Eucalyptus Woodland by Holland (1986). Eucalyptus–Tree of Heaven–Black Locust Groves Woodland Semi-Natural Alliance is not considered a CDFW sensitive natural community. Because this community is designated as a semi-natural stand, it does not have a global or state ranking. Blue gum (*Eucalyptus globulus*) has a California Invasive Plant Council (Cal-IPC) rank of moderate with seedings aggressively invading neighboring areas from original planted locations. Tree of heaven has a Cal-IPC rank of moderate with rapid growth and remarkable suckering ability. Black locust has a Cal-IPC rank of limited and sprouts through seedling establishment, displacing native vegetation (see Section 2.4.6, *Invasive Species*, for details on invasive plants) (Cal-IPC 2021).

Pepper Tree or Myoporum Forest and Woodland Semi-Natural Alliance

Pepper Tree or Myoporum (Ngaio) Forest and Woodland (*Schinus* [*molle*, *terebinthifolius*]–*Myoporum laetum* Forest and Woodland Semi-Natural Alliance) is composed of ornamental trees, typically pepper trees, ornamental pine trees (*Pinus* spp.), or ngaio (*Myoporum laetum*), which are strongly dominant within the tree canopy. The tree canopy is open to continuous and may reach heights up to approximately 59 feet. The shrub layer is sparse to intermittent, and the herbaceous layer is simple to diverse. Within the BSA, this community is dominated or co-dominated by pepper trees and/or ngaio trees but often occurs with other nonnative and ornamental trees, which

include, but are not limited to, Mexican fan palm, eucalyptus, paperbark, honey-myrtle, silk oak (*Grevillea robusta*), and ornamental pines. These groves are strongly dominated by nonnative trees but may have native trees and tall shrubs, such as coast live oak, elderberry, laurel sumac, and sugar bush at very low cover (CNPS 2023). The shrub layer in the BSA is typically sparse to bare, and the herbaceous layer is typically sparse, composed of nonnative grasses or barren. Pepper Tree or Myoporum Forest and Woodland is at the southern end of the BSA between Collier Avenue and I-15 and in the central portion of the BSA north of Lawson Road, covering approximately 1.92 acres (Table 2.4.1-1).

Pepper Tree or Myoporum (Ngaio) Forest and Woodland Semi-Natural Alliance is not a CDFW sensitive natural community. Because this community is designated as a semi-natural stand, it does not have a global or state ranking. Pepper trees have a Cal-IPC rank of limited and ngaio trees have a Cal-IPC rank of moderate, often with fruits dispersed by birds (see Section 2.4.6, *Invasive Species*, for details on invasive plants) (Cal-IPC 2021).

Arrow Weed Thickets

Arrow Weed Thickets (*Pluchea sericea* Shrubland Alliance) is a dense riparian shrub community dominated by or co-dominated by arrow weed (*Pluchea sericea*). The shrub cover is variable, typically less than approximately 10 feet in height, and emergent trees may be present at low cover. Within the BSA, this community is characterized by dense, monotypic stands of arrow weed. The understory is bare to sparely populated with nonnative grasses and mustards (CNPS 2023). Within the BSA, Arrow Weed Thickets occur in several large patches within the riparian corridor on the western side of I-15 in Lake Elsinore between Lake Street and Nichols Road, covering approximately 2.07 acres (Table 2.4.1-1).

This vegetation is classified as Arrow Weed Scrub by Holland (1986). Arrow Weed Thickets Shrubland Alliance is considered a sensitive natural community, with a global rank of G4 and a state rank of S3 (CDFW 2023). Seasonally flooded Arrow Weed Thickets are also considered to be sensitive.

Coast Live Oak Woodland and Forest

Coast Live Oak Woodland and Forest (*Quercus agrifolia* Woodland and Forest Alliance) is a multi-canopy community dominated or co-dominated by coast live oak within an open to continuous tree canopy reaching heights of up to approximately 98 feet. Within the BSA, this community is dominated by coast live oak with associated tree and tall shrub species such as velvet ash (*Fraxinus velutina*), arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), poison-oak (*Toxicodendron diversilobum*), toyon, black elderberry, and laurel sumac. The herbaceous understory is composed primarily of native western ragweed (*Ambrosia psilostachya*), dwarf nettle (*Urtica urens*), and nonnative grasses and mustards. Perennial exotic trees and shrubs are also present within this community at low cover and include species such as giant reed (*Arundo donax*), castor bean (*Ricinus communis*), saltcedar, Mexican fan palm, eucalyptus, and pepper trees. Both upland and riparian Coast Live Oak Woodland and Forest

communities are found within the BSA. Riparian Coast Live Oak Woodland and Forest can be found throughout the BSA along drainages and riparian corridors and other mesic areas (CNPS 2023). Upland Coast Live Oak Woodland and Forest typically occurs on valley floors and along ephemeral drainages, but also exists as remnant patches surrounded by development. This vegetation community covers approximately 26.77 acres within the BSA (Table 2.4.1-1).

The Coast Live Oak Woodland and Forest Alliance is classified as Southern Coast Live Oak Riparian Forest or Coast Live Oak Woodland by Holland (1986). Coast Live Oak Woodland and Forest Alliance is not considered to be sensitive by CDFW, with a global rank of G5 and a state rank of S4 (CDFW 2023).

Fremont Cottonwood Forest and Woodland

Fremont Cottonwood Forest and Woodland (*Populus fremontii–Fraxinus velutina–Salix gooddingii* Forest and Woodland Alliance) is a dense, multi-canopy growth of broadleaf, winter-deciduous riparian tree and shrub species dominated or co-dominated by Fremont cottonwood (*Populus fremontii*) within an open to continuous tree layer. Within the BSA, this community is a co-dominant alliance of Fremont cottonwood and Goodding's black willow (*Salix gooddingii*) with associated native tree species such as red willow, coast live oak, velvet ash, and arroyo willow commonly present. The low shrub cover is intermittent to continuous and includes species such as mugwort (*Artemisia douglasiana*), blackberry (*Rubus ursinus*), mulefat, poison-oak, and wild tarragon, with coastal sage shrub species also common in drier locations. The herbaceous understory is composed primarily of native ragweed, yerba mansa (*Anemopsis californica*), stinging nettle (*Urtica dioica*), nonnative grasses, and mustards. Perennial exotic trees and shrubs are also present within this community at low cover, and it includes species such as giant reed, Mexican fan palm, saltcedar, eucalyptus trees, and pepper trees (CNPS 2023). Fremont Cottonwood Forest and Woodland occurs in several locations throughout the BSA but primarily occurs within the riparian corridor within Temecula Wash on the western side of I-15 south of Lake Street, covering approximately 35.26 acres (Table 2.4.1-1).

This vegetation is classified as Southern Cottonwood–Willow Riparian Forest by Holland (1986). Fremont Cottonwood Forest and Woodland Alliance is considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S3 (CDFW 2023).

Goodding's Willow–Red Willow Riparian Woodland

Goodding's Willow–Red Willow Riparian Woodland (*Salix laevigata* Woodland Alliance) is a dense growth of broadleaf, winter-deciduous riparian species dominated or co-dominated by Goodding's black willow and/or red willow within a continuous tree canopy typically less than approximately 98 feet in height. Within the BSA, this community is strongly dominated by Goodding's black willow with associated tree species such as red willow, coast live oak, California sycamore, and Fremont's cottonwood (CNPS 2023). Within the BSA, this community typically lacks a sub-canopy of smaller willow and shrub species, and the understory is sparse to heavily composed of nonnative grasses and

forbs. Goodding's Willow–Red Willow Riparian Woodland occurs at several locations throughout the BSA, but it primarily occurs within the riparian corridor within Temecula Wash on the western side of I-15 south of Lake Street, covering approximately 48.45 acres (Table 2.4.1-1).

This vegetation is classified as Southern Willow Scrub by Holland (1986). Goodding's Willow–Red Willow Riparian Woodland Alliance is considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S3 (CDFW 2023).

Hardstem and California Bulrush Marshes

Hardstem and California Bulrush Marshes (*Schoenoplectus acutus californicus* Herbaceous Alliance) is characterized by hardstem bulrush (*Schoenoplectus acutus*) and/or California bulrush (*S. californicus*) being dominant within the herbaceous layer, or one or both species may form a co-dominant alliance with cattails (*Typha* spp.). The herbaceous canopy is intermittent to continuous, typically less than approximately 13 feet in height, and emergent shrubs and trees may be present but only at low relative cover. Within the BSA, this community is dominated by hardstem bulrush and largely forms uniform monotypic stands. Trees and shrubs, such as sandbar willow (*Salix exigua*), arroyo willow, mulefat, and coast live oak, occur at low cover along the periphery of this community (CNPS 2023). Hardstem and California Bulrush Marshes are found at several locations throughout the BSA, but primarily occur within the riparian corridor on the western side of I-15 south of Lake Street in Lake Elsinore, covering approximately 7.19 acres (Table 2.4.1-1).

This vegetation is classified as Coastal and Valley Freshwater Marsh by Holland (1986). Hardstem and California Bulrush Marshes Herbaceous Alliance is considered a CDFW sensitive natural community, with a state rank of S3 (CDFW 2023); this alliance is not globally ranked.

Mulefat Thickets

Mulefat Thickets (*Baccharis salicifolia* Shrubland Alliance) is a dense, riparian shrub community dominated by or co-dominated by mulefat. The shrub cover is variable, typically less than approximately 10 feet in height, and emergent trees may be present at low cover. Within the BSA, the shrub canopy varies from intermittent to closed and is dominated by mulefat with species such as arroyo willow, mugwort, tarragon, toyon, and black elderberry commonly present. Perennial exotic trees and shrubs are also present within this community at low cover; it includes species such as giant reed, saltcedar, castor bean, Mexican fan palm, eucalyptus, and pepper trees. The herbaceous understory includes native species such as weak leaf ragweed (*Ambrosia confertifolia*), yerba mansa, and stinging nettle, but primarily consists of nonnative grasses and mustards (CNPS 2023). Mulefat Thickets occur at several mesic locations throughout the BSA and in larger swaths within the riparian corridor on the western side of I-15 between Lake Street and Nichols Road in Lake Elsinore, covering approximately 13.87 acres (Table 2.4.1-1).

This vegetation is classified as Mulefat Scrub by Holland (1986). Mulefat Thickets Shrubland Alliance is not considered a CDFW sensitive natural community, with a global rank of G4 and a state rank of S4.

Salt Grass Flats

Salt Grass Flats (*Distichlis spicata* Herbaceous Alliance) is a native riparian herbaceous community commonly found in alkaline or saline environments. The herbaceous layer is open to continuous, typically less than 5 feet in height, and emergent shrubs may be present at low cover, including *Atriplex* spp., rabbitbrush (*Ericameria albida*), rubber rabbitbrush (*Ericameria nauseosa*), or greasewood (*Sarcobatus vermiculatus*). Herbaceous species may include salt grass, spiny rush (*Juncus acutus*), and Cooper's rush (*Juncus cooperi*) as dominant or co-dominant in the herbaceous layer. Characteristic species of this alliance include yerba mansa, ripgut grass (*Bromus diandrus*), brass-buttons (*Cotula coronopifolia*), alkali heath (*Frankenia salina*), and wall barley (*Hordeum murinum*) (CNPS 2023), all of which are present in the BSA. Salt Grass Flats occur at one location in the BSA on the north side of Temescal Canyon Road and south of I-15, north of Temescal Wash, between Lake Street and Horse Thief Canyon Road in Lake Elsinore, covering approximately 0.08 acre (Table 2.4.1-1).

This vegetation is classified as Alkali Meadow by Holland (1986). Salt Grass Flats Alliance is not considered a CDFW sensitive natural community, with a global rank of G5 and a state rank of S4; however, the Salt Grass–Alkali Heath–Marsh Jaumea (*Jaumea carnosa*) association has a global rank of G3 and a state rank of S2.2 and is considered a CDFW sensitive natural community (CDFW 2023).

Tamarisk Thickets

Tamarisk Thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance) is a nonnative riparian shrub community that is strongly dominated by saltcedar or other *Tamarix* species within the shrub canopy. The shrub cover is open to continuous, typically less than approximately 26 feet in height, and emergent trees may be present at low cover, including native riparian species such as Fremont cottonwood and willows. Within the BSA, Tamarisk Thickets are strongly dominated by saltcedar with species such as elderberry, arroyo willow, giant reed, and mulefat present but at low cover. The understory, when present, is composed mainly of nonnative grasses and mustards (CNPS 2023). Within the BSA, small thickets of tamarisk occur at several mesic locations and several larger patches occur within the riparian corridor on the western side of I-15 south between Lake Street and Nichols Road in Lake Elsinore. Tamarisk Thickets cover approximately 9.51 acres within the BSA (Table 2.4.1-1).

This vegetation is classified as Tamarisk Scrub by Holland (1986). Tamarisk Thickets Shrubland Semi-Natural Alliance is not considered a CDFW sensitive natural community. Because this community is designated as a semi-natural stand, it does not have a global or state ranking. Tamarisk species are among the most invasive, widely distributed, and troublesome nonnatives to infest California's wetlands. Most tamarisk species in California, including saltcedar, have a Cal-IPC rank of high (see Section 2.4.6, *Invasive Species*, for details on invasive plants) (Cal-IPC 2021).

Scale Broom Scrub

Scale Broom Scrub (*Lepidospartum squamatum* Shrubland Alliance) is a native shrub community commonly associated with alluvial environments and dominated or co-dominated by scale broom (*Lepidospartum squamatum*) within the shrub canopy. The shrub canopy cover is open to continuous and typically less than approximately 7 feet in height, and emergent trees may be present at low cover and can include riparian species such as California sycamore, Fremont cottonwood, black elderberry, or willows. Within the BSA, Scale Broom Scrub is an open shrub community co-dominated by scale broom and California buckwheat, with species such as two-color rabbit-tobacco (*Pseudognaphalium biolettii*), mulefat, deer weed, brittle bush, California sage, and tarragon commonly present (CNPS 2023). The understory is typically bare or sparsely composed of native and nonnative grasses and forbs. Within the BSA, Scale Broom Scrub primarily occurs within several large drainages traversing I-15, covering approximately 31.09 acres (Table 2.4.1-1).

This vegetation is classified as Riversidian Alluvial Fan Sage Scrub by Holland (1986). Scale Broom Scrub Shrubland Alliance is considered a CDFW sensitive natural community, with a global rank of G3 and a state rank of S3 (CDFW 2023).

California Sycamore Woodland

California Sycamore Woodland (*Platanus racemosa–Quercus agrifolia* Woodland Alliance) is a broadleaf, winter-deciduous woodland and forest community dominated by California sycamore or a co-dominant alliance of California sycamore and coast live oak. The tree canopy is continuous and typically less than approximately 115 feet in height. Within the BSA, this community is strongly dominated by California sycamore; coast live oak is also present but at low cover (CNPS 2023). Within the BSA, this community lacks a sub-canopy of smaller willows and shrubs and the understory is heavily composed of nonnative grass and forbs. California Sycamore Woodland occurs at a single location just south of Temescal Canyon Road within the BSA, covering approximately 2.32 acres (Table 2.4.1-1).

This vegetation is classified as Southern Sycamore–Alder Riparian Woodland by Holland (1986). California Sycamore Woodland Alliance is considered a CDFW sensitive natural community, with a global rank of G3 and a state rank of S3 (CDFW 2023).

Other Land Cover Types

Agriculture

Areas mapped as Agriculture are active or recently active agricultural areas, as well as associated access roads. These areas are regularly maintained and understory is minimal, consisting mostly of scattered nonnative weeds. Small Agriculture areas are present on the northern side of I-15 near Lake Street in Lake Elsinore within the BSA, covering approximately 2.39 acres (Table 2.4.1-1).

Developed

Areas mapped as Developed include roadways, buildings, residential housing, commercial development, parks, and landscaped areas. The Developed land cover type is typically unvegetated or composed of nonnative, ornamental species. Within the BSA, this land cover type is found throughout the LOD, covering approximately 1,295.05 acres (Table 2.4.1-1).

Disturbed

Areas mapped as Disturbed are mostly devoid of vegetation and have evidence of frequent human disturbance, such as disking and firebreaks. These areas usually have a very scant cover of native or nonnative ruderal or nonnative grassland species, but the cover is much reduced compared to areas mapped as ruderal vegetation type or nonnative grassland. Areas mapped as Disturbed are mostly observed immediately adjacent to the freeway shoulder or in vacant dirt lots and cover approximately 334.22 acres in the BSA (Table 2.4.1-1).

Natural Communities of Concern

Eleven sensitive natural communities considered important by CDFW were identified within the BSA. These habitats are classified as sensitive natural communities by CDFW because their extent has been substantially reduced, primarily due to urbanization and development, and they provide the natural life history characteristics required for a variety of special-status species, including federally and/or state-listed threatened and endangered plant and animal species. In addition, RSS, which is not designated as sensitive by CDFW but is considered to be rare per the MSHCP, is present within the BSA. These sensitive communities are described in the subsections below and their distributions within the BSA are illustrated on Figure 2.4.1-2.

Riversidian Sage Scrub

There are an estimated 644.46 acres of RSS within the BSA, which is composed of 378.89 acres of Brittle Bush Scrub Shrubland Alliance, 49.18 acres of California Buckwheat Scrub Shrubland Alliance, 177.95 acres of California Sagebrush–Black Sage Scrub Shrubland Alliance, and 38.44 acres of Deer Weed Scrub Shrubland Alliance. The overall habitat value of the RSS communities within the BSA is judged to be moderate to high due to relatively high native cover. California Buckwheat Scrub and Deer Weed Scrub are judged to be lower in value based on their association with disturbed environments within the BSA as well as their understories being primarily composed of nonnative grasses and mustards.

Chaparral

There are an estimated 35.09 acres of sensitive Chaparral communities within the BSA, composed of 15.2 acres of Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral Shrubland Alliance and 19.89 acres of Bush Penstemon Scrub Shrubland Alliance. The overall habitat value of Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral and Bush Penstemon Scrub in the BSA is judged to be moderate to high based on overall native species diversity, although it still has nonnative grass species in the understories.

Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral occurs in several large patches within the southern-central portion of the BSA between Lake Street and Nichols Road. Bush Penstemon Scrub is limited to a few locations within the central portion of the BSA between Horse Thief Canyon Road and Hostettier Road.

Native Grasslands

There are an estimated 1.62 acres of Native Grasslands within the BSA, which is composed of Needle Grass–Melic Grass Grasslands Herbaceous Alliance. The overall habitat value of Needle Grass–Melic Grass Grasslands in the BSA is judged to be low to moderate based on its proximity to disturbed and developed habitats, as well as the presence of nonnative annual grasses and forbs within the community. Within the BSA, Needle Grass–Melic Grass Grasslands is found in two small patches, one just south of Indian Truck Trail and the other just south of Nichols Road in Lake Elsinore.

Wildflower Fields

There are an estimated 3.79 acres of Wildflower Fields within the BSA, which are composed of Clustered Tarweed Fields Herbaceous Alliance. The vegetation community was not found associated with any of the seasonal pools that were mapped during the fairy shrimp surveys. The overall habitat value of Clustered Tarweed Fields in the BSA is judged to be moderate, as this community was typically associated with a diverse mix of native and nonnative forbs and grasses. Clustered Tarweed Fields occur mainly in the northern portion of the BSA.

Sensitive Riparian Communities

There are an estimated 125.79 acres of sensitive riparian communities within the BSA, which is composed of 2.07 acres of Arrow Weed Thickets Shrubland Alliance, 54.19 acres of Fremont Cottonwood Forest and Woodland Alliance, 28.25 acres of Goodding's Willow–Red Willow Riparian Woodland Alliance, 7.19 acres of Hardstem and California Bulrush Marshes Herbaceous Alliance, 31.77 acres of Scale Broom Scrub Shrubland Alliance, and 2.32 acres of California Sycamore Woodland Alliance.

Arrow Weed Thickets occur in the BSA in several large patches within the riparian corridor on the western side of I-15 between Lake Street and Nichols Road in Lake Elsinore. Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, and Hardstem and California Bulrush Marshes occur at several locations throughout the BSA, primarily within the riparian corridor within Temecula Wash on the western side of I-15 south of Lake Street in Lake Elsinore. Scale Broom Scrub Shrubland Alliance occurs within several large drainages traversing I-15 within the BSA. California Sycamore Woodland Alliance occurs at a single location just south of Temescal Canyon Road within the BSA. The distributions of these sensitive riparian communities are illustrated on Figure 2.4.1-2.

The overall habitat value of these sensitive riparian communities is judged to be moderate, as they provide occupied habitat for federally and state-listed species (see Section 2.4.5, *Threatened and Endangered Species*) and are also suitable for a number

of other non-listed sensitive species (see Section 2.4.3, *Plant Species*, and Section 2.4.4, *Animal Species*).

MSHCP Riparian/Riverine and Vernal Pool Resources

MSHCP Riparian/Riverine Resources

The MSHCP has specific policies and procedures regarding the evaluation and conservation of MSHCP riparian/riverine resources (including riparian vegetation) because these resources support MSHCP covered species (MSHCP Volume I, Section 6.1.2). Similar to RSS, natural communities of concern within riparian systems and vernal pools have declined throughout Southern California during past decades. These sensitive riparian communities often occur within federal and state jurisdictional drainages and wetland areas, which are also declining and are protected resources (refer to Section 2.4.2, *Wetlands and Other Waters*, for the discussion of waters and wetlands).

MSHCP riparian/riverine resources are not specifically tracked by the CNDDB as natural communities of concern; however, the MSHCP classification of riparian/riverine includes the sensitive riparian communities described in the section above, as well as riparian vegetation associated with ephemeral drainages, such as mulefat scrub (not tracked by the CNDDB) and some upland vegetation that occurs adjacent to ephemeral drainages. These natural communities are distributed throughout the BSA and occur within riparian and riverine areas, and adjacent uplands.

Under Section 6.1.2 of the MSHCP Volume I, MSHCP riparian/riverine resources are afforded special considerations under this policy. Specifically, the MSHCP states that “riparian/riverine areas are natural lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to, or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.” Therefore, the MSHCP classification of riparian/riverine includes both riparian (natural community of concern) as well as ephemeral drainages that are natural in origin but may lack riparian vegetation.

For the evaluation of MSHCP riparian/riverine resources, a smaller jurisdictional study area (JSA) (i.e., LOD and up to a 50-foot buffer; Figure 2.4.1-1) was used. There are an estimated 26.42 acres of MSHCP riparian/riverine resources within the JSA, which are composed of 14.69 acres of riparian habitats (i.e., Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Fremont Cottonwood Forest and Woodland, Goodding’s Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, and Tamarisk Thickets) and 11.73 acres of ephemeral riverine drainages.

A large portion of the MSHCP riparian/riverine resources in the JSA occur within Temescal Wash and along its tributaries. The quality of habitat within Temescal Wash ranges from moderate to high. At Temescal Wash (west of I-15), the riparian resources support a large population of LBV (refer to Section 2.4.5, *Threatened and Endangered Species*), as well as many other MSHCP (Volume I, Section 6.1.2) covered species of

birds and amphibians that need moist soils and riparian vegetation and would be considered high quality. Other areas of Temescal Wash are more degraded due to disturbances from humans, domestic predators, vehicular noise from I-15, and general proximity to I-15; this area would be considered moderate quality due the higher level of disturbance.

All MSHCP riparian/riverine resources in the JSA occur in state jurisdictional streambeds. However, there are state streambeds that are human-made features that are constructed in upland areas, which generally do not qualify as MSHCP riparian/ riverine. However, these features do need to be evaluated for downstream resources, especially if upstream to the Conservation Area, to make this determination.

Vernal Pool Resources

Vernal pools are defined in the MSHCP as seasonal wetlands that occur in depression areas that have wetland indictors of all three parameters (i.e., soils, vegetation, and hydrology) during the wetter portion of the growing season, but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, whereas upland species (i.e., annuals) may be dominant during the drier portion of the growing season.

A habitat assessment, which included the mapping of seasonal depressions, was conducted within the fairy shrimp study area (i.e., LOD and up to a 100-foot buffer; Figure 2.4.1-1) in December 2020, following approximately 3.33 inches of accumulated rain that had fallen since September 1, 2019. Ponded areas were determined using the following criteria: water marks, leaf staining, cracked soils, saline crusts, and saturated soils. Areas showing these indicators were mapped. The vernal pool study was performed in conjunction with the fairy shrimp and special-status plant surveys. Detailed survey methodology is provided in Appendix M of the NES.

None of the seasonal depressions detected within the fairy shrimp study area are considered vernal pools given their lack of vernal pool indicators, such as vernal pool–associated vegetation. They have been degraded due to heavy and frequent vehicular traffic, and construction disturbances (refer to Figure 3 in Appendix G of the NES for the location of the surveyed seasonal depressions found in the BSA). No vernal pool resources were identified in the fairy shrimp study area.

Corridors and Linkages

The BSA and surrounding area provide opportunities for movement and landscape connectivity for a wide variety of species. Between Nichols Road and Temescal Canyon Road, there are large areas of open space and conservation lands that are bounded by I-15 to the east. These open space areas provide diverse topographical conditions, riparian corridors, and low human presence. The BSA occurs in the Temescal Valley, which includes Temescal Wash and its associated tributaries. Habitats associated with Temescal Wash include riparian, woodland, coastal sage scrub, alluvial fan sage scrub, and open water. Upland habitats adjacent to Temescal Wash and riparian areas

connect to Lake Mathews/Estelle Mountain Reserve areas and the foothills north of Lake Elsinore (e.g., Estelle Mountain, Sedco Hills) to the north. Existing connections at Indian Canyon, Horsethief Canyon, and open upland areas southwest of Alberhill provide connections between the Santa Ana Mountains, Temescal Wash, and the foothills. Temescal Wash links to the Santa Ana River to the north.

Underpasses like viaducts, bridges, culverts, and pipes are often designed to ensure adequate drainage beneath highways and can also support connectivity for biological resources. Within the LOD and the BSA, there are nine natural features (washes) that cross under I-15. The nine washes cross below I-15 at large bridges, where the northbound and southbound lanes are separated over the washes. Seven of these washes have natural bottoms and, therefore, are likely to provide all of the fish passage and most of the wildlife crossing opportunities within the BSA. Two hydrological features, Brown Canyon Wash and Wasson Canyon Wash, have partial or complete concrete channels and thus provide less wildlife connectivity value. The location of each wash and description are provided below:

- Bedford Wash (PM 36.58): Natural bottom crossing under I-15 at large bridges
- Brown Canyon Wash (PM 34.72): Concrete channelized wash crossing under I-15 at large bridges
- Coldwater Wash (PM 32.96): Natural bottom crossing under I-15 at large bridges
- Mayhew Wash (PM 31.97): Natural bottom crossing under I-15 at large bridges
- Indian Wash (PM 30.09): Natural bottom crossing under I-15 at large bridges
- Horsethief Canyon Wash (PM 29.13): Natural bottom crossing under I-15 at large bridges
- Temescal Wash (South Crossing) (PM 28.04): Natural bottom crossing under I-15 at large bridges
- Gavilan Wash (PM 25.55): Natural bottom crossing under I-15 at large bridges
- Wasson Canyon Wash (PM 21.57): Part natural bottom, part concrete channel crossing under I-15 at large bridges

Many additional road undercrossings and overcrossings exist that could allow for wildlife movement across I-15 within the BSA; however, they are primarily frequently traveled roadways and are therefore not likely to support a high level of use by wildlife. Smaller culverts and pipes that cross under I-15 may provide alternative crossing opportunities, particularly for smaller species, although they may only function well if they are shorter than approximately 300 feet and have daylight visible through the length of the structure.

Existing connectivity corridors and linkages within the BSA are summarized in the subsections below. The datasets that were evaluated for the Project included CDFW's Biogeographic Information and Observation System Habitat Connectivity Viewer (Penrod et al. 2001; Spencer et al. 2010; CDFW 2017, 2019), the Western Riverside County MSHCP (RCIP 2003), U.S. Geological Survey 7.5-minute quadrangle maps (i.e., Alberhill, Corona South, Lake Elsinore, Lake Mathews), National Hydrography Dataset (USGS 2018, 2020), and Google Earth aerial imagery (Google Earth 2020) (see the NES for details).

Western Riverside County MSHCP

Within the BSA, there are several wildlife corridors and linkages identified by the MSHCP, including Core areas, Extension of Existing Core, Linkages, and Constrained Linkages. The specific MSHCP linkages and cores that overlap the BSA are the Proposed Core 1, Proposed Extension of Existing Core 2, Proposed Linkage 1, Proposed Linkage 2, Proposed Constrained Linkage 3, Proposed Constrained Linkage 5, and Proposed Constrained Linkage 6. As defined by the MSHCP, linkages are specific areas of connectivity delineated between Core areas with adequate size, configuration, and vegetation characteristics to generally provide for "live-in" habitat and/or for genetic flow for identified planning species. A constrained linkage is a constricted connection that is expected to provide for movement of identified planning species between Core areas, in areas where connections are limited due to existing use. Wildlife movement corridors are often linear and facilitate movement by providing adequate cover and lack of physical obstacles for movement. These movement corridors do not provide live-in habitat for species. Core areas are blocks of habitat of appropriate size, configuration, and vegetation characteristics to generally support the life history requirements of one or more MSHCP covered species. An extension of an existing Core is a habitat block that provides additional habitat adjacent to an existing Core and reduces an exposed edge. Descriptions of these MSHCP connectivity features are summarized in Table 2.4.1-2 below and detailed in the NES.

Table 2.4.1-2. Summary of MSHCP Connectivity Features within the Biological Study Area

MSHCP Habitat Connectivity Feature	Location Description	Approximate Total Area (acres)	Planning Species	Primarily Provides Live-in Habitat and/or Movement Habitat	Major Covered Activities Potentially Affecting Feature
Proposed Core 1	East and west of I-15, approximately from PM 24 to PM 27. Consists of land in the Alberhill area. Within Project site: Overlaps with the BSA and LOD; exists on both sides of I-15. The Gavilan Wash crossing under I-15 occurs between the two Proposed Core 1 blocks.	7,470	Coastal California gnatcatcher, cactus wren, tricolored blackbird, SWFL, Munz's onion, many-stemmed dudleya	Both live-in and movement habitat	I-15, Hemet to Corona/Lake Elsinore CETAP Corridor
Proposed Extension of Existing Core 2 (i.e., Lake Mathews/Estelle Mountain Extension)	West of I-15. Consists of land from Lake Mathews and El Cerrito south to almost the I-15 crossing of Temescal Wash. Within Project site: Overlaps with the BSA and LOD (specifically the ROW from PM 29 to PM 32 and near PM 34) but does not cross I-15. Existing crossings under I-15 adjacent to Proposed Extension of Existing Core 2 include Coldwater Wash (PM 32.96), Mayhew Wash (PM 31.97), Indian Wash (PM 30.09), and Horsethief Canyon Wash (PM 29.13).	8,100	Cooper's hawk, Southern California rufous-crowned sparrow, Bell's sage sparrow, yellow warbler, white-tailed kite, SWFL, yellow-breasted chat, loggerhead shrike, downy woodpecker, coastal California gnatcatcher, LBV, SKR, bobcat, mountain lion, Munz's onion, long-spined spine flower, many-stemmed dudleya	Both live-in and movement habitat	Hemet to Corona/ Lake Elsinore, CETAP Corridor, Alternative 1B

MSHCP Habitat Connectivity Feature	Location Description	Approximate Total Area (acres)	Planning Species	Primarily Provides Live-in Habitat and/or Movement Habitat	Major Covered Activities Potentially Affecting Feature
Proposed Linkage 1	West of I-15. Consists of foothills of the Santa Ana Mountains and adjacent undeveloped areas. Within Project site: Overlaps with the BSA and LOD (specifically the ROW from approximately PM 29 to PM 30). An existing large undercrossing, Horsethief Canyon Wash (PM 29.13), is present at I-15 adjacent to Proposed Linkage 1.	2,310	Cooper's hawk, Bell's sage sparrow, loggerhead shrike, mountain quail, coastal California gnatcatcher, SKR, bobcat, mountain lion	Movement habitat	I-15
Proposed Linkage 2	West of I-15. Consists of wetland habitat associated with Collier Marsh in the City of Lake Elsinore. Within Project site: Adjacent to the BSA (near PM 23 to PM 24) but does not overlap with the LOD.	160	American bittern, mountain plover, SWFL, black-crowned night heron, osprey, double-crested cormorant, white-faced ibis, LBV	Live-in habitat	None
Proposed Constrained Linkage 3	West of and underneath I-15. Consists of undeveloped upland habitat approximately at the Indian Truck Trail exit between PM 30 and PM 31. Within Project site: Overlaps with the BSA and LOD. There is a possible undercrossing at I-15 via an unnamed wash that passes under I-15 through Proposed Constrained Linkage 3 at the Indian Truck Trail exit. However, the culvert is more than 800 feet long and may not provide adequate wildlife passage due to its length.	80	Bobcat	Movement habitat	I-15

MSHCP Habitat Connectivity Feature	Location Description	Approximate Total Area (acres)	Planning Species	Primarily Provides Live-in Habitat and/or Movement Habitat	Major Covered Activities Potentially Affecting Feature
Proposed Constrained Linkage 5	West of and underneath I-15. Consists of a wildlife undercrossing and adjacent upland habitat northwest of Horsethief Canyon Road. Within Project site: Overlaps with the BSA and LOD. There is an existing crossing under I-15 within Horsethief Canyon Wash (PM 29.13).	25	Bobcat, mountain lion	Movement habitat	I-15
Proposed Constrained Linkage 6	North and south of, and underneath, I-15. Consists of Temescal Wash and adjacent riparian habitat and nearby undeveloped upland habitat. Within Project site: Overlaps with the BSA and LOD from approximately PM 27 to PM 28 and extends underneath I-15 on both sides of the highway at the Temescal Wash undercrossing (PM 28.04).	175	Cooper's hawk, yellow warbler, white-tailed kite, SWFL, yellow-breasted chat, LBV	Both live-in and movement habitat	I-15

Source: RCIP 2003
CETAP = Community and Environmental Transportation Acceptability Process; SKR = Stephens' kangaroo rat; SWFL = southwestern willow flycatcher

Missing Linkages in California's Landscape

The missing linkages layer in the CDFW Biogeographic Information and Observation System (BIOS) Viewer [ds420] (Penrod et al. 2001) identifies the location of, and threats to, the most important wildlife movement corridors in California. The Project area occurs within the South Coast ecoregion, and there are two linkages that overlap the BSA and LOD, as identified in the missing linkages geospatial layer:

- **Bedford Canyon:** In the CDFW BIOS viewer, this linkage is near approximately PM 65.5, south of Dos Lagos Drive/Weirick Road, but it is likely meant to be the location of the existing Bedford Wash crossing under I-15 (PM 36.85). The area is described as a choke point in the linkage report. It is within coastal sage scrub and chaparral habitats as well as citrus groves, and could be key connectivity habitat for species, such as mountain lion and mule deer (*Odocoileus hemionus*). The Missing Linkages Report noted that this is one of two remaining corridors that connect Cleveland National Forest to Lake Mathews/Gavilan Plateau and ranked it as facing "severe threat/loss imminent" due to urbanization. I-15 and a proposed industrial park (as of 2001) were listed as impediments/barriers to wildlife movement within the linkage. It was given a feasibility ranking for conservation priority of only 2 (between infeasible and moderately feasible).

- **Gavilan Hills–Santa Ana Mountains:** This linkage is near approximately PM 30, near the Indian Truck Trail exit and at the Indian Wash crossing under I-15 (PM 30.09). The area is described as a choke point. It is within sage scrub and chaparral habitats as well as citrus groves, and could be key connectivity habitat for species such as mountain lion, mule deer, bobcat (*Lynx rufus*), and badger (*Taxidea taxus*). The Missing Linkages Report ranked it as facing "severe threat/loss imminent" due to development. I-15 is noted as an impediment/barrier to wildlife movement within the linkage. The report gave this linkage a feasibility ranking for conservation priority of 5 (good opportunity). The report also lists a previous mountain lion study that demonstrated the value of this linkage and notes this is the last remaining connection across I-15 south of State Route 91.

California Essential Habitat Connectivity Layers

The California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California was designed to support connectivity conservation in land use and transportation planning. The statewide map of essential habitat connectivity depicts large and small "Natural Landscape Blocks" of relatively intact habitat, as well as areas that have been deemed essential with respect to ecological connectivity for a broad range of species. Also depicted are "Essential Connectivity Areas" that serve to connect the Natural Landscape Blocks. Mapped California Essential Habitat Connectivity resources that occur within or adjacent to the BSA and LOD include the following:

- **Natural Landscape Blocks – Large [ds621] (Spencer et al. 2010):** One large natural landscape block occurs within, and crosses, the BSA and LOD: ID Number 76, named "Indian Mountain/Gilman Springs." This natural landscape block consists of approximately 48,455 contiguous acres of wildlife habitat. It is generally across

the Santa Ana Mountains, including a vast area of national forest. The block crosses the BSA and the LOD at two places (near the Indian Truck Trail exit and east of the Lake Street exit) and generally runs adjacent to I-15 along Temescal Wash between approximately PM 25 and PM 32, including on both sides of the highway in some areas.

- **Natural Landscape Blocks – Natural Areas Small [ds1073] (Spencer et al. 2010):** Eight small Natural Landscape Blocks are mapped within or adjacent to the BSA and LOD, ranging in size from approximately 2.5 to 126 acres. These small areas are adjacent to larger Natural Landscape Blocks; therefore, they are of importance to species traversing or living near edges of developed areas.
    - Near PM 35: One block of 126.02 acres west of I-15, previously undeveloped habitats, although the area now consists of a mix of scrub/remnant sagebrush habitats and residential neighborhoods.
    - Near PM 29.5 to PM 30: Four blocks of 32.12 acres, 4.94 acres, 2.47 acres, and 4.94 acres northeast of I-15 and adjacent to Lee Lake, consisting of coast live oak forest, sagebrush/scrub, and developed (park) land.
    - Near PM 23.5 to PM 24.5: Two blocks of 7.41 acres and 217.45 acres along and east of I-15, consisting of scrub/shrub and grassland habitats, although most of the larger block has been developed in is now a quarry.
    - Near PM 23.8: One block of 2.47 acres west of I-15 along Temescal Wash, consisting of riparian and wetland habitats.
- **Essential Connectivity Areas (Linkages) [ds620] (Spencer et al. 2010):** The BSA and LOD are adjacent to an essential habitat connectivity area: ID Number 120, named “Estelle Mountain-Lake Mathews.” This essential connectivity area linkage consists of approximately 4,428 acres of contiguous wildlife habitat that connects from the north side of Temescal Wash near Estelle Peak to the Monument Peak and Lake Mathews area. It is adjacent to and near the BSA, north of I-15, near PM 28 to PM 31.

Terrestrial Connectivity – Areas of Conservation Emphasis

The Terrestrial Connectivity dataset [ds2734] (CDFW 2017) within Areas of Conservation Emphasis layer supports conservation planning efforts. The data summarize information on terrestrial connectivity, including the presence of mapped corridors or linkages and proximity to large, contiguous natural areas. Each hexagonal mapping unit has a connectivity rank value from 1 to 5, with 5 indicating areas of irreplaceable and essential connectivity conservation priority.

The majority of the BSA and LOD intersect with hexagonal mapping units with a connectivity rank of 1, signifying “limited connectivity opportunity,” defined as “areas where land use may limit options for providing connectivity (e.g., agriculture, urban) or no connectivity importance has been identified in models.” The following locations that overlap the BSA and LOD are mapped as having connectivity ranks higher than 1.

- **Indian Truck Trail vicinity:** The hexagonal mapping unit at the Indian Truck Trail exit along I-15 (approximately PM 30 to PM 31.5) was given a connectivity rank of 5. A rank of 5 is given to "irreplaceable and essential corridors," which are defined as "channelized areas, as identified in The Nature Conservancy's Omniscape Model, and priority species movement corridors."

- **Temescal Wash crossing vicinity:** Five contiguous hexagonal mapping units at, adjacent to, and near the I-15 crossing of Temescal Wash (approximately PM 24.5 to PM 30) were given a connectivity rank of 3. A rank of 3 is given to "connections with implementation flexibility," defined as "other areas that have been identified as having connectivity importance but have not been identified as channelized areas, species corridors, or habitat linkages at this time."

California Fish Passage Assessment Database

There are no identified California Fish Passage [ds69] (CDFW 2019) impediments or barriers on streams within the BSA or LOD; therefore, this layer is not discussed further.

Local Regulations

Protected trees are trees or tree communities that have been identified as having special significance and are provided protection by, and specifically identified in, county and city ordinances, codes, or general plans. Within the BSA, trees are protected by Riverside County Oak Tree Management Guidelines (County of Riverside 1993), Open Space and Conservation Policy, Ordinance 12.08, Tree Removal Ordinance 12.24.010, and the California State Senate Concurrent Resolution No. 17, Oak Woodlands.

Protected trees in the BSA include oak trees within both the mapped Coast Live Oak Woodland and Forest Alliance and any other vegetation community containing oak trees. Other protected trees include trees within the ROW of the county highway.

A tree inventory was performed to determine the locations of all oak trees within the LOD (see Figure 2.4.3-3 in Section 2.4.3, *Plant Species*). In the BSA, coast live oak trees can be found in Coast Live Oak Woodland, California Sycamore Woodland, Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Scrub Oak Chaparral, Eucalyptus–Tree of Heaven–Black Locust Groves, and Pepper Tree or Myoporum Forest and Woodland communities. The distribution of these communities in the BSA is shown on Figure 2.4.1-2. These vegetation communities within the BSA include approximately 168.65 acres of habitat where oaks may occur.

In addition, other protected trees, including roadside trees in the ROW (Ordinance 12.08), may occur in any mapped vegetation type. Tree Removal Ordinance 12.24.010 does not apply to the Project because the Project's elevation is not above 5,000 feet.

2.4.1.3 Environmental Consequences

This section addresses the effects on natural communities of concern, MSHCP riparian/ riverine and vernal pool resources, wildlife corridors and linkages, and local tree ordinances.

The effects from permanent and temporary impacts on natural communities of concern, MSHCP riparian/riverine and vernal pool resources, wildlife corridors and linkages, and local regulations were analyzed for the Build Alternative and the No-Build Alternative. The permanent and temporary impacts can also be classified as direct or indirect. *Direct impacts* are those impacts that can be expected from direct removal and disturbances to the land and resources. Examples of direct impacts include mortality of individuals, temporary removal of habitat, and permanent loss of habitat. *Indirect impacts* are those that give rise to delayed, secondary impacts. Indirect impacts are those that can be assumed to increase mortality, reduce productivity, and/or reduce the functions and values of natural open space for native species. Permanent and temporary direct impacts and permanent indirect shading impacts as a result of Project implementation are illustrated on Figure 2.4.1-2.

Natural Vegetation Communities

Build Alternative

Twelve sensitive natural communities (11 of which are considered sensitive by CDFW and one of which is considered rare per the MSHCP) are present within the BSA and could potentially be affected by the Project. Permanent, temporary, and shading impacts on sensitive natural communities are included in Table 2.4.1-3 and potential impacts on these community types are discussed in the subsections below.

Table 2.4.1-3. Potential Impacts of the Build Alternative on Sensitive Natural Communities

Sensitive Natural Community	Impact (acres)			
	Permanent	Temporary	Shading	Total
RSS				
Brittle Bush Scrub[1]	3.11	84.76	0.07	87.94
California Buckwheat Scrub[1]	0.08	11.46	0.00	11.54
California Sagebrush–California Buckwheat Scrub[1]	0.09	24.84	0.00	24.93
Deer Weed Scrub[1]	0.05	7.52	0.00	7.57
RSS Total	**3.33**	**128.58**	**0.07**	**131.98**
Chaparral				
Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral[2]	0.00	0.53	0.00	0.53
Bush Penstemon Scrub[2]	0.00	0.96	0.00	0.96
Chaparral Total	**0.00**	**1.49**	**0.00**	**1.49**

Sensitive Natural Community	Impact (acres)			
	Permanent	Temporary	Shading	Total
Native Grasslands				
Needle Grass–Melic Grass Grasslands[2]	0.00	0.31	0.00	**0.31**
Native Grasslands Total	**0.00**	**0.31**	**0.00**	**0.31**
Wildflower Fields				
Clustered Tarweed Fields[2]	0.09	2.29	0.00	**2.38**
Wildflower Fields Total	**0.09**	**2.29**	**0.00**	**2.38**
Riparian				
Arrow Weed Thicket Shrubland Alliance[2]	0.00	0.00	0.00	**0.00**
Fremont Cottonwood Forest and Woodland Alliance[2,3]	0.00	0.32	0.00	**0.32**
Goodding's Willow–Red Willow Riparian Woodland and Forest Alliance[2]	0.00	1.21	0.00	**1.21**
Hardstem and California Bulrush Marshes	0.00	0.39	0.00	**0.39**
Scale Broom Scrub[2]	0.00	0.31	0.18	**0.49**
California Sycamore Woodland[2,3]	0.00	0.06	0.00	**0.06**
Sensitive Riparian Total	**0.00**	**2.29**	**0.18**	**2.47**
Grand Total	**3.42**	**134.96**	**0.25**	**138.63**

[1] RSS is considered rare per the MSHCP; it is not classified as sensitive by CDFW.
[2] Classified as sensitive by CDFW.
[3] A portion of this vegetation community occurs within upland areas.

Temporary Impacts

Construction of the Build Alternative would temporarily disturb 128.58 acres of RSS, 1.49 acres of Chaparral, 0.31 acre of Native Grasslands, 2.29 acres of Wildflower Fields, and 2.29 acres of Sensitive Riparian. Temporary impacts on each vegetation community types and individual alliances are detailed in Table 2.4.1-3 and illustrated on Figure 2.4.1-2. These impacts would occur in MSHCP criteria cells and cores and linkages, but no impacts on these sensitive natural communities would occur in conserved lands.

The potential also exists for short-term, temporary, indirect effects from construction activities, including dust, increases in fire risks, introduction of invasive plant species, erosion and sedimentation, introduction of hazardous materials, and introduction of trash on sensitive natural communities adjacent to the LOD. However, these effects are expected to be greatly reduced with implementation of the measures presented below and detailed in Section 2.4.1.4. Construction activities are expected to occur primarily within the I-15 median and are not expected to sever existing connectivity of sensitive natural communities from one side of the interstate to the other.

Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-4 (NES BIO-4)**, **NC-5 (NES BIO-5)**, **NC-6 (NES BIO-6)**, **NC-7 (NES BIO-7)**, **NC-8 (NES BIO-8)**, **NC-9 (NES BIO-9)**, **NC-10 (NES BIO-10)**, **NC-11 (NES BIO-11)**, and **NC-12 (NES BIO-12)** (in Section 2.4.1.4) are required under the MSHCP to reduce the level of indirect effects and eliminate the potential for direct impacts on RSS, Chaparral, Native Grasslands, Wildflower Fields, and Sensitive Riparian communities adjacent to but outside of the proposed LOD. These measures would also protect adjacent native flora and fauna associated with these sensitive natural communities in the BSA during and following construction.

Permanent Impacts

Permanent impacts on sensitive natural communities may occur during both construction and operation. Construction of the Build Alternative would permanently remove 3.33 acres of RSS; Chaparral, Native Grasslands, Wildflower Fields, and Sensitive Riparian communities would not be permanently removed by the Project. The Project would also result in permanent indirect shading effects on 0.07 acre of RSS and 0.18 acre of Sensitive Riparian; Chaparral, Native Grasslands, and Wildflower Fields would not experience shading effects from the Project. Permanent and shading impacts on each of the vegetation community types and individual alliances are detailed in Table 2.4.1-3 and illustrated on Figure 2.4.1-2. These impacts would occur in MSHCP criteria cells and cores and linkages, but no impacts on these sensitive natural communities would occur in conserved lands.

Operation of the Project could have potential indirect effects on sensitive natural communities, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to normal operation or ROW maintenance. However, operation of the Project is not expected to differ appreciably from existing conditions.

The potential operational impacts on RSS, Chaparral, Native Grasslands, and Wildflower Fields from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. The permanent removal, temporary disturbance, and/or shading effects on these communities could be considered a biologically substantial loss given their rarity in the region. RSS provides habitat for coastal California gnatcatcher (*Polioptila californica californica*) and other special-status plant and animal species, Native Grasslands provides habitat for Stephens' kangaroo rat (*Dipodomys stephensi*) and special-status plant species, and Wildflower Fields could provide habitat for fairy shrimp and special-status plant species (although no seasonal pools were mapped during fairy shrimp surveys [refer to Section 2.4.5, *Threatened and Endangered Species*] and no special-status plants were found in these areas [refer to Section 2.4.3, *Plant Species*, and Section 2.4.5, *Threatened and Endangered Species*]). Although these impacts could be considered a biologically substantial loss, the Project is a Covered Activity under the MSHCP; as such, the impacts on and loss of RSS, Chaparral, and Native Grasslands (totaling 133.78 acres for the Project) would not be considered substantial and would be covered under the MSHCP. The loss of any Wildflower Fields would be mitigated under the MSHCP, except where this habitat type would be classified as a vernal pool, in which case

Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, of the MSHCP would apply. No evidence that vernal pools associated with the Wildflower Field habitat type was detected within the BSA during field surveys; therefore, the loss of any Wildflower Fields would not be considered substantial and would be covered under the MSHCP (totaling 2.38 acres for the Project).

The potential impacts on sensitive Chaparral from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. The temporary removal of 1.49 acres of sensitive Chaparral would not be considered a biologically substantial loss under the MSHCP. Chaparral is the most abundant and widespread vegetation type in western Riverside County, covering approximately 435,000 acres of the Plan Area. The loss of any sensitive Chaparral (totaling 1.49 acres for the Project) would not be considered substantial and would be covered under the MSHCP. Sensitive Chaparral is not expected to provide habitat for California Endangered Species Act (CESA)- or FESA-listed wildlife.

Under the Build Alternative, all potential direct and indirect impacts on sensitive RSS, Chaparral, Native Grasslands, and Wildflower Fields would be fully addressed through consistency with the MSHCP through the Avoidance and Minimization Measures identified in Section 2.4.1.4 below.

The potential operational impacts on Sensitive Riparian communities from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. Because Sensitive Riparian communities provide suitable habitat for special-status species, including listed LBV (refer to Section 2.4.4, *Animal Species*, and Section 2.4.5, *Threatened and Endangered Species*), and are becoming fragmented and degraded throughout the region, the permanent removal, temporary disturbance, and/or shading effects on these Sensitive Riparian communities could be considered a biologically substantial loss. All potential direct and indirect impacts on Sensitive Riparian communities would be fully mitigated under the MSHCP with implementation of the Avoidance and Minimization Measures identified in Section 2.4.1.4 and through compliance with Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, of the MSHCP. To reduce these impacts, compensatory mitigation for sensitive riparian communities would be required. A mitigation ratio of 3:1 is currently proposed for permanent impacts (including shading) on riparian resources; a ratio of 2:1 is proposed for permanent impacts (including shading) on ephemeral drainages; and a ratio of 1.25:1 is proposed for temporary impacts (Mitigation Measure **NC-16 [NES BIO-16]** in Section 2.4.1.4).

However, not all parts of the Sensitive Riparian communities described here would be considered riparian/riverine per the MSHCP and, therefore, not all impacts on these communities would be completely mitigated through implementation of Section 6.1.2 of the MSHCP. For instance, both Fremont Cottonwood Forest and Woodland Alliance and California Sycamore Woodland Alliance can be considered upland communities but are still considered to be sensitive natural communities. Where these communities are considered to be upland communities, all potential direct and indirect impacts on

Sensitive Riparian communities would be fully mitigated through consistency with the MSHCP.

Mitigation for MSHCP riparian/riverine resources will be addressed further in the DBESP report (Mitigation Measure **NC-15 [NES BIO-15]** in Section 2.4.1.4) and Clean Water Act (CWA) (Sections 401 and 404) and Lake and Streambed Alteration Program permits (refer to Section 2.4.2, *Wetlands and Other Waters*). Approval of the DBESP by RCA, USFWS, and CDFW, and adequate compensatory mitigation for MSHCP riparian/riverine resources, would ensure full compliance with the MSHCP riparian/riverine policy (see the *MSHCP Riparian/Riverine and Vernal Pool Resources* subsection below for details). In addition, implementation of Avoidance and Minimization Measures in Section 2.4.1.4 would address potential indirect effects on Sensitive Riparian communities.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no new or additional impacts on natural vegetation communities would occur beyond those that would be expected from operation of the existing facility.

MSHCP Riparian/Riverine and Vernal Pool Resources

Build Alternative

MSHCP riparian/riverine resources (MSHCP Volume I, Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools) are present within the JSA and could potentially be affected by the Project. Permanent, temporary, and shading impacts on MSHCP riparian/riverine resources are included in Table 2.4.1-4 and potential impacts are discussed in the subsections below.

Table 2.4.1-4. Potential Impacts of the Build Alternative on MSHCP Riparian/Riverine Resources

MSHCP Riparian/ Riverine Resources	Impact (acres)			
	Permanent	Temporary	Shading	Total
Riparian	0.00	1.80	0.46	**2.26**
Riverine	0.10	3.79	1.00	**4.89**
Total Impacts	**0.10**	**5.59**	**1.46**	**7.15**

Vernal pools were determined to be absent within the fairy shrimp study area and, as such, the Project is not expected to affect vernal pool resources.

Temporary Impacts

MSHCP Riparian/Riverine Resources

Construction of the Build Alternative would temporarily disturb up to 5.59 acres of MSHCP riparian/riverine resources (of which 1.80 acres are riparian and 3.79 acres are

riverine). These temporary direct effects are associated with the work area needed to accomplish the installation of bridge decks, abutments, and piers, including access routes to and from bridge areas and ephemeral habitats. Temporary impacts on MSHCP riparian/riverine resources are detailed in Table 2.4.1-4 and illustrated on Figure 2.4.1-3.

The potential also exists for short-term, temporary, indirect effects on MSHCP riparian/riverine resources from construction activities, including dust, increases in fire risks, introduction of invasive plant species, erosion and sedimentation, introduction of hazardous materials, and introduction of trash on MSHCP riparian/riverine resources adjacent to the LOD. However, these effects are expected to be greatly reduced with implementation of the measures presented below and detailed in Section 2.4.1.4.

Implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-4 (NES BIO-4)**, **NC-5 (NES BIO-5)**, **NC-6 (NES BIO-6)**, **NC-7 (NES BIO-7)**, **NC-8 (NES BIO-8)**, **NC-9 (NES BIO-9)**, **NC-10 (NES BIO-10)**, **NC-11 (NES BIO-11)**, **NC-12 (NES BIO-12)**, **NC-13 (NES BIO-1)**, **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1.4); **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*); **AS-1 (NES BIO-18)**, **AS-3 (NES BIO-26**, and **AS-5 (NES BIO-28)** (in Section 2.4.4, *Animal Species*); and **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*) would avoid or minimize potential temporary impacts on MSHCP riparian/riverine resources that are present adjacent to or in the vicinity of the LOD during construction. These Avoidance and Minimization Measures would also protect adjacent native flora and fauna associated with these MSHCP riparian/riverine resources in the JSA during and following construction.

Vernal Pool Resources

No temporary impacts on vernal pool resources would occur.

Permanent Impacts

MSHCP Riparian/Riverine Resources

Permanent Project impacts on MSHCP riparian/riverine resources may occur during both construction and operation. Construction of the Build Alternative would directly and permanently remove approximately 0.10 acre of MSHCP riverine resources; no MSHCP riparian resources would be permanently removed (Table 2.4.1-4). These permanent effects would result from installation of bridge piers, best management practices (BMPs), and other work associated with the permanent construction area (Figure 2.4.1-3). The Project would also result in permanent indirect shading effects on 1.46 acres of MSHCP riparian/riverine resources (of which 0.46 acre is MSHCP riparian and 1.00 acre is MSHCP riverine). Shading effects would greatly reduce or eliminate the canopy of riparian habitat and would occur in the following areas:

- Riverine areas in Feature 25.5-1 (Figure 2.4.1-3, Sheet 6)

- Riparian habitat found in the median gap in Temescal Wash (Figure 2.4.1-3, Sheet 8); however, this habitat is mapped as disturbed (refer to Figure 2.4.1-2, Sheet 9)
- Riverine areas in Feature 29.1-1 (Figure 2.4.1-3, Sheet 10)
- Riverine areas in Feature 30.0-1, Indian Wash (Figure 2.4.1-3, Sheet 11)
- Riverine areas in Feature 31.9, Mayhew Wash (Figure 2.4.1-3, Sheet 13)
- Riverine areas in Feature 31.8-1 (Figure 2.4.1-3, Sheet 13)
- Riverine areas in Feature 32.9-1, Coldwater Wash (Figure 2.4.1-3, Sheet 14)
- Riverine areas in Feature 34.7-1, McBride Canyon Creek (Figure 2.4.1-3, Sheet 17)
- Riverine areas in Feature 36.5-1, Bedford Wash (Figure 2.4.1-3, Sheet 19)

The closure of the median over existing MSHCP riparian areas would permanently lower the habitat function and value for wildlife and plant species, affect potential movement for wildlife due to decreased vegetation cover and less light penetration, and/or affect water quality and soil processes within stream areas due to shading and changes in vegetative cover.

Operation of the Project may have potential indirect effects on MSHCP riparian/riverine resources including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to normal operation or ROW maintenance. The potential indirect operational effects may reduce the functions and values of the existing MSHCP riparian/riverine resources adjacent to the LOD.

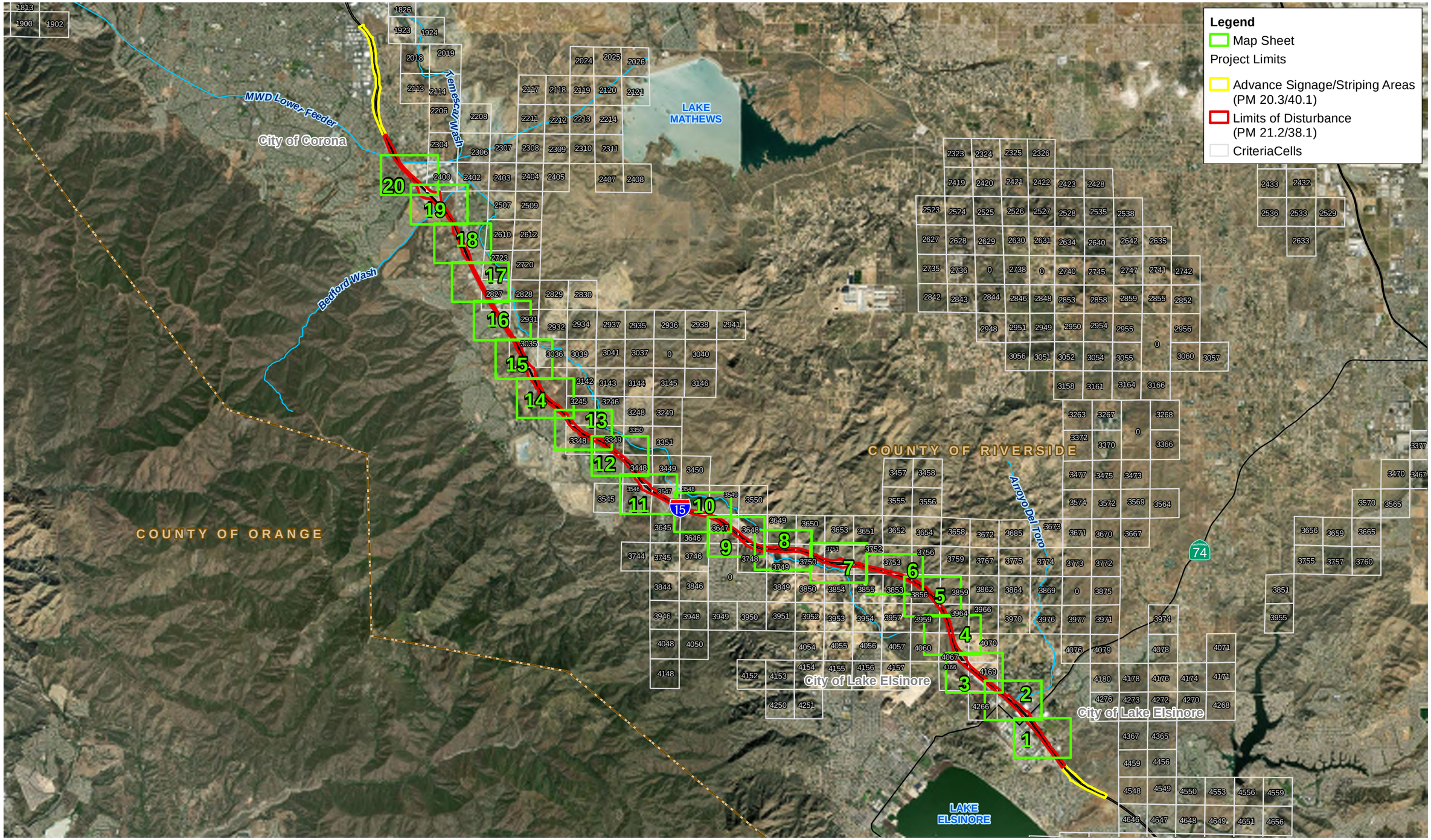

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Figure 2.4.1-3 - Map Index
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 1
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 2
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

0 200 400 Feet

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N

Figure 2.4.1-3 - Sheet 3
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.1-3 - Sheet 4
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Feature 25.3-4
Feature 25.3-2
Feature 25.5-1
Feature 25.3-1
Feature 25.2-1
(Temescal Wash)
Feature 25.1-2
Feature 25.1-2
Feature 25.1-1
Feature 24.7-1
Feature 24.6-2
Feature 24.6-1
3853
3856
3857
3859
3959
3964
15

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.1-3 - Sheet 5
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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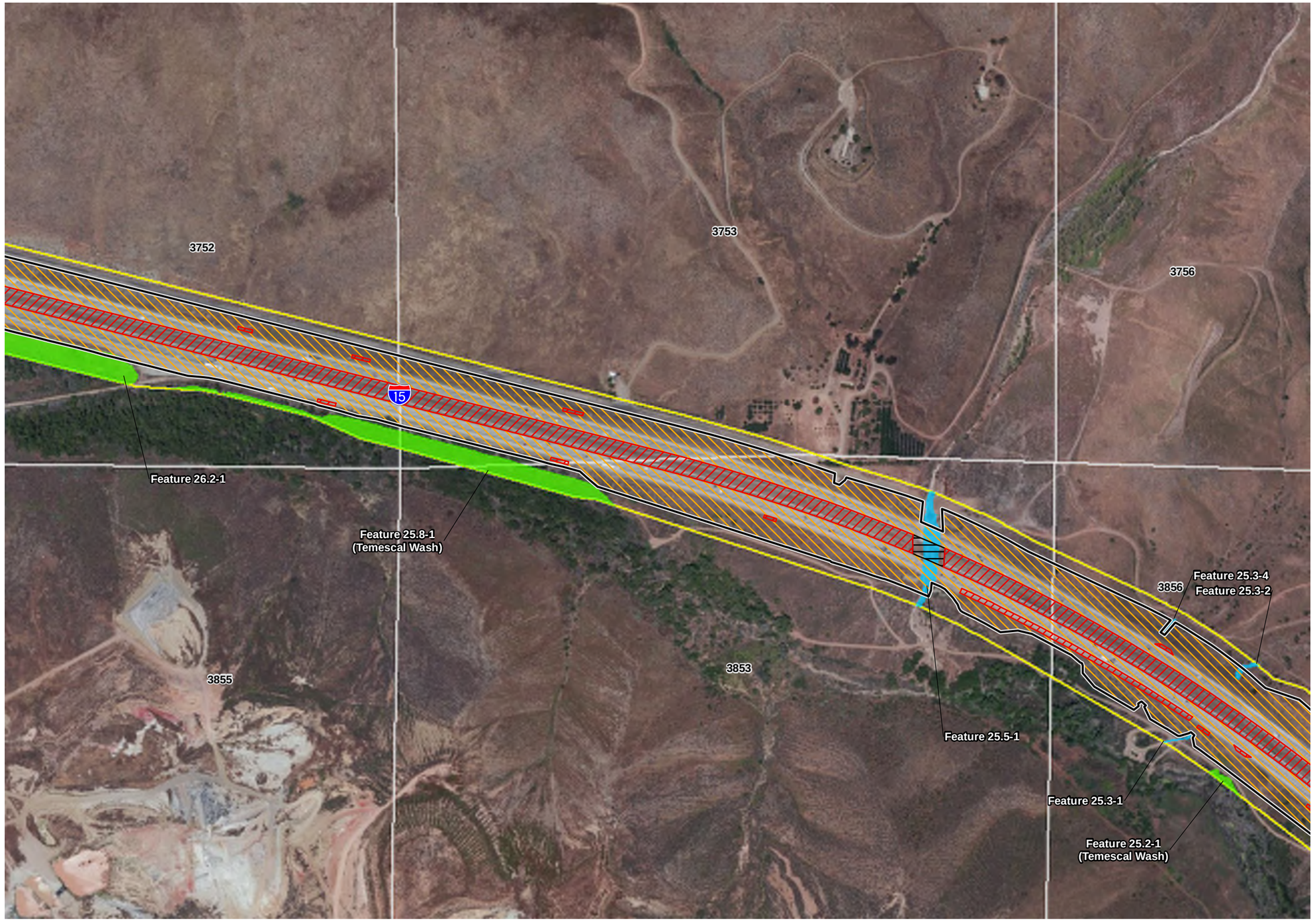

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

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Figure 2.4.1-3 - Sheet 6
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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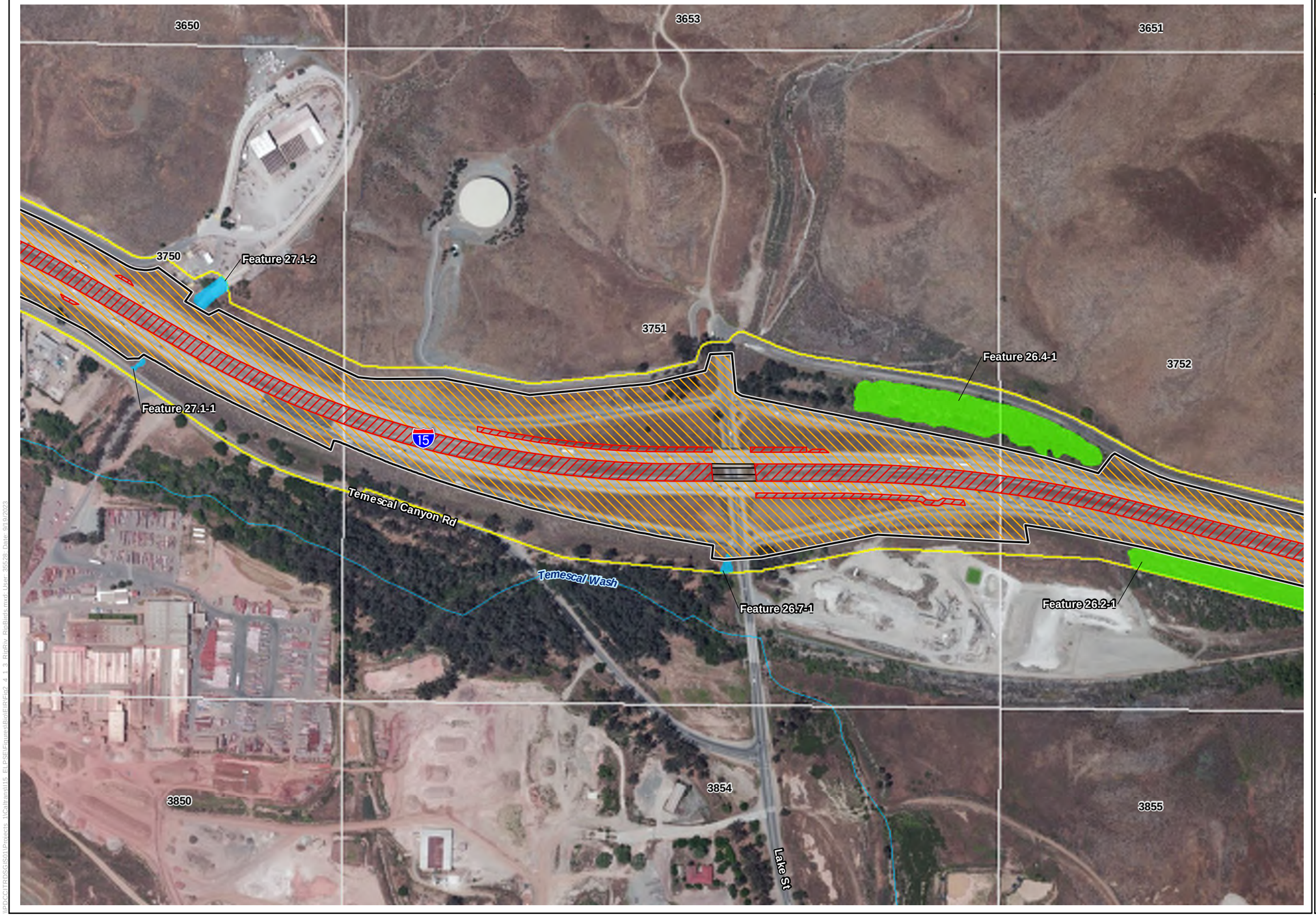

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

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Figure 2.4.1-3 - Sheet 7
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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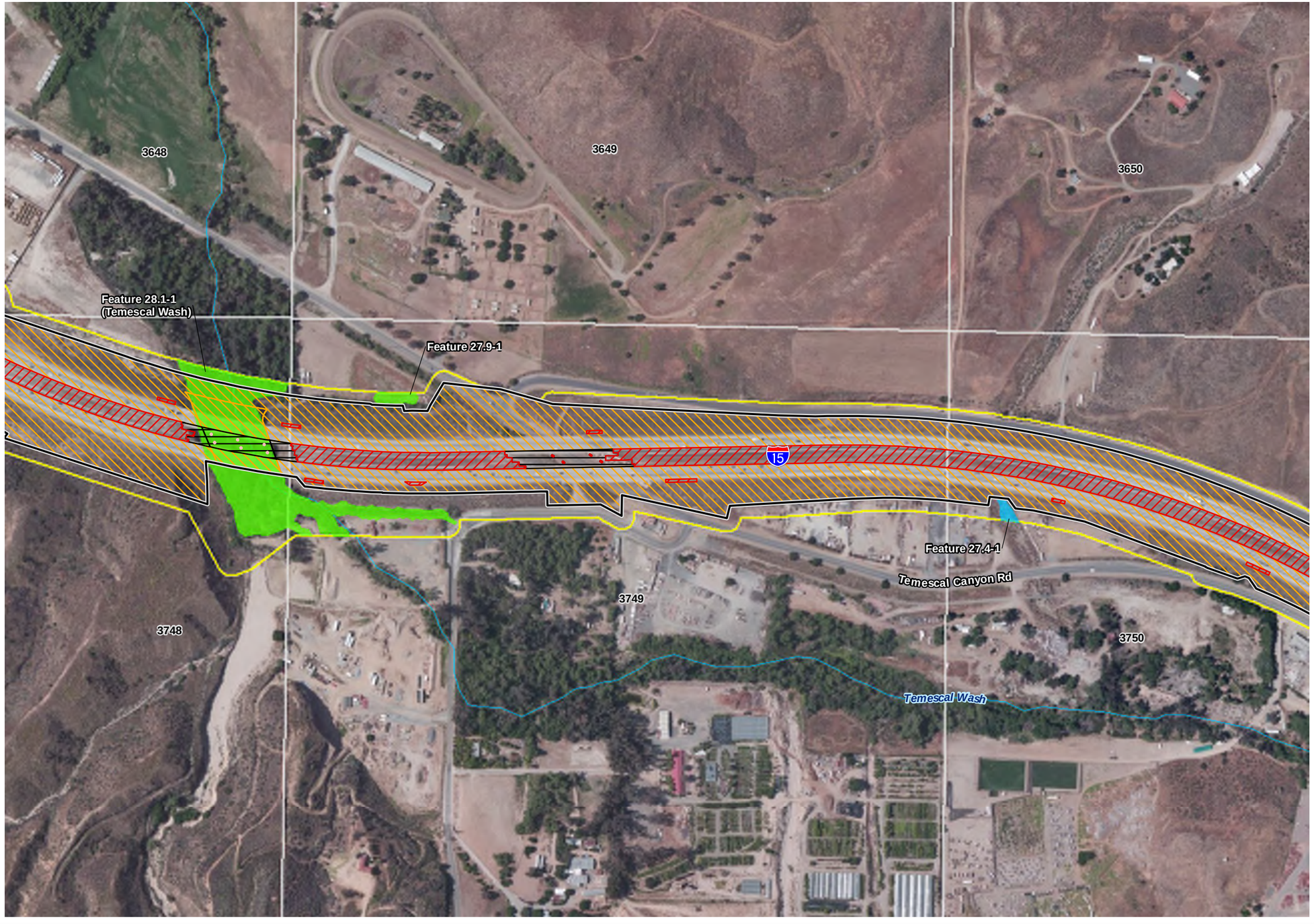

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

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Figure 2.4.1-3 - Sheet 8
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.1-3 - Sheet 9
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

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Figure 2.4.1-3 - Sheet 10
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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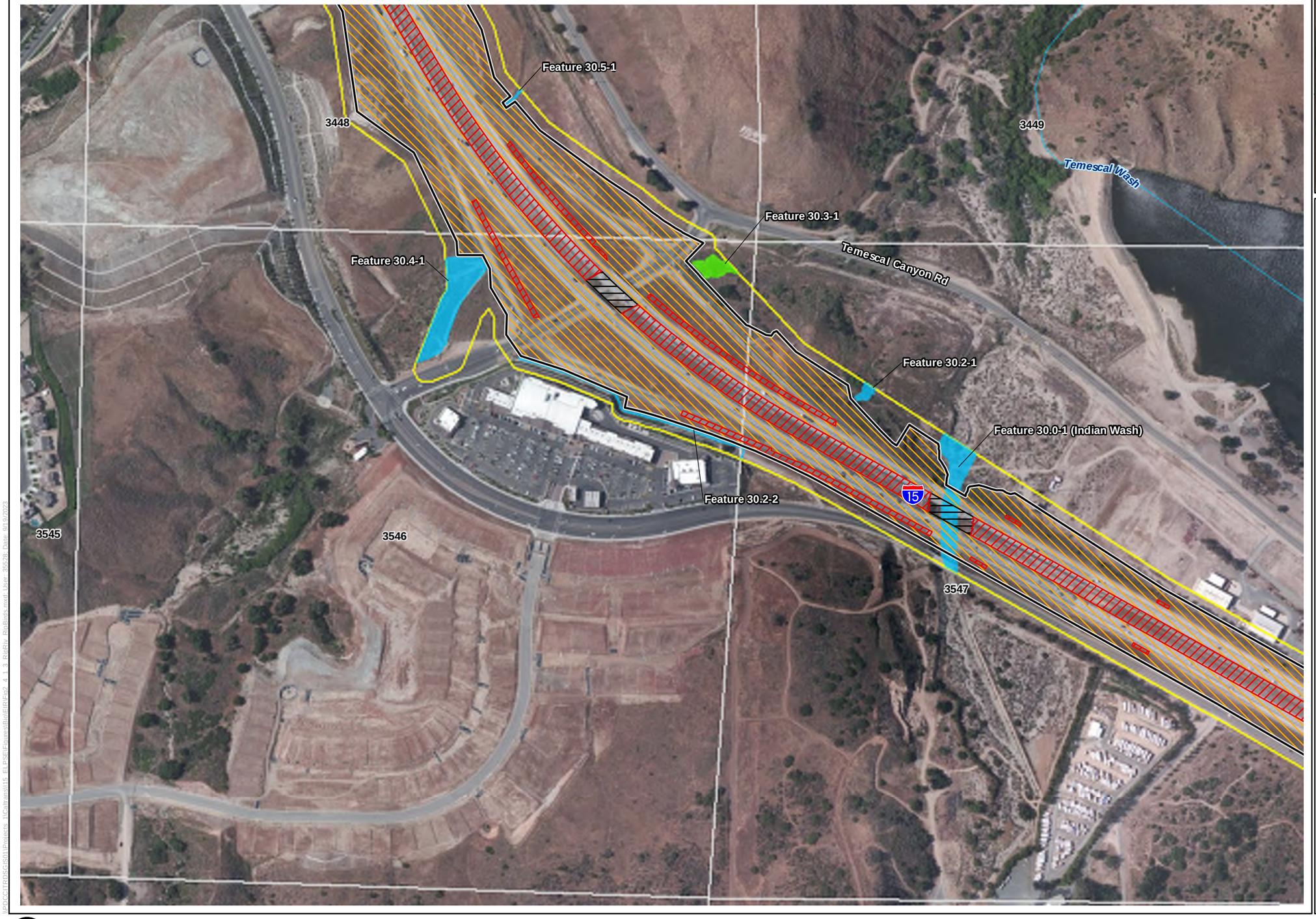

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

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Figure 2.4.1-3 - Sheet 11
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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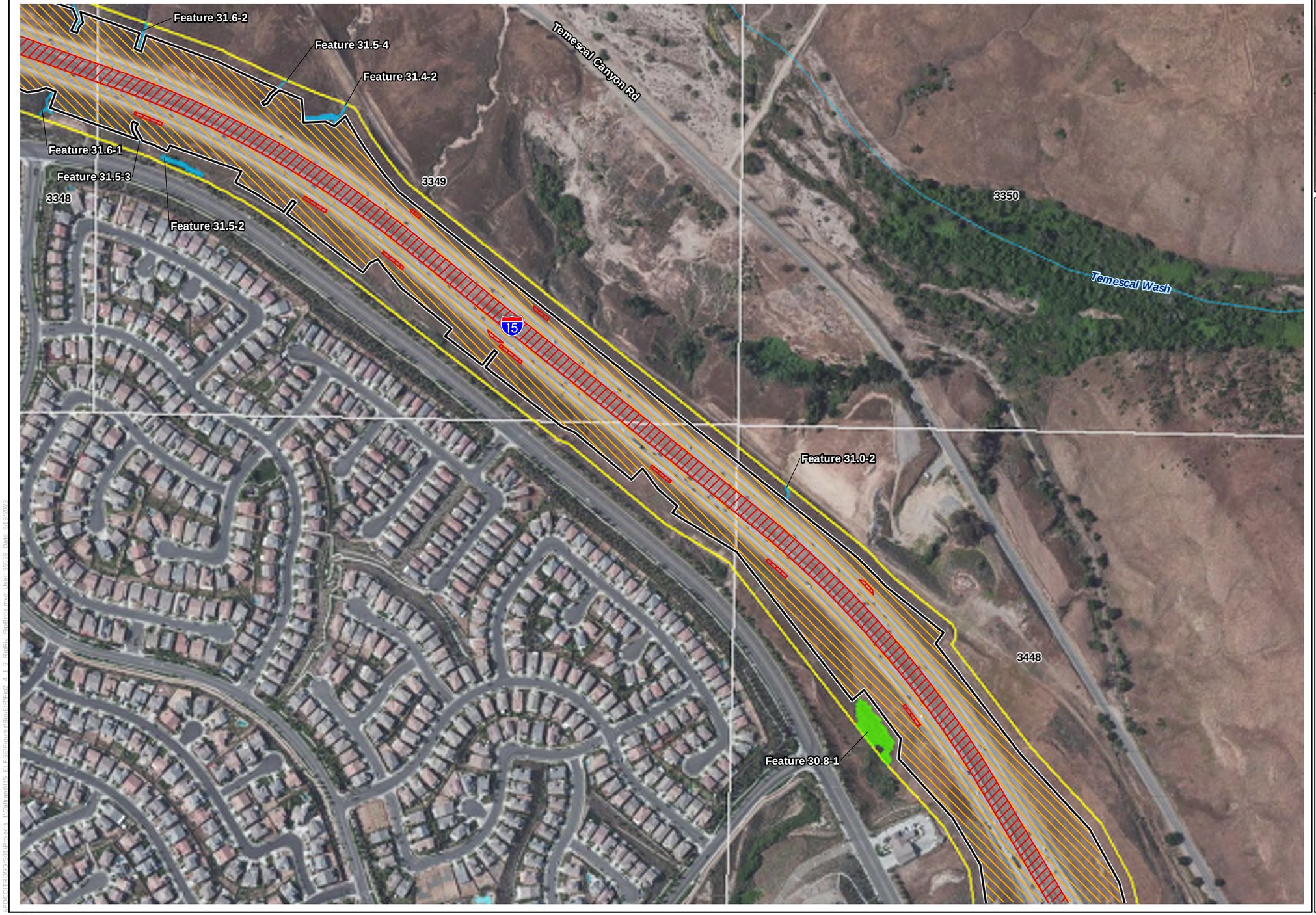

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

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Figure 2.4.1-3 - Sheet 12
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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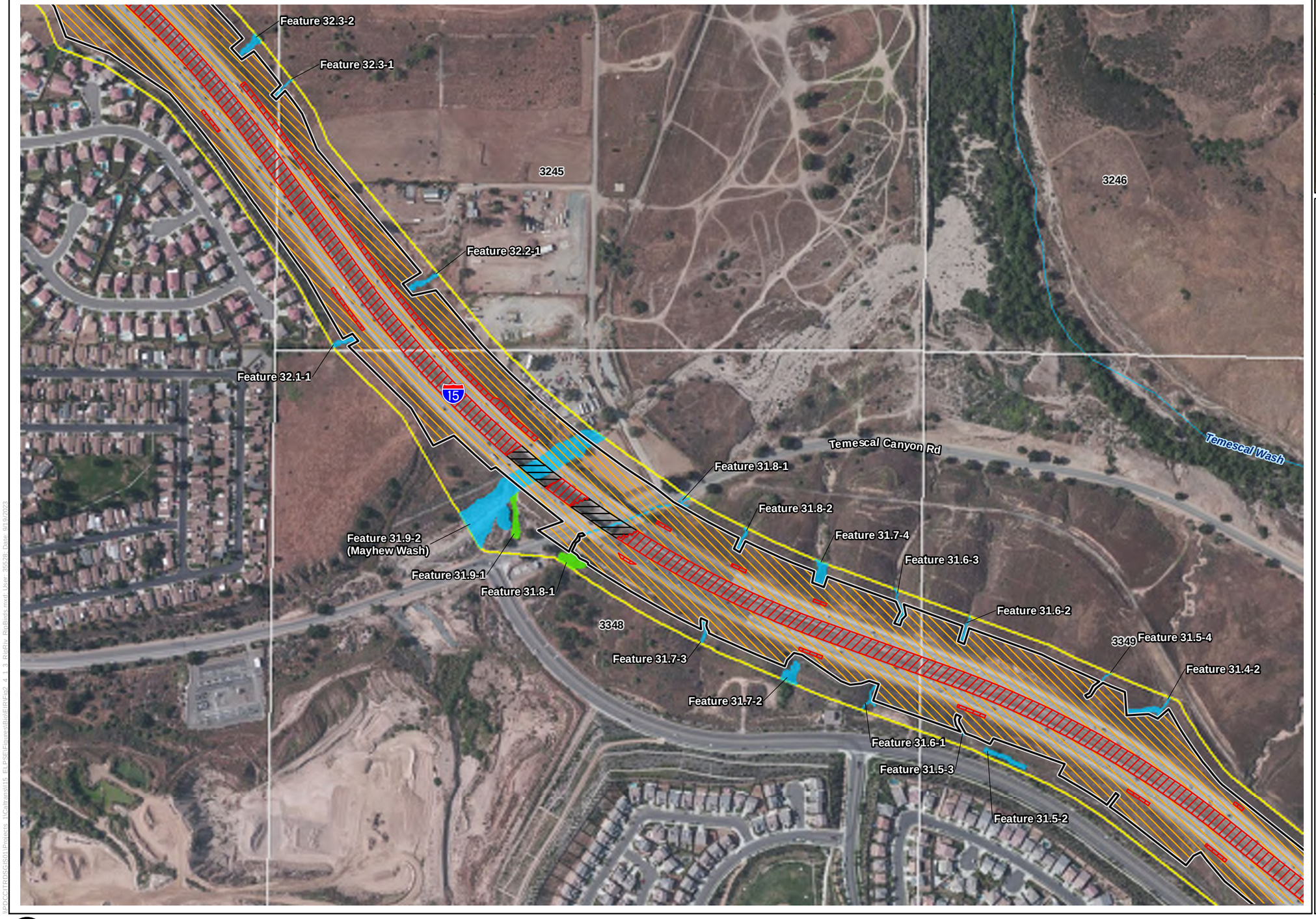

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.1-3 - Sheet 13
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 14
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.1-3 - Sheet 15
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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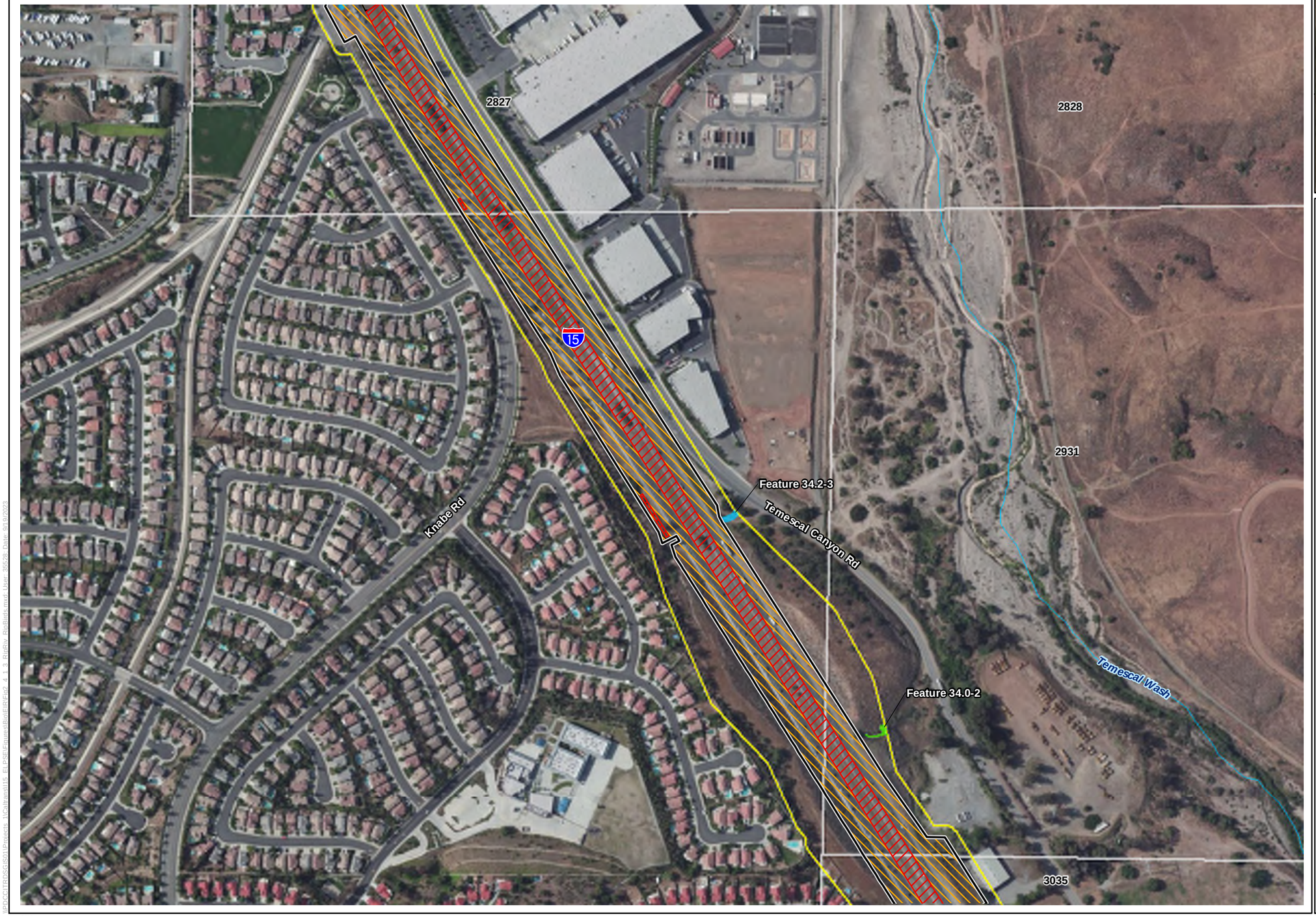

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 16
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 17
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 18
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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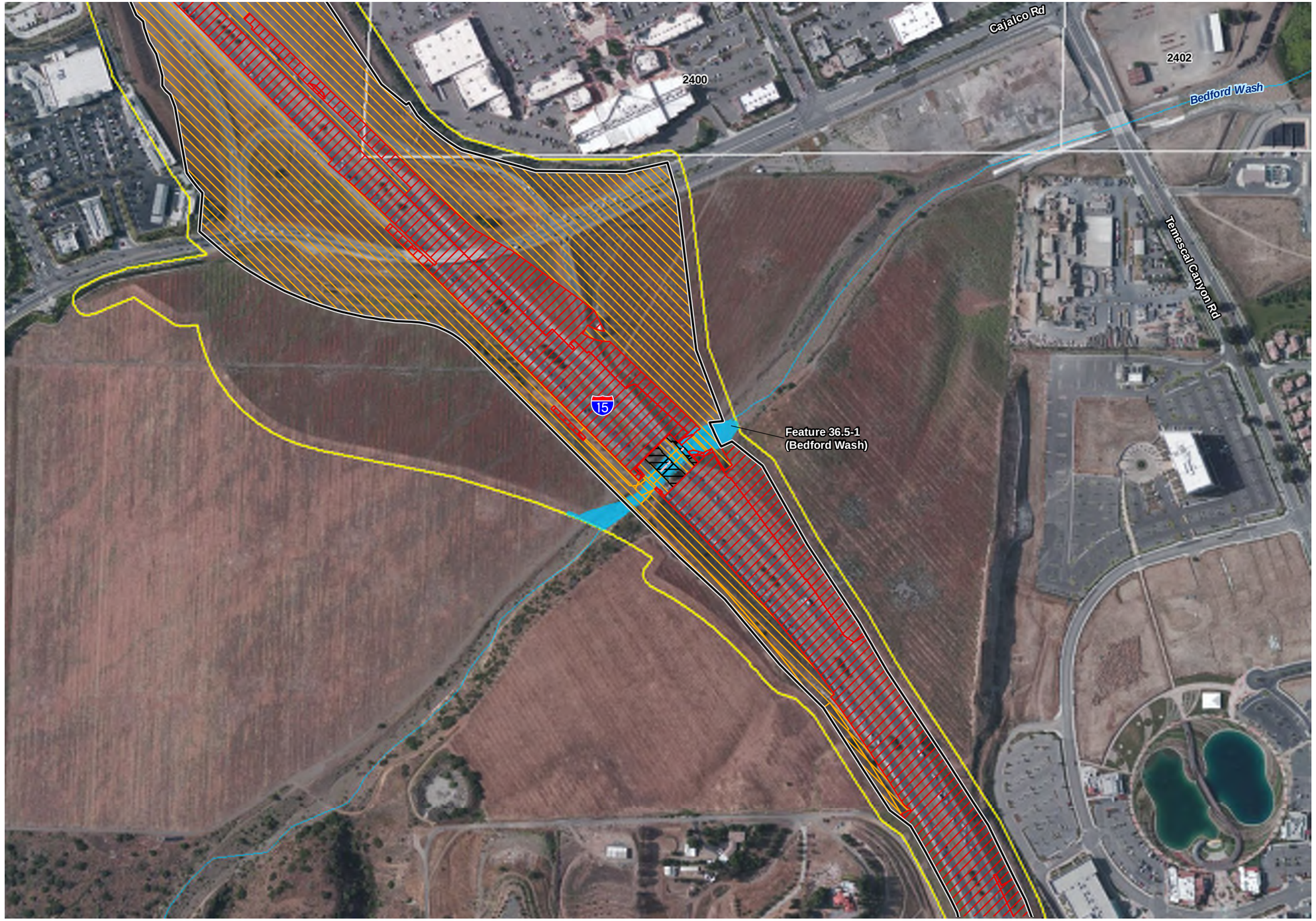

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- CriteriaCells

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 19
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

CriteriaCells

MSHCP Riparian/Riverine Resources

Riparian

Riverine

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.1-3 - Sheet 20
Riparian/Riverine Resources
Interstate 15 Express Lanes Project Southern Extension

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The potential operational impacts on MSHCP riparian/riverine resources from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility. The permanent removal of 0.10 acre, temporary disturbance of 5.59 acres, and shading effects on 1.46 acres of MSHCP riparian/riverine resources could be considered a biologically substantial loss given the rarity of MSHCP riparian/riverine resources. MSHCP riparian/riverine resources have declined appreciably over past decades. As stated previously, this resource provides highly productive habitats for plants and animals and is essential to maintaining water quality functions and values.

The proposed impacts on MSHCP riparian/riverine resources by the Project would require compensatory mitigation. Under the MSHCP, compensation for these losses would be addressed through preparation of a DBESP report that would be approved through the Joint Project Review (JPR) process, whereby the JPR application and supporting documentation will be assessed and concurrence with the Project's consistency with the MSHCP would be provided by RCA, USFWS, and CDFW. As a part of the JPR process, impacts on MSHCP riparian/riverine resources would trigger the need for a DBESP report, which would be prepared to demonstrate that no net loss of MSHCP riparian/riverine resources would occur and that replacement would be equivalent to or better than existing conditions (Mitigation Measure **NC-15 [NES BIO-15]** in Section 2.4.1.4). A compensation ratio of no less than 3:1 for permanent riparian impacts (including shading effects) and 1.25:1 for temporary riparian impacts, along with no less than 2:1 for permanent and temporary impacts on ephemeral drainages, would provide equivalent preservation. The minimum 3:1 ratio addresses the temporal loss of riparian resources that would occur between the impact and completion of the offsite restoration/enhancement program as well as acknowledgment that although it is not quantifiable, the viability of the riparian vegetation directly adjacent to the gap area may be compromised by the permanent shading. All temporary losses would be replaced at their current locations, when feasible (Mitigation Measure **NC-16 [NES BIO-16]** in Section 2.4.1.4). Mitigation Measure **NC-17 (NES BIO-17)** in Section 2.4.1.4 ensures no net loss of MSHCP riparian/riverine resources. Implementation of Mitigation Measures **NC-15 (NES BIO-15)** through **NC-17 (NES BIO-17)** in Section 2.4.1.4 would fully compensate for any impacts on MSHCP riparian/riverine resources. Such compensation should be coordinated with acquisition of a state Streambed Alteration Agreement (California Fish and Game Code Section 1602). Federal CWA Section 401 and 404 permits would also be required for the Project (see Section 2.4.2, *Wetlands and Other Waters*). It would also be necessary to ensure restored riparian habitat in temporarily affected areas along Temescal Wash so this habitat can continue to support wildlife movement and LBV (Mitigation Measure **TE-3 [NES BIO-23]**) (see Section 2.4.5, *Threatened and Endangered Species*).

Vernal Pool Resources

No permanent impacts on vernal pool resources would occur.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no new or additional impacts on MSHCP riparian/riverine and vernal pool resources would occur beyond those that would be expected from operation of the existing facility.

Corridors and Linkages

Build Alternative

Temporary Impacts

Implementation of the Build Alternative would temporarily affect existing wildlife movement corridors, wildlife movement, and wildlife crossings within the BSA and Project region. Vegetation removal that would occur during construction activities at wash bridges could have impacts on riparian-obligate species, such as LBV, if present, but the habitat loss impact would be temporary until revegetation is complete. During construction, wildlife movement through the washes and under I-15 could be interrupted due to noise, lighting, human presence, removal of cover features, and general disturbance within the crossing structures and their immediate vicinity. There is potential for wildlife to avoid moving through areas adjacent to construction and/or to make less safe crossings of the highway that may increase the risk of mortality, especially during nighttime work. This impact would be temporary.

Potential edge impacts on connectivity features during construction would be addressed through Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-4 (NES BIO-4)**, **NC-5 (NES BIO-5)**, **NC-6 (NES BIO-6)**, **NC-7 (NES BIO-7)**, **NC-8 (NES BIO-8)**, **NC-9 (NES BIO-9)**, **NC-11 (NES BIO-11)**, **NC-12 (NES BIO-12)**, **NC-13 (NES BIO-13)**, and **NC-14 (NES BIO-14)** in Section 2.4.1.4, as required by the MSHCP. Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, will reduce potential indirect impacts on wildlife movement during construction. Avoidance and Minimization Measure **NC-18 (NES BIO-20)** in Section 2.4.1.4 will maintain undercrossing functionality at Temescal Wash during construction. Avoidance and Minimization Measure **NC-10 (NES BIO-10**) would replace any natural vegetation communities that are temporarily disturbed during construction activities.

Permanent Impacts

Implementation of the Build Alternative would permanently affect existing wildlife movement corridors, wildlife movement, and wildlife crossings within the BSA and Project region, including increased habitat fragmentation and reduced structural openness of crossings.

Road widening can result in reduced use of an existing wildlife crossing structure if animals have a difficult time seeing daylight from the other side after structure widening or closing of the gap between sections of a closed structure. A reduction in the openness of a structure can restrict animal movement and affect the type and size of animal that would use it. As proposed, the Project would widen the I-15 facility by creating lanes in the existing median; there would be no outside widening of the facility.

Where bridges currently exist, the additional lane would either be supported by bridge expansion between the two existing bridges (northbound and southbound), or the existing bridge would support the additional lanes.

As part of the Project, the dual bridges at the nine wash crossings would be widened to fill in the existing gaps between them, and the gap would support the new lanes. Other smaller, existing culverts and pipes along the alignment that may support animal movement under I-15 are expected to remain unchanged because all widening would occur in the existing median.

Localized, direct, and permanent impacts would occur where infrastructure is added within the floodplain. This would reduce the amount of available live-in habitat by a small amount within each crossing feature. Shading would occur where the gap between dual bridges would be permanently closed; no partial gaps are proposed to remain. However, the shading would be unlikely to deter wildlife movement through the structures considering the overall openness of the bridge crossings. The shading could result in a small amount of permanent habitat loss for the movement of riparian-obligate species because riparian vegetation would likely no longer grow without adequate sunshine.

MSHCP linkages and cores that overlap with the BSA and LOD could be affected by the Project. There are portions of the LOD where permanent impact areas overlap with MSHCP areas described for conservation. Shading and permanent impacts overlap with Proposed Core 1 (at the Lake Street crossing), Proposed Linkage 1 (at Indian Wash), Proposed Constrained Linkage 3 (at Indian Truck Trail), Proposed Constrained Linkage 5 (at Horsethief Canyon Road), and Proposed Constrained Linkage 6 (at Temescal Canyon Road and Temescal Wash).

I-15 is expected to operate similarly after Project completion compared to existing conditions, but with increased traffic efficiency. Development of the median into active traffic lanes may reduce the chance of an animal successfully reaching the other side when crossing the highway, although the number of animals this may directly affect is not known. However, the capacity for wildlife movement across I-15 is already poor, with roadkill frequently observed. Such capacity has also been degraded over past decades by the increasing width of the interstate, traffic flows, and noise. Although the Project would not improve this situation, it is not expected to substantially worsen current operational impacts on wildlife movement or connectivity.

Overall, the Project is not expected to substantially affect wildlife movement or linkage functions and values within the BSA because major wash crossings under I-15 bridges would be retained, including the priority linkages at Bedford Wash and Indian Wash.

To address potential direct impacts from additional bridge infrastructure and closing of bridge gaps on MSHCP Proposed Linkage 1, Proposed Constrained Linkage 3, Proposed Constrained Linkage 5, Proposed Core 1, and Proposed Extension of Existing Core 2, Mitigation Measures **NC-15 (NES BIO-15)**, **NC-16 (NES BIO-16)**, and **NC-17 (NES BIO-17)** in Section 2.4.1.4 would be implemented as required by the

MSHCP and would fully compensate for any impacts on MSHCP riparian/riverine resources, which would also address any loss of connectivity features. The permanently removed riparian and ephemeral streambed habitat would be compensated at a minimum 3:1 ratio for riparian habitat and 2:1 for ephemeral habitat (**NC-16 [NES BIO-16]** in Section 2.4.1.4). The minimum 3:1 ratio was chosen to address temporal loss as well as potential indirect degradation of the riparian habitat adjacent to bridge gaps that would be closed off. The compensation may be a combination of enhancement, restoration, and/or creation as long as there is no net loss of MSHCP riparian/riverine resources (see the *MSHCP Riparian/Riverine and Vernal Pool Resources* subsection above for details). It would also be necessary to restore riparian habitat in temporarily affected areas along Temescal Wash so this habitat can continue to support wildlife movement and LBV with Mitigation Measure **TE-3 [NES BIO-23]** in Section 2.4.5, *Threatened and Endangered Species*.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no new or additional impacts on corridors and linkages would occur beyond those that would be expected from operation of the existing facility.

Local Regulations

Build Alternative

Temporary Impacts

The potential exists for short-term, temporary, indirect effects on protected trees from construction activities including dust, increases in fire risks, introduction of invasive plant species, erosion and sedimentation, introduction of hazardous materials, and introduction of trash on oak trees and trees within the ROW adjacent to the LOD. However, these effects are expected to be greatly reduced with implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-4 (NES BIO-4)**, **NC-5 (NES BIO-5)**, **NC-6 (NES BIO-6)**, **NC-7 (NES BIO-7)**, **NC-8 (NES BIO-8)**, **NC-9 (NES BIO-9)**, **NC-10 (NES BIO-10)**, **NC-11 (NES BIO-11)**, and **NC-12 (NES BIO-12)** (in Section 2.4.1.4), which are required under the MSHCP to reduce the level of indirect effects and eliminate the potential for direct impacts on protected trees adjacent to, but outside of, the LOD.

Permanent Impacts

Tree removal may occur during construction and operations once the Project is constructed. Construction of the Build Alternative would remove protected trees, including the direct removal of up to three oak trees within the temporary impact area of the LOD (see Figure 2.4.3-3 in Section 2.4.3, *Plant Species*). No oak trees were observed within the permanent impact area of the LOD. All three trees occur at the edges of the LOD and not within the median where most of the construction work would occur. The permanent removal of individual oak trees could be considered a biologically substantial loss of protected trees.

Operation of the Project would have potential indirect effects on oak trees, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to ROW maintenance. However, operation of the Project is not expected to differ appreciably from existing conditions. The potential impacts on oak trees from the Build Alternative would not be expected to be more than the impacts under current operational conditions of the I-15 facility.

Under the Build Alternative, all potential direct and indirect impacts on vegetation communities that may contain protected trees would be fully mitigated under the MSHCP with implementation of the measures identified in Section 2.4.1.4 and specifically through compliance with Mitigation Measure **NC-20 (NES BIO-19)**, where the removal of trees, including oaks, may require replacement or purchase of credits in a mitigation bank.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no new or additional impacts on protected trees would occur beyond those that would be expected from operation of the existing facility.

2.4.1.4 Avoidance, Minimization, and/or Mitigation Measures

NC-1 (NES BIO-1). Vegetation Clearing Restrictions. Clearing of natural vegetation (including sage scrub) will be performed outside of the active breeding season for birds, as defined in the MSHCP (March 1 through June 30) (MSHCP Volume I, Section 7.5.3), except for RSS (including disturbed) judged to be potentially suitable habitat for (and/or occupied by) coastal California gnatcatcher and within MSHCP Criteria Areas. For these areas, the habitat removal restriction is extended from June 30 to August 15. In addition, for riparian/riverine vegetation occupied by LBV, vegetation removal cannot occur through September 15. Table 2.4.1-5 summarizes the locations of (1) natural vegetation communities within the LOD that have the March 1 through June 30 restriction, (2) sage scrub with the June 30 and the August 15 clearing restriction, and (3) riparian/riverine vegetation with a clearing restriction through September 15 (refer to Figure 2.4.1-2 for an illustration of these vegetation communities).

Table 2.4.1-5. Natural, Sage Scrub, and Riparian Vegetation Clearing Restrictions

Clearing Restriction	Figure/Sheet(s)	Natural Vegetation with Clearing Restriction
March 1–June 30	Figure 2.4.1-2, Sheets 1–22	Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Tarragon Patches, Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Salt Grass Flats, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub,

Clearing Restriction	Figure/Sheet(s)	Natural Vegetation with Clearing Restriction
		California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry–Toyon–Greenbark Ceanothus Chaparral, Quailbush Scrub, Scrub Oak Chaparral, California Sycamore Woodland
March 1–August 15	Figure 2.4.1-2, Sheets 1–21	Brittlebush Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub where it occurs within criteria cell areas, RCA Conserved Lands, and Public/Quasi-public Conserved Lands
April 1–September 15	Figure 2.4.1-2, Sheets 1, 3–16, and 20	Coast Live Oak Woodland and Forest (Riparian), Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Tamarisk Thickets

Note: Compliance with the Special Terms and Condition 5 (b) of the Biological Opinion Permit TE-088609-0 requires that clearing of occupied gnatcatcher habitat within public/quasi-public lands and the Criteria Areas between March 1 and August 15 is prohibited.

If clearing of vegetation needs to occur during these timeframes, a preconstruction nesting bird survey will need to be performed (refer to Avoidance and Minimization Measure **AS-6 [NES BIO-28]** in Section 2.4.4, *Animal Species*, for the nesting bird survey requirements).

NC-2 (NES BIO-2). Dust Control. Active construction areas will be watered regularly to control dust and thus minimize impacts on adjacent vegetation (MSHCP Volume I, Section 7.5.3).

NC-3 (NES BIO-3). Fire Suppression. When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to RSS (Figure 2.4.1-2), appropriate firefighting equipment (e.g., extinguishers, shovels, water tankers) will be available on the Project site during all phases of Project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires will advise contractors regarding fire risk from all construction-related activities (MSHCP Volume I, Section 7.5.3).

NC-4 (NES BIO-4). Biological Training. A qualified biologist will conduct a training session for Project and construction personnel (MSHCP Volume I, Section 7.5.3) prior to grading. The training will include a description of the species of concern and their habitats, the general provisions of the Endangered Species Acts (FESA and CESA) and the MSHCP, the need to adhere to the provisions of the acts and the MSHCP, the penalties associated with violating the provisions of the acts, the general measures that are being implemented to conserve the species of concern as they relate to the Project, and the access routes to and Project site boundaries within which the Project activities

must be accomplished (MSHCP Volume I, Appendix C). All sensitive areas will be fenced as presented in Avoidance and Minimization Measure **NC-6 (NES BIO-6)**, below.

NC-5 (NES BIO-5). Biological Monitoring. The qualified Project Biologist will monitor construction activities for the duration of the Project to ensure that practicable measures are being employed and avoid incidental disturbance of habitat and species of concern outside the LOD (MSHCP Volume I, Section 7.5.3). Special attention will be provided to ensure that the environmentally sensitive area (ESA) fencing required in Avoidance and Minimization Measure **NC-6 (NES BIO-6)** is maintained daily. Additionally, ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of BMPs. This will be done in concert with Avoidance and Minimization Measure **NC-6 (NES BIO-6)** below, which includes the fencing of sensitive areas.

NC-6 (NES BIO-6). Construction and Project Limits. Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the proposed LOD and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to complete the Project and will be specified in the construction plans. Construction limits adjacent to sensitive resource areas will be demarcated using ESA fencing (e.g., orange snow screen). ESA fencing will be installed where sensitive biological resources have been identified by a qualified biologist. ESA fencing will be reviewed at least weekly by the biological monitor (as indicated in Avoidance and Minimization Measure **NC-5 [NES BIO-5]**) until the completion of all construction activities. Employees will be instructed that their activities are restricted to the construction areas (MSHCP Volume I, Appendix C). Access to sites will be from pre-existing access routes to the greatest extent possible (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C).

NC-7 (NES BIO-7). Exotic Species. Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth (MSHCP Volume I, Section 7.5.3). Exotic wildlife species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible (MSHCP Volume I, Appendix C).

Development adjacent to the MSHCP Conservation Area will not use the plant species listed in Table 6-2 of the MSHCP, Volume I. The applicability of this list will consider the proximity of the planting area to the MSHCP Conservation Areas, species considered in the planting plans, resources to be protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

NC-8 (NES BIO-8). Equipment Cleaning. Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. The cleaning of equipment will occur off site.

NC-9 (NES BIO-9). Minimizing Disturbance. The removal of native vegetation will be avoided and minimized to the maximum extent practicable. Temporary impacts will be returned to pre-existing contours and revegetated with appropriate native species (MSHCP Volume I, Appendix C). Vegetation will be covered while being carried on trucks, and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations.

NC-10 (NES BIO-10). Revegetation. Post-construction, any temporarily disturbed areas remaining as bare ground will be hydro-seeded with a Caltrans-approved seed mix. This measure will comply with Avoidance and Minimization Measure **NC-7 (NES BIO-7)**.

NC-11 (NES BIO-11). Access. The permittee (in this case, Caltrans and Riverside County Transportation Commission) will have the right to access and inspect any sites of approved projects for compliance with Project approval conditions, including BMPs (MSHCP Volume I, Appendix C).

NC-12 (NES BIO-12). Water Pollution and Erosion Control Plans. Plans for water pollution and erosion control will be prepared. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and Caltrans prior to construction (MSHCP Volume I, Sections 6.1.4 and 7.5.3). The following measures will be provided:

- Water pollution and erosion control plans will be developed and implemented in accordance with Regional Water Quality Control Board (RWQCB) requirements (MSHCP Volume I, Appendix C) and will ensure that no fluids or sediment from construction will enter into the ESA fenced areas.

- Measures, including measures required through the National Pollutant Discharge Elimination System requirements, will be required for work in proximity to MSHCP Conservation Areas to ensure that the quantity and quality of runoff discharged into the MSHCP Conservation Area are not altered in an adverse way when compared to existing conditions. In particular, stormwater systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area.

- New surface flows will be treated prior to reaching waterways.

- Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized (MSHCP Volume I, Section 7.5.3).

- No erodible materials will be deposited into watercourses or areas demarcated with ESA fencing. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C).

- Projects that cannot be conducted without placing equipment or personnel in riparian vegetation areas should be timed to avoid the breeding season of riparian/ associated species identified in MSHCP Global Species Objective No. 7 (MSHCP Volume I, Appendix C). The breeding season as defined by the MSHCP is March 1 through June 30.

- If streamflows must be diverted, the diversions will be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment-trapping materials will be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected will be cleaned out in a manner that prevents the sediment from reentering the stream. Care will be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream (MSHCP Volume I, Section 7.5.3, MSHCP Volume I, Appendix C). Short-term diversions will consider effects on wildlife (MSHCP Volume I, Section 7.5.3).

- Equipment storage, fueling, and staging areas will be located on non-sensitive upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). These designated areas will be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate entities including, but not limited to, the applicable jurisdictional city, USFWS, CDFW, and RWQCB, and will be cleaned up immediately and contaminated soils removed to approved disposal areas (MSHCP Volume I, Appendix C).

- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur only in designated areas within the proposed grading limits of the Project site. These designated areas will be clearly marked and located in such a manner as to contain runoff (MSHCP Volume I, Section 7.5.3). This will ensure that there will be no discharge into MSHCP Conservation Areas adjacent to the LOD (MSHCP Volume I, Section 6.1.4).

NC-13 (NES BIO-13). LODs and ESAs. The LODs, including the upstream, downstream, and lateral extents on either side of any stream adjacent to the Project's LOD, will be clearly defined and marked in the field. Biological monitors will review the LODs prior to initiation of construction activities (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). ESA fencing will be installed during construction to ensure avoidance of jurisdictional areas and riparian habitat.

NC-14 (NES BIO-14). MSHCP Covered Species Avoidance. During construction, the placement of equipment within a stream or on adjacent banks or adjacent upland habitats occupied by MSHCP covered species that are outside of the Project's LOD will be avoided (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C).

NC-15 (NES BIO-15) (Mitigation). Determination of Biologically Equivalent or Superior Preservation (DBESP). A DBESP report that provides analysis of direct and indirect impacts, avoidance, minimization, and compensatory mitigation, along with the functions and values of the resources being affected as related to MSHCP covered species, will be prepared and submitted to RCA, USFWS, and CDFW for review. After approval, the DBESP will be implemented.

NC-16 (NES BIO-16) (Mitigation). Riparian/Riverine Compensation. Compensation for permanent impacts on riparian/riverine resources (including permanent shading) will occur as a combination of re-establishment and/or establishment, and potentially a component of rehabilitation, all of which will be at an equivalent or superior value at a ratio that achieves no net loss of riparian/riverine resources and wetlands.[1] Compensation can occur through permittee-responsible mitigation and/or other approved mitigation provider (Mitigation Measure **NC-17 [NES BIO-17]**) having equivalent or superior riparian/riverine resources and located in the vicinity of the Project.

A mitigation ratio of up to 3:1 is proposed for permanent impacts on riparian resources and 2:1 is proposed for permanent impacts on riverine resources, with a ratio of a minimum of 1:1 of the 3:1 (or 2:1 as appropriate) as re-establishment or establishment. These ratios will ensure no net loss of these habitats. Mitigation for all riparian/riverine resources will be biologically superior or equivalent to resources that are to be lost on site.

The temporary impacts on riparian/riverine resources may be replaced through restoration of the temporarily affected area to pre-Project conditions, at a ratio of 1.25:1 and through permittee-responsible mitigation or other approved mitigation program. All temporary losses would be replaced in kind at their current locations following preparation of both a Restoration Plan and a Habitat Mitigation and Monitoring Plan (HMMP) that would be reviewed and approved by the RCA and wildlife agencies prior to Project implementation.

During establishment/re-establishment of riparian/riverine resources, no plant species listed in Table 6-2 of MSHCP Volume I will be planted within or adjacent to these resources. Details of the compensation for riparian/riverine resources will be provided in the DBESP (Avoidance and Minimization Measure **NC-13 [NES BIO-13]**).

Once the mitigation location has been identified, a functions and values assessment will be performed to evaluate the equivalency of the resources to ensure that the requirement of biologically equivalent or superior preservation is met. The equivalency analysis will include addressing how mitigation will replace permanently lost functions and values, potential lost connectivity to downstream MSHCP resources, temporal

[1] Mitigation ratios may differ based on the location of riparian/riverine resources within the LOD. For example, riparian habitat within Temescal Wash may be mitigated at a higher ratio due to the quality of functions and values for wildlife movement, “live-in” habitat for sensitive species (i.e., LBV), and water quality functions.

losses, and onsite restoration. The equivalency analysis will be reviewed and approved by RCA and the wildlife agencies prior to construction.

In addition, refer to Mitigation Measure **TE-3 (NES BIO-23)** below for more details on LBV compensatory mitigation.

NC-17 (NES BIO-17). Aquatic Resource Compensatory Mitigation. Mitigation for permanent impacts, including permanent shading, on aquatic resources (i.e., U.S. Army Corps of Engineers [USACE]/Regional Water Quality Control Board [RWQCB] wetland and non-wetland Waters of the U.S./State, and CDFW streambed and associated riparian habitat[2]) will occur through permittee-responsible mitigation, purchase of mitigation bank credits through an agency-approved mitigation bank, in-lieu fee program, or other approved mitigation provider. A 3:1 mitigation ratio is proposed for USACE/RWQCB jurisdictional wetlands and CDFW riparian vegetation. A ratio of 2:1 for permanent impacts and permanent shading impacts on USACE/RWQCB jurisdictional non-wetlands and CDFW unvegetated streambeds is proposed.

The temporary impacts on USACE/RWQCB wetlands and non-wetlands, CDFW unvegetated streambed, and associated CDFW riparian habitat may be replaced through restoration of the temporarily affected area to pre-Project conditions, at a ratio of 1.25:1 and through permittee-responsible mitigation or another approved mitigation program. All temporary losses would be replaced, where feasible, at their current locations following preparation of an HMMP.

NC-18 (NES BIO-20). Wildlife Undercrossings. In portions of the MSHCP Conservation Area that are assembled to provide for wildlife movement or where there is known wildlife movement, the permittee is required to maintain functionality of wildlife crossings to comply with Section 7.5.3 of the MSHCP. The following crossings were identified as described in the MSHCP to be included in the MSHCP Conservation Area to provide wildlife movement and where direct impacts from the Project are anticipated:

- Indian Truck Trail (PM 30.41): MSHCP Proposed Constrained Linkage 3
- Indian Wash, Jurisdictional Feature 30.0-1 (PM 30.09): MSHCP Proposed Linkage 1
- Horsethief Canyon Wash, Jurisdictional Feature 29.1-1 (PM 29.13): MSHCP Proposed Constrained Linkage 5
- Horsethief Canyon Road (PM 28.88): MSHCP Proposed Constrained Linkage 5
- Temescal Wash (south crossing), Jurisdictional Feature 28.1-1 (PM 28.04): Proposed Constrained Linkage 6

[2] MSHCP riparian/riverine resources have the same limits as CDFW features, with the exception that riparian/riverine resources also include adjacent buffer/upland areas that would not be considered CDFW jurisdiction.

- Lake Street (PM 26.69): Proposed Core 1 (linking north and south I-15)
- Gavilan Wash or Alberhill Creek, Jurisdictional Feature 25.5-1 (PM 25.54): Proposed Core 1 (linking east and west of I-15)
- Jurisdictional Features 25.3-3/25.3-4 (PM 25.38); Proposed Core 1 (linking east and west of I-15)
- Jurisdictional Features 25.3-1/25.3-2 (PM 25.32): Proposed Core 1 (linking east and west of I-15)

To maintain functionality at these wildlife crossings, the following will apply:

Prior to construction, a Wildlife Crossing Plan to address potential modifications in wildlife movement at the above-identified wildlife crossings during construction will be prepared by a qualified biologist. The Wildlife Crossing Plan will be based on the information provided in the MSHCP Consistency Analysis (consistent with Section 6.6.2 (E [2]) of the MSHCP). The plan will evaluate and provide requirements that may be considered, such as:

- Construction work windows (seasonal and daily) (consistent with **NC-1 (NES BIO-1)**, Vegetation Clearing Restrictions)
- Construction fencing requirements to provide movement through the wildlife crossing outside of work areas (generally single-span underpasses will maintain one large, open passage area and bridges with multiple spans will have multiple open passage areas during construction)
- Size of the opening(s):
    - A minimum width of 10 feet of crossing opening will be maintained at all times at Indian Truck Trail and Horsethief Canyon Wash, and Horsethief Canyon Road.
- Restricted work areas (consistent with **NC-6 (NES BIO-6**, Construction and Project Limits, and **NC-9 (NES BIO-9**, Minimizing Disturbance)
- Noise and light requirements (consistent with **AS-1 (NES BIO-18),** Lighting and Signage, **AES-4,** Lighting and Signage**, TE-2 (NES BIO-21),** Temescal Wash – Nesting Season Noise Requirements, **WET-1 (NES BIO-22),** Temescal Wash – Biological Monitoring, and **Caltrans Standard Specification Section: 14-8.02 Noise Control**)
    - A qualified biologist will confirm that night lighting is not entering the MSHCP Conservation Areas
- Noise abatement during construction, maintaining noise levels within the crossing area below 100 dBA during sensitive crossing periods and/or in sensitive crossing areas, at the discretion of the qualified biologist

- Treatment of edge effects (toxics, runoff, [consistent with **NC-12 (NES BIO-12)**, Water Pollution and Erosion Plans], invasive species avoidance [consistent with **NC-7 (NES BIO-7)**, Exotic Species, and **NC-8 (NES BIO-8)**, Equipment Cleaning], night lighting [consistent with **AS-1 (NES BIO-18)**, Night Lighting Management])

- If it is determined that the natural dry ledges are insufficient during periods of inundation for wildlife movement, then this will be re-evaluated and artificial ledges may be required

The biological monitor (**NC-5 [NES BIO-5]** Biological Monitoring) will ensure that the requirements in the Wildlife Crossing Plan are implemented during construction.

Wherever temporary disturbances occur to riparian/riverine areas, onsite restoration is proposed per **(NC-16 [NES BIO-16]** Riparian/Riverine Compensation and **NC-17 [NES BIO-17]** Aquatic Resource Compensatory Mitigation). Temporary impacts are anticipated at all of the above aquatic crossings. A qualified biologist will review the Habitat Mitigation and Monitoring Plan (HMMP) required to be prepared (**NC-16 [NES BIO-16]** and **NC-17 [NES BIO-17]**) for the above-identified wildlife crossings in drainages and will assist in designing revegetation efforts relative to existing conditions, with designs such as using tree and shrubs around crossing entrances, compliant with jurisdiction design requirements, to support the wildlife in the crossing by efforts that may be considered, such as:

- Installing vegetation to guide wildlife to the crossings

- Providing protection for small mammals and cover for predatory species, such as mountain lion or bobcat, leading up to crossings

- Ensuring revegetation mimics the surrounding natural wildlife crossing area using native species

- Providing vegetation buffers to reduce noise effects on wildlife approaching the crossing

- No artificial lighting will be added to wildlife crossing structures.

- Treatment and management of edge effects such as lighting (consistent with **AS-1 (NES BIO-18)**, Night Lighting Management), runoff, toxics (consistent with **NC-12 (NES BIO-12)**, Water Pollution and Erosion Plans, **WQ-2**, Prepare a Storm Water Pollution Prevention Plan, **WQ-3**, Water Quality Monitoring During Construction, **WQ-6**, Treatment Prevention BMPs and **WQ-7**, Design Pollution Prevention BMPs and **WQ-8**, Maintenance BMPs), and invasive species (consistent with **NC-7 (NES BIO-7)**, Exotic Species, and **NC-8 (NES BIO-8)**, Equipment Cleaning), as described in the Avoidance and Minimization Measures, will apply to wildlife crossings.

Shading is anticipated to be increased at several of the wildlife crossings through the widening of the dual bridges to fill the existing gaps between the bridges to support the

new lanes of road. Modifying the length of the crossing by increasing the length decreases the openness ratio. During bridge modifications, the openness ratio of any of the above-identified modified wildlife crossings will not be reduced to less than 0.6 for crossings intended for mule deer.

Wildlife fencing, if determined to be required by the qualified biologist preparing the Wildlife Crossing Plan, would be designed to encourage animals to use the crossing and prevent access to the road. Wildlife jump outs (to allow wildlife to exit the road if wildlife becomes trapped in the roadway) may be preferrable to one-way access gates for wildlife due to maintenance issues. If fencing is to be installed, it would require a fine mesh at the bottom to direct small animals into the crossing and prevent wildlife from entering I-15.

NC-19 (NES BIO-24). Waste Management. To avoid attracting predators of special-status species, the Project site will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site(s) (MSHCP Volume I, Appendix C). Waste, dirt, rubble, or trash will not be deposited in the Conservation Area or on native habitat (MSHCP Volume I, Section 7.5.3).

NC-20 (NES BIO-19). Oak Tree Management. Compliance with the Riverside County Oak Tree Management Guidelines will be required. An accurate depiction of all oak trees that are 2 inches diameter at breast height or larger within the Project site will be identified by a biologist and mapped. Impacts on all oak trees will be identified and quantified. If impacts on oak trees and their protected zones cannot be avoided, then a design that least impacts oak trees will be prepared. If oak trees are to be lost, the loss of oak trees will require mitigation, and an oak tree mitigation plan will be required to be prepared. At a minimum, the plan will include mitigation methods and options, requirements for replacement trees, and locations of mitigation sites.

2.4.2 Wetlands and Other Waters

2.4.2.1 Regulatory Setting

Wetlands and other waters are protected under several laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S. (WoUS), including wetlands. WoUS include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark (OHWM), in the absence of adjacent wetlands. When adjacent wetlands are present, CWA jurisdiction may extend beyond the OHWM to the limits of the adjacent wetlands. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the U.S. Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE and allow the discharge of dredged or fill material into the aquatic system (WoUS) only if there were no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a "least environmentally damaging practicable alternative" (LEDPA) to the proposed discharge that would have lesser effects on WoUS, and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies regarding wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or the Department, as assigned, cannot undertake, or aid with new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to WoUS. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) also has a policy regarding riparian-riverine resources (RCIP 2003).

2.4.2.2 Affected Environment

The information presented in this report is based on surveys and impact analyses performed for the following reports:

- *I-15 Express Lanes Project South Extension (I-15 ELPSE) Natural Environment Study* (NES; Caltrans 2023)
- *Determination of Biologically Equivalent or Superior Preservation Report I-15 Express Lanes Project South Extension (I-15 ELPSE)* (DBESP; Caltrans 2024)
- *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Jurisdictional Delineation Report* (JD; Caltrans 2021).

The JD is included in Appendix I of the NES (Caltrans 2023). These references in these technical reports are not carried over into this EIR/EA section.

The entire biological study area (BSA) (i.e., Project limits of disturbance [LOD] plus a 500-foot buffer) was assessed for the potential presence of sensitive biological and natural resources. The study area for jurisdictional resources (i.e., waters and wetlands) included a 50-foot buffer from the edge of the LOD; this defined the jurisdictional study area (JSA) (see Section 2.4.1, *Natural Communities*, and Figure 2.4.1-1 for details).

Aquatic resources identified and mapped within the JSA consist of USACE/SWRCB wetland and non-wetland WoUS pursuant to CWA Sections 404 and 401; SWRCB wetland and non-wetland waters of the State (WoS) pursuant to the Porter-Cologne Water Quality Control Act; and CDFW lakes, streambeds, and associated riparian vegetation pursuant to Section 1600 et seq. of the California Fish and Game Code.

The delineation followed the most current and applicable procedures and guidance available at the time of delineation, including the Navigable Waters Protection Rule and State Wetland Definitions and Procedures. However, on June 9, 2021, the U.S. EPA and the Department of the Army announced their intent to revise the Navigable Waters Protection Rule's definition of "waters of the United States." That rulemaking process is anticipated to take approximately 2 years. In the meantime, pursuant to an August 30, 2021, U.S. District Court for the District of Arizona order vacating and remanding the Navigable Waters Protection Rule (*Pascua Yaqui Tribe* v. *U.S. Environmental Protection Agency*), the U.S. EPA and USACE have halted implementation of the Navigable Waters Protection Rule that became effective on June 22, 2020, and are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice. On December 7, 2021, the U.S. EPA and USACE published a revised definition of WoUS, which was similar to the pre-2015 WoUS definition but updated to reflect consideration of U.S. Supreme Court decisions. Following the public comment period that ended February 7, 2022, the new revised definition of WoUS was published on January 18, 2023, and became effective March 20, 2023. On May 25, 2023, a decision in *Sackett* v. *Environmental Protection Agency* was released by the U.S. Supreme Court. The Court unanimously held that wetlands that do not have a continuous surface connection with a navigable water are not federally jurisdictional. On August 29, 2023, the U.S. EPA and USACE issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule, published in the *Federal Register* on January 18, 2023. This final rule conforms the definition of "waters of the United States" to the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett* v. *Environmental Protection Agency*. The NES and JD have not been revised to address these updates.

The BSA is composed of developed areas, grasslands, and scrub habitats. Temescal Wash drains from Lake Elsinore to the Santa Ana River and runs along and through the BSA. Some wetland, riparian vegetation, and woodland habitats are present along Temescal Wash and other intermittent and ephemeral tributaries (see Section 2.4.1, *Natural Communities*, for details and Figure 2.4.1-1 for aerial imagery within the BSA and the LOD).

Riverside County has a Mediterranean climate, characterized by warm, dry summers and cool, moist winters. Average annual precipitation for the Elsinore Climate Analysis for Wetlands station between 1990 and 2019 was 11.1 inches, with most of the annual rainfall occurring between November and April. Within the BSA, loamy and sandy soils of various textures make up most of the mapped soil types (more than 82 percent of the BSA). These soils include Altamont Clay, Arbuckle, Cajalco, Clay Pits, Cortina (hydric in Riverwash and Garretson components), Escondido, Garretson, Gorgonio (hydric in Riverwash component), Hanford (hydric in Riverwash component), Honcut (hydric in Riverwash component), Modjeska, Perkins, Placentia (hydric in unnamed ponded component), Porterville Clay, Ramona, Lodo, San Emigdio, Soboba, Soper, Temescal, Tujunga, Vallecitos, Yokohl (hydric in unnamed component), Waukena, Yorba, and Ysidora. Other mapped units include terrace escarpments (10 percent of the BSA); rough broken land (1 percent of the BSA); and riverwash (hydric), badland, and gullied land (less than 1 percent of the BSA each). Soils within the BSA are highly disturbed and do not match mapped soil types. Several of the soil types identified on the soil map within the BSA have hydric components.

The BSA occurs within the Bedford Wash-Temescal Wash (Hydrologic Unit Code [HUC] 180702030604), Dawson Canyon-Temescal Wash (HUC 180702030602), Arroyo del Toro-Temescal Wash (HUC 180702030601), and Lake Elsinore (HUC 180702020308) subwatersheds of the Santa Ana River Watershed (HUC 18070105) (USGS 2021). The Santa Ana River Watershed drains a 2,650-square-mile area (USGS 2021). Drainages within the BSA receive flows from the Santa Ana Mountains west of the BSA and the Gavilan Hills east of the BSA. Temescal Wash, which connects Lake Elsinore in the south to the Santa Ana River north of the BSA, is the main drainage within the BSA, and most of the aquatic features in the BSA are eventually tributary to Temescal Wash. Within the BSA, Temescal Wash is an intermittent and perennial earthen drainage that supports riparian habitat throughout much of its length. Between the BSA and the Santa Ana River, Temescal Wash contains portions with earthen substrate that support areas with riparian habitat, as well as portions that have been concrete-lined/channelized. All hydrological features within the BSA have been modified to some extent to support development of I-15 and surrounding residential, agricultural, and commercial land uses.

Jurisdictional Delineation Methodology

Literature and materials were reviewed both prior to conducting delineation fieldwork and in the process of determining jurisdictional status of features identified in the field. The entire JSA was walked and visually examined for the presence of drainage features. (If possible, potential drainage features within the JSA that were not accessible were viewed in the field using binoculars.) Features were reviewed and mapped using aerial photography. Feature names were determined based on the feature location in reference to I-15 post mile (PM) values. Where a feature was named on topographic mapping, the mapped name of the feature was also included. Field surveys were conducted in August and December 2020 and February 2021.

Features within the JSA were assessed to identify potential presence of USACE WoUS, including wetlands, according to the methods outlined in the *Corps of Engineers Wetland Delineation Manual*, the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0), and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Environmental Laboratory 1987; USACE 2008a, 2008b). In addition, vegetation types (i.e., typically upland or hydrophytic/riparian species), hydrology indicators, and historic aerial photographs within aquatic features were studied in support of establishing the hydrologic regime of potential aquatic features within the JSA. Aquatic features were considered ephemeral if they did not support evidence of surface flows for at least 2 weeks (e.g., inundation on aerial photographs more than 2 weeks after a substantial precipitation event, hydrophytic vegetation, cracked soils, algae, coarse substrates). Features that supported evidence of surface flows for at least 2 weeks were identified as intermittent or perennial.

When linear potential WoUS were encountered, the length of the drainage feature was walked and the outer jurisdictional limits within the JSA were recorded on 1:2,400-scale 0.3-meter resolution 2020 aerial maps, where visible on the aerial photography, or widths were recorded (in feet) with an ESRI Collector for ArcGIS application on iOS and Android phones connected to a global positioning system recorder with submeter accuracy. The OHWM was measured at locations where transitions were apparent. Other data recorded included bank-to-bank width, bank height and morphology, substrate type, flow regime, and all vegetation within and adjacent to the feature.

Features potentially subject to CDFW jurisdiction were mapped from top of bank to top of bank or to the extent of riparian vegetation, whichever was greater. Constructed ephemeral features that were positioned in the freeway median, gore areas, interchange areas, or other areas where features were clearly constructed in uplands to convey roadway runoff and that did not exhibit more than minimal (if any) functions and values for wildlife resources (i.e., riparian habitat or aquatic characteristics) were not considered jurisdictional.

Upon completion of fieldwork, all data collected in the field were incorporated into a geographic information system (GIS) along with topography, National Hydrography Dataset features, and aerial photographs. The GIS data was then used to quantify the extent of potential jurisdictional features within the JSA.

Agency Coordination

A pre-application meeting related to the DBESP for the MSHCP riparian/riverine requirements was held on April 12, 2023, between the permittee, the Regional Conservation Authority (RCA), USACE, State Water Quality Control Board, CDFW, and U.S. Fish and Wildlife Service (USFWS) regarding the I-15 Corridor Operations Project (COP), which was within the LOD of the Project and had a much smaller impact. On January 18, 2024, a pre-application meeting was held with the same agencies for this Project.

Jurisdictional Delineation Results

Jurisdictional resources observed within the JSA include a total of 146 features with an identifiable OHWM or discernible bed-and-bank, or both. Features that did not exhibit an OHWM or discernible bed-and-bank or were constructed in uplands (with inadequate functions and values to benefit fish and wildlife resources) were not mapped and are not included in this analysis. Findings are subject to verification by USACE, RWQCB, and CDFW during final design.

Constructed in Uplands

Fifty-two features exhibited OHWM but were best characterized as ephemeral ditches constructed in uplands, which are generally not regulated by USACE. These features are considered not to be subject to CDFW jurisdiction because they were constructed in uplands, are not natural or modified natural drainages (based on historical aerials and U.S. Geological Survey topographic maps), and do not have adequate functions and values to benefit fish and wildlife resources (i.e., features are unvegetated, constructed in upland, concrete-lined, collect and convey only sheet flow or exhibit no evidence of surface flow, or discharge directly to an underground storm drain system). These 52 non-jurisdictional features are not included for further analysis.

U.S Army Corp of Engineers Jurisdiction

Isolated Features

Three features within the JSA—two non-wetland (Feature 27.9-1 and 28.2-1) and one wetland (30.8-1)—exhibited an OHWM but were determined to be isolated from downstream features. Isolated features are not subject to USACE.

Waters of the U.S.

Ninety features within the JSA were determined to be potentially subject to USACE jurisdiction pursuant to Section 404 of the CWA based on the presence of an OHWM, location within a historical flowline or 100-year floodplain, and downstream connection to a traditional navigable water (Santa Ana River via Temescal Wash). Both wetland and nonwetland WoUS occur within the JSA. A total of 9.991 acres of potential WoUS are within the JSA WoUS—6.757 acres are non-wetland waters and 3.234 acres are wetland waters (Table 2.4.2-1).

Table 2.4.2-1. U.S. Army Corps of Engineers Wetlands and Non-Wetland Waters of the U.S. and California Department of Fish and Wildlife Streambeds, and Associated Riparian Vegetation in the Biological Study Area

Jurisdictional Agency	Jurisdictional Type	Total Acreage
USACE/RWQCB[1]	Non-Wetland WoUS/WoS	6.757
	Wetland WoUS/WoS	3.234
	Total	9.991
	Constructed in Uplands (Potential Non-Jurisdictional)	0.652
Porter-Cologne Wetland	Wetland (Isolated)	0.206
	Riparian (Isolated)	0.168
	Total	0.374
CDFW	Unvegetated Streambed	11.73
	Associated Riparian	14.693
	Total	26.423
	Constructed in Uplands (Potential Non-Jurisdictional)	2.275

[1] Aquatic resources within the JSA were delineated according to the 1987 *Corps of Engineers Wetland Delineation Manua*l; *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*; and *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (Environmental Laboratory 1987; USACE 2008a, 2008b). The extent of jurisdiction was not refined based on the definition established by the August 29, 2023, definition of "waters of the United States." Acreages represented are conservative and may be reduced in the future based on the regulations in place when the Project is finalized and goes to permitting.

Non-Wetland Waters of the U.S.

Eighty-three of the features identified as subject to USACE jurisdiction support areas of potentially jurisdictional non-wetland WoUS. Features that support non-wetland WoUS are OHWM (ephemeral), OHWM (intermittent), and OHWM (perennial).

Wetland Waters of the U.S.

Ten of the features identified within the JSA contain wetlands as defined by USACE guidelines, including multiple sections of Temescal Wash (Features 24.3-2, 25.2-1, 25.8-1, and 28.1-1) as well as Features 26.4-1, 30.3-1, 31.5-2, 33.8-3, 35.7-1, and 37.2-1 (Figure 2.4.2-1).

Regional Water Quality Control Board Jurisdiction

The RWQCB regulates areas that meet the USACE definition of non-wetland and wetland features pursuant to Section 401 of the CWA. The total acreage of all non-wetland and wetland features previously discussed as subject to USACE regulation pursuant to Section 404 of the CWA are also subject to RWQCB regulation pursuant to Section 401 of the CWA. As shown in Table 2.4.2-1, 6.757 acres of non-wetland areas and 3.234 acres of wetland areas potentially subject to RWQCB jurisdiction pursuant to CWA Section 401 were identified within the JSA.

In addition to Section 401 wetlands, pursuant to Porter-Cologne, the RWQCB also regulates isolated wetlands and riparian habitat. One isolated wetland area (Feature 30.8-1) and one isolated area with riparian habitat (Feature 27.9-1) were mapped within the JSA. As shown in Table 2.4.2-1, the total area of potential isolated wetlands and riparian habitat subject to potential RWQCB jurisdiction pursuant to Porter-Cologne is 0.206 acre.

California Department of Fish and Wildlife Jurisdiction

Features within the JSA were considered subject to CDFW jurisdiction if they exhibited a bed and bank, provided substantial habitat value for terrestrial or aquatic wildlife, and occurred within or were constructed within a naturally occurring drainage feature.

Potential Jurisdictional Streambeds

Seventy-five features exhibiting streambeds that are either unvegetated or support upland vegetation that are potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code were mapped within the JSA. As shown in Table 2.4.2-1, potential CDFW-jurisdictional streambeds within the JSA total 11.730 acres.

Potential Jurisdictional Riparian Habitat

Typical riparian vegetation communities mapped within the BSA include Fremont Cottonwood (*Populus fremontii*) Forest and Woodland, Goodding's Willow (*Salix gooddingii*)-Red Willow (*Salix laevigata*) Riparian Woodland and Forest, Hardstem and California Bullrush (*Schoenoplectus acutus californicus*) Marshes, and Mulefat (*Baccharis salicifolia*) Thickets. Riparian bird habitat for the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*; LBV) and southwestern willow flycatcher (*Empidonax traillii extimus*; SWFL) is present within many of the riparian areas of the BSA. (Suitable habitat for each species is mapped in Figure 2.4.1-3.) No SWFL were observed during protocol surveys in the riparian bird study area. LBV were present, and the Project was redesigned to avoid all occupied LBV habitat. (Observations of LBV are mapped in Figure 2.4.1-3.)

Riparian communities were identified within Temescal Wash, as well as in 14 unnamed channels, basins, or depressional areas throughout the Project site. In total, 19 features identified within the JSA supported riparian habitat either within or extending beyond the mapped bed-and-bank and are potentially subject to CDFW jurisdiction under Section 1600 et seq. of the California Fish and Game Code. While most riparian vegetation was confined to areas within the banks of the drainage, the canopy of trees and other plants typically supported by intermittent or perennial water extended beyond the banks in some instances. CDFW jurisdiction was mapped to the furthest extent of the riparian canopy.

As shown in Table 2.4.2-1, 14.693 acres of potential CDFW-jurisdictional riparian areas were mapped within the JSA.

Legend

- Map Sheet Project Limits
- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Agency/Jurisdiction	Hydrology	Permanent Impact (acres)	Temporary Impacts (acres)	Shading Impacts (acres)
CWA Section 404/401 Non-Wetland	Ephemeral, Intermittent, and Perennial	0.02	2.02	0.47
CWA Section 404/401 Wetland	Wetland	--	0.03	--
Grand Total CWA Section 404/401 Non-Wetland and Wetlands	**--**	**0.02**	**2.05**	**0.47**
Porter-Cologne Wetland	Wetland (Isolated)	--	--	--
Potential Non-Jurisdictional Non-Wetland	Constructed in Uplands	0.01	0.19	--
Grand Total Porter-Cologne Non-Wetland and Wetlands	**--**	**0.01**	**0.19**	**--**

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1:100,000

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Figure 2.4.2-1 - Map Index
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-1 - Sheet 1
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-1 - Sheet 2
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-1 - Sheet 3
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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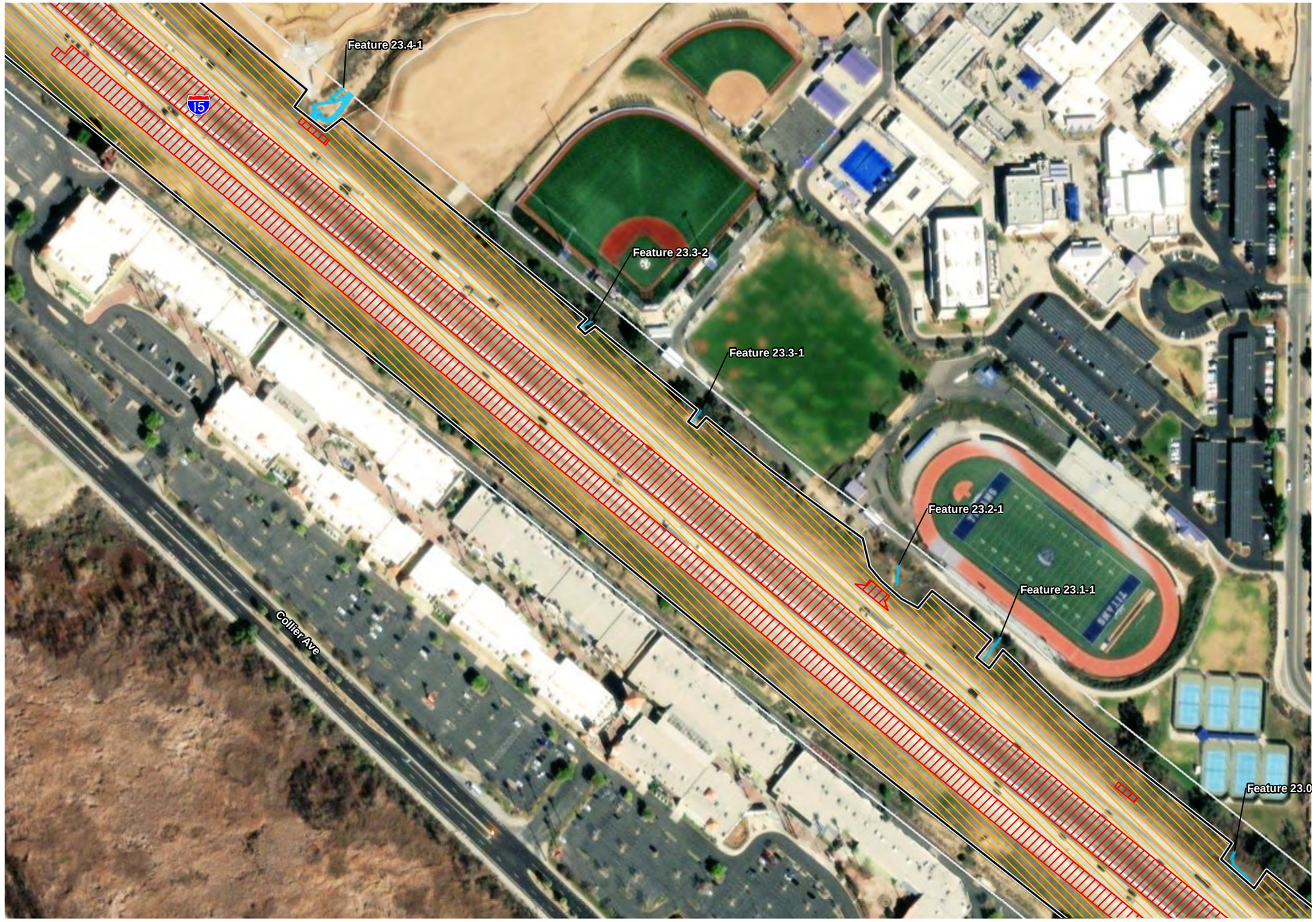

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.2-1 - Sheet 4
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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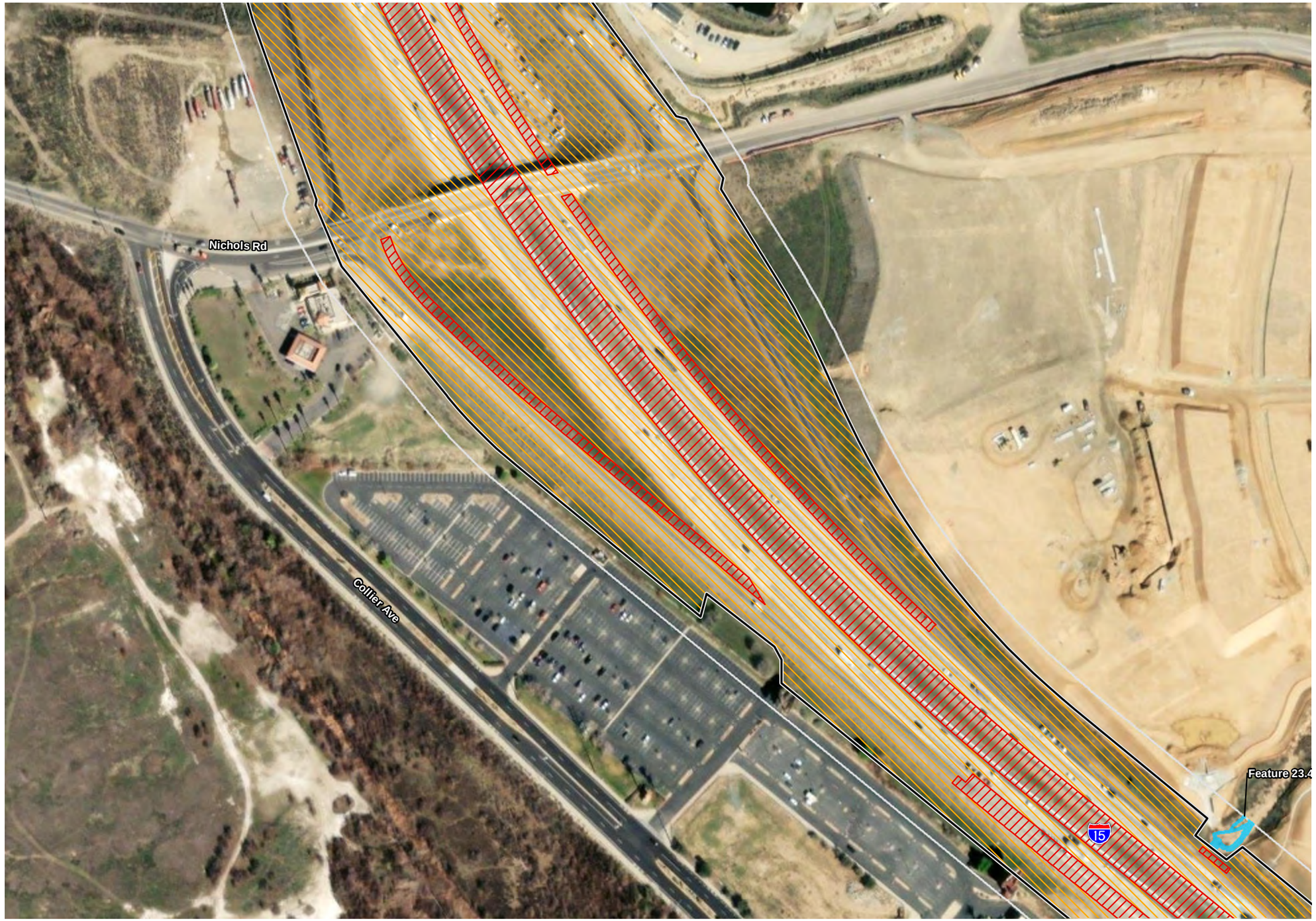

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

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1:2,400

Figure 2.4.2-1 - Sheet 5
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 6
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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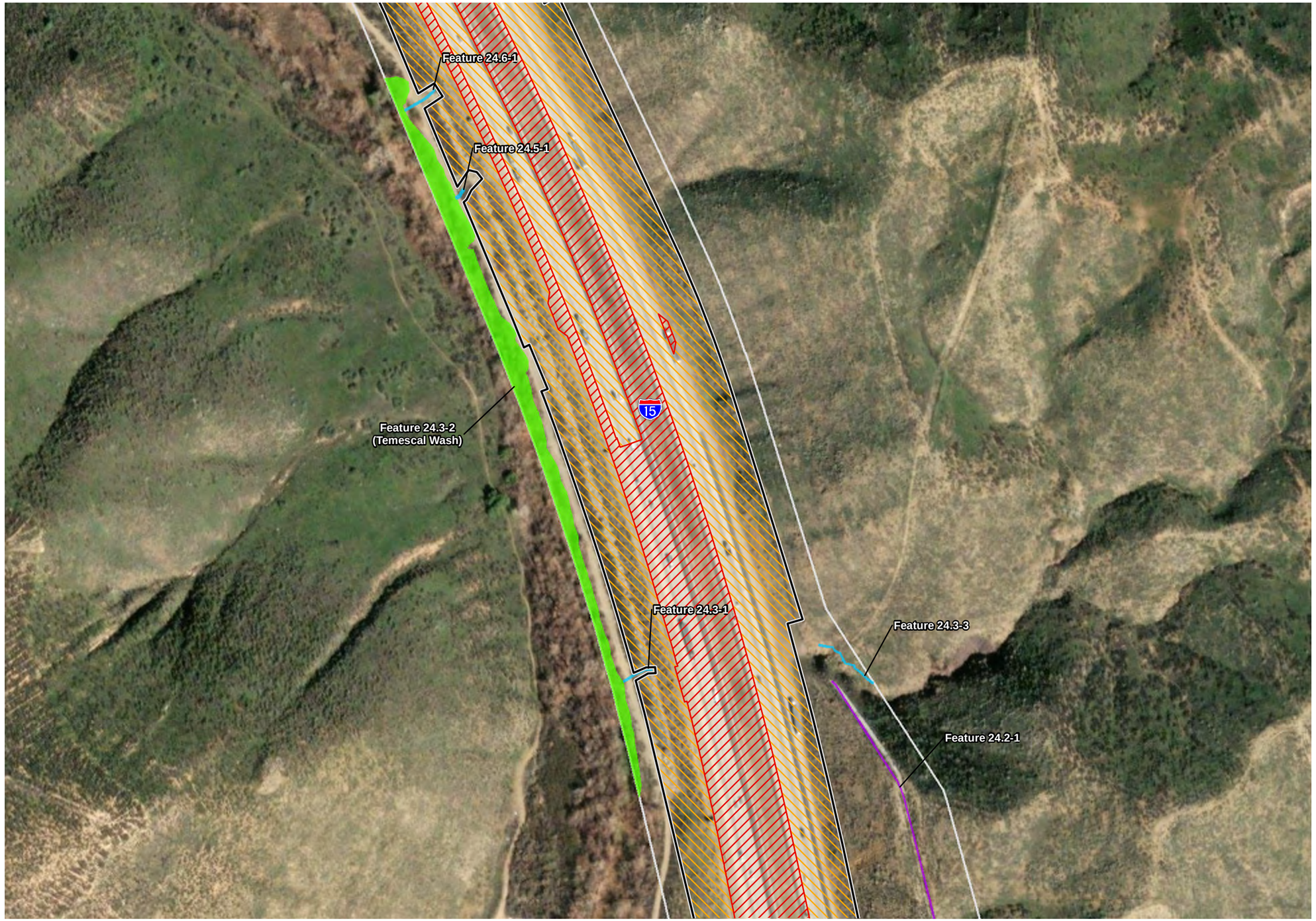

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 7
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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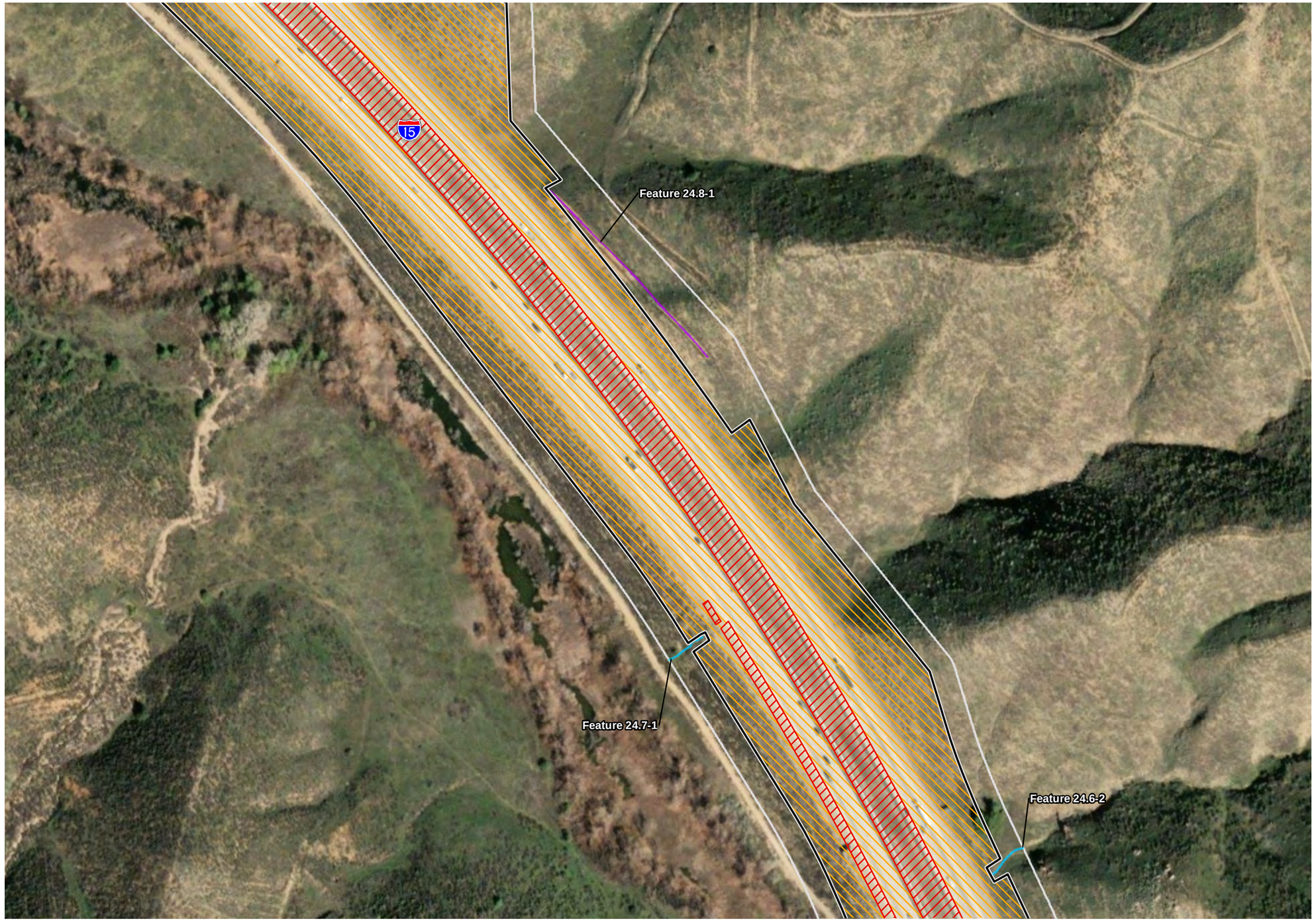

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 8
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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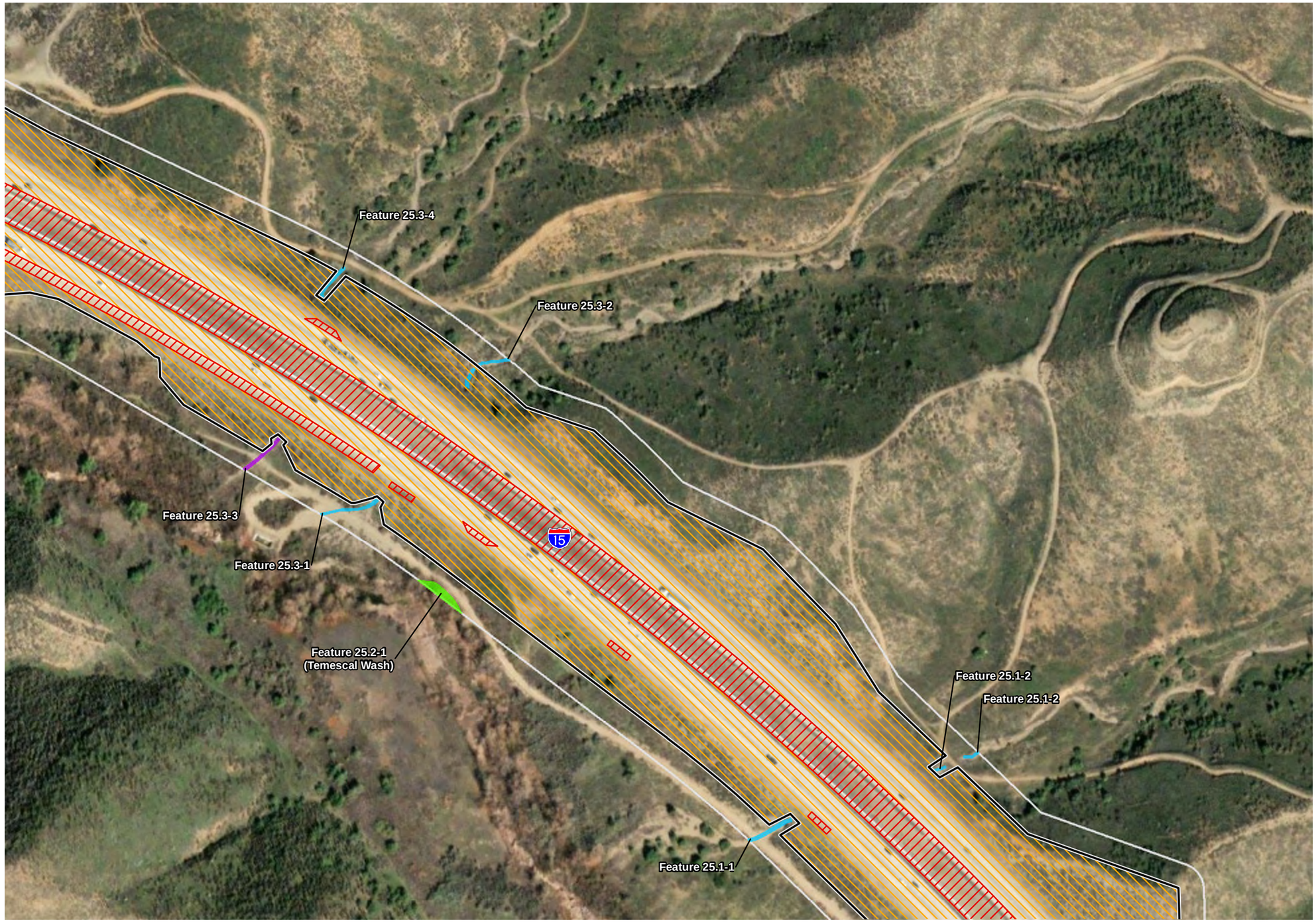

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 9
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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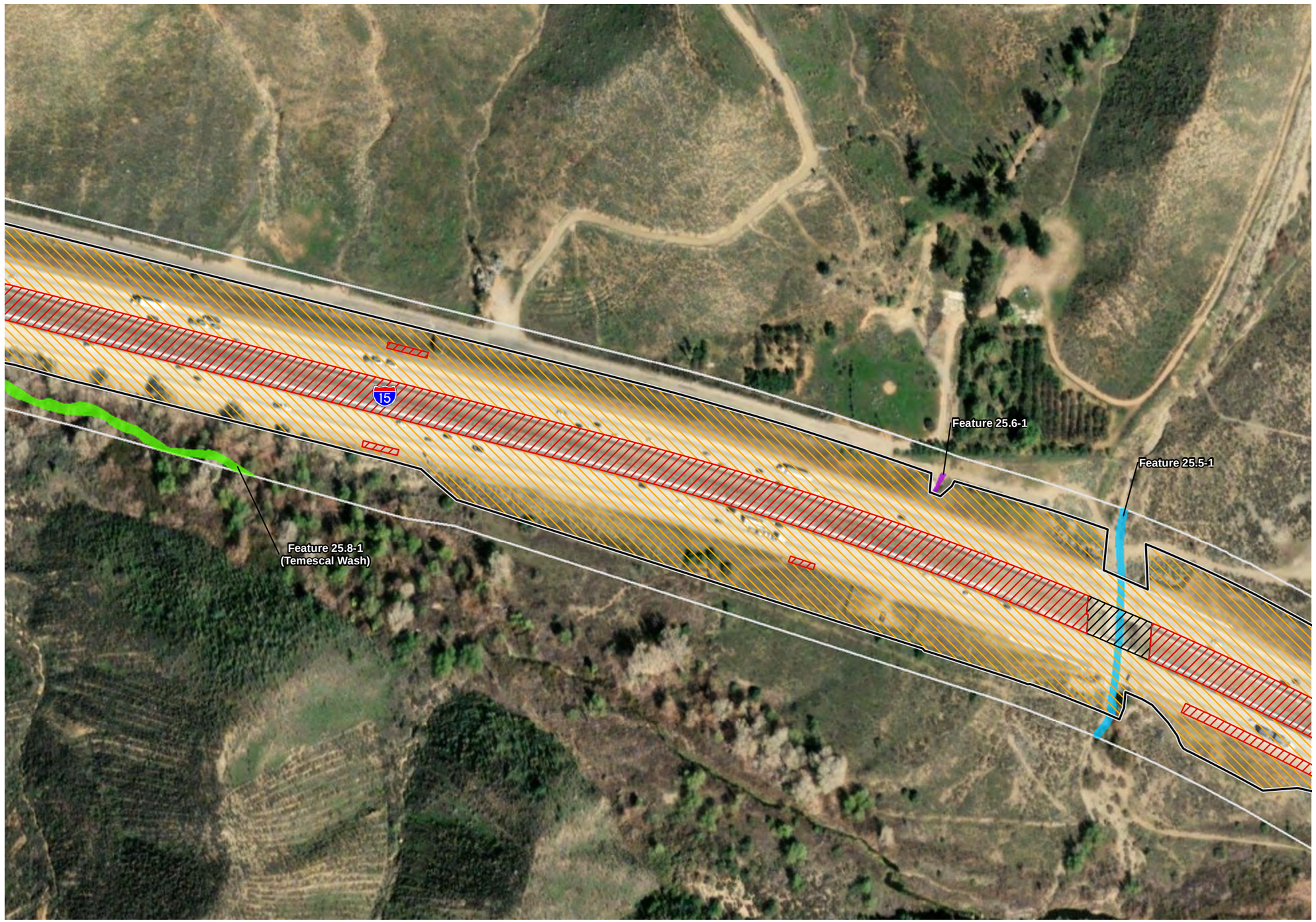

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 10
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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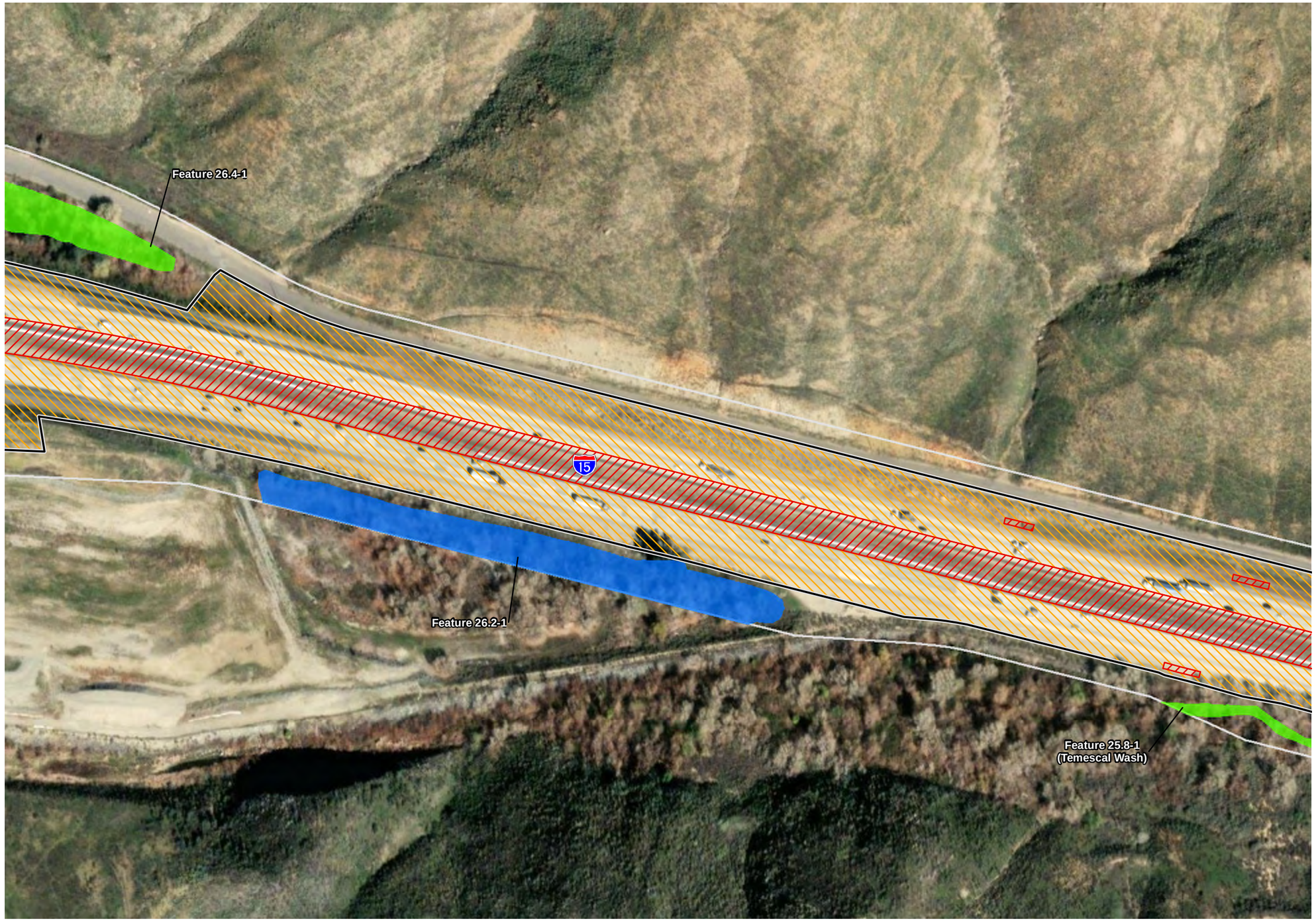

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 11
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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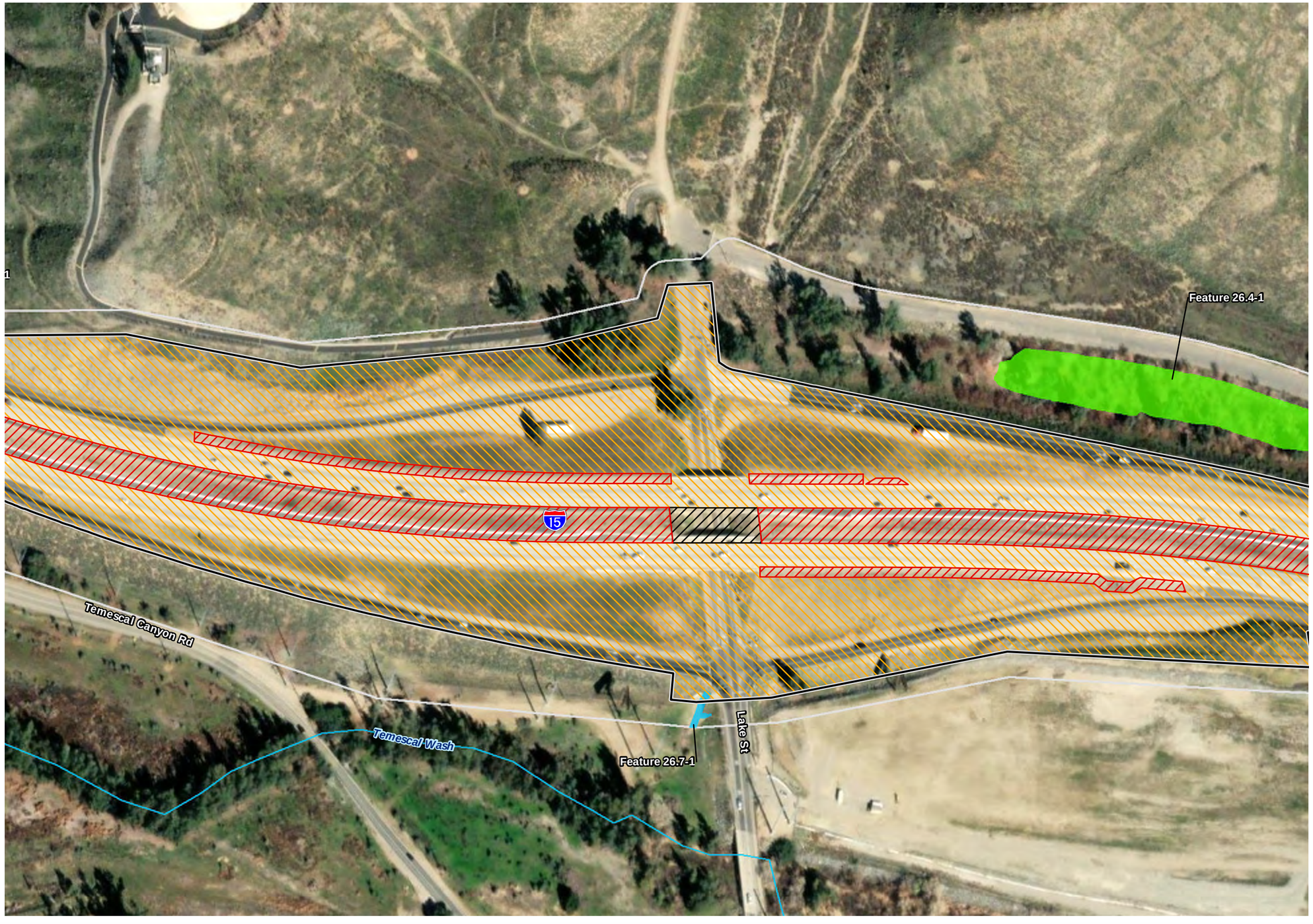

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.2-1 - Sheet 12
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 13
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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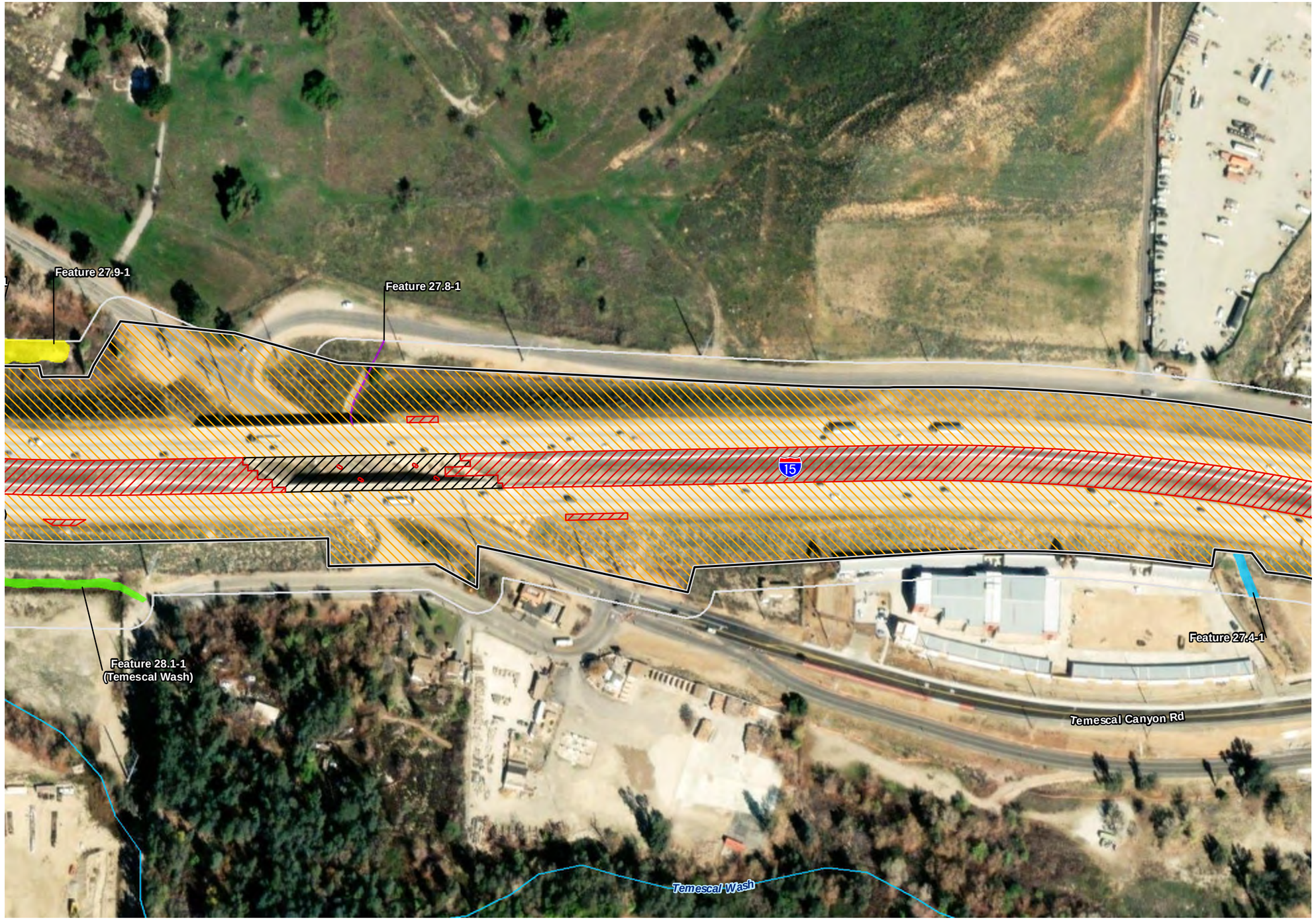

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 14
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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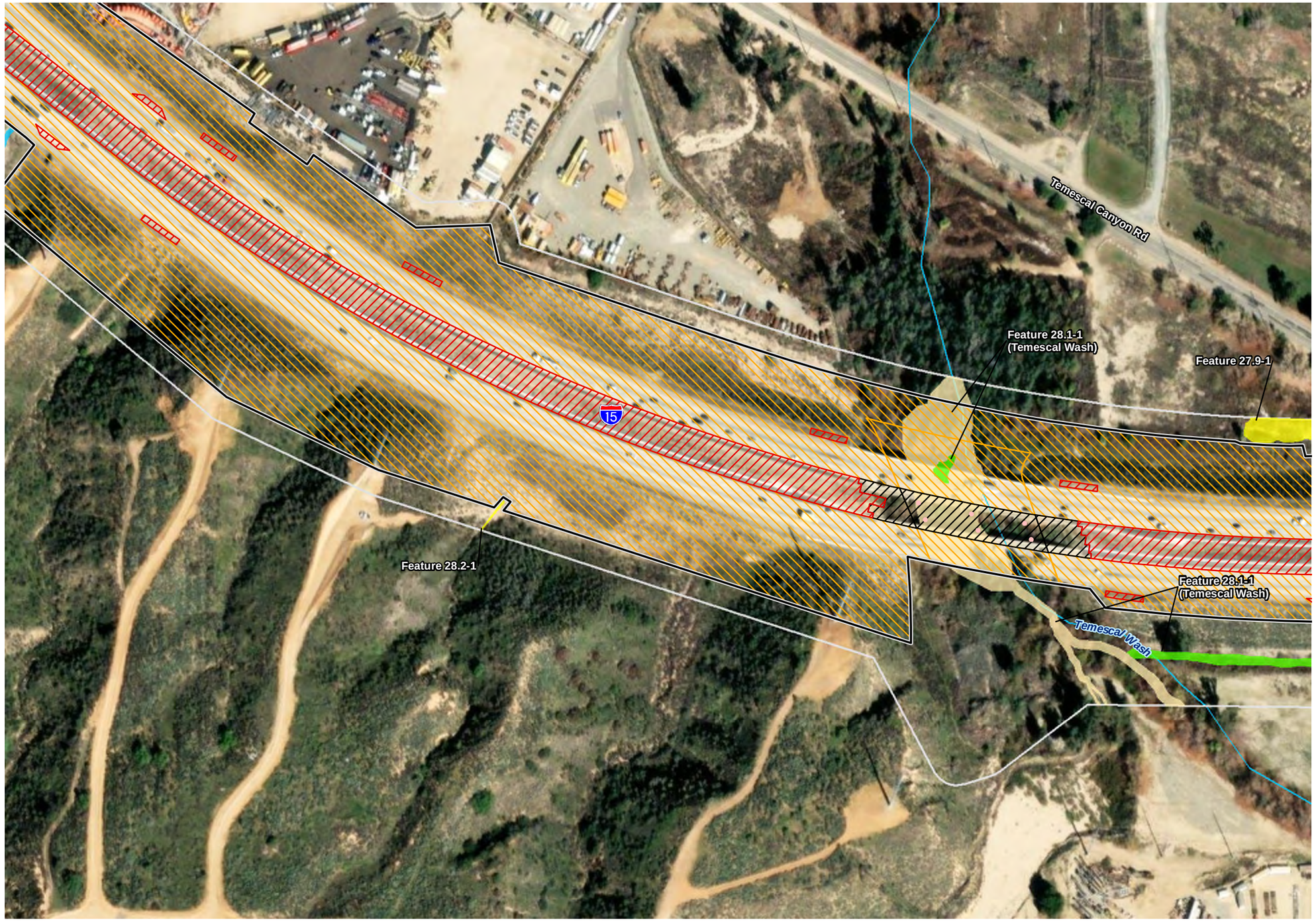

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.2-1 - Sheet 15
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 16
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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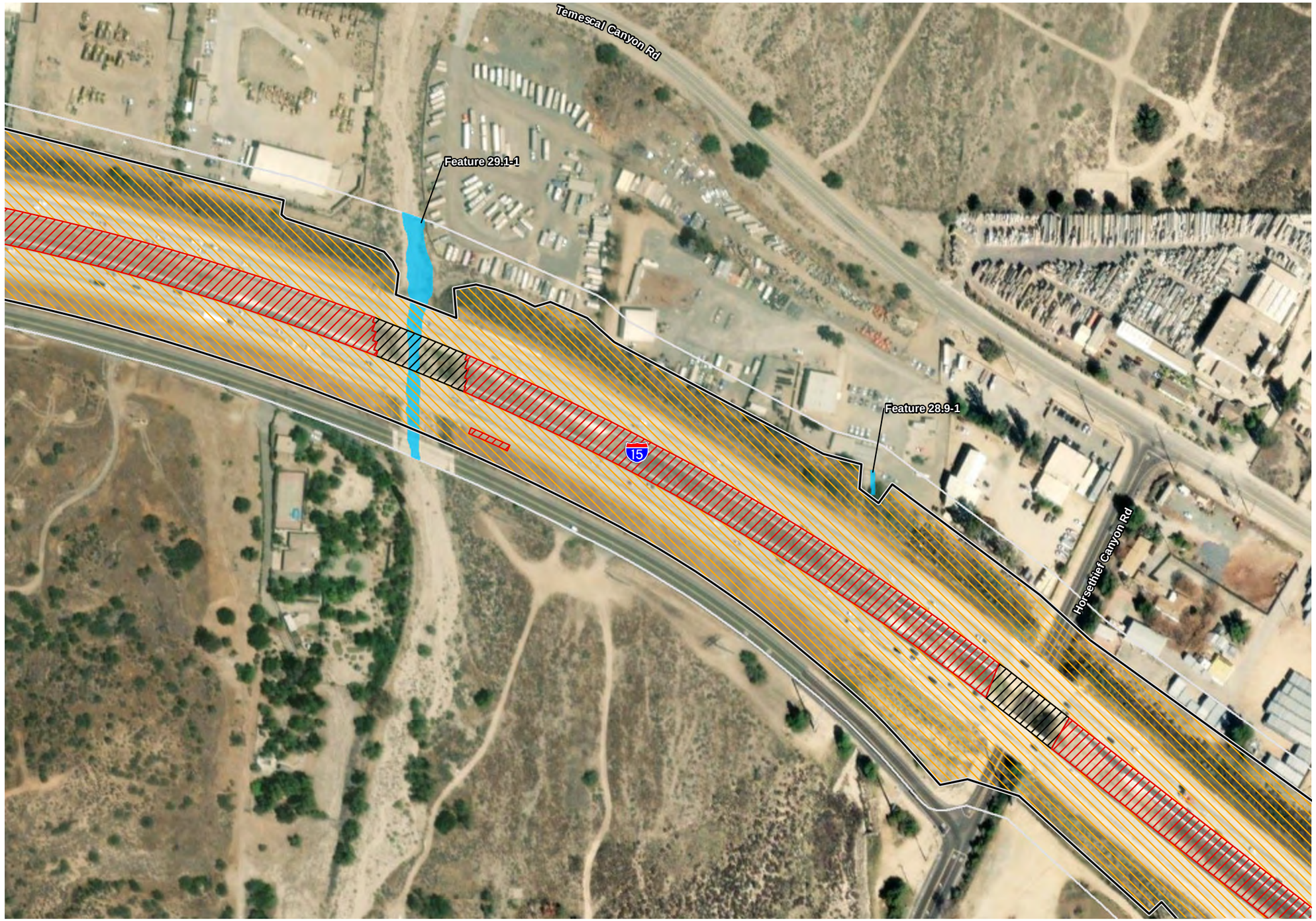

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.2-1 - Sheet 17
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

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0 200 400 Feet

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Figure 2.4.2-1 - Sheet 18
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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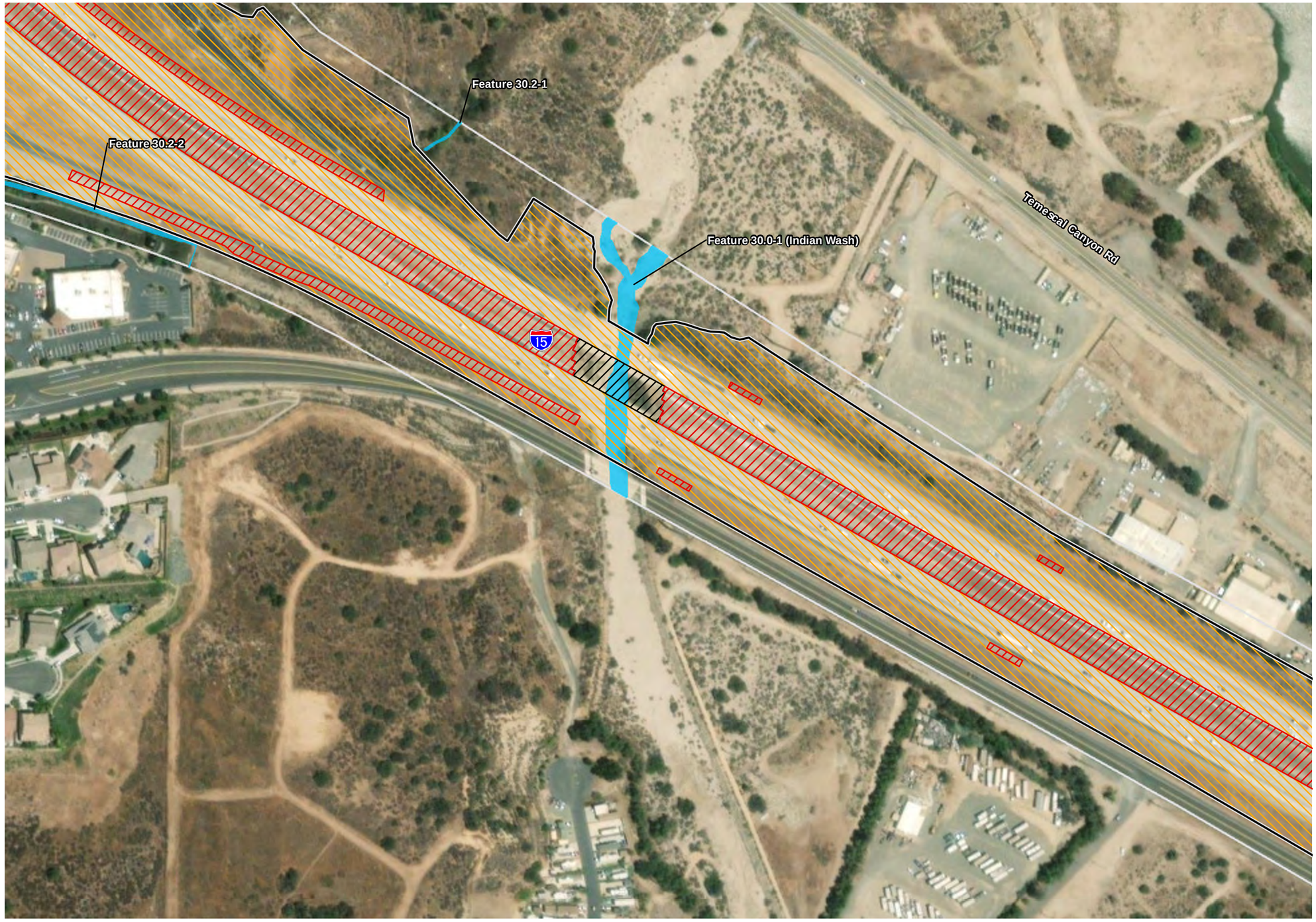

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-1 - Sheet 19
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 20
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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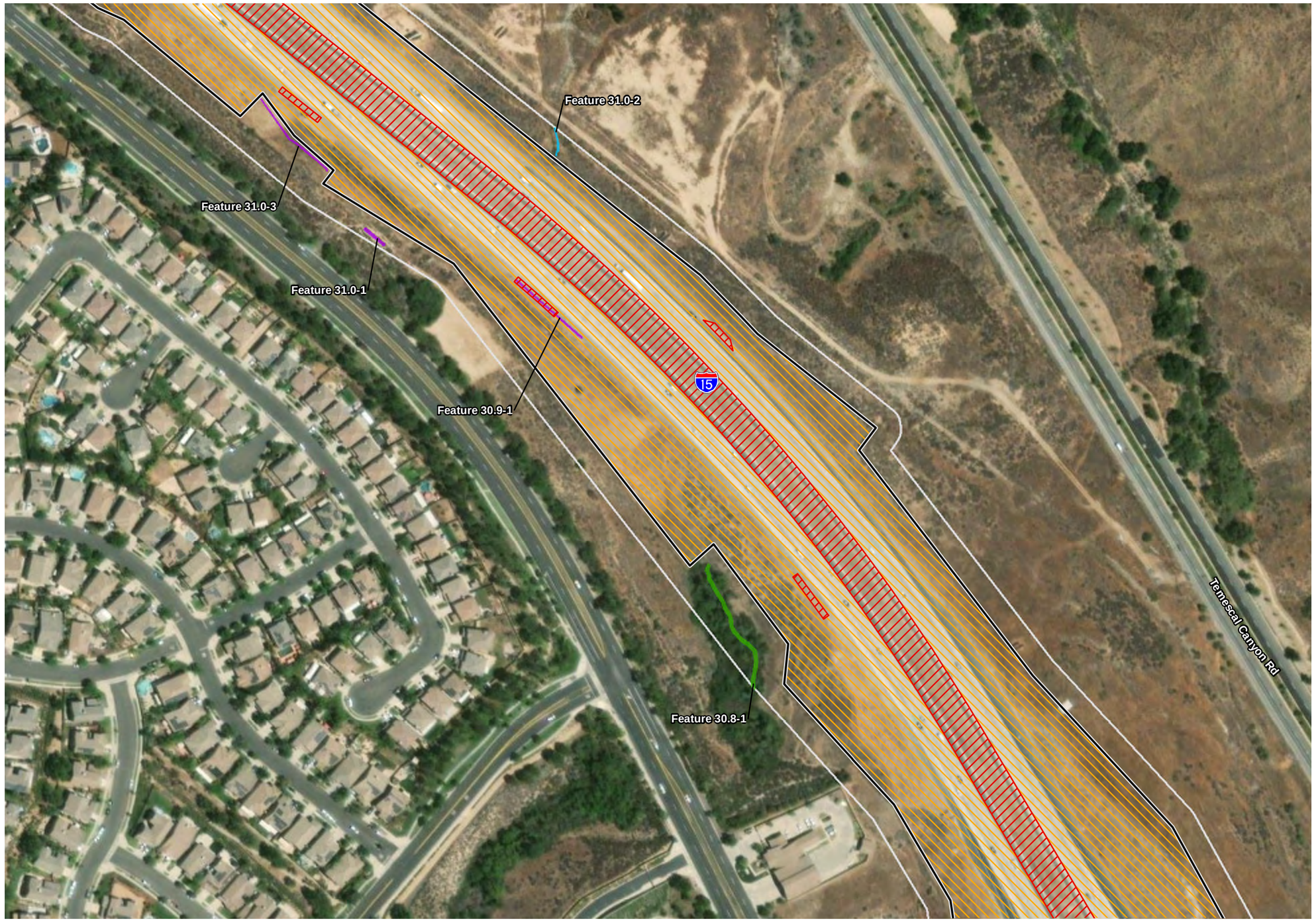

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

.

.

Source: ESRI USA Imagery

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0 200 400 Feet

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Figure 2.4.2-1 - Sheet 21
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

.

Source: ESRI USA Imagery

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0 200 400 Feet

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Figure 2.4.2-1 - Sheet 22
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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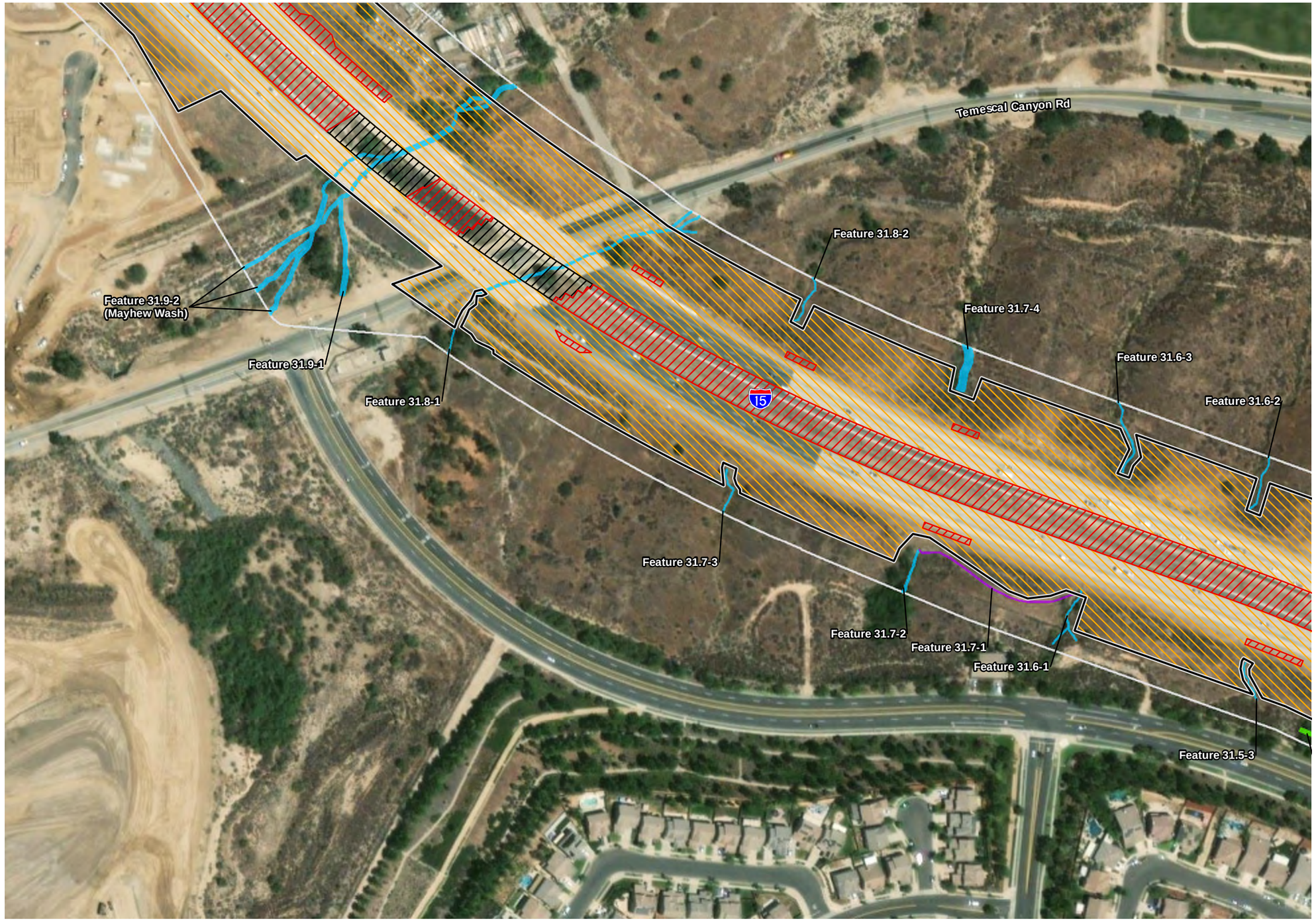

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

.

Source: ESRI USA Imagery

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0 200 400 Feet

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Figure 2.4.2-1 - Sheet 23
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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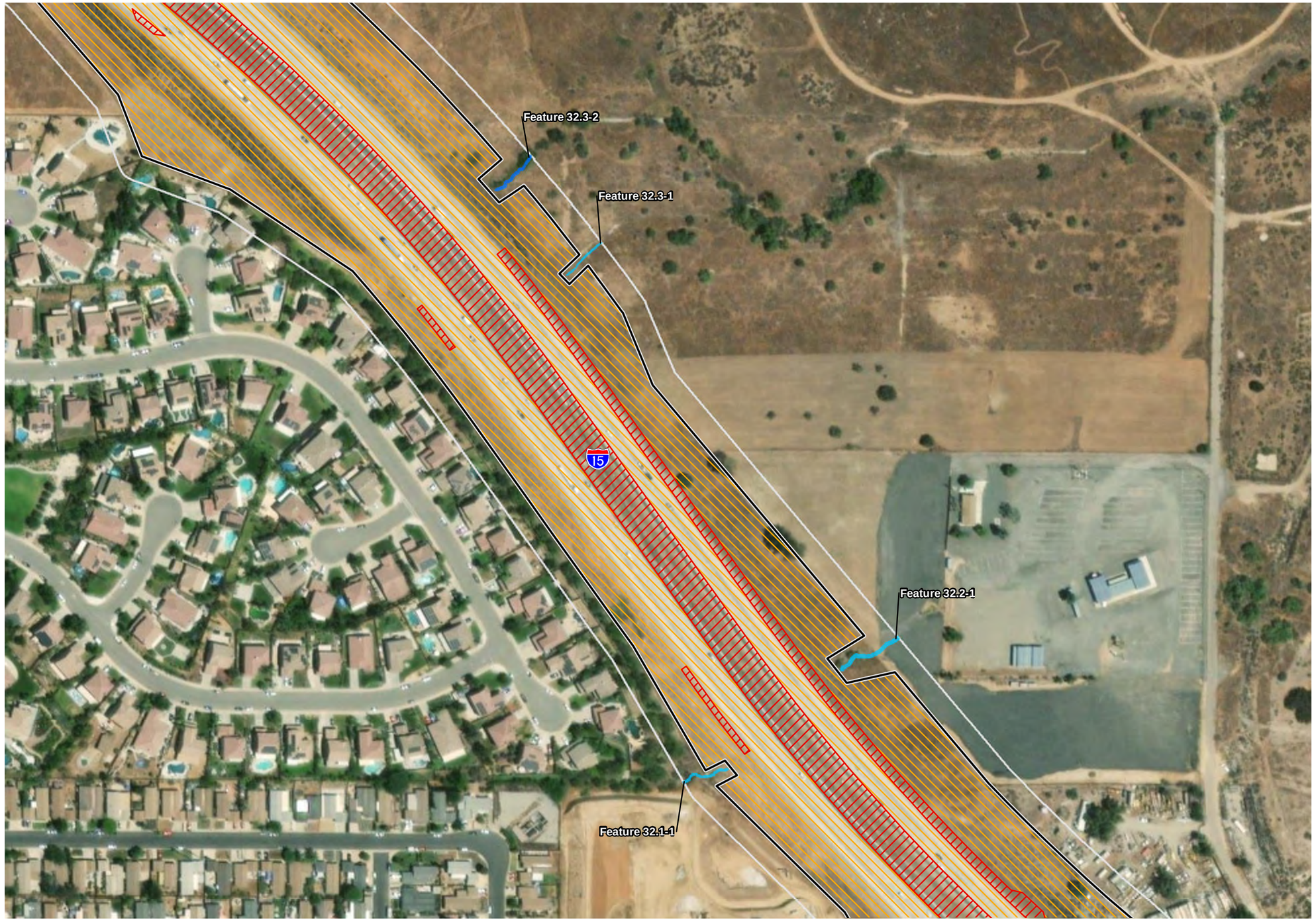

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

.

.

Source: ESRI USA Imagery

N

0 200 400 Feet

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Figure 2.4.2-1 - Sheet 24
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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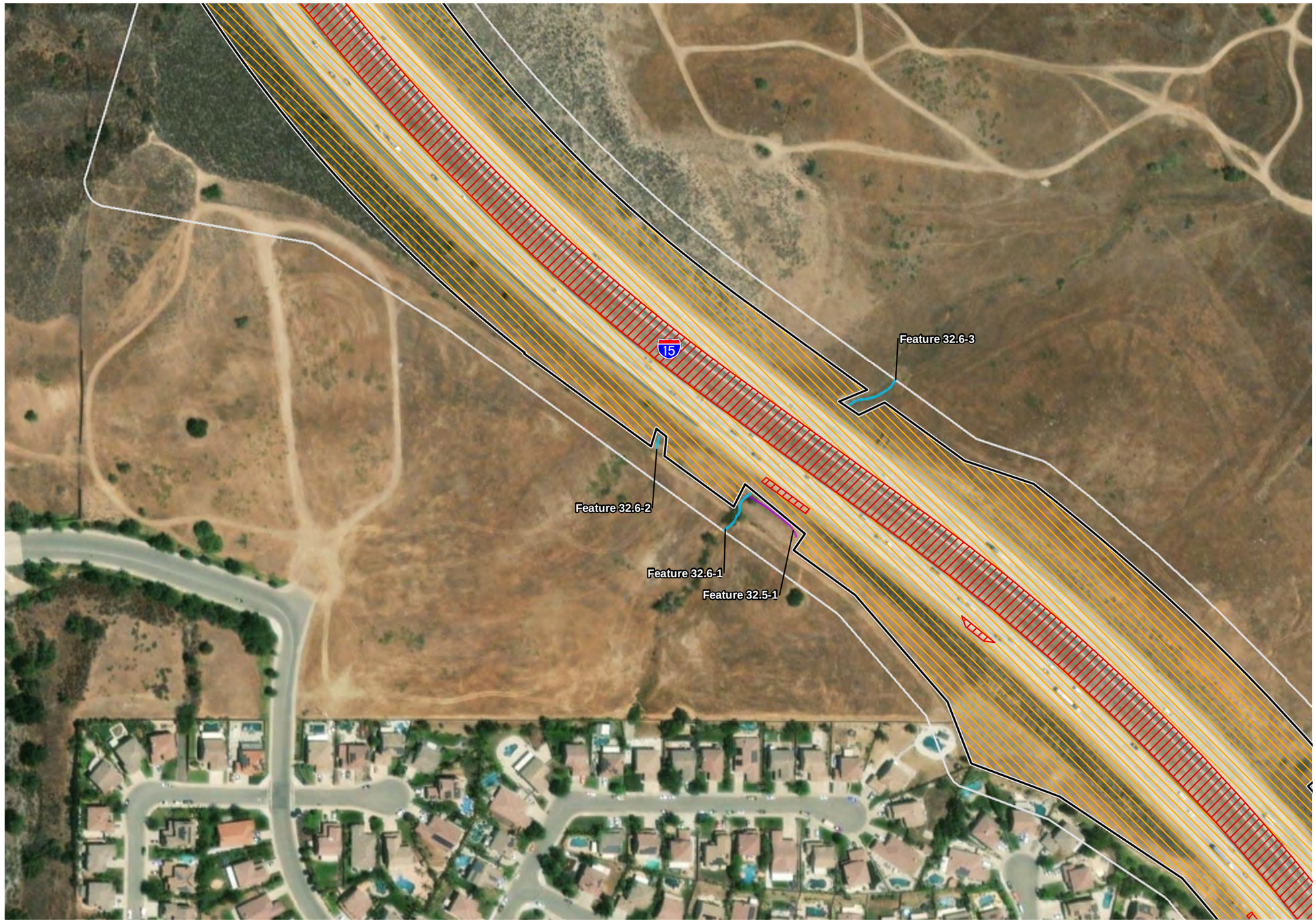

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

.

Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 25
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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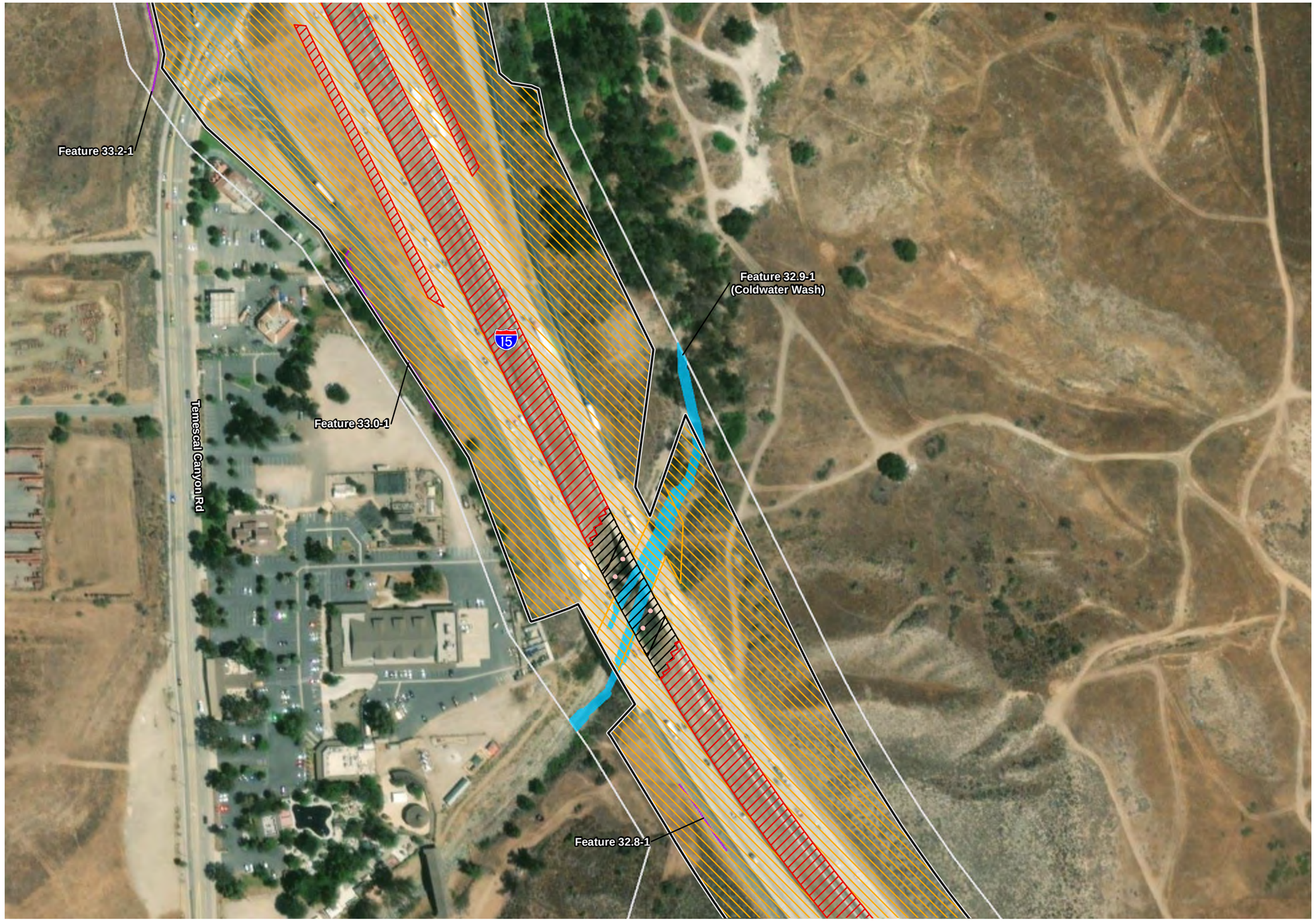

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-1 - Sheet 26
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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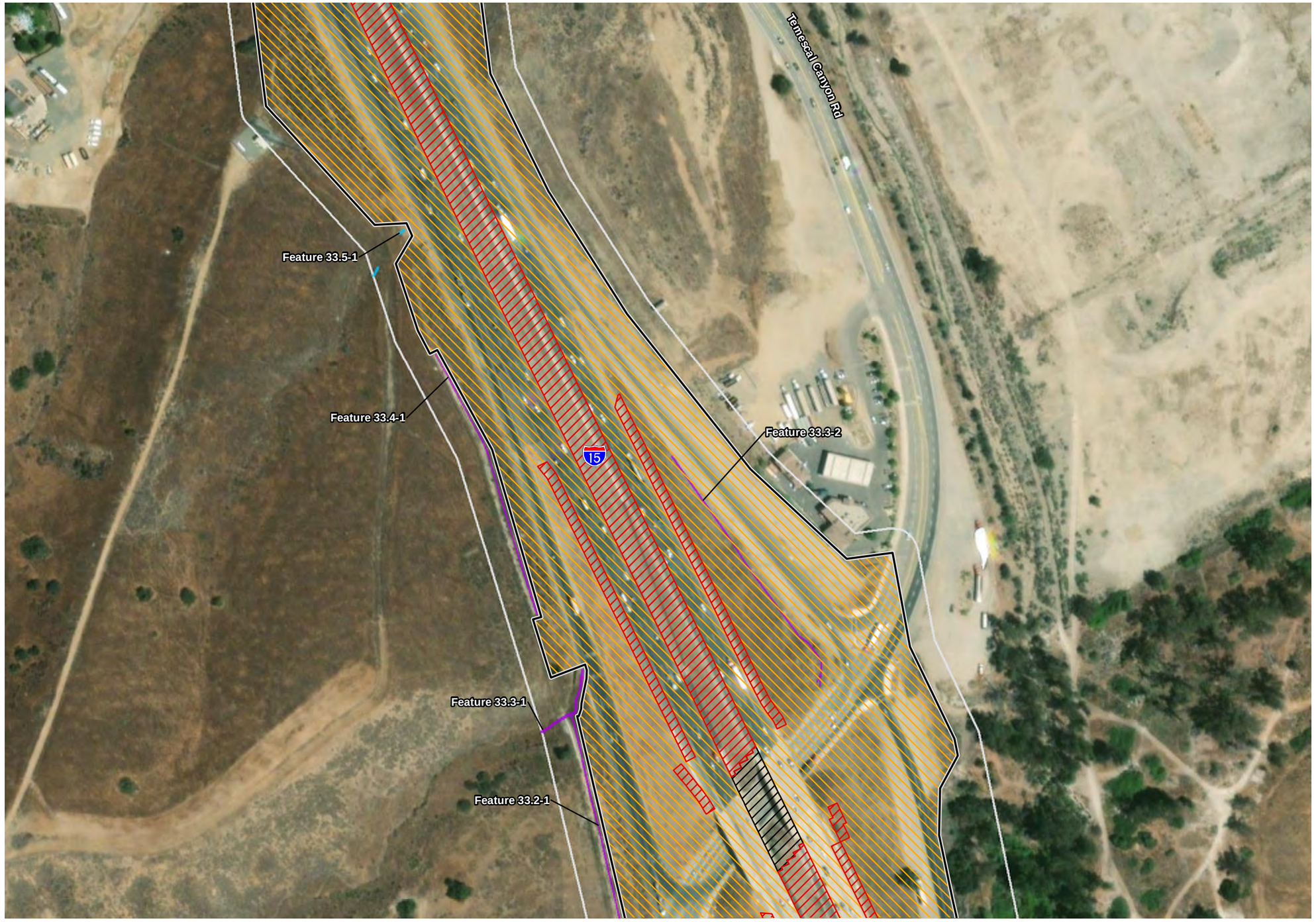

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 27
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 28
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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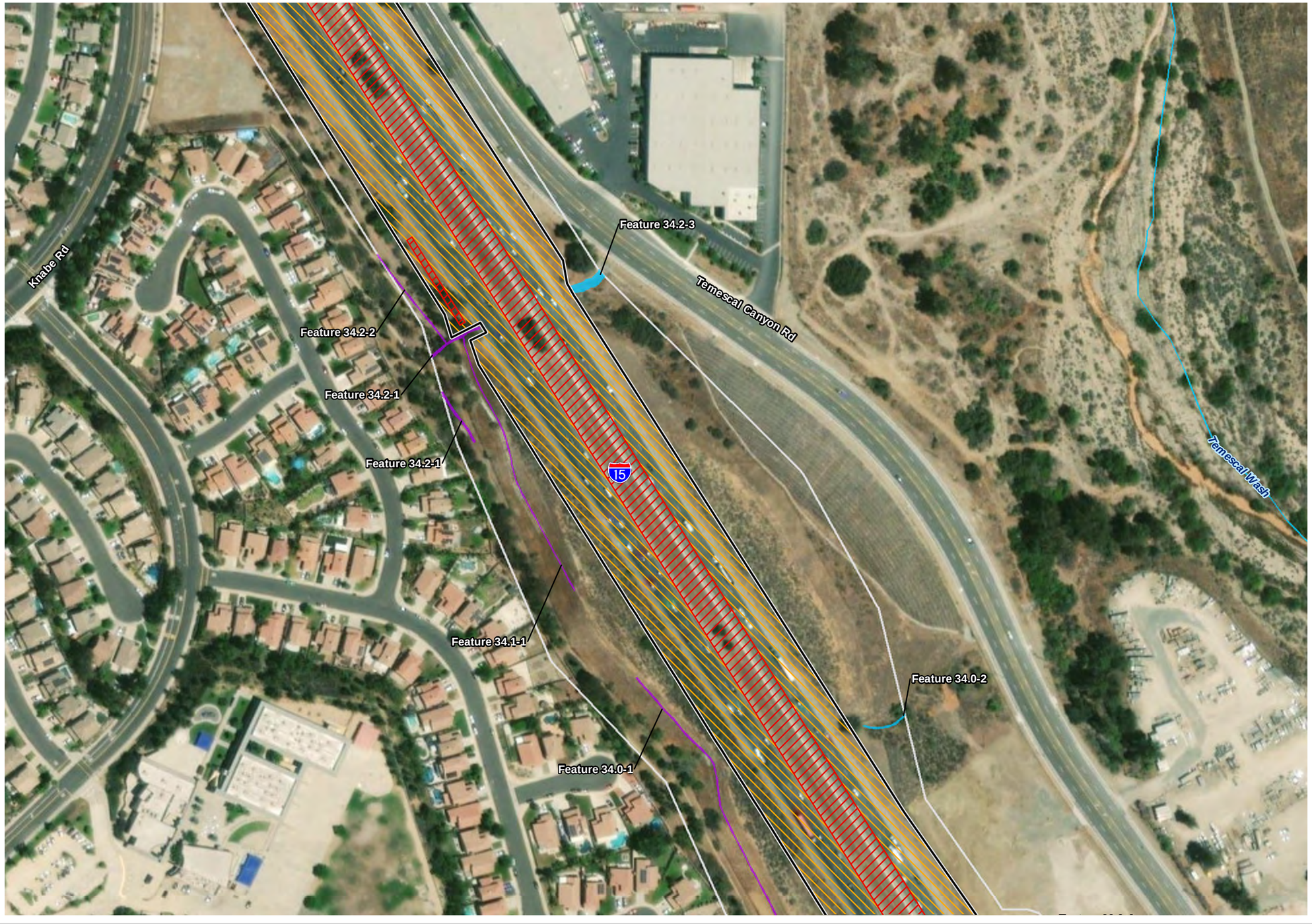

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 29
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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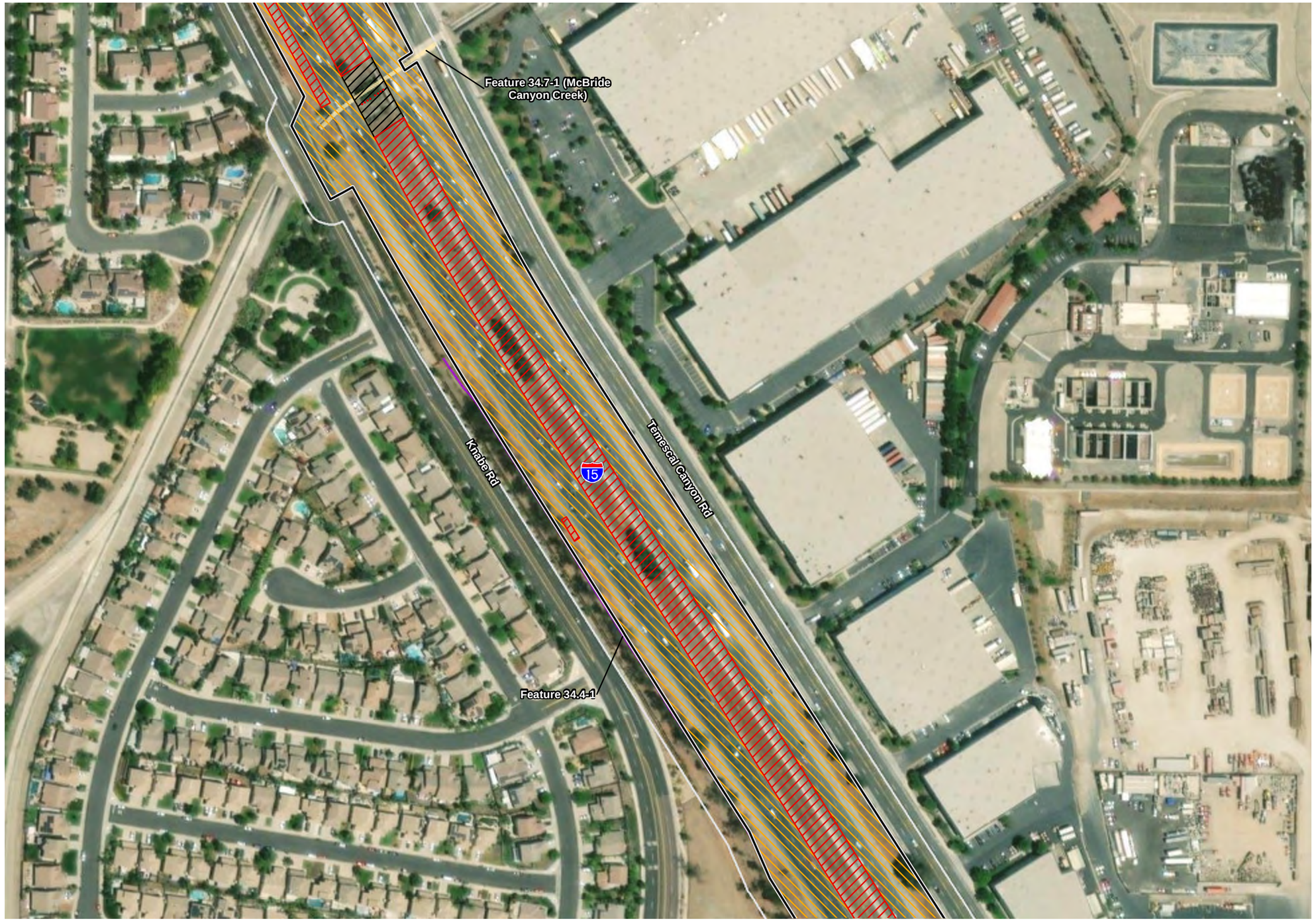

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 30
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

USACE/RWQCB Jurisdictional Features

OHWM (Ephemeral)

OHWM (Intermittent)

OHWM (Perennial)

Wetland

RWQCB Jurisdictional Features

OHWM (Isolated)

Wetland (Isolated)

Other Aquatic Features

Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 31
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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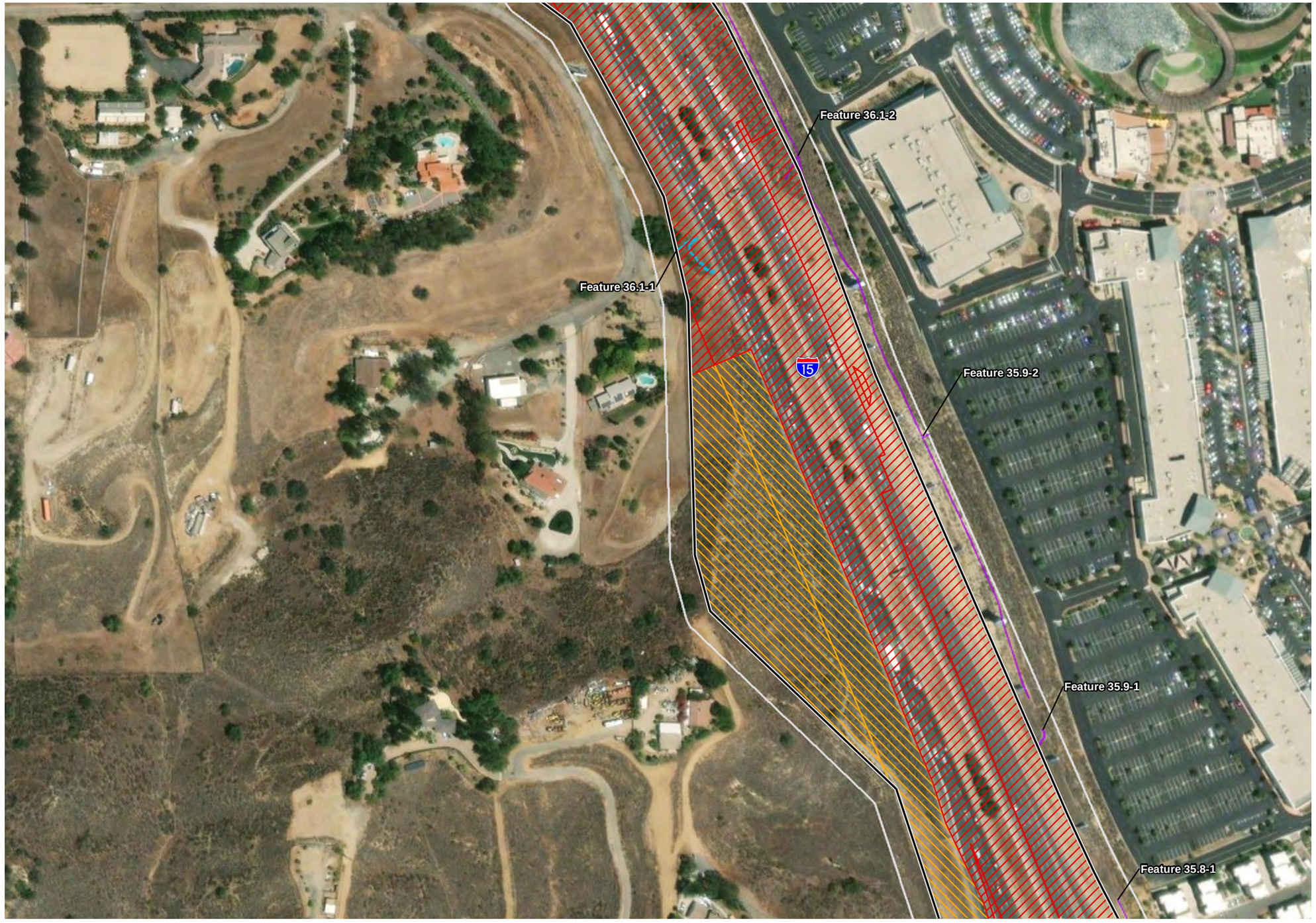

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 32
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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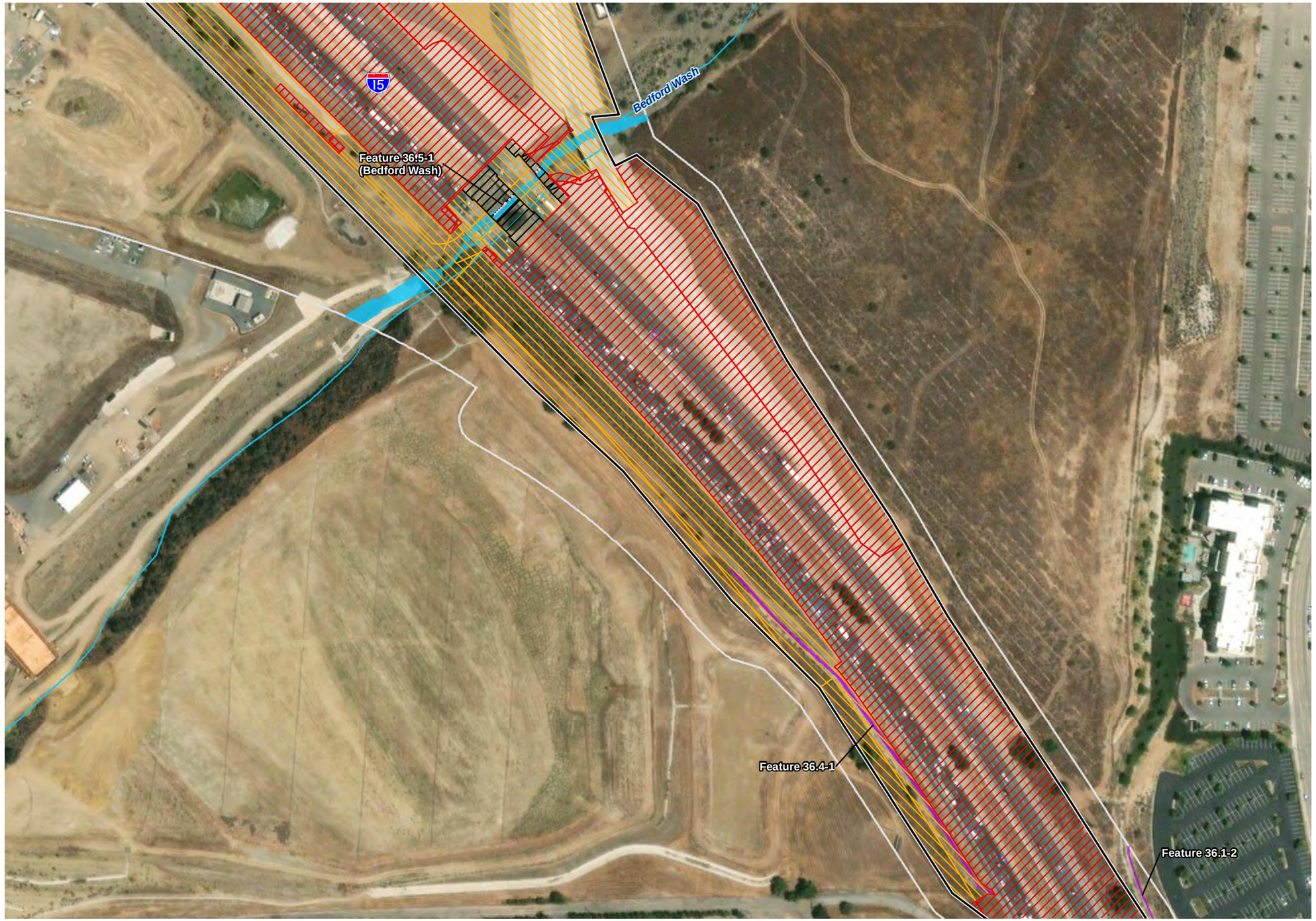

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 33
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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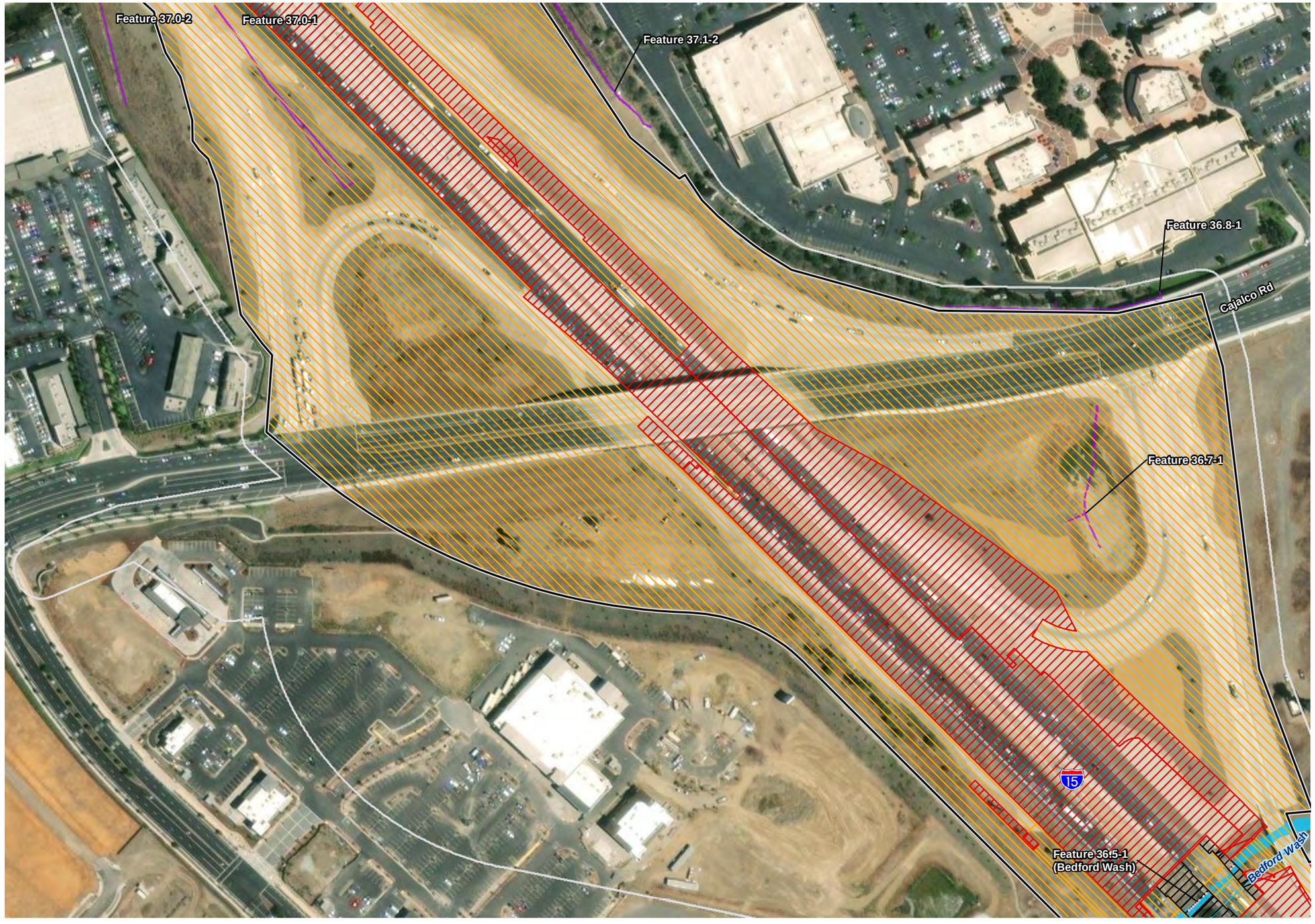

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 34
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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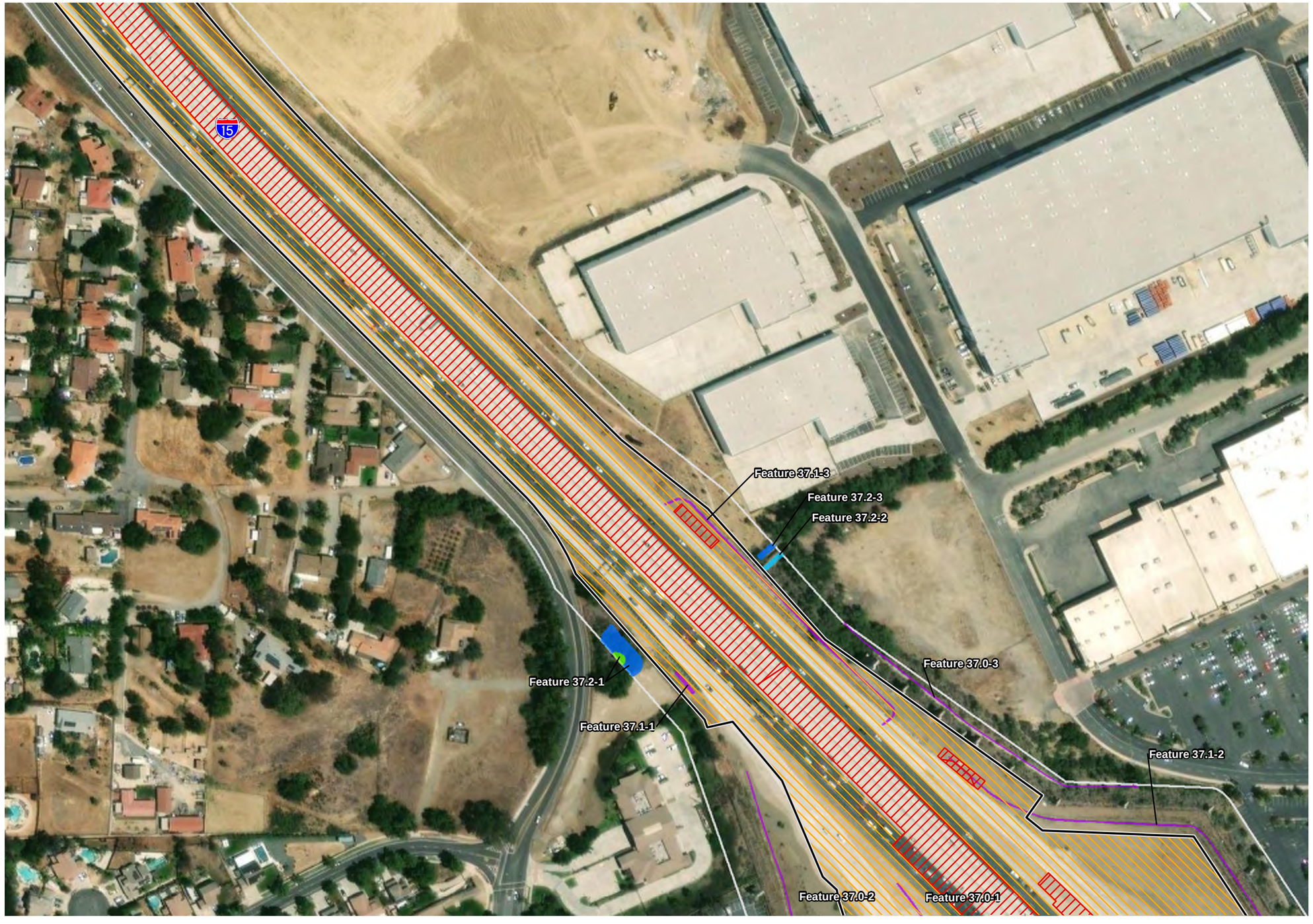

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 35
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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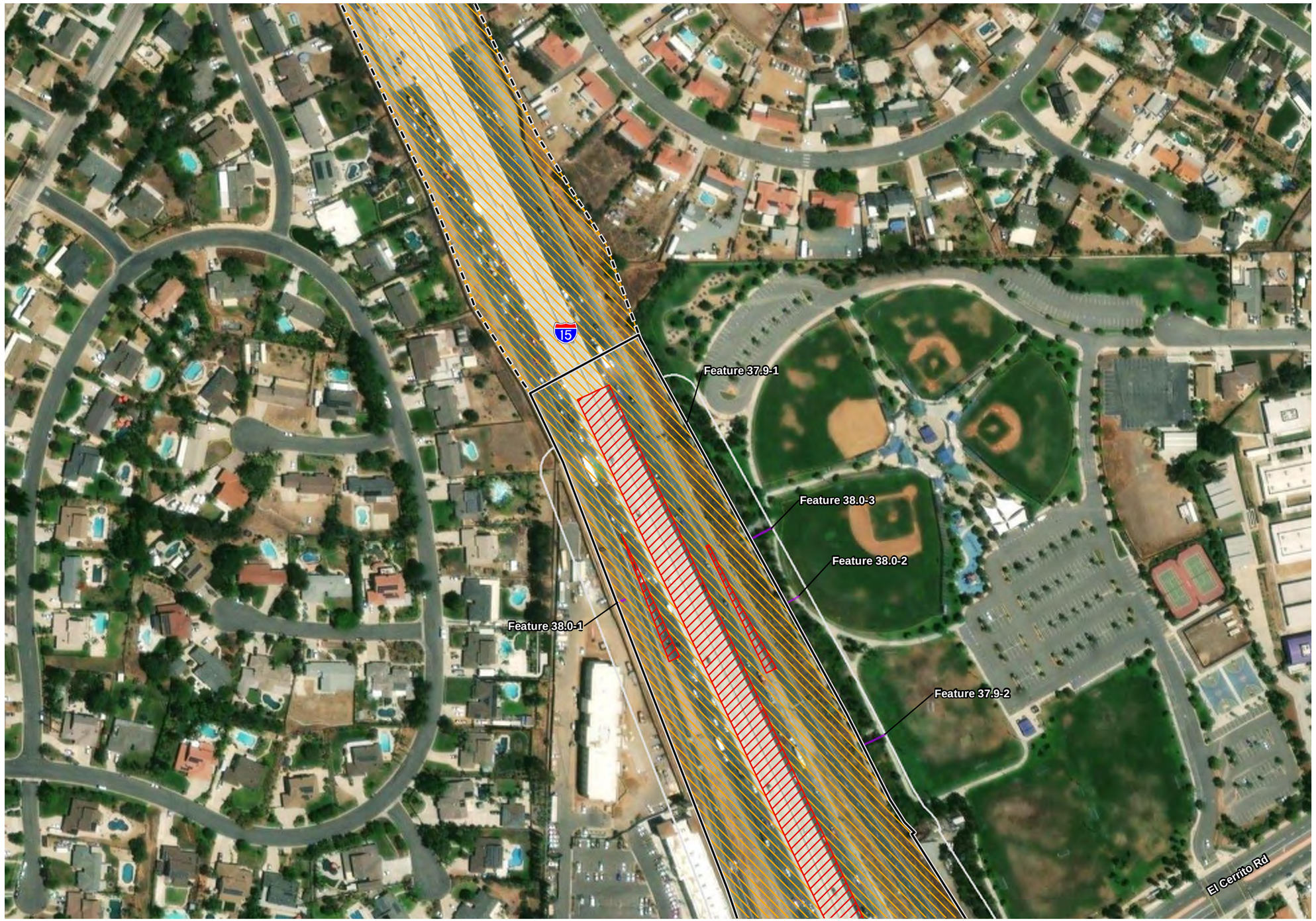

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

USACE/RWQCB Jurisdictional Features

- OHWM (Ephemeral)
- OHWM (Intermittent)
- OHWM (Perennial)
- Wetland

RWQCB Jurisdictional Features

- OHWM (Isolated)
- Wetland (Isolated)

Other Aquatic Features

- Constructed in Uplands

.

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Source: ESRI USA Imagery

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Figure 2.4.2-1 - Sheet 36
USACE/RWQCB Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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2.4.2.3 Environmental Consequences

Build Alternative

The Project is intended to improve and manage traffic operations and travel times along the corridor.

Field investigations were performed within all portions of the JSA established for the Project. Project engineers and biologists reviewed the Project to determine whether construction activities could avoid jurisdictional areas or minimize impacts on these areas. For many locations, impact areas were reduced where feasible, including by decreasing Project construction areas, redesigning, and reducing temporary impact areas to avoid riparian areas and occupied LBV habitat to the greatest extent feasible. Full avoidance of jurisdictional WoUS/WoS, state streambeds, and riparian habitat for the Project, however, was not feasible.

A key component of the development of the Project's avoidance and minimization of impacts on jurisdictional waters includes compliance with the MSHCP and coordination with the RCA, USFWS, CDFW, RWQCB, and USACE (resource agencies) on the related I-15 COP. Coordination is still ongoing for the Project and includes the submittal of the required documents for MSHCP consistency, including the DBESP, which includes additional information regarding riparian/riverine mitigation requirements. During meetings with the resource agencies, the main topic of discussion was required mitigation and mitigation options. Agency questions and comments were addressed and incorporated into proposed mitigation within the DBESP. Chapter 5 provides a detailed discussion of coordination and copies of correspondence with the agencies. A coordination summary is also available in Section 5.4 of the NES. No formal coordination with the resource agencies has occurred regarding aquatic permitting.

The Project would require a CWA Section 404 Nationwide Permit from USACE and a CWA Section 401 Water Quality Certification and Porter-Cologne WDR from RWQCB. Acquisition of a Nationwide Permit and a CWA Section 401 Water Quality Certification and WDR for impacts on state waters only would ensure compliance with Executive Order 11990. A CDFW 1602 Streambed Alteration Agreement would also be required.

USACE/RWQCB Jurisdiction Summary

The Project would result in impacts on federal jurisdictional non-wetlands, including the permanent removal of 0.02 acre, temporary impacts on 2.02 acres, and shading impacts on 0.47 acre. A total of 0.03 acre of temporary impacts would occur on federal jurisdictional wetlands. There is anticipated to be 0.01 acre of permanent impacts and 0.19 acre of temporary impacts on potentially non-jurisdictional, non-wetland (constructed in uplands) RWQCB jurisdictional WoS. The RWQCB impacts on WoS are the same as those identified for the USACE wetland and non-wetland WoUS. The proposed impacts on USACE jurisdictional WoUS are summarized in Table 2.4.2-2 and shown on Figure 2.4.2-1, with a discussion of temporary, permanent, and shading impacts to follow below.

Table 2.4.2-2. USACE/RWQCB Jurisdictional Impacts

Agency/Jurisdiction	Hydrology	Permanent Impact (acres)	Temporary Impacts (acres)	Shading Impacts (acres)
CWA Section 404/401 Non-Wetland	Ephemeral, Intermittent, and Perennial	0.02	2.02	0.47
CWA Section 404/401 Wetland	Wetland	--	0.03	--
Grand Total CWA Section 404/401 Non-Wetland and Wetlands	**--**	**0.02**	**2.05**	**0.47**
Porter-Cologne Wetland	Wetland (Isolated)	--	--	--
Potential Non-Jurisdictional Non-Wetland	Constructed in Uplands	0.01	0.19	--
Grand Total Porter-Cologne Non-Wetland and Wetlands[1]	**--**	**0.01**	**0.19**	**--**

-- not applicable
[1]Totals include features identified as "Constructed in Uplands" that may not be considered RWQCB jurisdictional.

CDFW Jurisdiction Summary

The Project would result in the permanent removal of 0.10 acre, temporary impacts on 3.79 acres, and shading impacts on 1.00 acre of state streambeds. A total of 2.26 acres of CDFW riparian would be affected by the Project (<0.01 acre permanent, 1.80 acre temporary, and 0.46 acre shading effects). The proposed impacts on CDFW streambeds and associated riparian vegetation are summarized in Table 2.4.2-3 and shown on Figure 2.4.1-3, with a discussion of temporary, permanent, and shading impacts to follow below.

Table 2.4.2-3. Summary of Proposed Impacts on CDFW Streambeds and Associated Riparian Vegetation

CDFW Jurisdictional Resource	Permanent Impact (acres)	Temporary Impact (acres)	Shading Impacts (acres)*
CDFW Unvegetated Streambed	0.10	3.79	1.00
Potential Non-Jurisdictional Unvegetated Streambed – Constructed in Uplands	0.02	0.91	--
Total Streambed[1]	0.12	4.70	1.00
CDFW Riparian	<0.01	1.80	0.46
Total Riparian[1]	<0.01	1.80	0.46
GRAND TOTAL[1,2]	**0.12**	**6.50**	**1.47**

[1]Totals may not match due to rounding.
[2]Totals include features identified as "Constructed in Uplands" that may not be considered CDFW jurisdictional.
*Closure of the median with new bridges would cause a new shading effect on the CDFW riparian and riverine areas. Although the work area would be temporary, the effect on CDFW riparian and riverine areas would be a permanent indirect effect.

Table 2.4.2-4. Proposed Impacts on CDFW Jurisdictional Resources Streambeds and Associated Riparian Vegetation by Feature

	Permanent Impact (acres)*		Temporary Impacts (acres)		Shading Impacts (acres)	
Feature Identification	**Riparian**	**Streambed**	**Riparian**	**Streambed**	**Riparian**	**Streambed**
21.5-1 (Wasson Canyon Wash)	–	0.028	–	0.533	–	–
22.5-1	–	–	–	0.061	–	–
22.6-1 (Arroyo Del Toro West Segment)	–	–	–	0.104	–	–
25.3-2	–	–	–	0.020	–	–
25.5-1	–	–	–	0.229	–	0.105
26.2-1	–	–	0.141	–	–	–
26.7-1	–	–	–	0.012	–	–
28.1-1 (Temescal Wash)	0.003	–	1.657	–	0.462	–
29.1-1	–	–	–	0.431	–	0.178
30.0-1 (Indian Wash)	–	–	–	0.273	–	0.119
31.8-1	–	–	<0.000	0.031	–	0.008
31.9-2 (Mayhew Wash)	–	–	–	0.484	–	0.135
32.9-1 (Coldwater Wash)	–	0.002	–	0.962	–	0.301
33.8-3	–	–	–	0.009	–	–
34.7-1 (McBride Canyon Creek)	–	–	–	0.066	–	0.034
35.6-2	–	–	–	0.039	–	–
35.7-3	–	–	–	0.011	–	–
36.1-1	–	0.012	–	–	–	–
36.5-1 (Bedford Wash)	–	0.055	–	0.523	–	0.123
Total	**0.003**	**0.097**	**1.798**	**3.788**	**0.462**	**1.003**

Temporary Impacts

USACE/RWQCB Jurisdiction

Temporary impacts would occur within the LOD outside of the permanent impact area (Figure 2.4.2-1, Table 2.4.2-2). This area would include the area needed to construct the Project, including access and staging areas, temporary construction easements, and temporary access roads. Any jurisdictional resource within the temporary impact area that experiences impacts would be restored to pre-Project conditions or better at its original location. The mitigation ratio for temporary impacts is proposed to be 1.25:1 to mitigate for the temporal loss of the functions and values of jurisdictional resources (Caltrans 2024). This is a modification to the mitigation measure in the NES, where

temporary impacts were proposed to be mitigated at a ratio of 1:1 (modified in Mitigation Measure **NC-16 [NES BIO-16]** in Section 2.4.1, *Natural Communities*, to be 1.25:1).

During construction, there is increased risk for indirect temporary impacts—such as changes in hydrology—on the adjacent jurisdictional waters and state streambeds. Indirect impacts on federal and state jurisdictional waters adjacent to the Project may include degradation of habitat through increased risk of fire, water pollution, litter, unintended loss of habitat, decreased water quality, and increased exposure to invasive plant species. The Avoidance and Minimization Measures identified in the NES, including best management practices (BMPs), such as Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-19 (NES BIO-24)** and Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*; and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** in Section 2.4.2.4 are designed to minimize or avoid habitat loss and degradation due to the effects described above.

These measures would ensure that potential indirect effects are reduced so the effects would not be substantial under the National Environmental Policy Act (NEPA). Dust control reduces the amount of siltation that enters the waterways and lowers water quality. Human-caused fires can lead to loss of habitat because of the high proportion of invasive species present in most areas in southern California, creating hotter burning conditions under which native plant species have lower survival rates. Biological training for construction and Project personnel, and biological monitoring by a qualified biologist would reduce the amount of unintended disturbance outside of the LOD and aid in protection of special-status species associated with riparian areas. Construction limits and Project limits reduce unintended disturbance in aquatic areas. Prevention of the spread of exotic plant species (including through equipment cleaning) supports aquatic resource quality, as exotic plant species lower the habitat quality of aquatic resources. Revegetation plans allow for on-site temporary impacts to be revegetated. Water pollution and erosion control plans are designed to protect water quality. Waste management prevents Project-related refuse from entering aquatic areas.

Once the Project is constructed and operational, there are additional long-term effects that would occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to right-of-way (ROW) maintenance. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD. The implementation of BMPs during operation would minimize these effects.

CDFW Jurisdiction

Temporary impacts would occur within the LOD outside of the permanent impact area (Figure 2.4.2-2, Table 2.4.2-3 and Table 2.4.2-4). This area would include the area needed to construct the Project including access and staging areas, temporary construction easements, and temporary access roads. Any jurisdictional resource within the temporary impact area that experiences impacts would be restored to pre-Project conditions or better at its original location.

CDFW has a “no net loss” policy. A mitigation ratio of 1:1 is considered a net loss, due to the temporal loss of use. When habitat is temporarily removed, it does not function during the period between removal and the completion of restoration.

A 1:1 mitigation ratio for temporary impacts would therefore not satisfy the requirement for no net loss of resources unless mitigation occurred prior to the impact and, therefore, no temporal loss occurred, and the mitigation was significantly better than in-kind. Final mitigation ratios would be dependent on the habitat that is lost versus the habitat that is being replaced and the enhancement, establishment, or re-establishment of aquatic resources at the mitigation site. Based on an analysis of the importance of streambed resources in the JSA, a mitigation ratio of 1.25:1 for impacts on streambed resources would be biologically superior or equivalent to the functions and values of the No-Build Alternative. It is anticipated that permanent impacts would occur only on streambed resources, and there would be no permanent impacts on riparian resources.

The mitigation ratio for temporary impacts on riparian and riverine (equivalent for the Project to CDFW riparian and streambed respectively) is proposed in the DBESP to be 1.25:1 (Caltrans 2024) to mitigate for the temporal loss of the functions and values of jurisdictional resources. This is a modification to mitigation measure in the NES and Mitigation Measure **NC-16 (NES BIO-16)** in Section 2.4.1, *Natural Communities*, has been modified to where temporary impacts are proposed to be mitigated at a ratio of 1.25:1 versus 1:1 in the NES.

During construction, there is increased risk for indirect temporary impacts, such as changes in hydrology, to the adjacent jurisdictional waters and state streambeds. Indirect impacts on federal and state jurisdictional waters adjacent to the Project may include degradation of habitat through increased risk of fire, water pollution, litter, unintended loss of habitat, decreased water quality, and increased exposure to invasive plant species. The Avoidance and Minimization Measures identified in the NES, including BMPs, such as Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-19 (NES BIO-24)** and Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*; and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** in Section 2.4.2.4 are designed to minimize or avoid habitat loss and degradation due to the effects described above and would ensure these potential indirect effects are reduced so the effects would not be substantial under NEPA.

Once the Project is constructed and the Project is operational, there are additional long-term effects that could occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to ROW maintenance and roadside effects. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD. The implementation of BMPs during operation would minimize these effects.

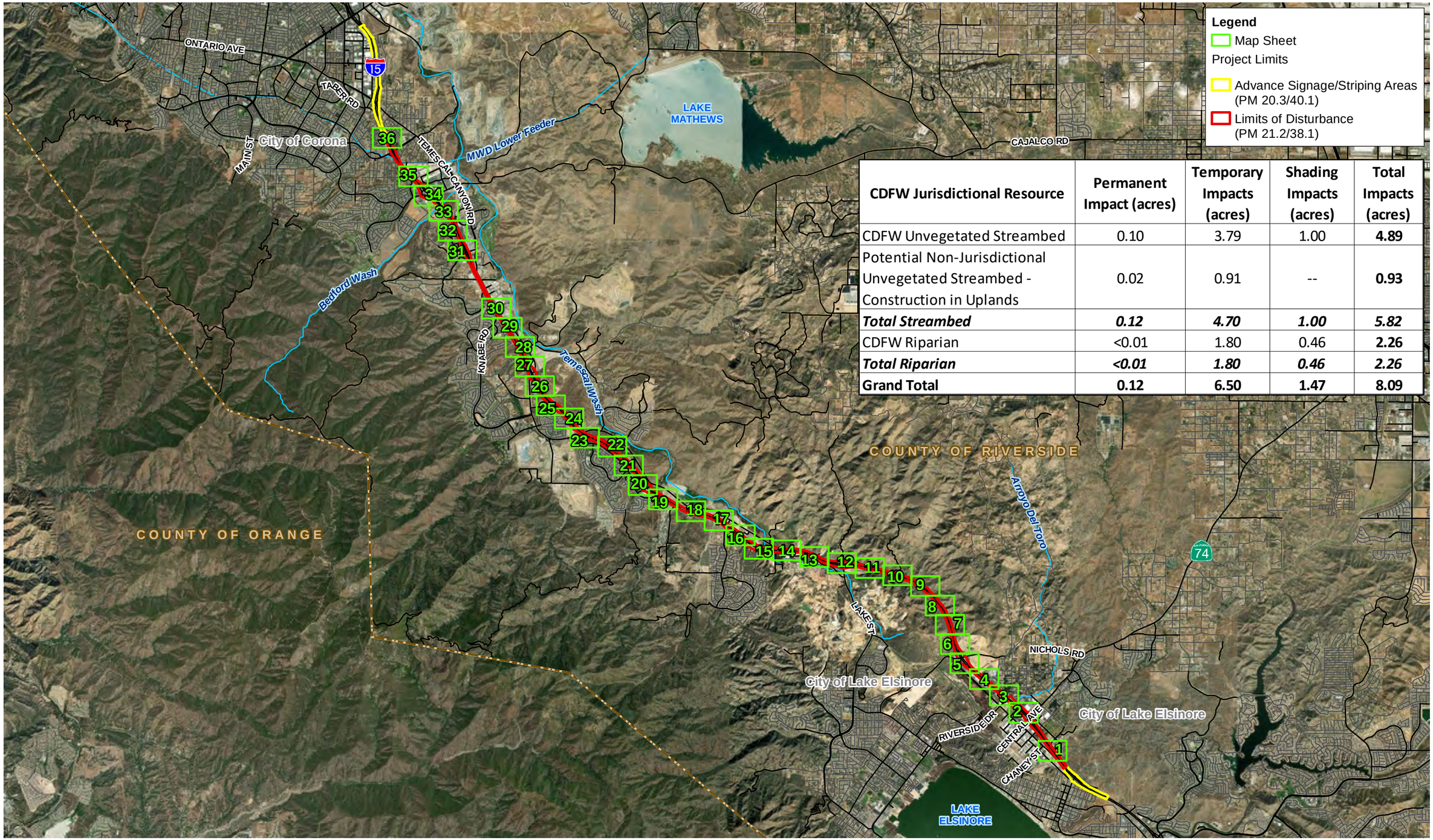
Permanent Impacts

USACE/RWQCB Jurisdiction

The permanent impacts on jurisdictional waters would result from the placement of piers, rock rip-rap, and supporting structures from widening of bridges and would occur within Feature 35.6-2, Feature 36.1-1, and Feature 36.5-1 (Bedford Wash). The permanent loss of 0.02 acre of CWA Section 404/401 non-wetland waters would be mitigated at a minimum 2:1 ratio.

During construction, there is increased risk for permanent impacts on the adjacent jurisdictional waters. Indirect impacts on federal jurisdictional waters adjacent to the Project may include the loss of habitat through increased risk of fire, water pollution, litter, unintended loss of habitat, decreased water quality, and increased exposure to invasive plant species. The Avoidance and Minimization Measures identified in the NES, including BMPs, such as Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-19 (NES BIO-24)** and Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*; and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** in Section 2.4.2.4 are designed to minimize or avoid habitat loss and degradation due to the effects described above and would ensure these potential effects are reduced so the effects would not lead to the inadvertent loss of federal jurisdictional waters.

Once the Project is constructed and operational, there are additional long-term effects that would occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to ROW maintenance. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD. The implementation of BMPs during operation would minimize these effects.



CDFW Jurisdictional Resource	Permanent Impact (acres)	Temporary Impacts (acres)	Shading Impacts (acres)	Total Impacts (acres)
CDFW Unvegetated Streambed	0.10	3.79	1.00	**4.89**
Potential Non-Jurisdictional Unvegetated Streambed - Construction in Uplands	0.02	0.91	--	**0.93**
Total Streambed	***0.12***	***4.70***	***1.00***	***5.82***
CDFW Riparian	<0.01	1.80	0.46	**2.26**
Total Riparian	***<0.01***	***1.80***	***0.46***	***2.26***
Grand Total	**0.12**	**6.50**	**1.47**	**8.09**

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Figure 2.4.2-2 - Map Index
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 1
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 2
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 3
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 4
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 5
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 6
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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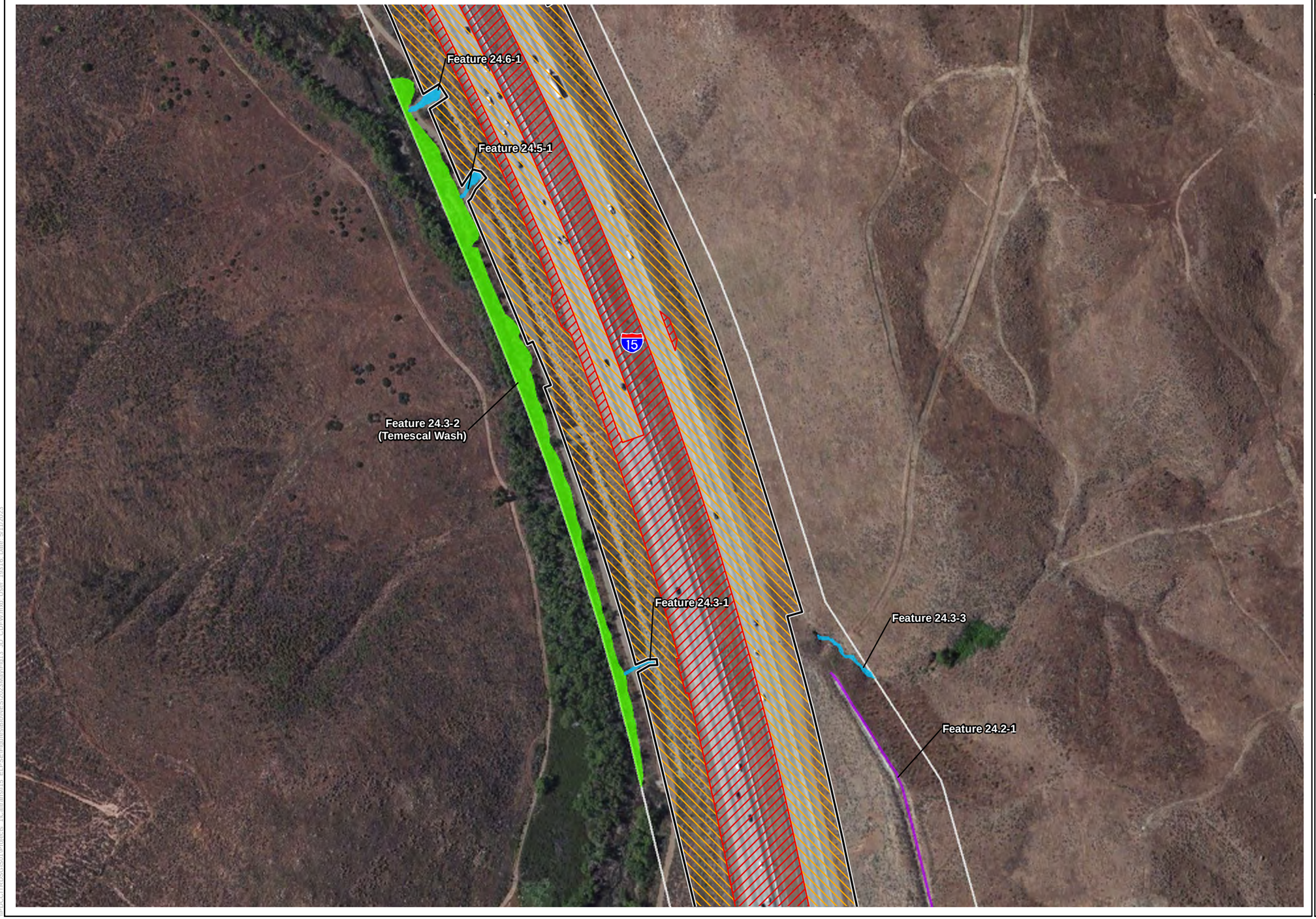

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 7
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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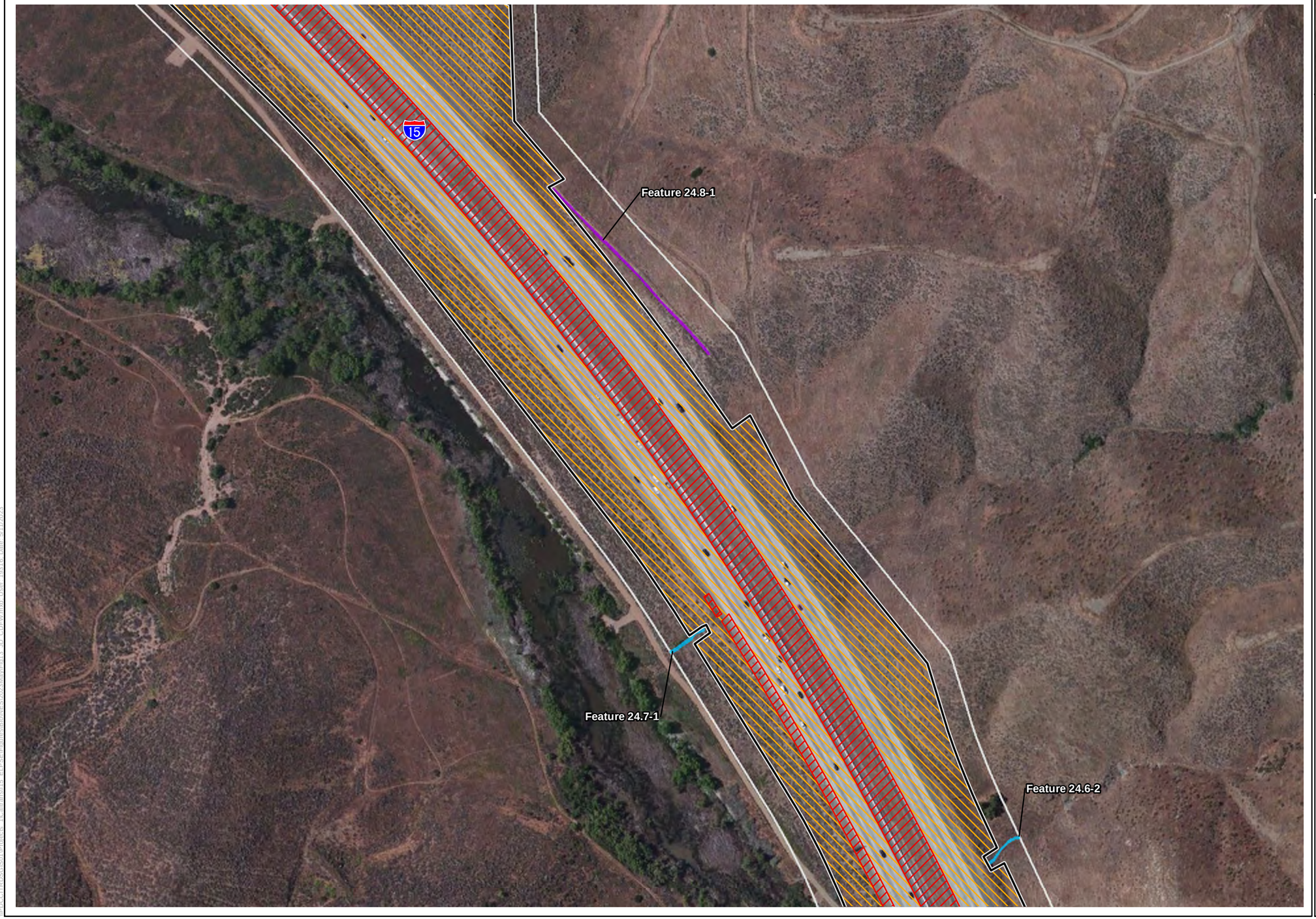

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 8
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 9
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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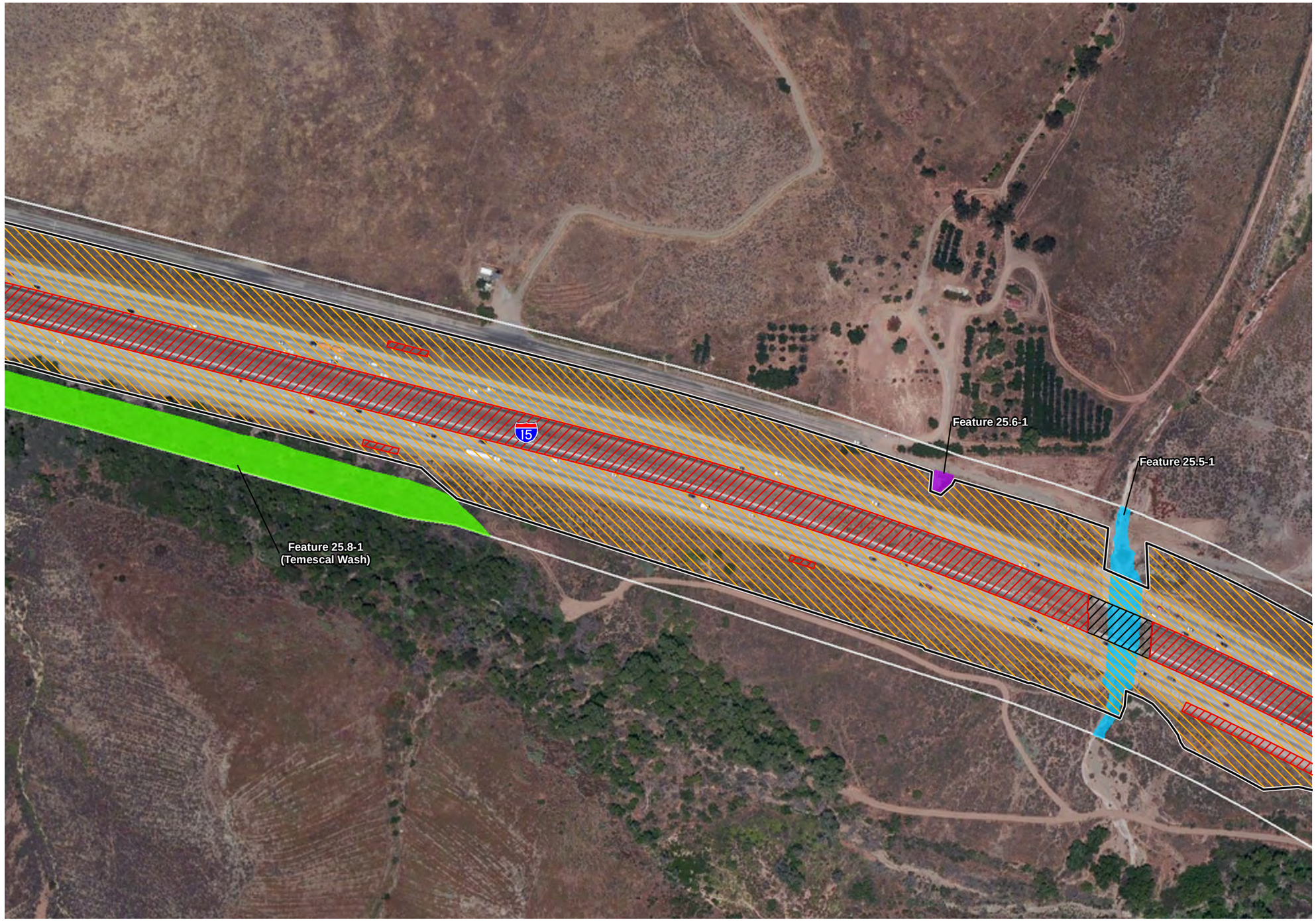

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 10
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 11
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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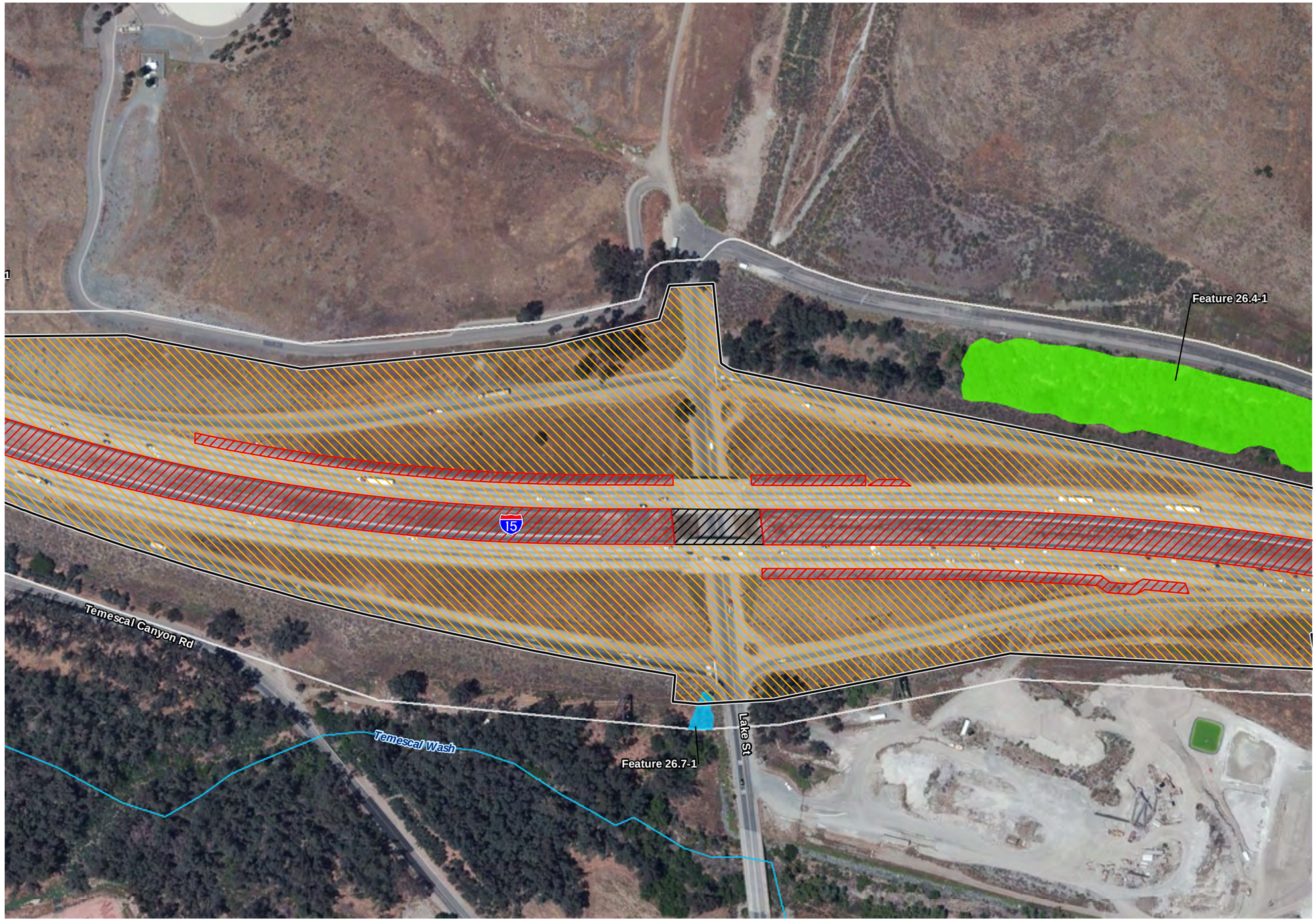

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 12
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 13
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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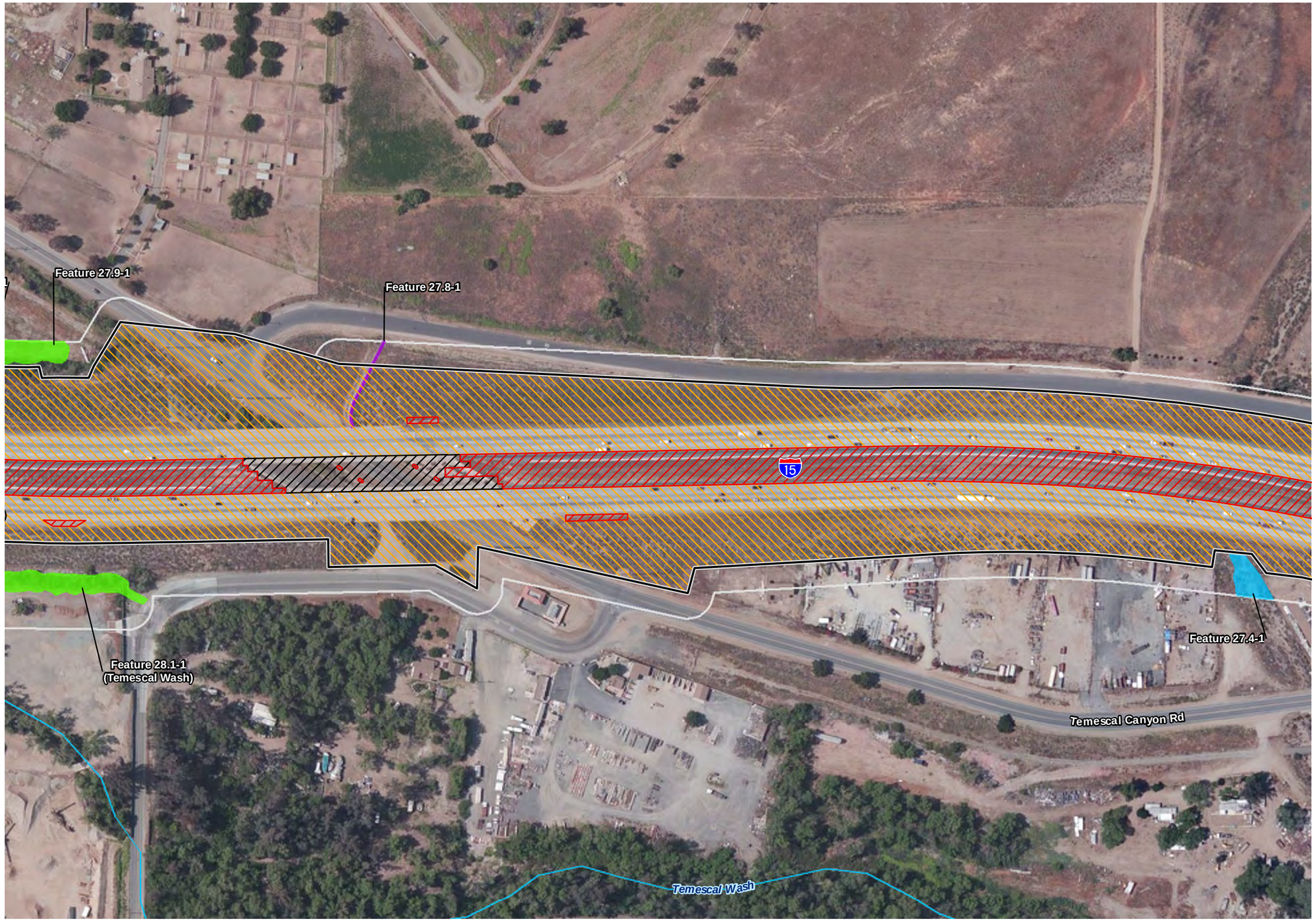

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 14
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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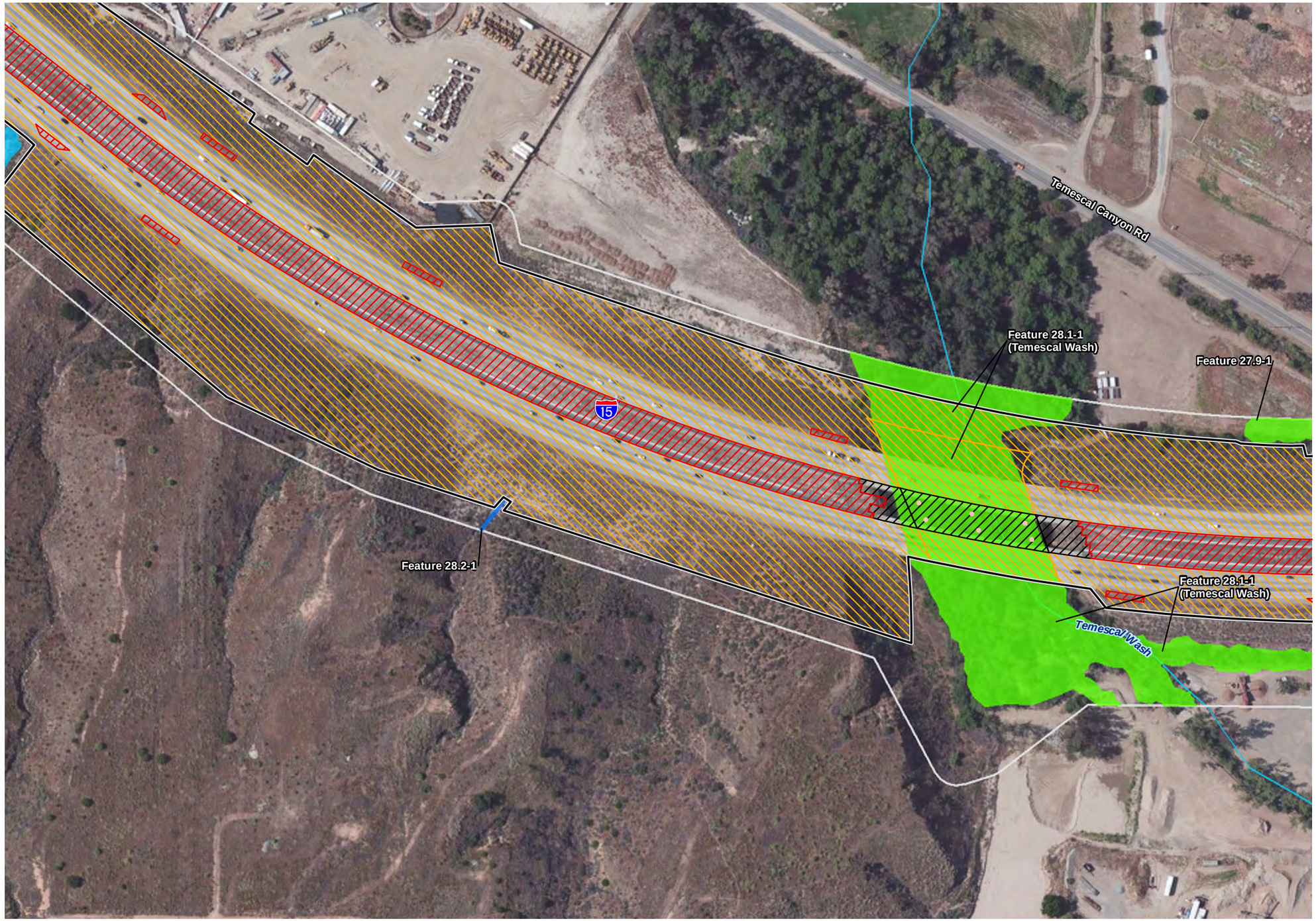

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 15
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 16
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 17
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 18
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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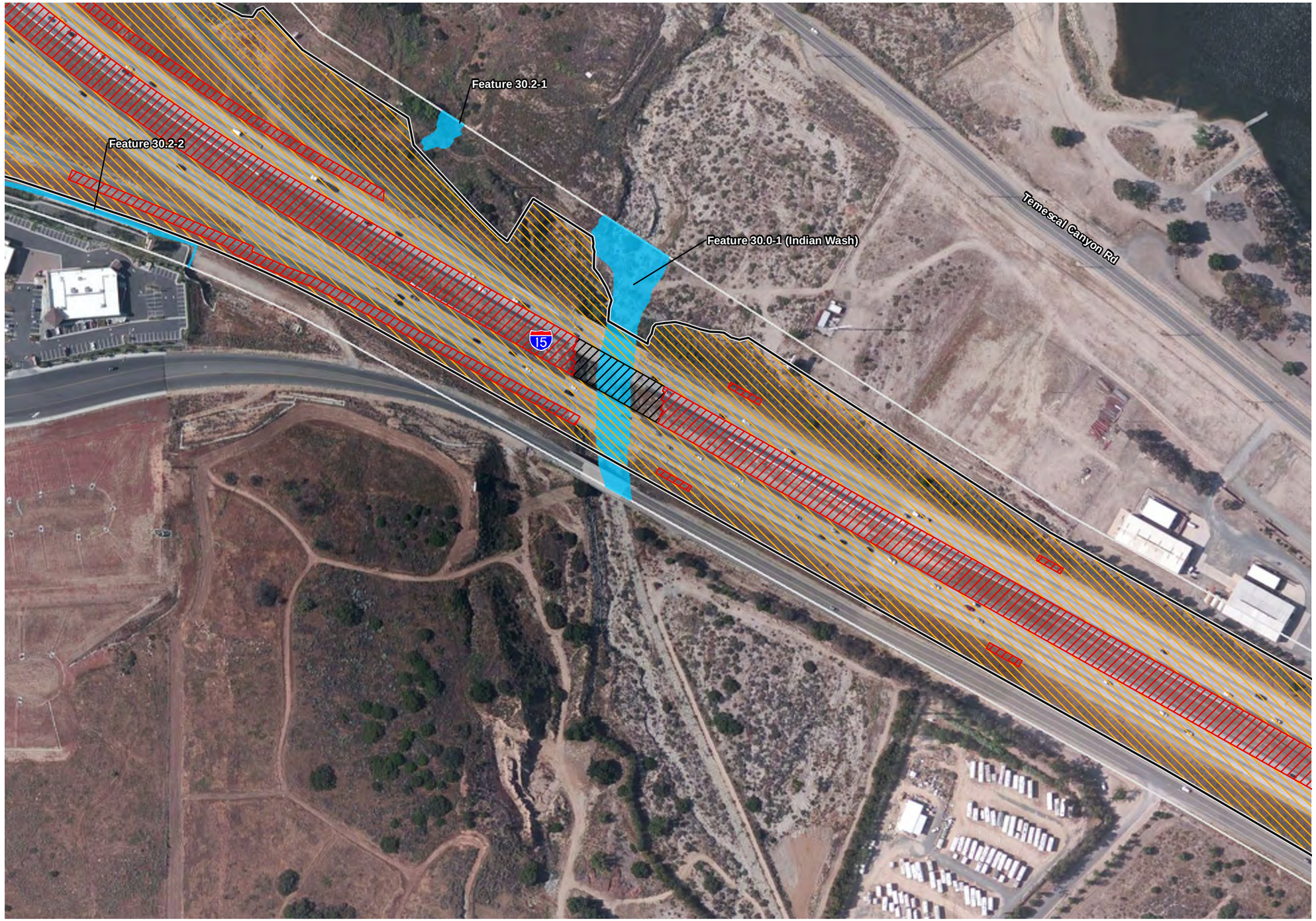

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 19
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 20
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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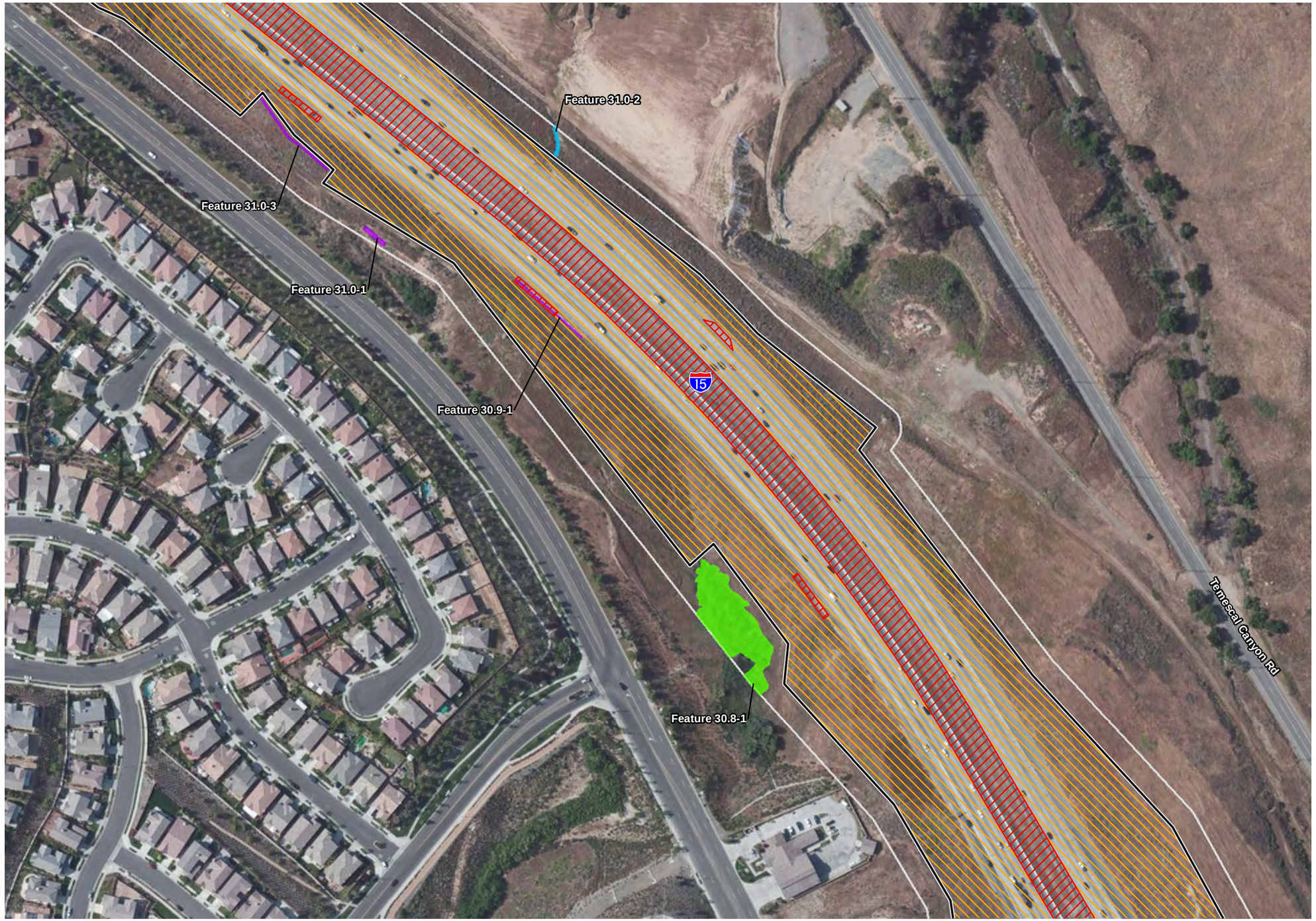

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 21
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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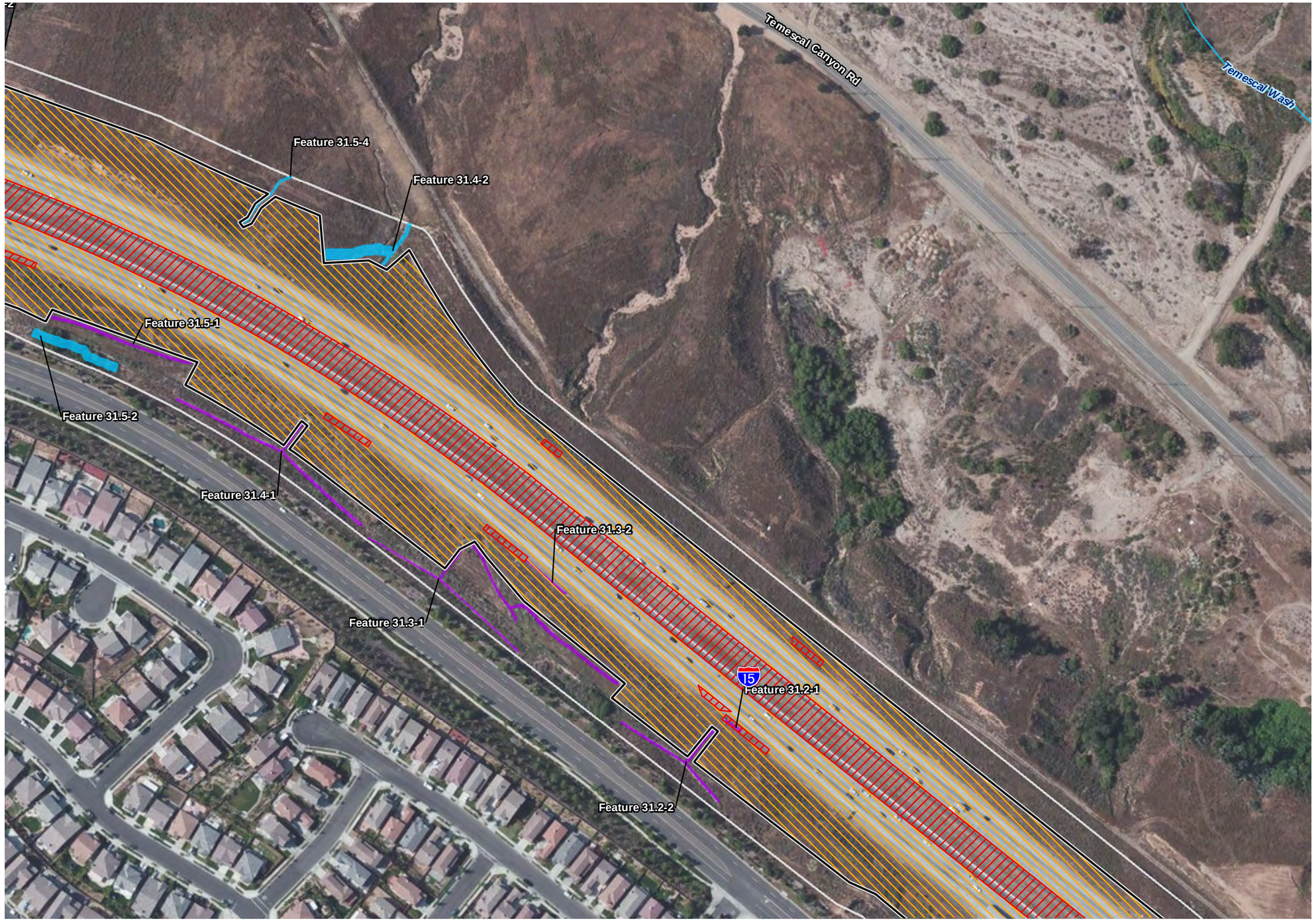

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 22
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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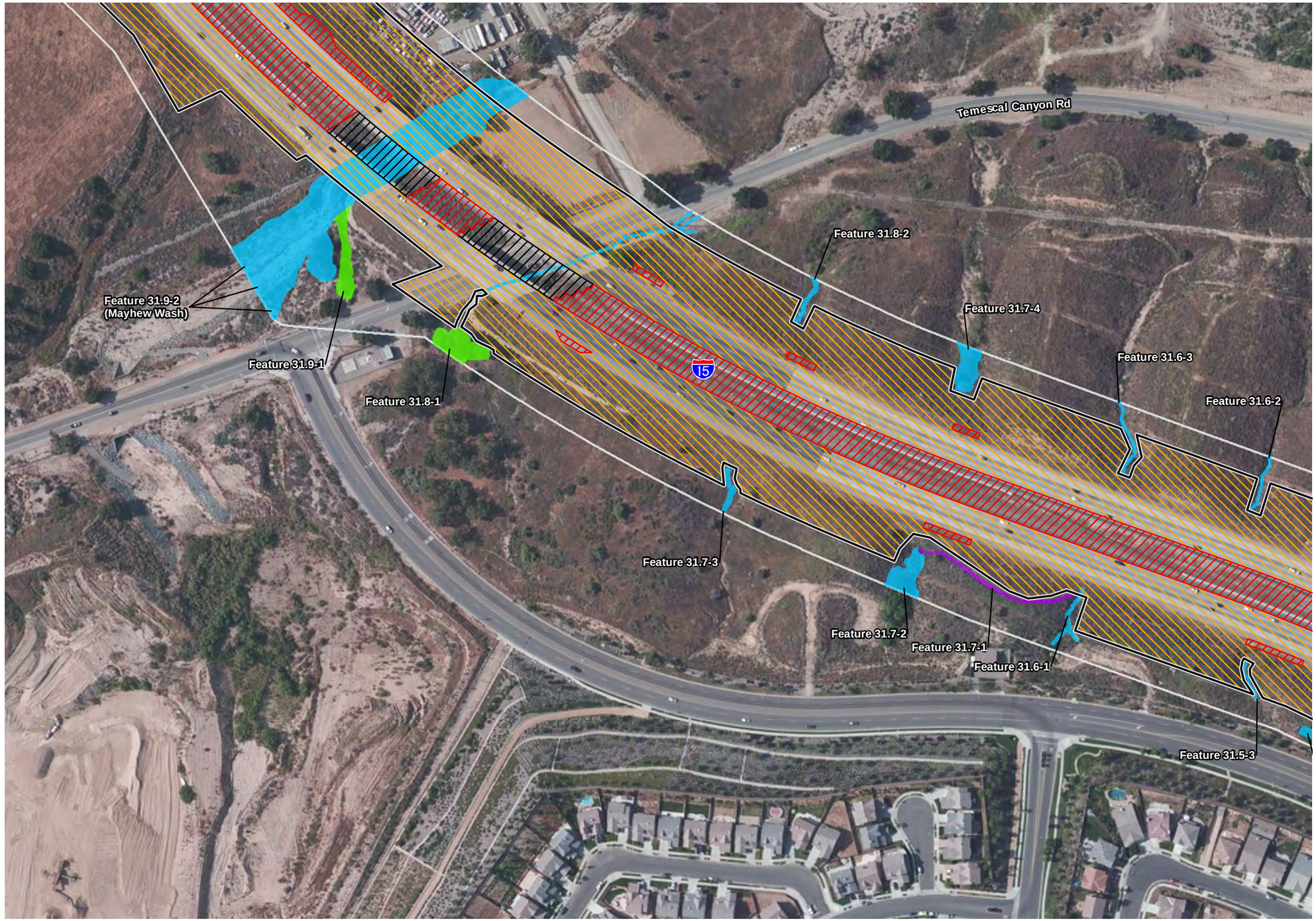

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 23
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

0 200 400 Feet

1:2,400

N

Figure 2.4.2-2 - Sheet 24
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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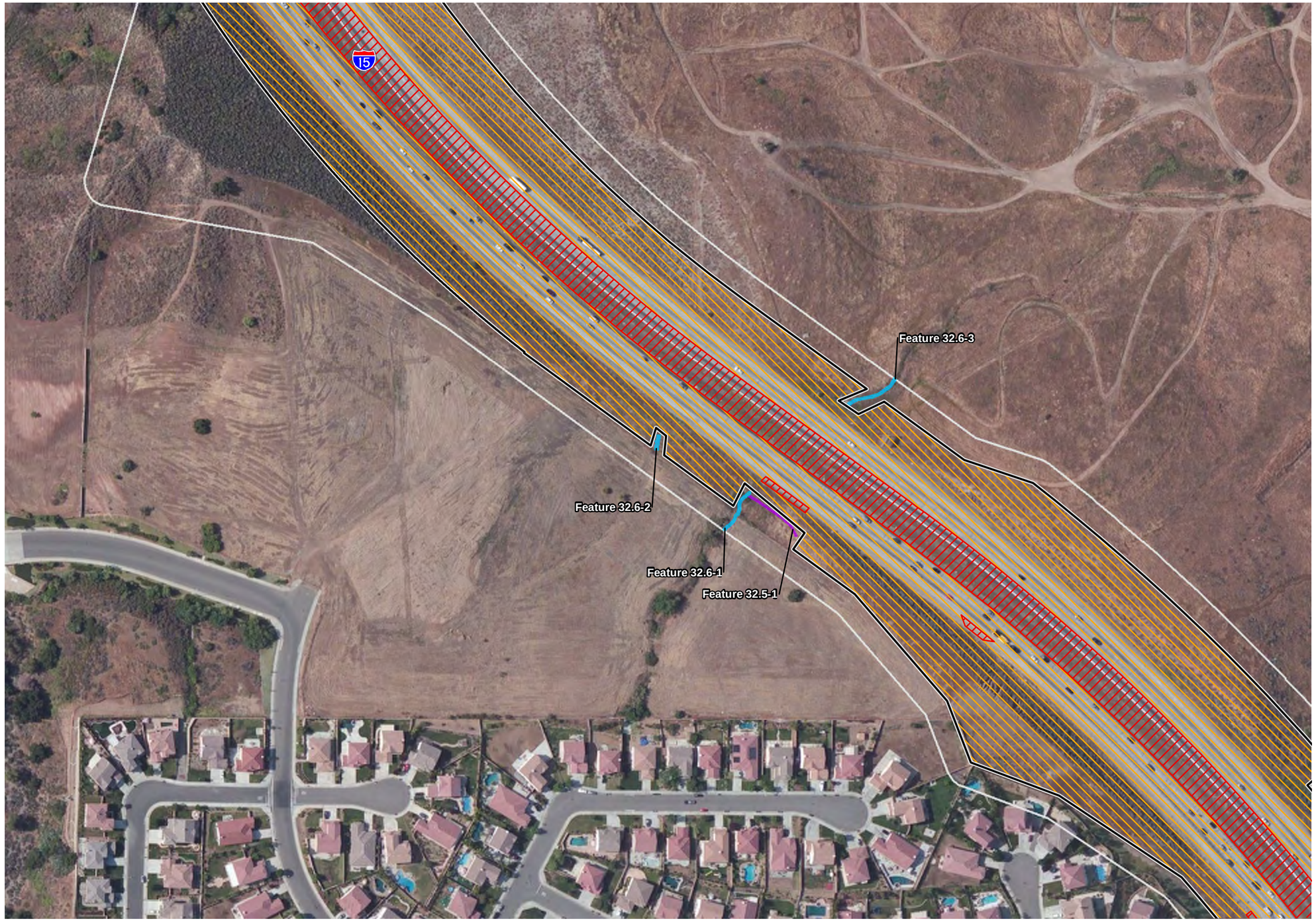

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 25
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 26
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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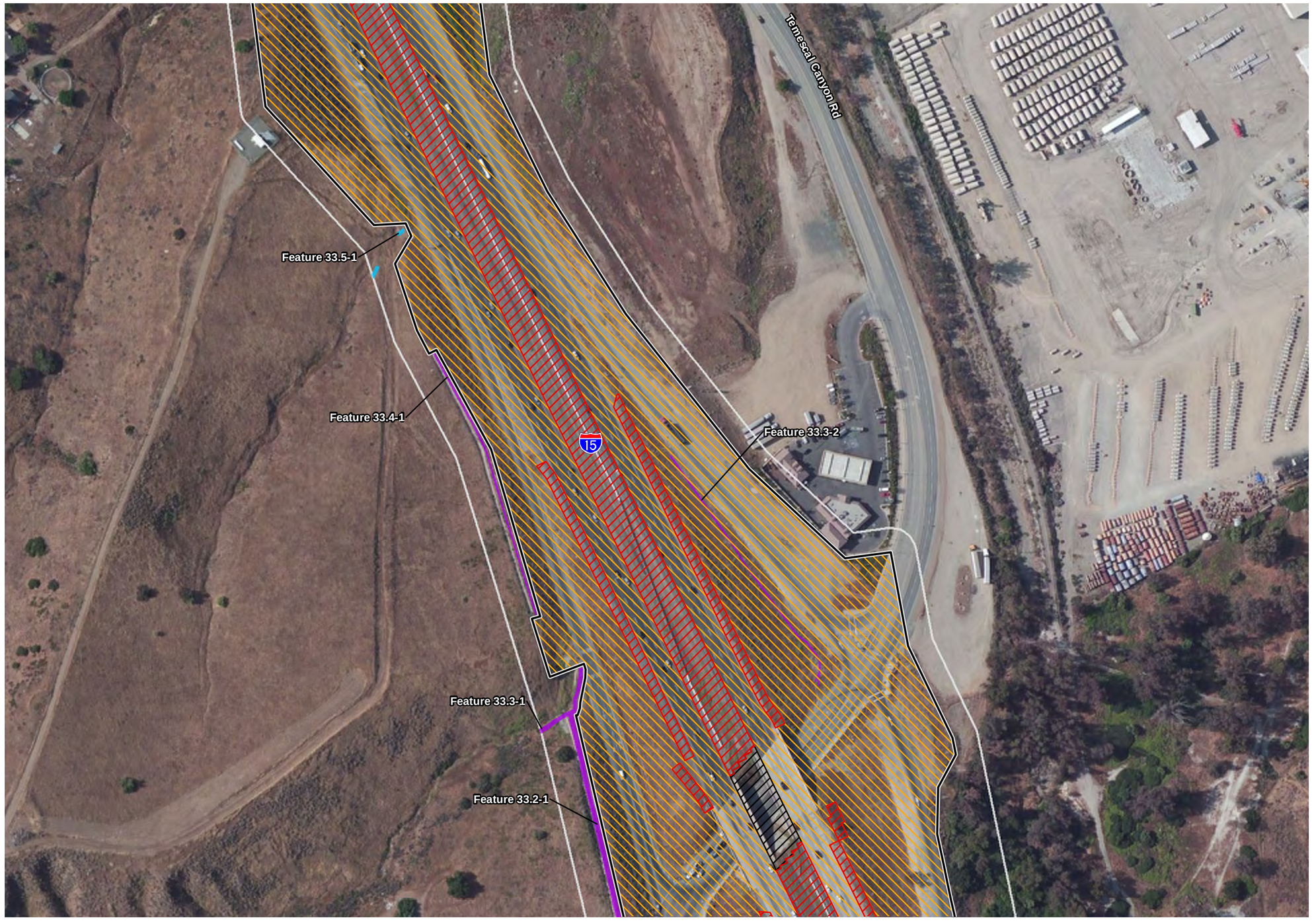

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 27
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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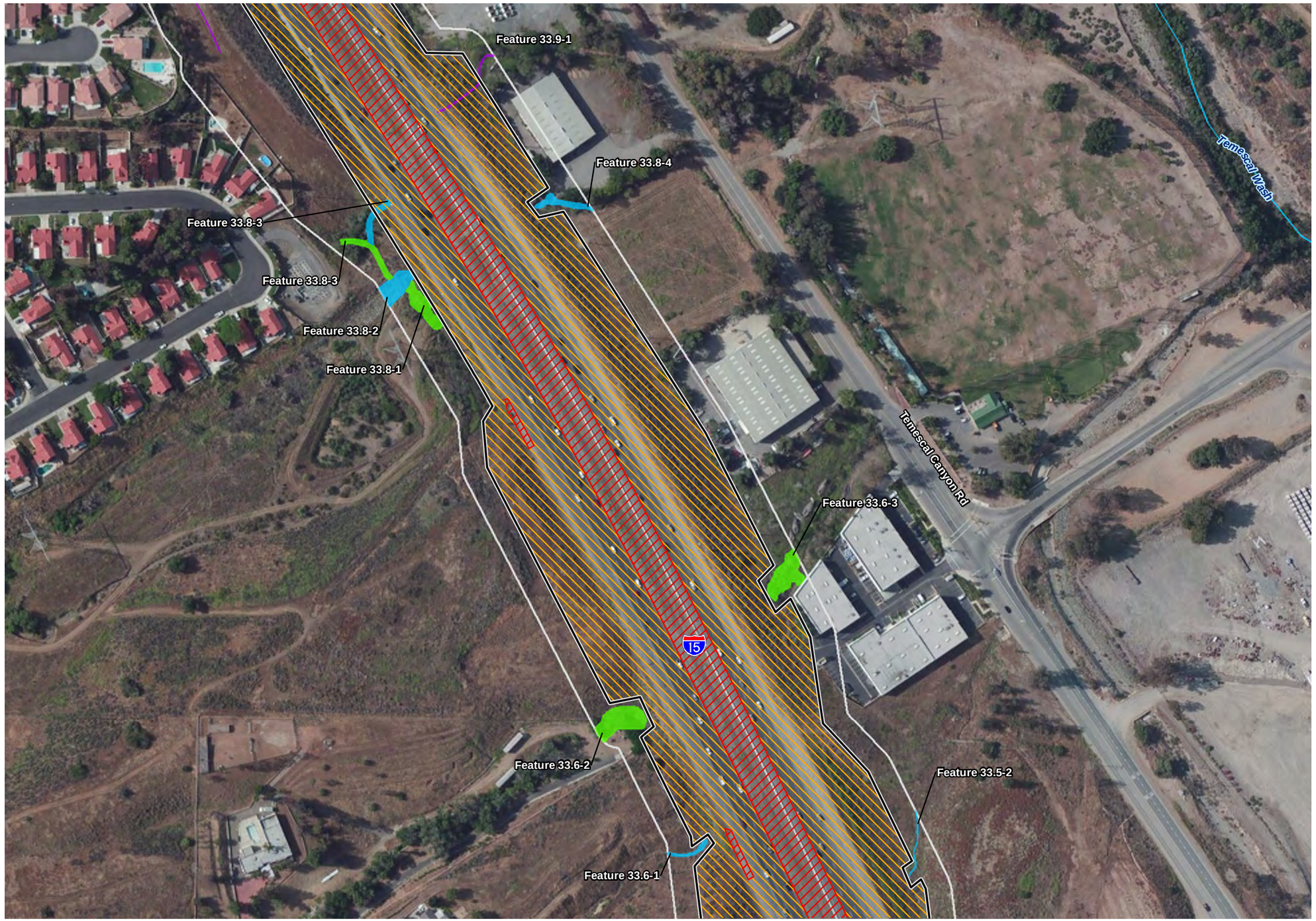

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 28
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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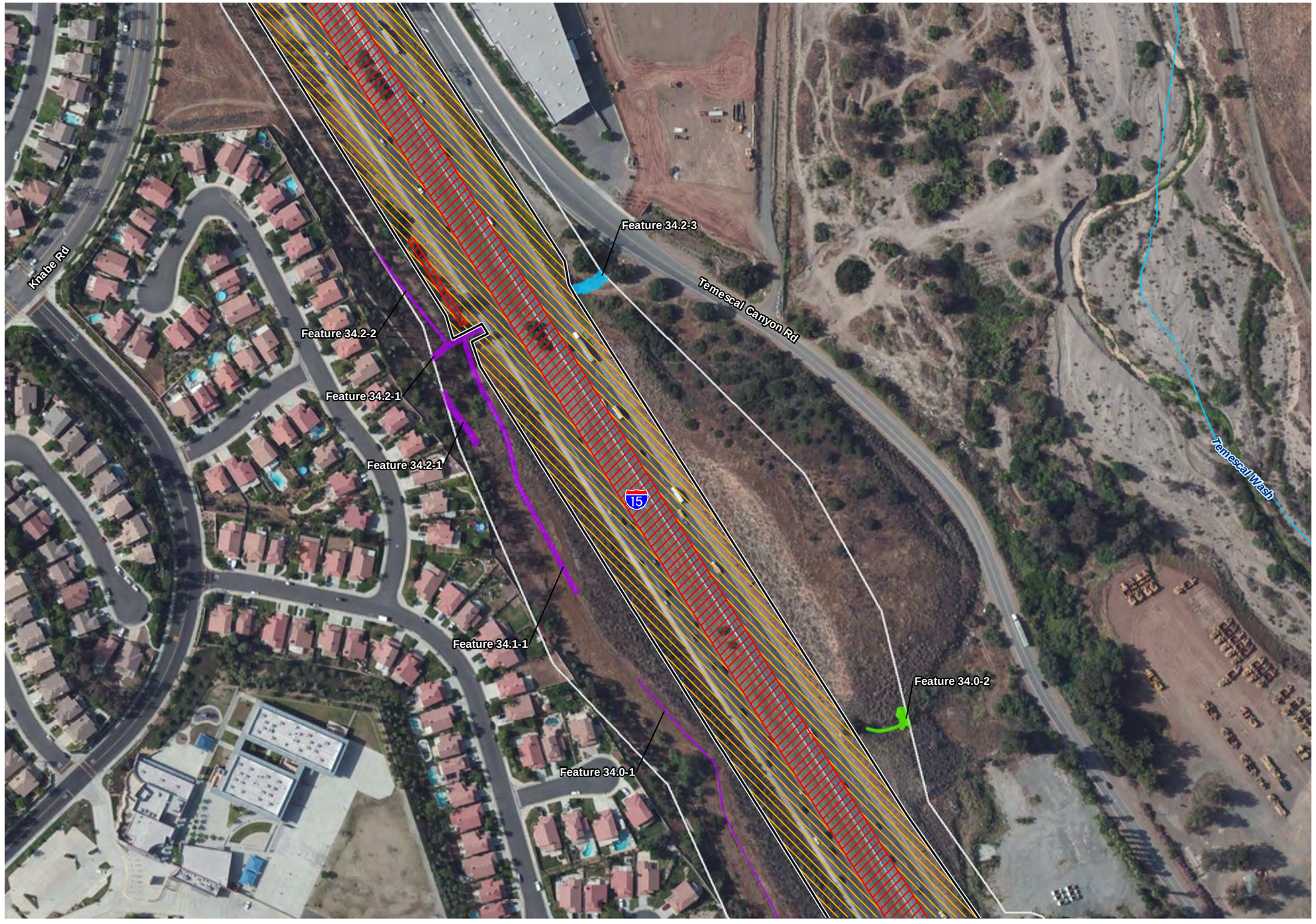

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

0 200 400 Feet

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Figure 2.4.2-2 - Sheet 29
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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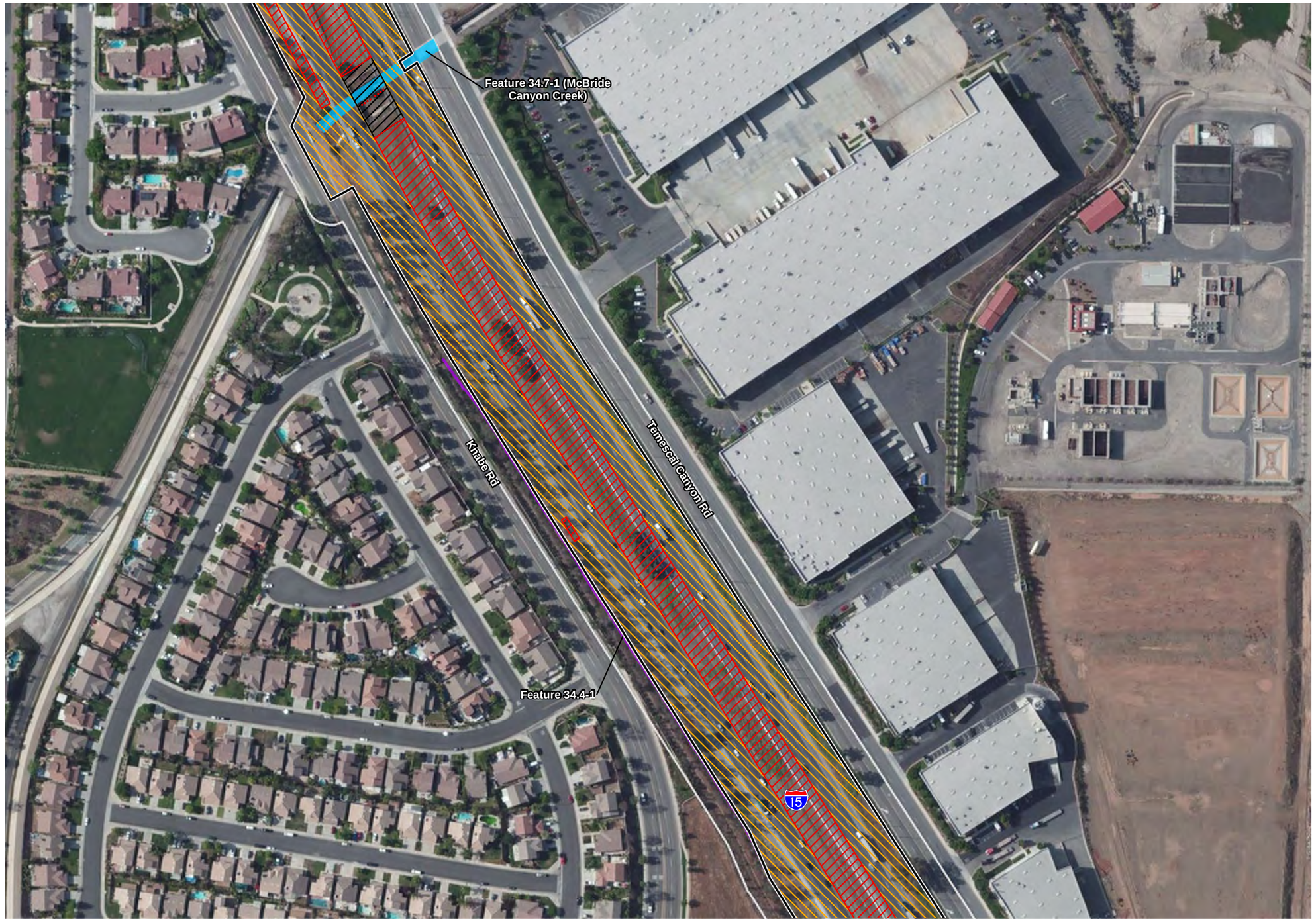

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 30
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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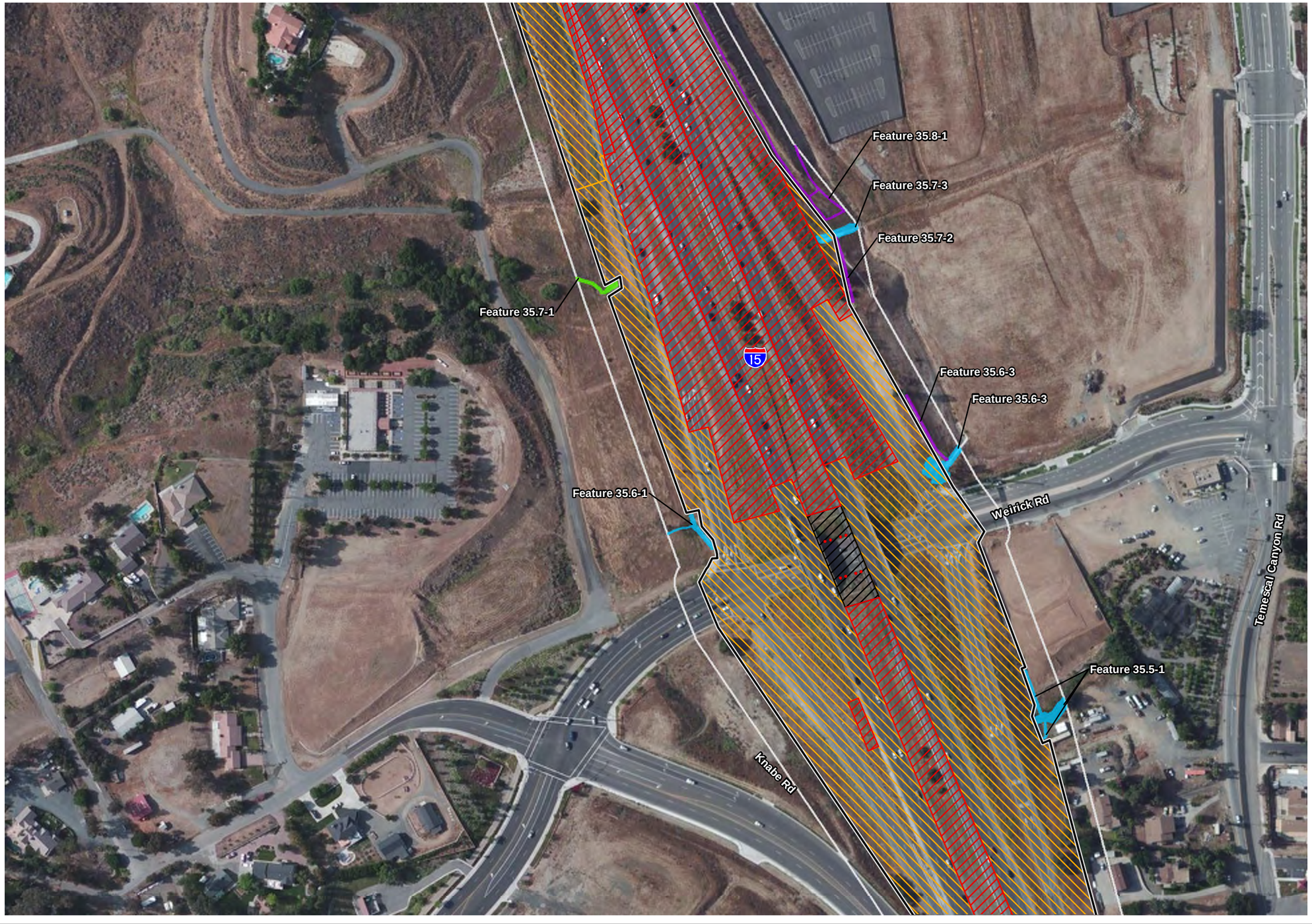

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 31
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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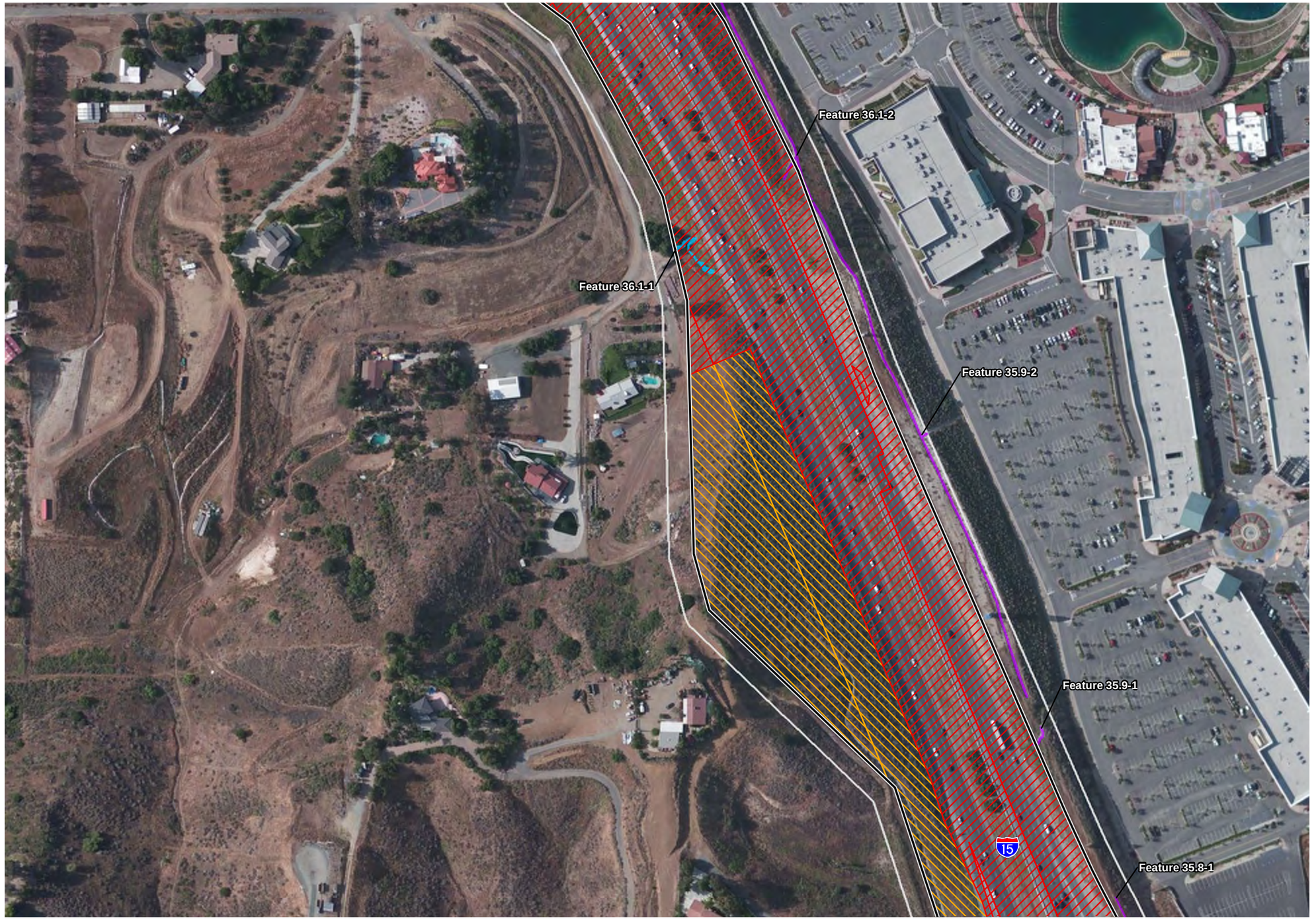

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 32
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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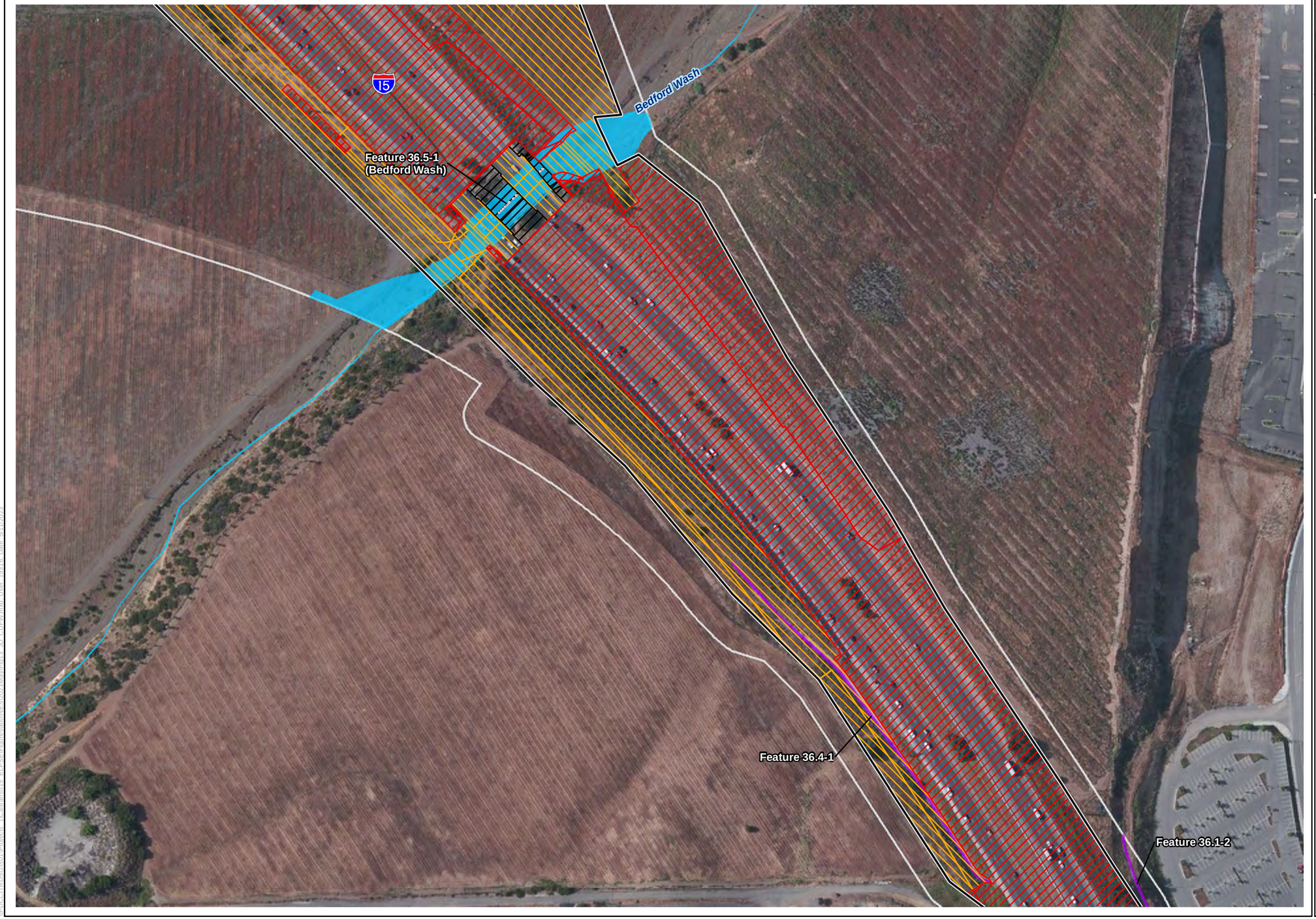

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 33
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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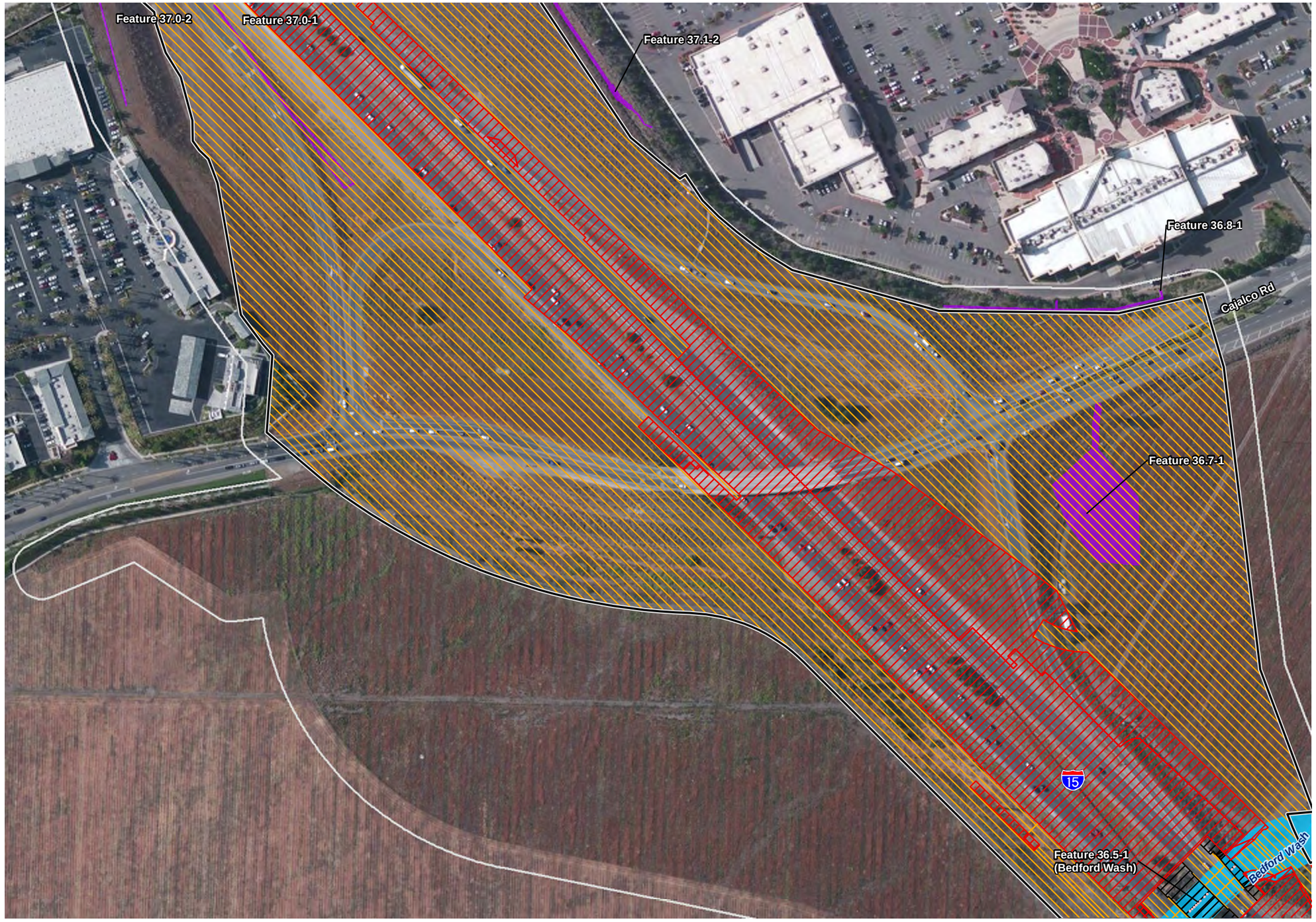

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 34
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- NHD Flowline

CDFW Jurisdictional Features

- Streambed
- Streambed (Isolated)
- Riparian

Other Aquatic Features

- Constructed in Uplands

Source: ESRI USA Imagery

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Figure 2.4.2-2 - Sheet 35
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

NHD Flowline

CDFW Jurisdictional Features

Streambed

Streambed (Isolated)

Riparian

Other Aquatic Features

Constructed in Uplands

Source: ESRI USA Imagery

N

0 200 400 Feet

1:2,400

Figure 2.4.2-2 - Sheet 36
CDFW Jurisdictional Resources
Interstate 15 Express Lanes Project Southern Extension

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CDFW Jurisdiction

The permanent impacts on CDFW jurisdictional waters would result from the placement of piers, rock rip-rap, and supporting structures from widening of bridges and would occur within Feature 21.5-1 (Wasson Canyon Wash), Feature 36.1-1, and Feature 36.5-1 (Bedford Wash). There is an anticipated loss of 0.10 acre of CDFW unvegetated streambed. This is proposed to be mitigated at a ratio of 2:1 with Mitigation Measure **NC-16 (NES BIO-16**) in Section 2.4.1, *Natural Communities*. This is not in addition to the mitigation required for USACE permanent impacts. The Avoidance and Minimization Measures outlined above under *Temporary Impacts* would apply to permanent Impacts.

Permanent impacts are anticipated from the installation of bridge piers, BMPs, and other work associated with the permanent construction area. A proposed mitigation ratio of 3:1 for permanent impacts on riparian resources and a ratio of 2:1 for permanent impacts on riverine resources would result in no net loss of these resources.

During construction, there is increased risk for permanent impacts on the adjacent state streambeds. Indirect impacts on state jurisdictional waters adjacent to the Project may include degradation of habitat through increased risk of fire, water pollution, litter, unintended loss of habitat, decreased water quality, and increased exposure to invasive plant species. The Avoidance and Minimization Measures identified in the NES, including BMPs, such as Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-19 (NES BIO-24)** and Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*; and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** in Section 2.4.2.4 are designed to minimize or avoid habitat loss and degradation due to the effects described above and would ensure these potential permanent effects are reduced.

Shading Impacts

USACE/RWQCB Jurisdiction

Shading can eliminate or appreciably reduce the direct sunlight available to plants and permanently reduce relative cover of wetland hydrophytic vegetation. Where bridge shading is expected to result in a type conversion of wetland WoUS to non-wetland WoUS, the conversion permanently alters the functions and values of these resources but is not considered a direct loss of waters (i.e., no placement of fill). Therefore, a mitigation ratio of 2:1 for this effect rather than 3:1 would occur.

However, where shading of non-wetland WoUS occurs, this would not result in a conversion of waters, and there is therefore no shading effect on these resources. The shading impact of 0.47 acre on USACE Section 404/401 non-wetland waters (Table 2.4.2-2) would not result in a type conversion and no direct loss of waters would occur. Therefore, a mitigation ratio of 1:1 is proposed. The loss of non-wetland and wetland WoUS would require compensatory mitigation as described in Section 2.4.2.4 (refer to Mitigation Measures **NC-16 [NES BIO-16]** and **NC-17 [NES BIO-17]** in Section 2.4.1,

Natural Communities). The mitigation required here is not in addition to the mitigation required for CDFW shading impacts.

Once the Project is constructed and the Project is operational, there are additional long-term effects that would occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to ROW maintenance. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD. The implementation of BMPs during operation would minimize these effects.

CDFW Jurisdiction

Shading impacts are expected because, as a part of the Project, the dual bridges at nine wash crossings would be widened to fill in the existing gaps. Shading can eliminate or appreciably reduce the direct sunlight available to plants and permanently reduce relative cover of wetland hydrophytic vegetation. As detailed in the DBESP, the construction-related impacts due to shading are proposed to be mitigated at a ratio of 2:1 (Caltrans 2024), as these impacts are not classified as temporary impacts but as type conversions and are therefore permanent shading effects. Bridge shading is expected to result in a conversion of CDFW riparian streambed to unvegetated streambed. The conversion from CDFW riparian streambed to unvegetated streambed would permanently alter the functions and values of these resources but would not be considered a direct loss of streambed (i.e., no direct modification of the bed, bank, or channel). Where shading would result in the permanent conversion of CDFW riparian streambed to unvegetated streambed, the mitigation ratios for this effect would occur at 2:1 rather than 3:1. Because shading of CDFW unvegetated streambed (1.00 acre) would not result in a conversion of waters, there would be no shading effect on these resources. The shading impact on 0.46 acre of CDFW riparian resources would result in a type conversion, and a mitigation ratio of 2:1 would be required (Table 2.4.2-3). The loss of wetland WoUS would require compensatory mitigation as described in Section 2.4.2.4. (Refer to Mitigation Measures **NC-16 [NES BIO-16]** and **NC-17 [NES BIO-17]** in Section 2.4.1, *Natural Communities*, and the DBESP.)

Based on an analysis of the importance of riparian resources in the JSA and given the general quality of the riparian resources and connectivity in the Project (each feature is discussed within the DBESP [Caltrans 2024]), a mitigation ratio of 2:1 for shading impacts on riparian resources would generally be biologically superior or equivalent to the functions and values of the No-Build Alternative.

Once the Project is constructed and the Project is operational, there are additional long-term effects that would occur, including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials due to ROW maintenance and roadside effects. The potential indirect operation effects may reduce the functions and values of the existing jurisdictional resources adjacent to the LOD. The implementation of BMPs during operation would minimize these effects.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no impacts on USACE/RWQCB wetland and non-wetland WoUS and CDFW streambed and associated riparian habitat would occur.

2.4.2.4 Avoidance, Minimization, and/or Mitigation Measures

The following Avoidance and Minimization Measures are being proposed to avoid and minimize direct and indirect impacts on USACE/RWQCB wetland and non-wetland WoUS and CDFW streambed and associated riparian habitat: Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-19 (NES BIO-24)** and Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*; and **WET-1 (NES BIO-22)** below.

Implementation of Mitigation Measure **NC-16 (NES BIO-16)** in Section 2.4.1, *Natural Communities*, coordinates the mitigation required for permitting for the CDFW 1602 Streambed Alteration Agreement and the CWA 401 and 404 permitting. Details of the compensation for riparian/riverine (streambed) resources are included in the DBESP (Mitigation Measure **NC-15 [NES BIO-15]** in Section 2.4.1, *Natural Communities*). Mitigation Measure **NC-17 (NES BIO-17)** (in Section 2.4.1, *Natural Communities*) describes the option for compensatory mitigation for CDFW 1602 and CWA 401 and 404 permitting and references Mitigation Measure **TE-3 (NES BIO-23)** (in Section 2.4.5, *Threatened and Endangered Species*) regarding LBV compensatory mitigation (to avoid duplicative mitigation).

Should it occur, the permanent removal of occupied LBV habitat would be compensated at a minimum 3:1 ratio through creation and/or restoration (Mitigation Measure **TE-3 [NES BIO-23]**, in Section 2.4.5, *Threatened and Endangered Species*). Temporarily removed habitat removed during construction would be restored at the original location at a minimum ratio of 1.25:1 (a compensation ratio of 1:1 is not biologically equivalent or superior to the functions and values of the No-Build Alternative due to the temporal loss of habitat). Creation and restoration potential exists at Temescal Wash.

An Avoidance and Minimization Measure specific to wetlands and other waters is described below.

Avoidance and Minimization Measure WET-1 (BIO-22). A qualified monitor will be present during all construction phase work occurring in or within surface waters that are within 300 feet of Temescal Wash and its tributaries.

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2.4.3 Plant Species

2.4.3.1 Regulatory Setting

Federal and State Regulations

The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.4.5, *Threatened and Endangered Species*, in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Department projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act (CEQA), found at California Public Resources Code, Sections 21000-21177.

Local and Regional Regulations

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), a comprehensive regional habitat conservation plan, is discussed in Section 2.4.1, *Natural Communities*. Portions of the Project occur in the following MSHCP survey areas:

- Narrow Endemic Plant Species Survey Areas 1 and 7 (Section 6.1.3 of the MSHCP) (Figure 2.4.3-1)
- Criteria Area Species Survey Area 1 (Section 6.3.2 of the MSHCP) (Figure 2.4.3-2)

Within these survey areas, the MSHCP requires, at a minimum, onsite habitat evaluations for those survey area species that have been determined to have suitable habitat within the entire survey area. If potentially suitable habitat is present, then focused surveys must be conducted. Of the species listed below, the MSHCP non-listed special-status species are discussed in this section and the MSHCP listed species are discussed in Section 2.4.5.

Narrow Endemic Plant Species Survey Areas 1 and 7

- Narrow Endemic Plant Species Survey Area 1 Species:
    - Munz's onion (*Allium munzii*), federally listed endangered (FE), state-listed threatened (ST), California Rare Plant Rank (CRPR[1]) 1B.1
    - San Diego Ambrosia (*Ambrosia pumila*), FE, CRPR 1B.1
    - slender-horned spineflower (*Dodecahema leptoceras*), FE, state-listed endangered (SE), CRPR 1B.1
    - many-stemmed dudleya (*Dudleya multicaulis*), CRPR 1B.2
    - spreading navarretia (*Navarretia fossalis*) federally listed threatened (FT), CRPR 1B.1
    - California orcutt grass (*Orcuttia californica*), FE, SE, CRPR 1B.1
    - San Miguel savory (*Clinopodium chandleri*), CRPR 1B.2
    - Hammitt's clay-cress (*Sibaropsis hammittii*), CRPR 1B.2
    - Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*), CRPR 2.1
- Narrow Endemic Plant Species Survey Area 7 Species:
    - San Diego ambrosia
    - Brand's phacelia (*Phacelia stellaris*), CRPR 1B.1
    - San Miguel savory

Criteria Area Species Survey Area 1

- Criteria Area Plant Species Survey Area 1 Species:
    - thread-leaved brodiaea (*Brodiaea filifolia*), FT, SE, CRPR 1B.1
    - Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), CRPR 1B.2
    - Parish's saltscale (*Atriplex parishii*), CRPR 1B.1
    - round-leaved filaree (*California macrophylla*)
    - smooth tarplant (*Centromadia pungens* spp. *laevis*), CRPR 1B.1
    - Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*), CRPR 1B.1
    - little mousetail (*Myosurus minimus* spp. *apus*), CRPR 3.1

[1] The CNPS CRPR system ranges from presumed extinct species, CRPR 1A, to limited distribution species now on a watch list, CRPR 4.

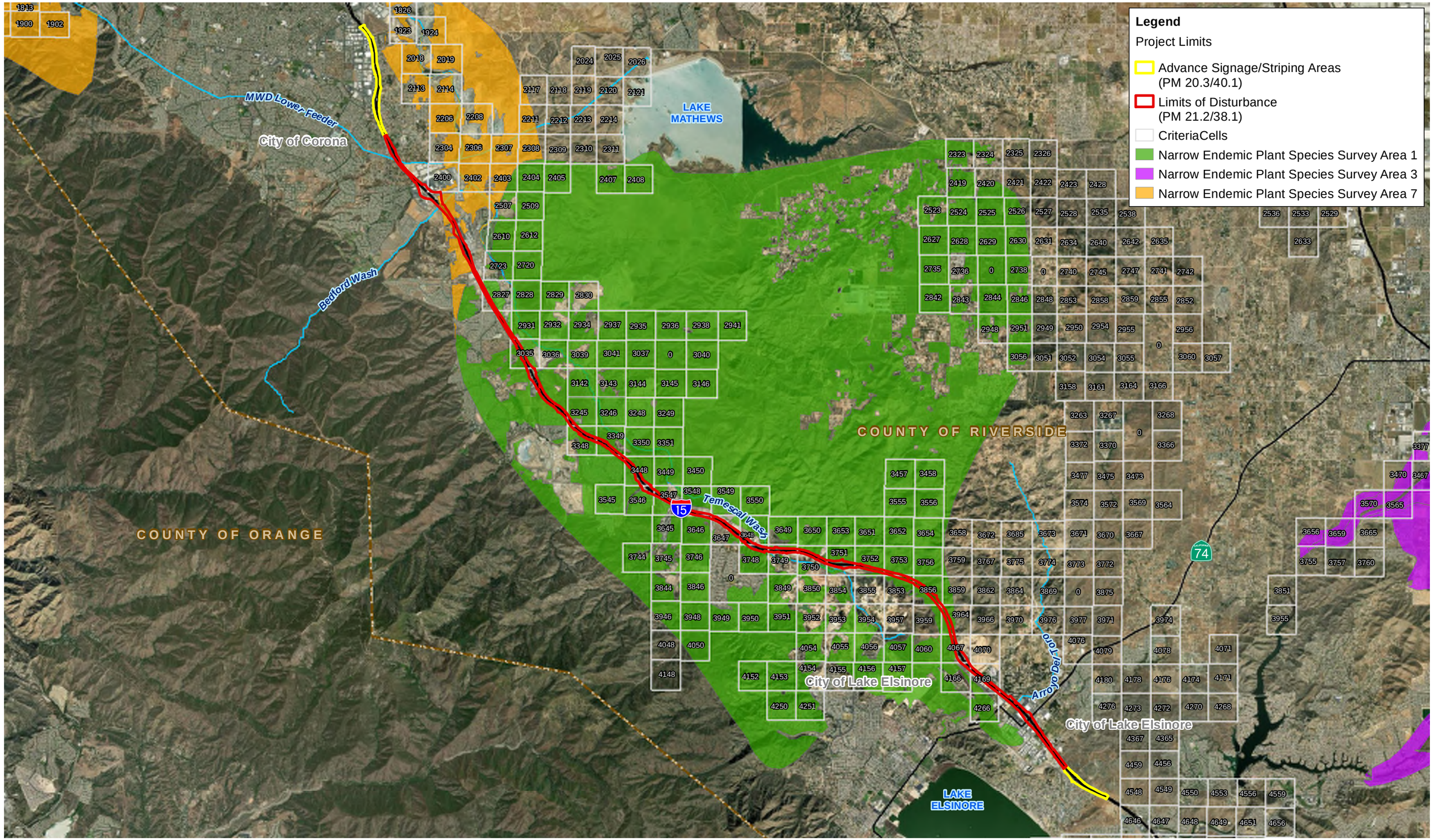

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Figure 2.4.3-1
MSHCP Survey Areas - Narrow Endemic Plants Survey Area
Interstate 15 Express Lanes Project Southern Extension

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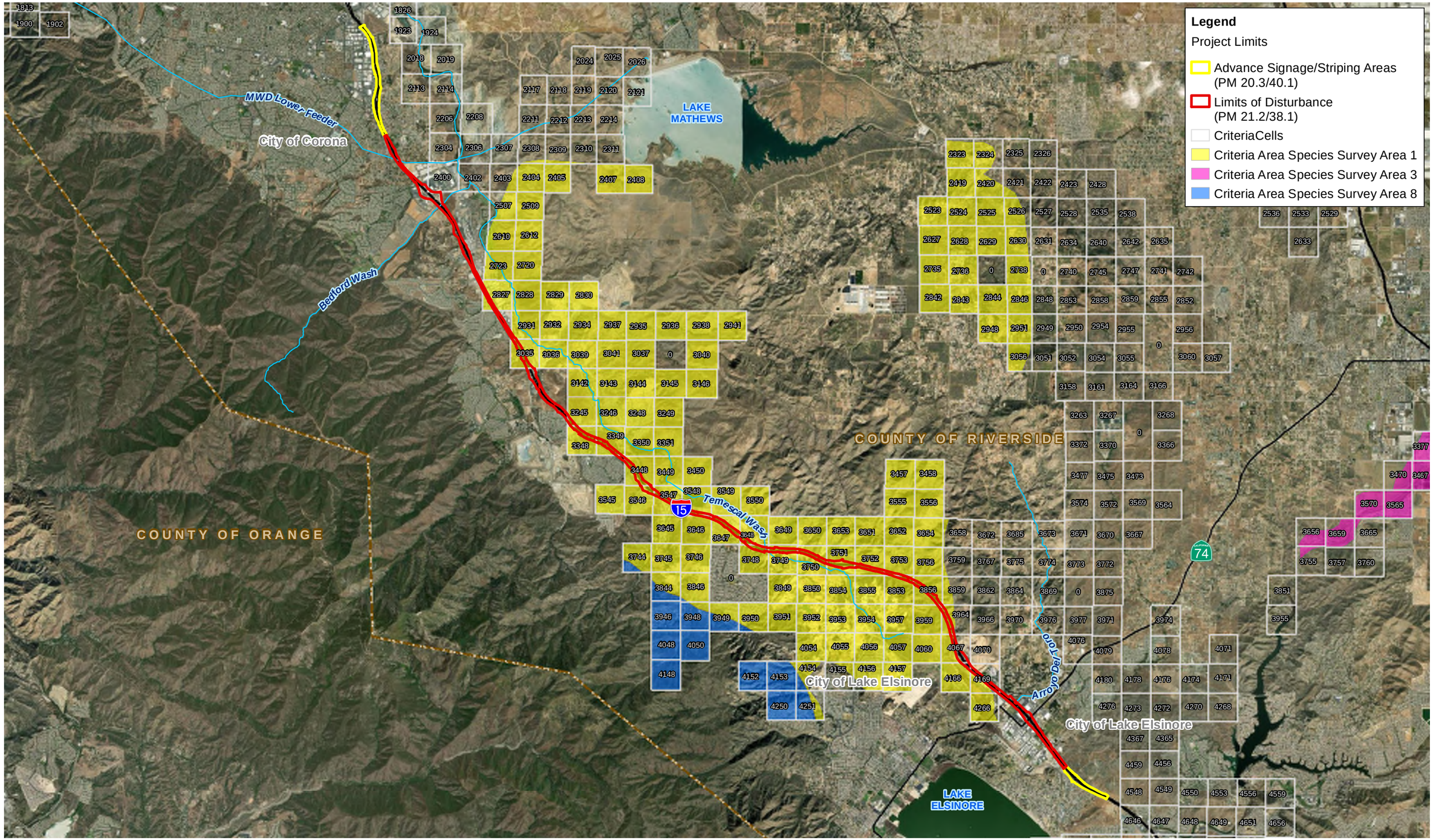

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Figure 2.4.3-2
MSHCP Survey Areas - Criteria Area Species Survey Area
Interstate 15 Express Lanes Project Southern Extension

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The MSHCP plant survey area maps are presented in Volume I of the MSHCP (Figures 6-1 and 6-2) and also included as Figure 2.4.3-1 and Figure 2.4.3-2 in this Environmental Impact Report/Environmental Assessment. The MSHCP requires the proposed Project to fulfill the requirements presented in MSHCP Volume I, Sections 6.1.3, 6.3.2, and 7.5.3, and implement the best management practices in Volume I, Appendix C of the MSHCP.

2.4.3.2 Affected Environment

Unless otherwise noted, the information in this section is based on the September 2023 Natural Environment Study (NES) prepared for the Project (Caltrans 2023). References used in the NES are not carried over into this section. Plant species in California that have special regulatory or management status were evaluated for potential to occur within the rare plant study area, which includes the Project limits of disturbance (LOD) plus a 100-foot buffer. To comply with the provisions of various state and federal environmental statutes and executive orders, potential impacts on natural resources in the region were investigated and documented.

Development of a list of potential species within the Project region was based on information compiled by USFWS, the California Natural Diversity Database (CNDDB), and the CNPS Rare Plant Inventory, which lists the CRPR for all species. Specifically, database searches were conducted for areas on the U.S. Geological Survey 7.5-minute quadrangle maps that include the rare plant study area as well as the directly adjacent quadrangle maps (i.e., Lake Elsinore, Wildomar, Alberhill, Sitton Peak, Murrieta, Romoland, Steele Peak, Lake Mathews, Perris, Corona South, Corona North, Santiago Peak, Prado Dam, Riverside East, Riverside West, and Black Star Canyon). Finally, species were added, as appropriate, as a result of professional knowledge or experience with prior projects in the vicinity. The entire biological study area (BSA) (i.e., Project LOD plus a 500-foot buffer) was assessed for the potential presence of sensitive biological and natural resources. The assessment considered habitat types, potential wetlands, special-status plants, and site disturbances.

Special-status plant surveys were conducted between April and June 2020 and between April and July 2021. Focused survey methods were derived from the standardized guidelines issued by USFWS, CDFW, and CNPS. Surveys were completed by walking meandering belt transects throughout suitable habitat where legally accessible. The distance between transects was adjusted when necessary to provide adequate coverage and account for ground surface visibility, terrain, vegetation density, and access constraints. Surveys were targeted within unique portions of the BSA where microhabitats had increased potential with respect to supporting special-status species. The focused rare plant surveys were conducted during the appropriate blooming season for all special-status plant species potentially occurring within the BSA that require flowers for detection. In addition, reference sites were visited to verify that the target species were in bloom during the focused survey. As described more thoroughly in Section 2.4.1, the 2,924-acre BSA supports 28 distinct vegetation communities or land cover types. A little over half of the total area within the BSA is developed/disturbed land (1,629 acres). The most common vegetation communities that

could support special-status plant species include herbaceous upland communities (364 acres), riparian communities (108 acres), shrubland upland communities (735 acres), and woodland and forest upland communities (87 acres). A full description of the natural vegetation communities within the BSA is provided in Section 2.4.1.

Special-Status Plant Species Observed

This section discusses only non-listed special-status plant species. Listed special-status plants are discussed in Section 2.4.5, *Threatened and Endangered Species*. No non-listed special-status plant species were documented in the rare plant study area during focused surveys conducted for the Project; however, long-spined spineflower, an MSHCP fully covered species, was incidentally observed in the rare plant study area during other field surveys performed for the Project (Sheets 3 and 4 of Figure 2.4.3-3).

Suitable habitat is present within 1,286.2 acres in the rare plant study area for an additional 50 species (19 of which are MSHCP-covered plant species) within the Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Salt Grass Flats, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, Scrub Oak Chaparral, California Sycamore Woodland, Eucalyptus–Tree of Heaven–Black Locust Groves, Pepper Tree or Myoporum Forest and Woodland, and Agriculture habitats.

None of these 50 species were observed during the 2020 and 2021 focused special-status plant surveys. These species are presented in Table 2.4.3-1, along with all other non-listed special-status plants that were analyzed for potential to occur within the rare plant study area.

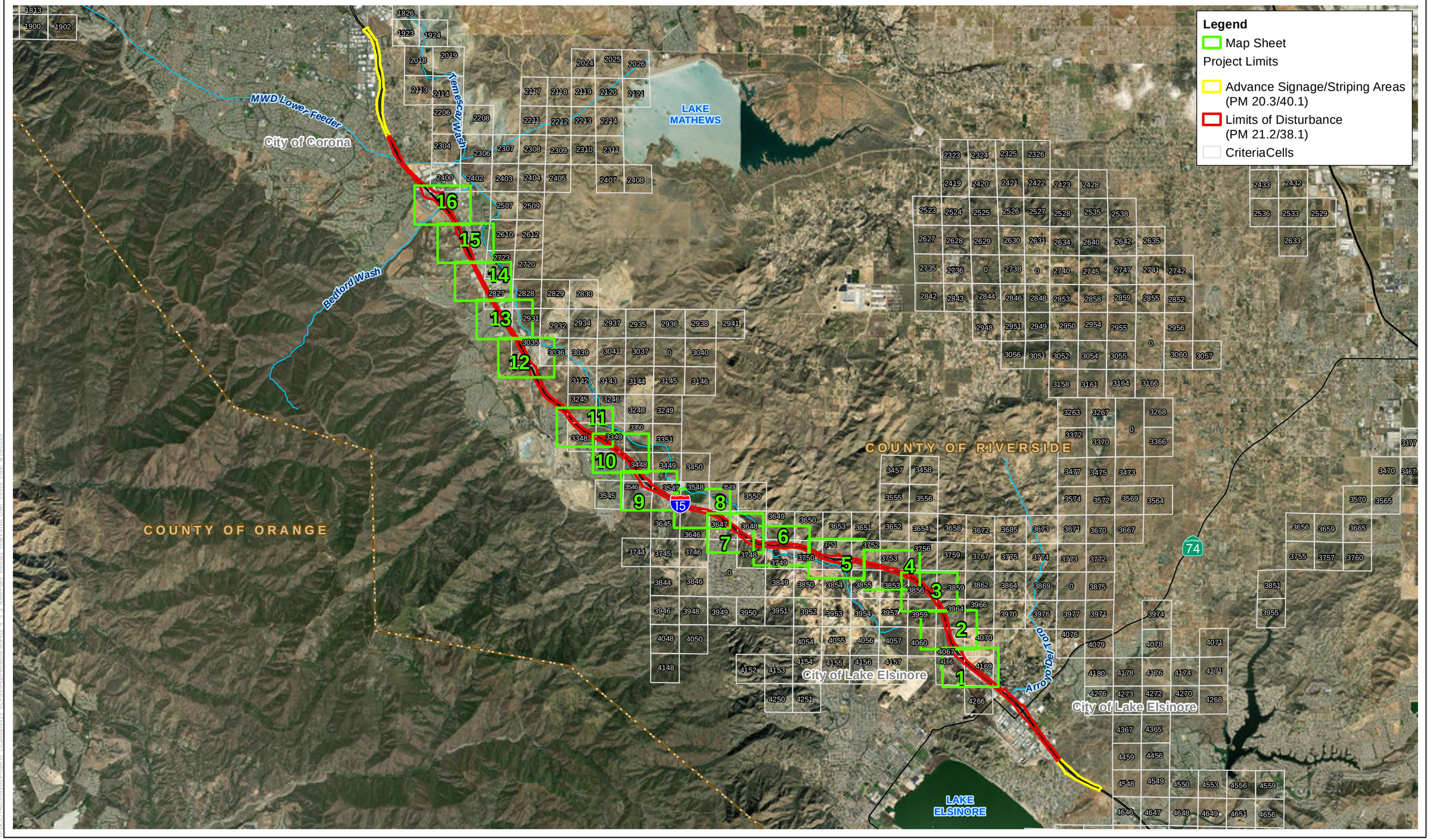

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Figure 2.4.3-3 - Map Index
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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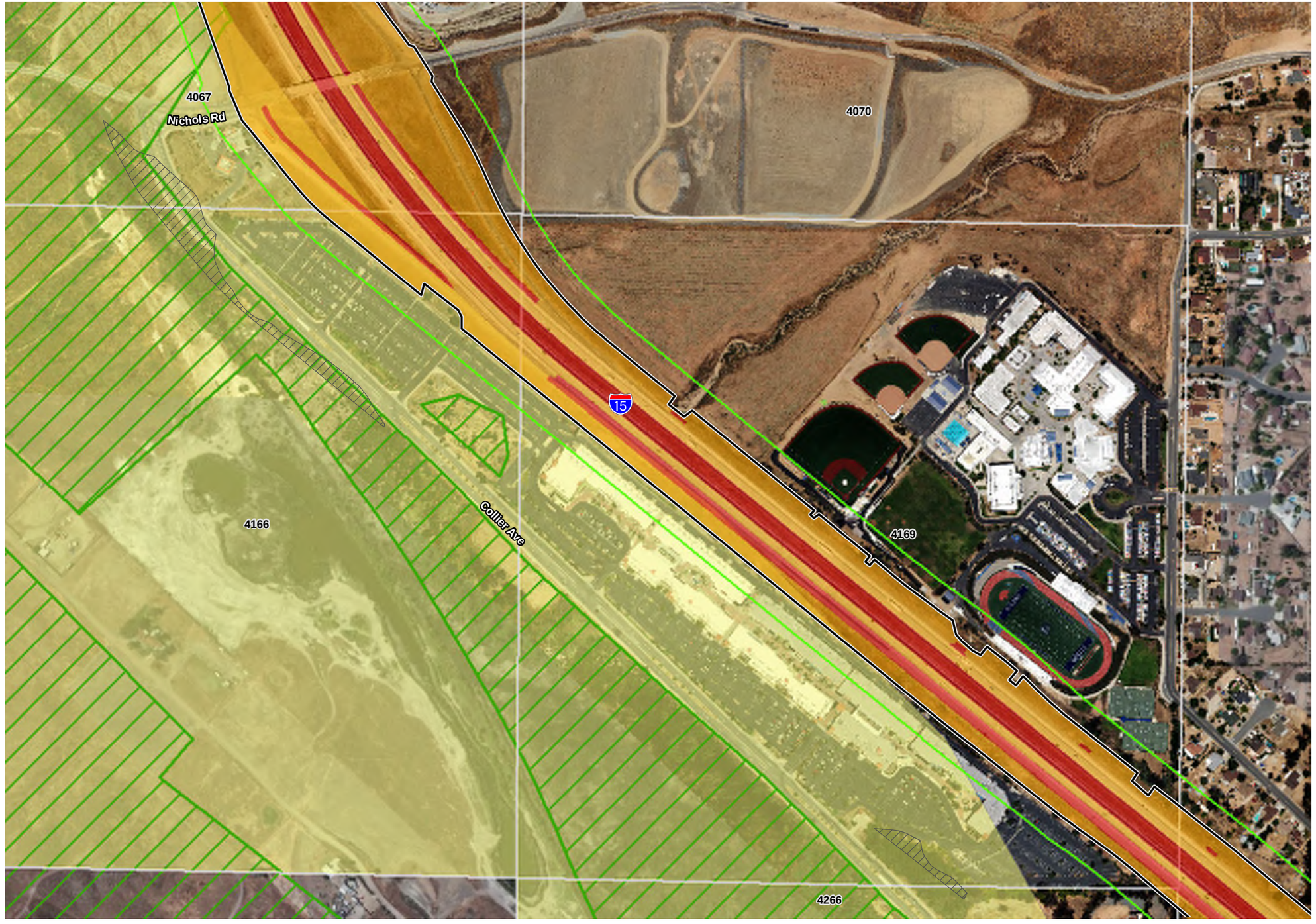

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 1
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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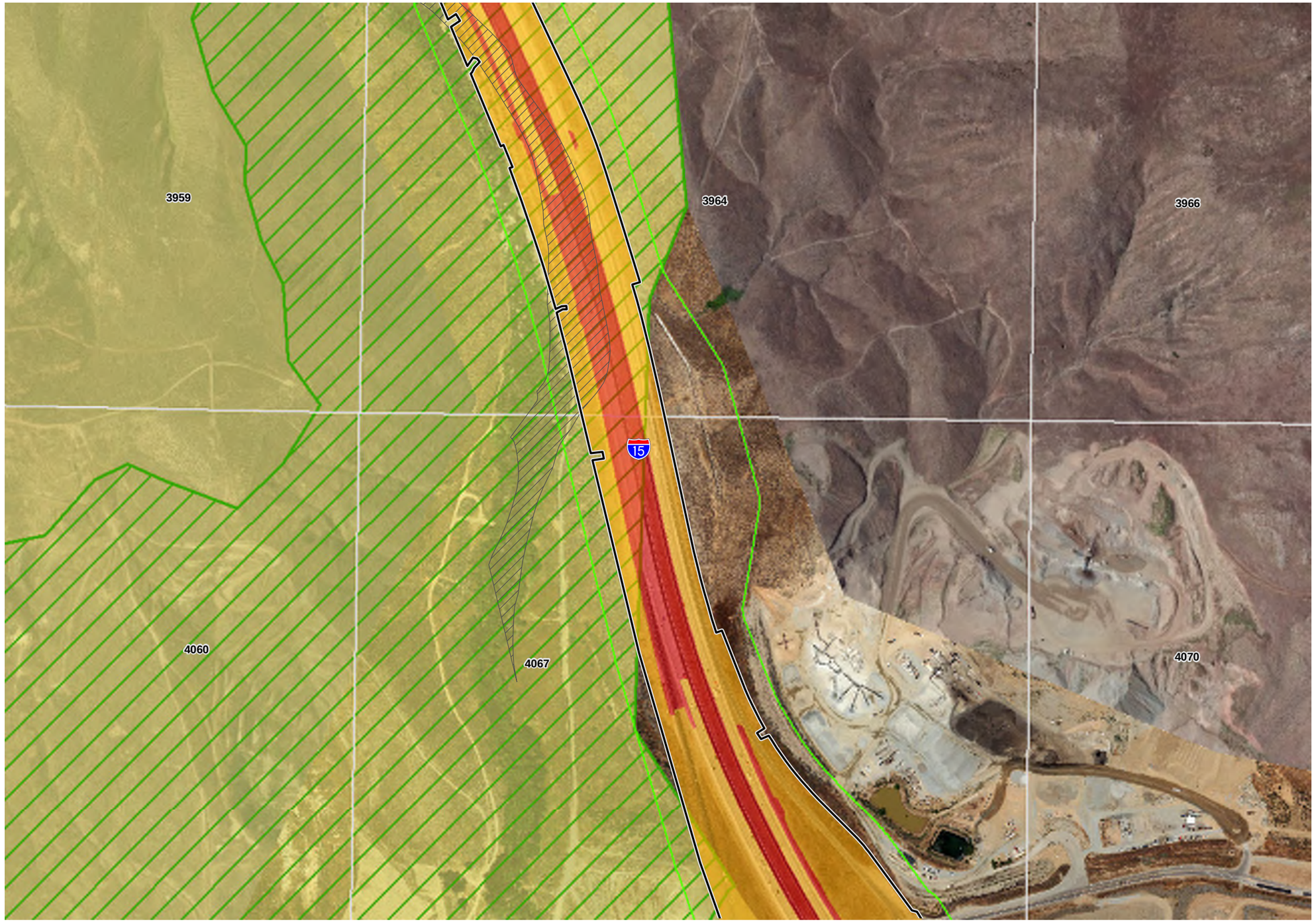

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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0 200 400 Feet

1:4,800

Figure 2.4.3-3 - Sheet 2
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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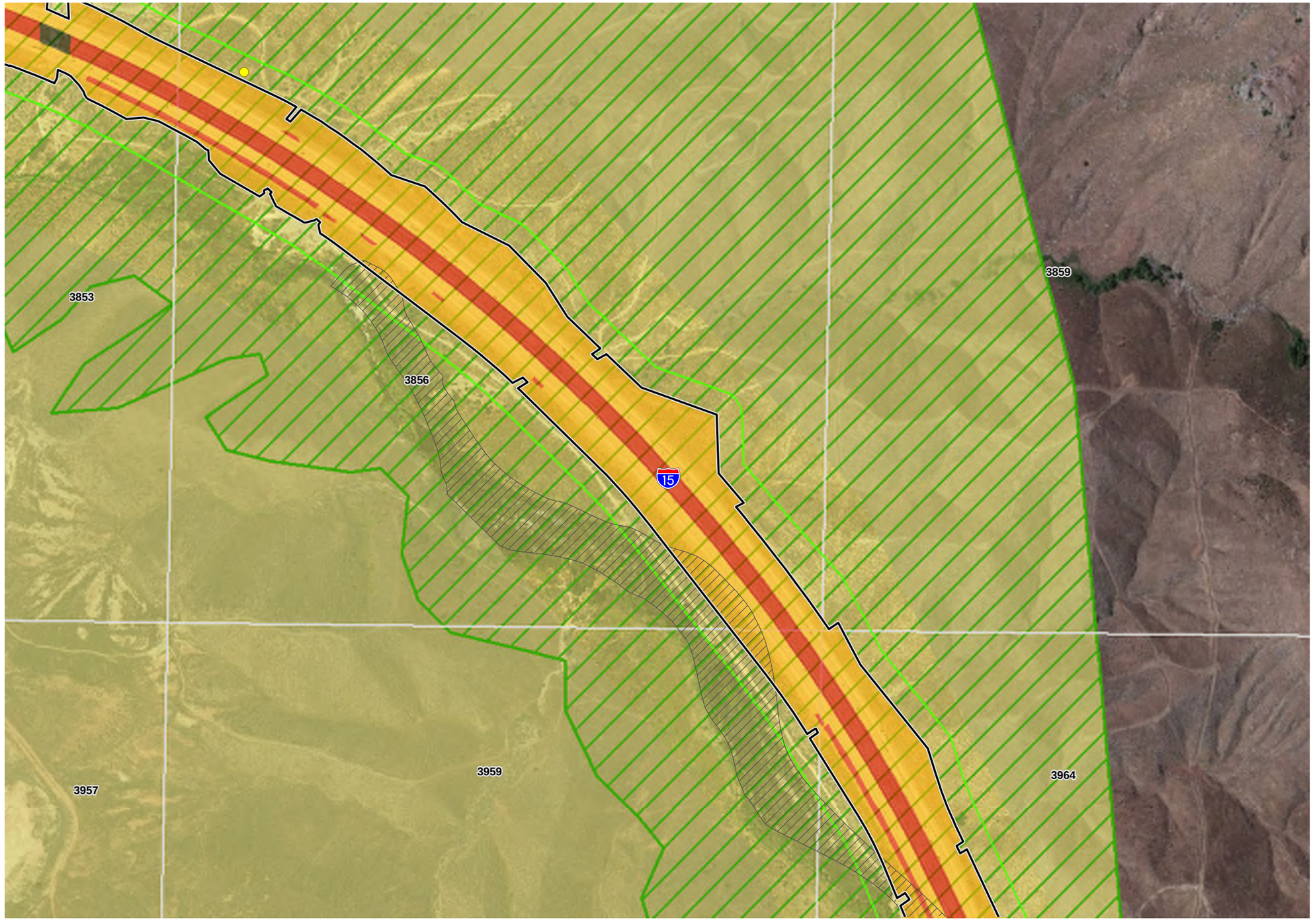

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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0 200 400 Feet

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Figure 2.4.3-3 - Sheet 3
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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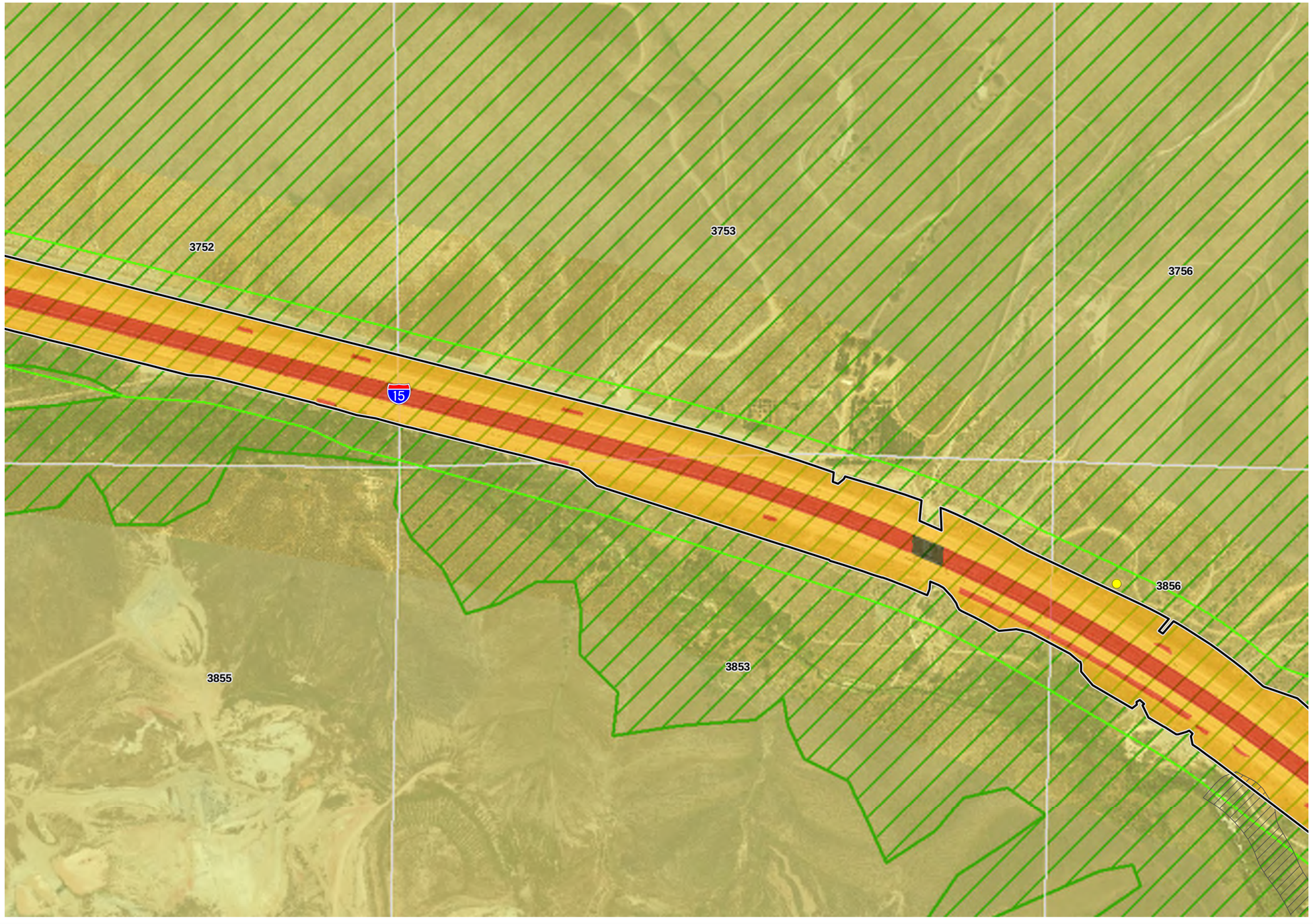

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 4
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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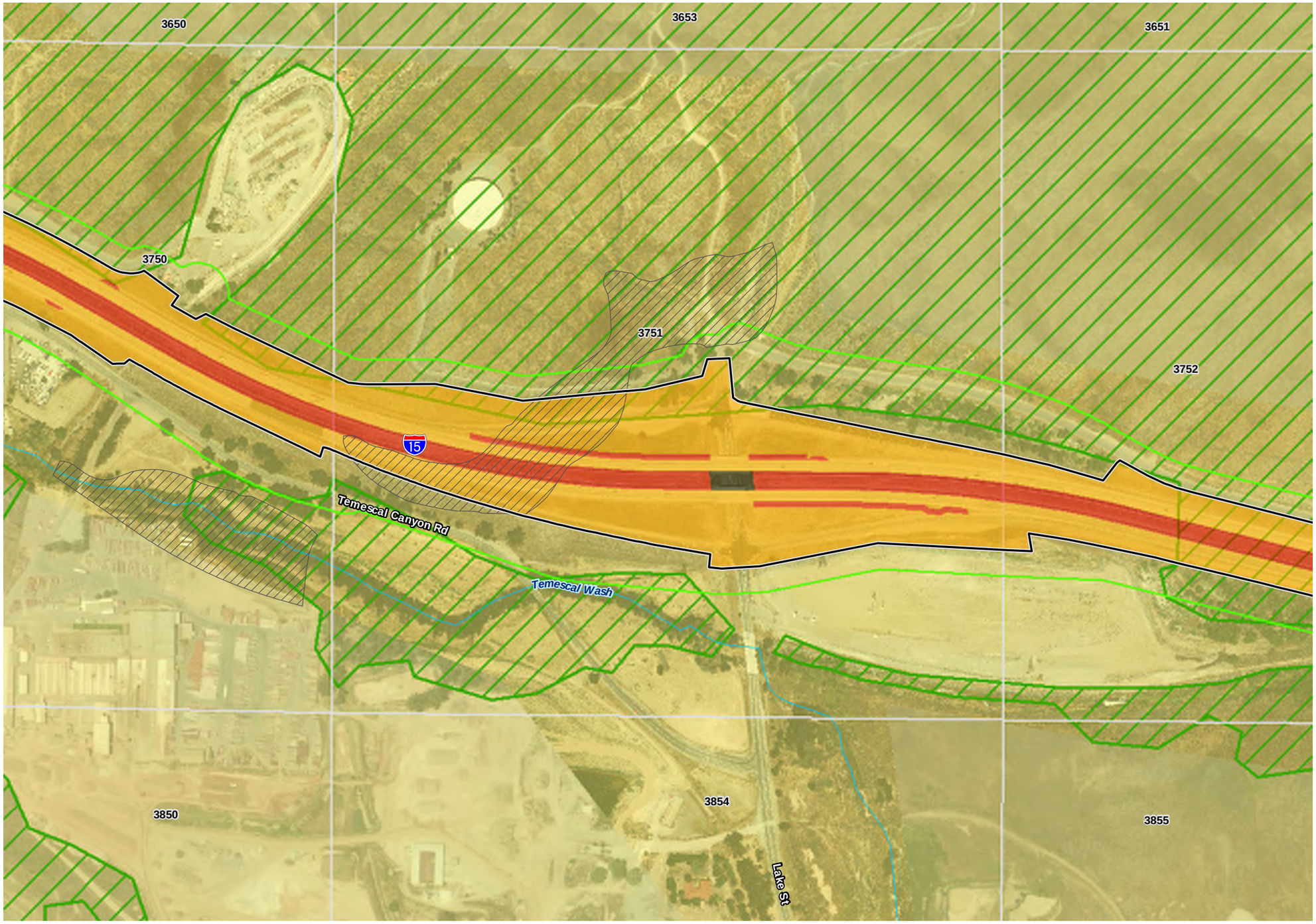

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 5
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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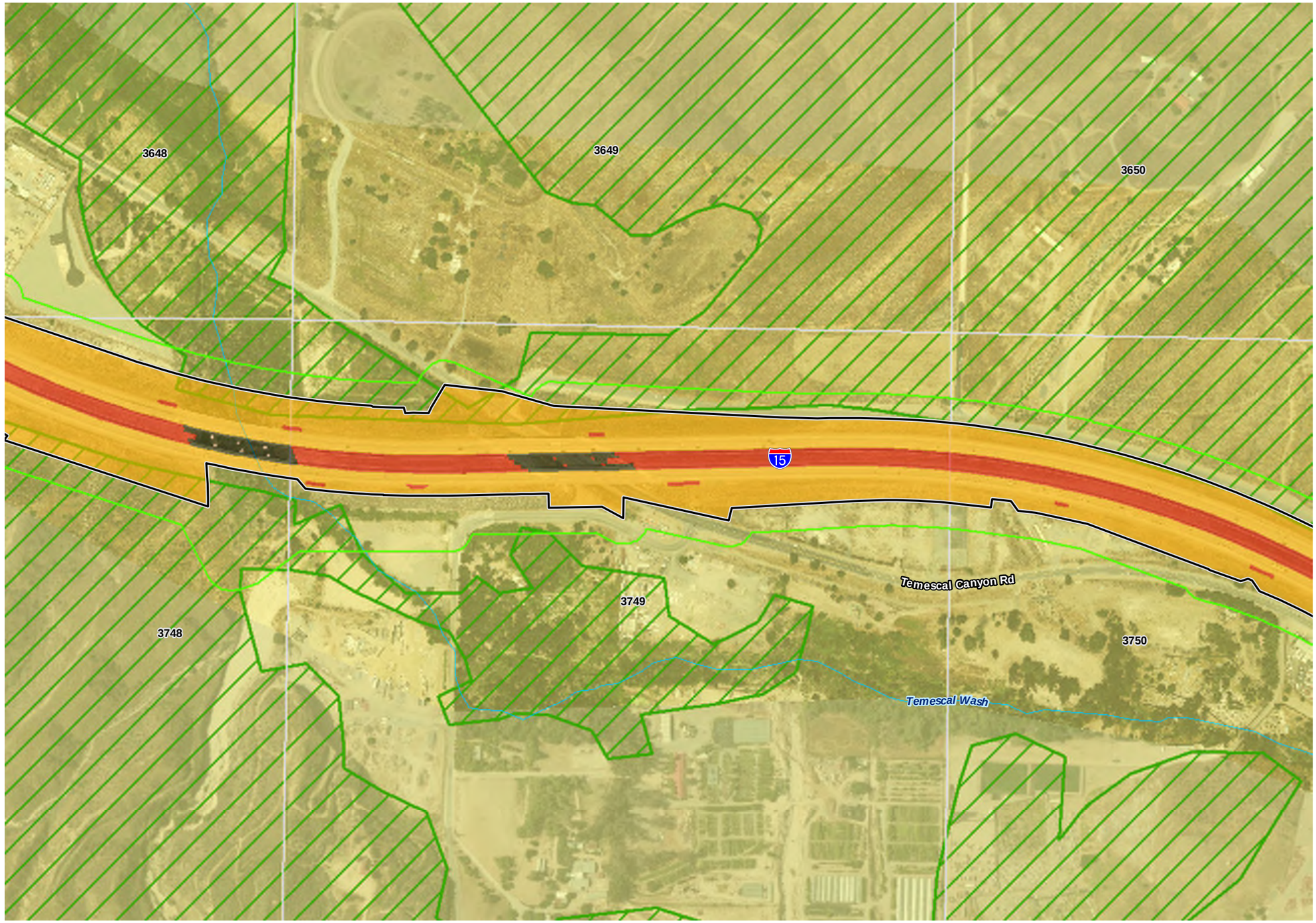

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 6
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 7
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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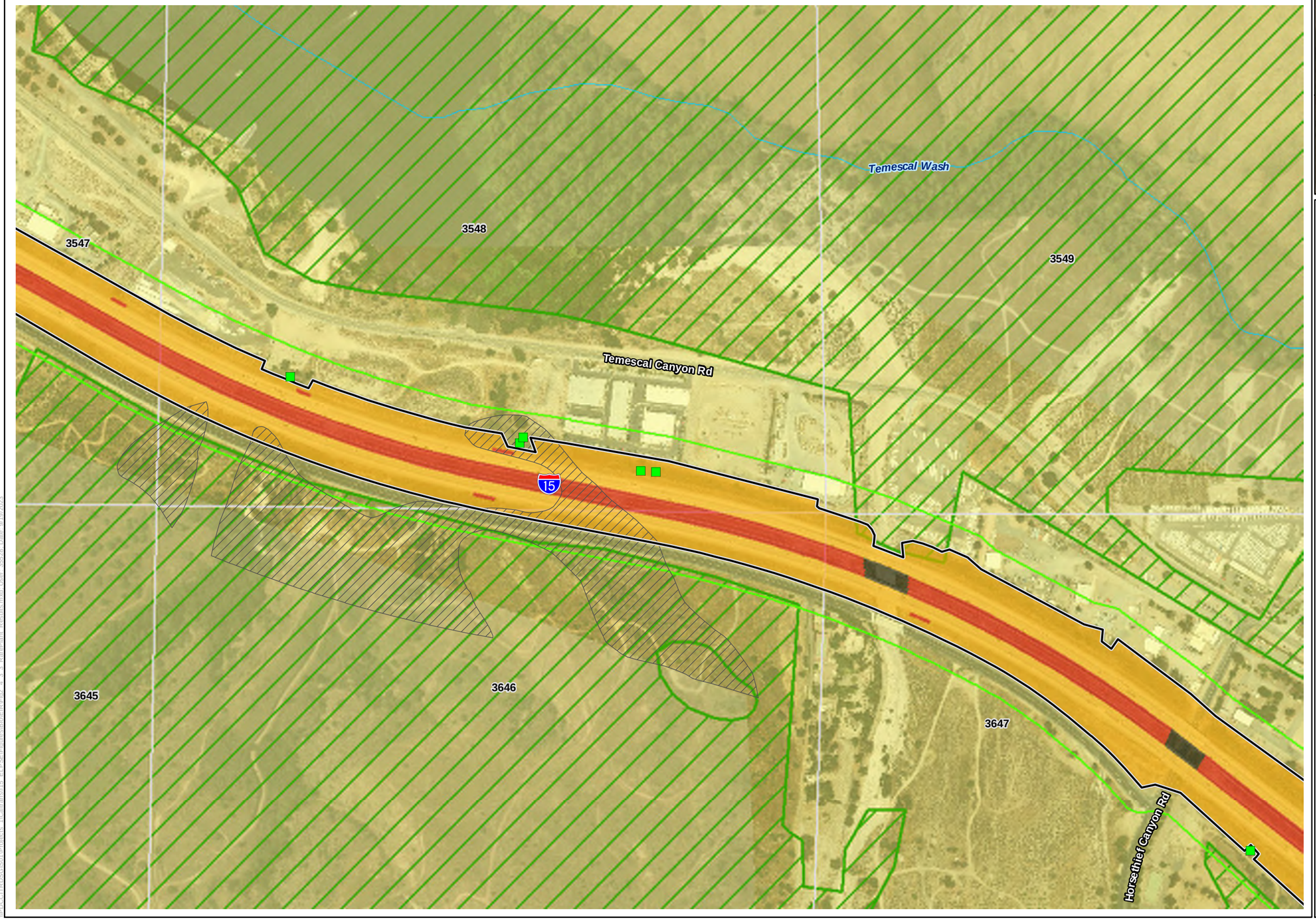

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 8
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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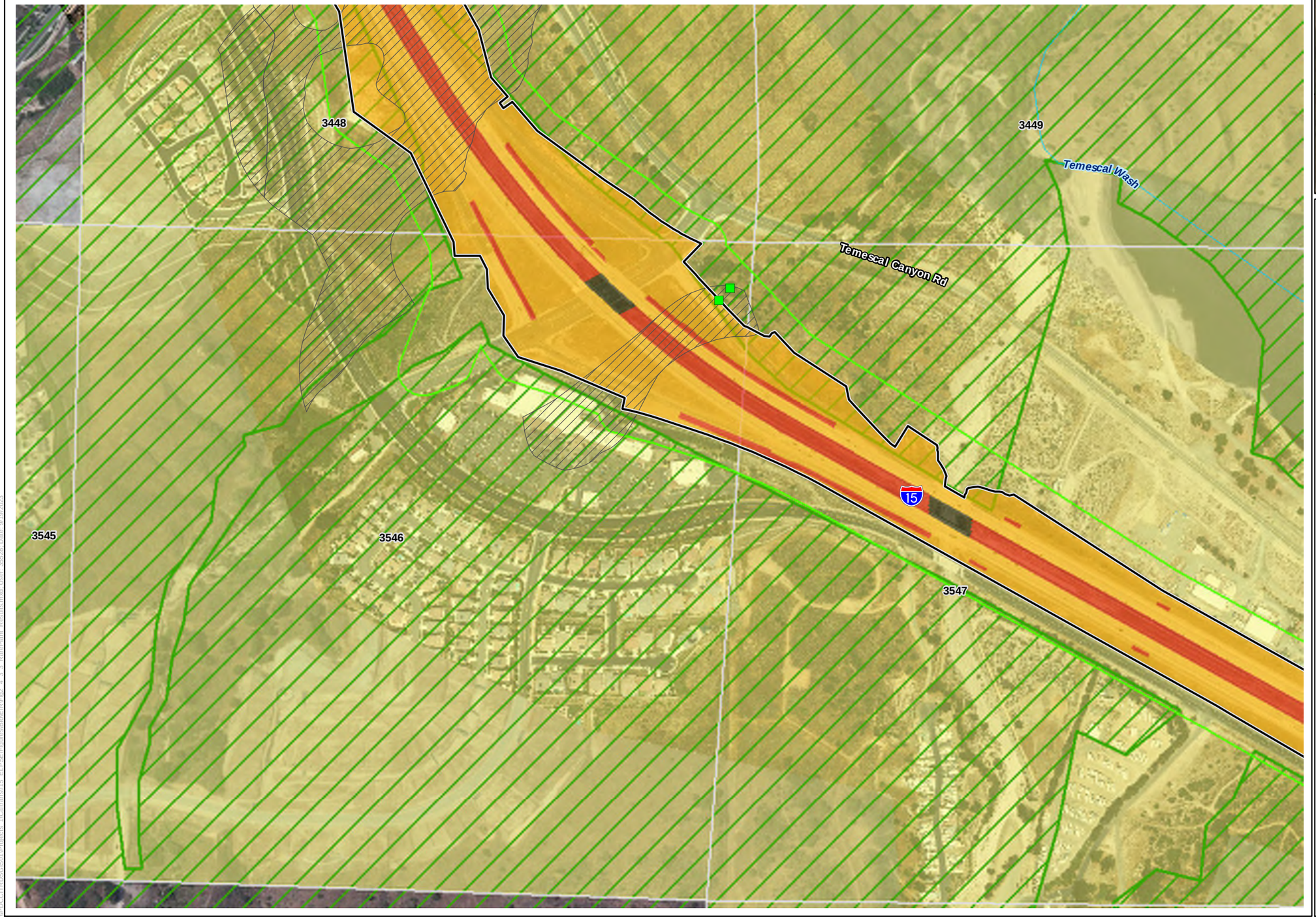

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 9
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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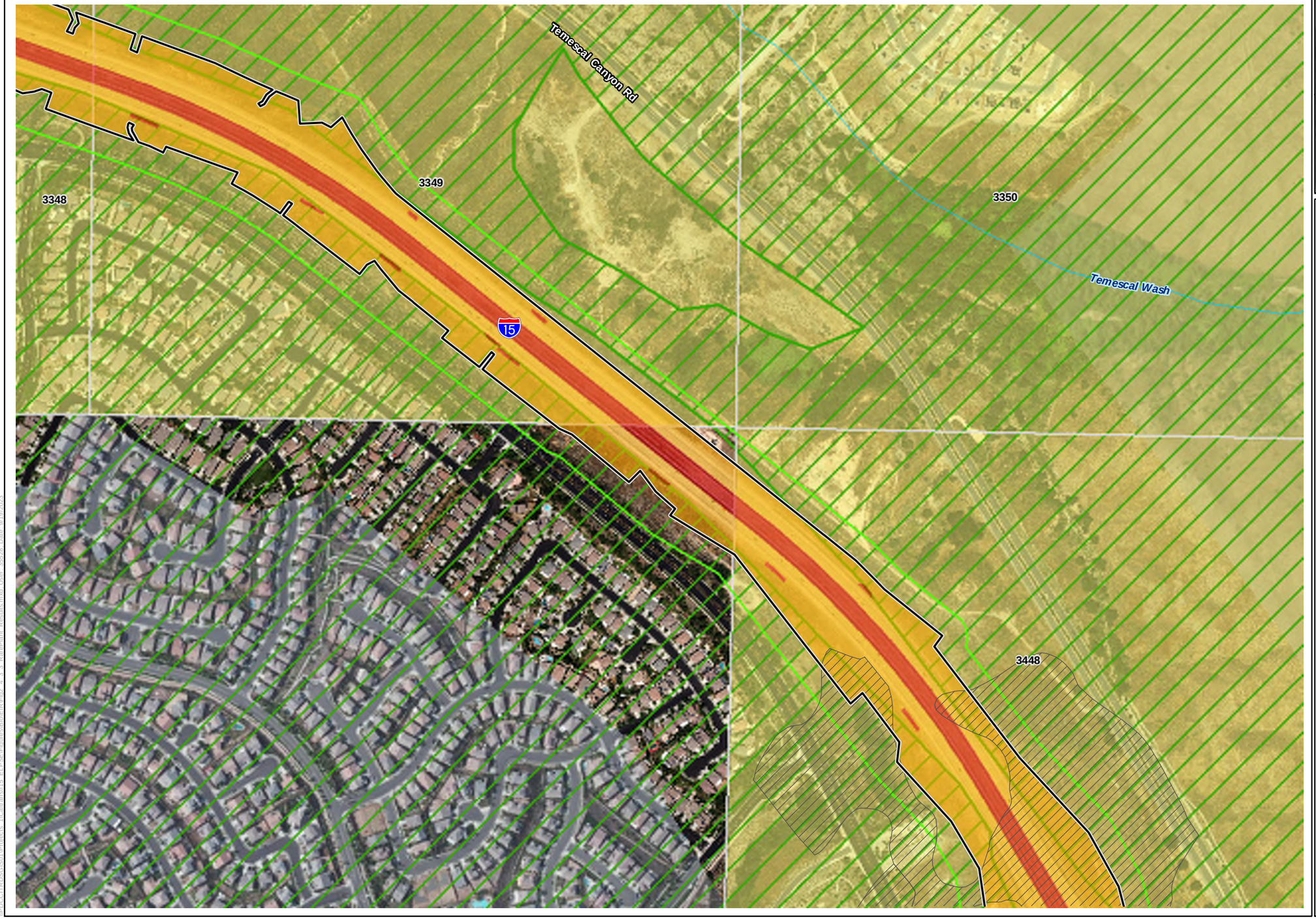

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 10
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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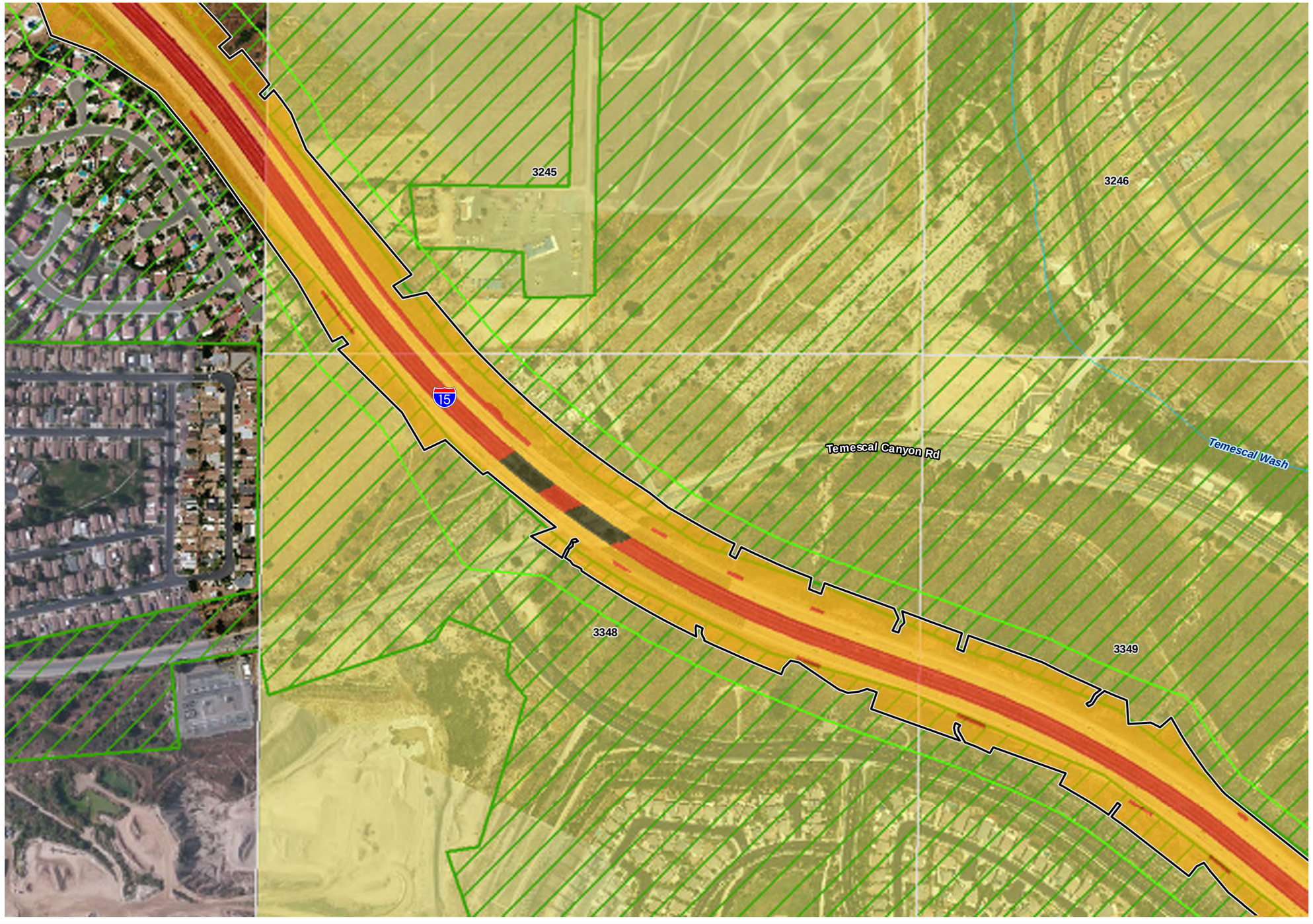

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 11
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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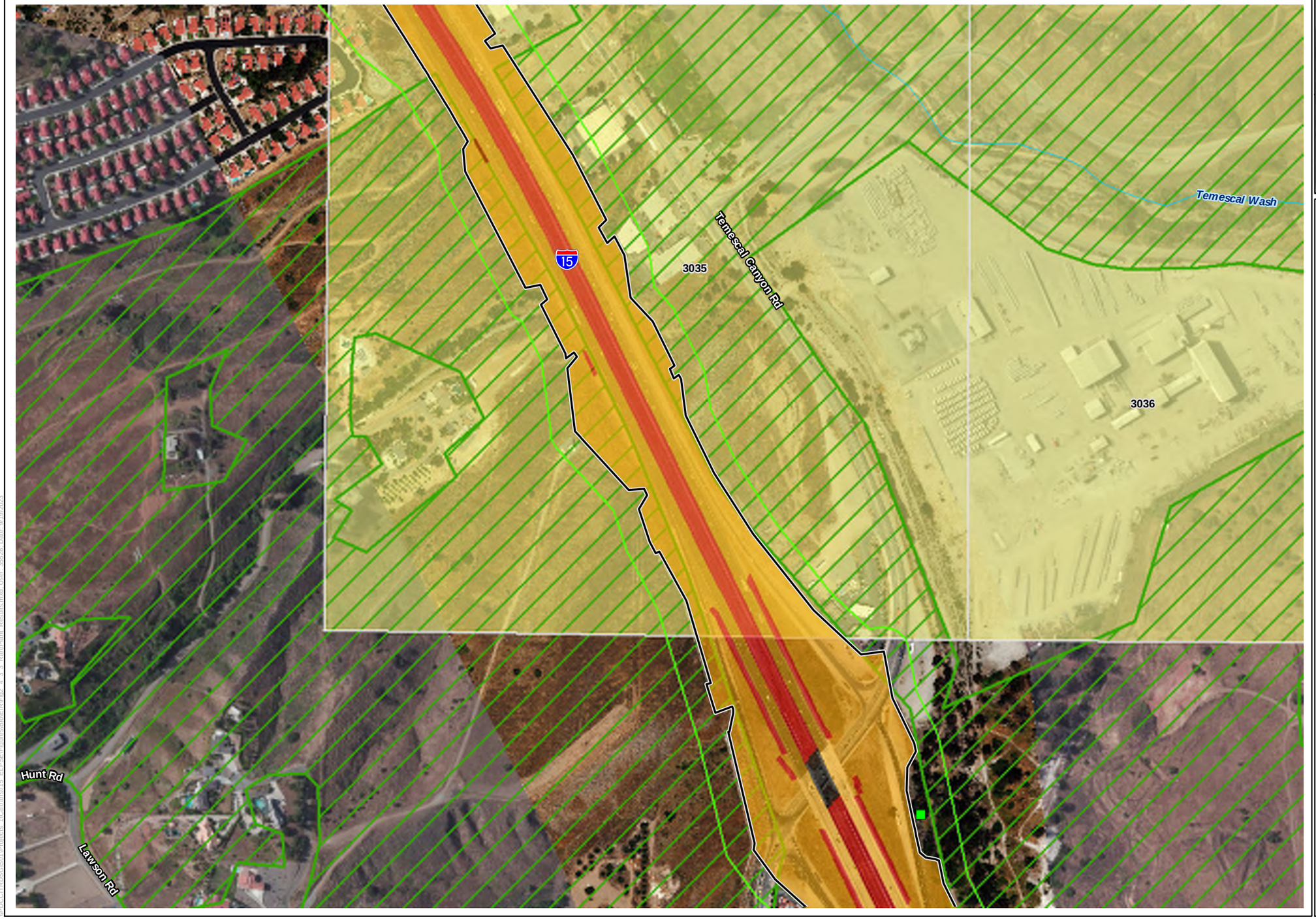

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 12
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 13
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 14
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- Rare Plant Study Area (100-foot buffer)
- CriteriaCells

MSHCP Survey

- Criteria Area Species Survey Area
- Narrow Endemic Plant Species Survey Area 1
- Narrow Endemic Plant Species Survey Area 7
- Clay Soils
- Long-spined Spineflower (MSHCP Covered)
- Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 15
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

Rare Plant Study Area (100-foot buffer)

CriteriaCells

MSHCP Survey

Criteria Area Species Survey Area

Narrow Endemic Plant Species Survey Area 1

Narrow Endemic Plant Species Survey Area 7

Clay Soils

Long-spined Spineflower (MSHCP Covered)

Coast Live Oak

Source: ESRI USA Imagery

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Figure 2.4.3-3 - Sheet 16
Rare Plant Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Table 2.4.3-1. Non-Listed Special-Status Plants with Potential to Occur in the Rare Plant Study Area

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Chaparral Sand-Verbena	*Abronia villosa* var. *aurita*	-/-/1B.1/-	Found in sandy soil within coastal scrub and mostly broad alluvial fans and benches. Known to occur in northern Orange County, western Riverside County, San Diego County, and southern Imperial County. It blooms from January to August at elevations from 262 to 5,248 feet. It is threatened by flood control activities.	HP	Suitable sandy coastal and broom scale scrub habitat is present in the rare plant study area. A focused rare plant survey was performed in 2020/2021, and this species was not detected within the survey area.
Yucaipa Onion	*Allium marvinii*	-/-/1B.2/-	A perennial, bulbiferous herb that grows typically in chaparral habitats upon clay soils. Known only from the Yucaipa and Beaumont area of the southern San Bernardino Mountains. Threatened by nonnative plants, urbanization, and alteration of fire regimes. It blooms from April to May and is found at elevations from 2,495 to 3,495 feet.	HA	This species is found at elevations outside of the range encountered throughout the Project area. Yucaipa onion is not expected to occur.
Alkali Marsh Aster	*Almutaster pauciflorus*	-/-/2B.2/-	A perennial herb found within meadows and seeps. Associated with alkaline soils. The species blooming period occurs between June and October.	HP	Suitable habitat in salt grass flats. This species was not detected in the rare plant study area during the focused rare plant surveys.
Douglas' Fiddleneck	*Amsinckia douglasiana*	-/-/4.2/-	Occurs in cismontane woodlands, valley and foothill grasslands. Often found in Monterey shale in dry climates. Elevations range from sea level to 6,400 feet and blooms from March to May. Possibly threatened by agriculture.	HP	Limited and marginally suitable habitat is present in the rare plant study area within valley and foothill grasslands. This species was not detected in the rare plant study area during the focused rare plant surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Rainbow Manzanita	*Arctostaphylos rainbowensis*	-/- /1B.1/MSHCP (e)	Found in chaparral at elevations ranging from 670 to 2,200 feet. Flowers emerge between December and March. Occurs in Riverside and San Diego Counties. Previously called *A. peninsularis* ssp. *peninsularis* or considered to be a hybrid between *A. glandulosa* and *A. glauca*. Threatened by development and agricultural conversion. Restricted to eastern slopes of the Santa Ana Mountains and northern slopes of the Agua Tibia Mountains. Found in the San Mateo Canyon Wilderness, Gavilan Mountain, Santa Margarita Ecological Reserve, Santa Rosa Plateau, and the Temecula, Margarita Peak, and Pechanga Area.	HP	Marginally suitable chaparral habitat is present in the rare plant study area. Gavilan Mountain is approximately 4.5 miles to the northwest and the Santa Ana Mountains are to the south of the rare plant study area. This species was not detected in the rare plant study area during the focused rare plant surveys. This species will be considered a covered species under the MSHCP once 10 localities with more than 50 individuals each have been conserved within the MSHCP Conservation Area.
Western Spleenwort	*Asplenium vespertinum*	-/-/4.2/-	Occurs in rocky areas within chaparral, cismontane woodlands, and coastal scrubs. Blooming occurs from February to June at elevations of 590 to 3,280 feet.	HA	No suitable rocky habitat is present in the rare plant study area. This species is not expected to occur.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Coulter's Saltbush	*Atriplex coulteri*	-/-/1B.2/-	Known to occur in coastal dunes, coastal bluff scrub, coastal sage scrub, and grassland habitats. Often on ocean bluffs or ridgetops, but also known from low places with some alkalinity. Found in heavy, usually clay soils and often with some alkalinity. Tolerant of some disturbance (e.g., light grazing) but is restricted to intact, natural communities. Elevation ranges from 10 to 1,509 feet. Blooms from March to October. Occurrences within Riverside County are misidentified based on careful reexamination of specimens (Roberts et al. 2004).	HA	Suitable coastal scrub and grassland habitats are present in the rare plant study area; however, there are no confirmed observations of this species within Riverside County, with the nearest record in Orange County. This species does not occur in the geographical area; therefore, this species is not expected to occur.
Parish's Brittlescale	*Atriplex parishii*	-/-/1B.1/ MSHCP (d)	Habitats where species is found include chenopod scrub, alkaline vernal pools, and playas. Blooms from June to October and ranges from 82 to 6,232 feet in elevation.	HA	A Criteria Area species (Area 1) for the proposed Project. No suitable chenopod scrub, alkaline vernal pools or playas are present in the rare plant study area. This species is not expected to occur within the rare plant study area.
Davidson's Saltscale	*Atriplex serenana* var. *davidsonii*	-/-/1B.2/ MSHCP (d)	Found in alkaline soils in scrubs and grasslands from 10 to 820 feet. Within Riverside County; uncommon on alkaline flats along the San Jacinto River, and west of Hemet (Roberts et al. 2004). Associated with Willows, Domino, and Traver soils. Populations known from Upper Salt Creek drainage west of Hemet and along the San Jacinto River floodplain from Mystic Lake south to the Ramona Expressway. May also occur in the vicinity of Nichols Road wetlands at Alberhill and Murrieta Hot Springs. Blooms from May to October.	HP	This species is a Criteria Area species (Area 1) for the proposed Project. Suitable habitat is present in the rare plant study area within areas of clay soils that overlap with grassland and scrub habitats. This species was not detected in 2020 in the rare plant study area during the focused rare plant surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
California Ayenia	*Ayenia compacta*	-/-/2B.3/-	Found in rocky soils within Mojavean desert scrub and Sonoran Desert scrub. Grows at elevations between 490 and 3,595 feet and blooms between March and April. Occurs in Riverside, San Bernardino, and San Diego Counties.	HA	Suitable desert scrub habitat is not present in the rare plant study area, and the study area is outside the known geographic range for this species. This species in not expected to occur within the rare plant study area.
Malibu Baccharis	*Baccharis malibuensis*	-/-/1B.1/-	This shrub is known only from the Malibu Creek drainage area in the Santa Monica Mountains (Los Angeles County). Elevation range of 197 to 2,133 feet. Blooms in August and September.	HA	Suitable coastal sage habitat is present in the rare plant study area; however, the study area is outside of the known geographic range for this species. This species is not expected to occur.
Orcutt's brodiaea	*Brodiaea orcutti*	-/-/1B.1/ MSHCP	Grows in mesic, clay soils within closed-cone coniferous forests, chaparral, cismontane woodlands, meadows and seeps, valley and foothill grasslands, and vernal pools. Occurs in elevations between 95 and 5,550 feet and blooms from May to July.	HA	The rare plant study area is outside of the known geographic range for this species, and it is not expected to occur. This species is fully covered under the MSHCP, and as such any potential impacts would be completely mitigated by the MSHCP.
Santa Rosa Basalt Brodiaea	*Brodiaea santarosae*	-/-/1B.1/-	Known to occur on basaltic soils in valley and foothill grasslands. Grows between 1,850 and 3,430 feet from May to June. Plants were known as possible hybrids between *B. filifolia* and *B. orcuttii* but are now recognized as distinct.	HA	No suitable habitats with basaltic soil are present in the rare plant study area. This species is restricted to the Santa Rosa Plateau; therefore, the rare plant study area is outside the known geographic range of this species.
Brewer's Calandrinia	*Calandrinia breweri*	-/-/4.2/-	Occurs in chaparral and coastal scrub in sandy or loamy soils and in disturbed sites and burned areas. Elevations range from 40 to 4,005 feet and flowers bloom as early as January but most often bloom between March to June. Plant appears to be widely scattered but uncommon everywhere.	HP	Suitable coastal scrub habitat and disturbed areas are present in the rare plant study area. This species was not detected in the rare plant study area during the focused rare plant surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Round-leaved Filaree	*California macrophylla*	-/-/-/ MSHCP (d)	Restricted to open cismontane woodland and valley and foothill grassland habitats on very friable deep clay soils between about 50 and 6,560 feet. Within western Riverside County, two of the mapped localities occur on Bosanko clay soils. Records reviewed for this species indicate that this species tends to be associated primarily with Wild Oats (*Avena fatua*).	HP	This species is a Criteria Area species (Area 1) for the proposed Project. Wild oat and annual brome grassland habitat and clay soils are present within the rare plant study area. This species was not detected in the rare plant study area during the focused rare plant surveys.
Slender Mariposa Lily	*Calochortus clavatus* var. *gracilis*	-/-/1B.2/-	This perennial herb occurs in shaded foothill canyons within chaparral, coastal scrub, valley and foothill grasslands. Occurs at elevations less than 3,281 feet. Occurs in the Western Transverse Ranges and San Gabriel Mountains. Blooms from March to June.	HA	Suitable coastal scrub habitat is present in the rare plant study area; however, the study area is outside of the known geographic range of this species. Therefore, this species is not expected to occur.
Catalina Mariposa Lily	*Calochortus catalinae*	-/-/4.2/-	This perennial herb occurs in chaparral, cismontane woodlands, coastal scrub, and valley and foothill grasslands. Occurs at elevations between 45 and 2,295 feet and blooms as early as February, but typically blooms between March and June. This species is threatened by development.	HP	Suitable coastal scrub habitat is present in the rare plant study area. A focused rare plant survey was performed and the species was not detected within the rare plant study area

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Plummer's Mariposa Lily	*Calochortus plummerae*	-/-/4.2/ MSHCP (e)	Found on rocky and sandy areas with granitic or alluvial material in coastal sage scrub, chaparral, and valley and foothill grasslands from 295 to 5,280 feet.	HP	Suitable coastal scrub habitat is present within the rare plant study area within coastal scrub with alluvial soils. A focused rare plant survey was performed and the species was not detected within the rare plant study area. This MSHCP covered species will be considered a Covered Species Adequately Conserved when six localities (not smaller than a quarter section with at least 500 individuals) within the MSHCP Conservation Area have been conserved.
Intermediate Mariposa Lily	*Calochortus weedii* var. *intermedius*	-/-/1B.2/ MSHCP	The typical blooming period extends from May to July, and the plant is a perennial. This species is known to occur in dry chaparral, valley grassland, and coastal sage scrub. It is often on sandstone outcrops in areas from elevation 590 to 2,805 feet. Soil affinities include sandy or clay soils.	HP	Suitable habitat for this species exists in the chaparral and coastal sage scrub habitats. This species is fully covered under the MSHCP, and as such any potential impacts would be completely mitigated by the MSHCP. No survey is required, and no further action is necessary.
Lucky Morning-Glory	*Calystegia felix*	-/-/1B.1/-	Occurs in meadows and seeps (sometimes alkaline), riparian scrub (alluvial) and is historically associated with wetland and marshy habitats, but possibly can occur in drier situations as well as in silty loam and alkaline soils. Elevations range from 95 to 705 feet and bloom between March and September. All recent occurrences are in irrigated landscapes.	HP	Suitable riparian scrub, wetlands, and marsh habitats are present in the rare plant study area; however, known occurrences of this species are from lower elevations. A focused rare plant survey was performed and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Lewis' Evening-primrose	*Camissonia lewisii*	-/-/3/-	Habitat includes coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grasslands within sandy or clay soils. Severely declining in San Diego County. No known reported sites occur within Riverside County. Blooming typically occurs between March and May but uncommonly extends into June. Occurs at elevations ranging from 0 to 984 feet.	HP	Coastal scrub habitat with clay soils are present in the rare plant study area; however, known occurrences of this species are generally from lower elevations. A focused rare plant survey was performed and the species was not detected within the rare plant study area.
Buxom's Sedge	*Carex buxbaumii*	-/-/4.2/-	Occurs in bogs and fens, meadows, and seeps (in mesic climates), and marshes and swamps. Known to occur between elevations of 5 and 10,825 feet, and blooms between March and August. Predominantly threatened by foot traffic.	HA	Although marshes are present in the rare plant study area, this species has only been found in Central California and is not known to occur within the region. Therefore, suitable habitat is absent, and the species is not expected to occur.
Payson's Jewelflower	*Caulanthus simulans*	-/-/4.2/MSHCP	Occurs in sandy, granitic soils within chaparral and coastal scrub. Grows between elevations of 295 and 7,220 feet and typically blooms between March and May but can also bloom between February and June. Confused with *C. heterophyllus* var. *pseudosimulans* (unpublished), which is more coastal.	HP	Suitable habitat is present in the rare plant study area within coastal scrub with sandy soils. This species is fully covered under the MSHCP; therefore, no focused surveys are warranted.
Southern Tarplant	*Centromadia parryi* ssp. *australis*	-/-/1B.1/-	Found in the margins of marshes and swamps, vernally mesic valley and foothill grasslands, and vernal pools. Blooming typically occurs from April to September and between sea level and 2,100 feet. Many Orange County occurrences, as well as historical occurrences in general, have recently been extirpated.	HP	Suitable marsh habitat is present in the rare plant study area. A focused rare plant survey was performed and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Smooth Tarplant	*Centromadia pungens* ssp. *laevis*	-/-/1B.1/ MSHCP (d)	Found in fine or alkaline soils of seasonally wet chenopod scrub, meadows and seeps, playas, riparian woodland, fallow fields, drainage ditches, and moist situations within valley and foothill grasslands below about 1,575 feet elevation. Tolerant of rural and agricultural land use. Found primarily in southwestern Riverside County, but also in a few sites in the interior valleys of San Bernardino, Los Angeles, and San Diego Counties.	HP	Smooth tarplant is a Criteria Area species (Area 1) for the proposed Project. Marginally suitable habitat is present in the rare plant study area, but generally lacks the combination of suitable mesic habitat and fine or alkaline soils. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Peninsular Spineflower	*Chorizanthe leptotheca*	-/- /4.2/MSHCP (e)	Found on alluvial fans and granitic soils within chaparral, coastal scrub, and lower montane coniferous forests. Elevations range from 980 to 6,235 feet and the species blooms between May and August. Much habitat already lost to development; also threatened by nonnative grasses. Closely related to and difficult to distinguish from *C. staticoides*.	HP	Suitable alluvial and coastal scrub habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area. This MSHCP covered species will be considered a Covered Species Adequately Conserved when 10 localities (not smaller than a quarter section with at least 1,000 individuals) within the MSHCP Conservation Area have been conserved.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Parry's Spineflower	*Chorizanthe parryi* var. *parryi*	-/-/1B.1/ MSHCP (e)	Found on dry sandy soils on slopes and flats, within coastal sage scrub and chaparral.	HP	Suitable coastal scrub habitat is present in the rare plant study area. A focused rare plant survey was performed and the species was not detected within the rare plant study area. This MSHCP covered species will be considered a Covered Species Adequately Conserved when 10 localities (not smaller than a quarter section with at least 1,000 individuals) within the MSHCP Conservation Area have been conserved.
Long-spined Spineflower	*Chorizanthe polygonoides* var. *longispina*	-/-/1B.2/ MSHCP	Associated primarily with heavy, often rocky, clay soils in southern needlegrass grassland, and openings in coastal sage scrub and chaparral. The species has been described as occurring on sandy and gravelly soil, but this appears to be infrequently the case.	P	This species was observed within the rare plant study area, north of Interstate 15, approximately 35 feet north of the LOD) in California Sagebrush–Black Sage, between Nichols Road and Lake Street. This species is fully covered by the MSHCP; therefore, any potential impacts would be completely mitigated by the MSHCP. No further action is necessary.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
San Miguel Savory	*Clinopodium chandleri*	-/-/1B.2/ MSHCP (b)	Associated with rocky, gabbroic, and metavolcanic substrates in valley and foothill grassland, coastal sage scrub, chaparral, cismontane woodland, and riparian woodland. The majority of populations and individuals are associated with the Santa Rosa Plateau and the Santa Ana Mountains. Known from 3 miles south of De Luz Road in the Santa Ana Mountains and 3 miles southwest of Murrieta near Warner's Ranch. Expected within the vicinity of the Santa Rosa Plateau, the Hogbacks, and the Santa Ana Mountains. Elevations range from 65–3,530 feet, and blooming period is from March to July.	HA	This is a NEPSA (Areas 1 and 7) for the proposed Project. Suitable habitats with rocky, gabbroic, or metavolcanic soils are not present in the BSA, and the study area may be too far north for this species. This species is not expected to occur within the rare plant study area.
Serpentine Collomia	*Collomia diversifolia*	-/-/4.3/-	Found in chaparral and cismontane woodlands between 655 and 1,970 feet. Blooming period typically occurs between May and June. Threatened by wind energy development and vehicles.	HA	Within Southern California, this species is only known within Santa Barbara, at one locality. This species is not expected to occur in Riverside County.
Summer Holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	-/-/1B.2/-	Found in chaparral and cismontane woodlands between 95 and 2,590 feet. Blooming period typically occurs between April and June. Threatened by development, urbanization, and gravel mining.	HP	Marginally suitable chaparral habitat is present within the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Small-flowered Morning-glory	*Convolvulus simulens*	-/-/4.2/-	Grows in clay and serpentinite seeps within chaparral openings, coastal scrub, and valley and foothill grasslands. Elevations range from 95 to 2,430 feet, and blooming period occurs between March and July. Rare in Southern California. Threatened by development and vehicles.	HP	Suitable coastal scrub habitat with clay soil is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Snake Cholla	*Cylindropuntia californica* var. *californica*	-/-/1B.1/-	Typically grows in chaparral and coastal scrub habitat at elevations ranging from 95 to 490 feet. Blooming takes place between April and May. Threatened by development and vehicles.	HP	Suitable coastal scrub habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Paniculate Tarplant	*Deinandra paniculata*	-/-/4.2/-	This annual herb has a limited distribution, with the species known from Orange, western Riverside, southwestern San Bernardino, and southwestern San Diego Counties. It regularly grows in mesic conditions within sage scrub, valley and foothill grassland, and vernal pools but can also occur in dry nonnative grasslands. Blooming period is April through November.	HP	Suitable coastal scrub and grassland habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Western Dichondra	*Dichondra occindentalis*	-/-/4.2/-	Found in chaparral, cismontane woodland, coastal scrub, and valley and foothill grasslands. Elevations range from 160 to 1,640 feet, and blooming occurs from March to July but can occur as early as January.	HA	Suitable coastal scrub habitat is present in the rare plant study area; however, the study area is outside of the known geographic range for this species.
Cleveland's Bush Monkeyflower	*Diplacus clevelandii*	-/-/4.2/-	Known to grow within gabbroic and rocky soils, often in openings and disturbed areas within chaparral, cismontane woodlands, and lower montane coniferous forests. Elevations range from 1,475 to 6,560 feet and blooming typically occurs between April and July.	HA	No suitable habitats with gabbroic or rocky soils are present in the rare plant study area. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Many-stemmed Dudleya	*Dudleya multicaulis*	-/-/1B.2/ MSHCP (b)	Found on the coastal slopes of Southern California from Los Angeles and San Bernardino Counties south, from about 50 to 2,600 feet in elevation. It usually grows on poor soils, often on clay or at the margins of gabbroic rock outcrops in coastal sage scrub and grassland communities.	HP	This species is a NEPSA (Area 1) for the proposed Project. Suitable coastal scrub habitat is present with clay soils. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Sticky Dudleya	*Dudleya viscida*	-/-/1B.2/ MSHCP (f)	Grows on rocky soils within coastal bluff scrub, chaparral, cismontane woodlands, and coastal scrub. Elevations range from 30 to 1,805 feet, and blooming occurs between May and June. Threatened by development and road construction.	HA	Rocky soils are not present within the rare plant study area. Species is fully covered by the MSHCP; therefore, any potential impacts on this species would be fully mitigated by the MSHCP and no survey is required. No further action is necessary, as the Project does not occur within U.S. Forest Service lands.
Palomar Monkeyflower	*Erythranthe diffusa*	-/-/4.3/-	Occurs in sandy or gravelly soils within chaparral and lower montane coniferous forests. Grows between 4,000 and 6,005 feet elevation and blooms between April and June. Threatened by recreational activities and development.	HA	The rare plant study area is outside the elevation range for this species. No lower montane coniferous forests are present in the rare plant study area, and the study area occurs well outside the species' geographic and elevation range. This species is not expected to occur in the rare plant study area.
Campbell's Liverwort	*Giothallus tuberosus*	-/-/1B.1/-	Occurs within coastal scrub (mesic climates) and vernal pools between 30 and 1,970 feet elevation. Most suitable historic habitat has been lost to urbanization.	HP	Marginally suitable coastal scrub habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Palmer's Grapplinghook	*Harpagonella palmeri*	-/-/4.2/ MSHCP	Found within chaparral, coastal scrub, and valley and foothill grasslands. Often associated with clay soils. Occurs at elevations of 65 to just over 3,130 feet. Blooming period begins in March and ends in May.	HP	Suitable habitat including chaparral, and coastal scrub habitat with clay soils is present in the rare plant study area. Species is fully covered by the MSHCP; therefore, any potential impacts on this species would be fully mitigated by the MSHCP and no survey is required. No further action is necessary.
Tecate Cypress	*Hesperocyparis forbesii*	-/-/1B.1/-	A perennial evergreen tree found within closed-cone coniferous forest and chaparral. Elevation range of 427–4,921 feet.	HA	No suitable closed-cone coniferous forest or chaparral with suitable soils are present in the rare plant study area. This species is not expected to occur in the rare plant study area.
Gowen Cypress	*Hesperocyparis goveniana*	-/-/1B.2/-	A perennial evergreen tree found within closed-cone coniferous forest and maritime chaparral. Elevation range of 100 to 985 feet.	HA	No suitable closed-cone coniferous forest or maritime chaparral with suitable soils are present in the rare plant study area. This species is not expected to occur in the rare plant study area.
Graceful Tarplant	*Holocarpha virgata* ssp. *elongata*	-/-/4.2/ MSHCP (e)	Occurs in chaparral, cismontane woodlands, coastal scrub, and valley and foothill grasslands. Elevations range from 15 to 3,280 feet and flowers bloom from May to November. Known only in Riverside County from the Santa Rosa Plateau. Potentially threatened by development.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and grasslands. A focused rare plant survey was performed, and the species was not detected within the rare plant study area. This MSHCP covered species will be considered a Covered Species Adequately Conserved when 10 localities (not smaller than a quarter section with 1,000 individuals each) within the MSHCP Conservation Area have been conserved.

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Vernal Barley	*Hordeum intercedens*	-/-/3.2/ MSHCP	Associated with mesic grasslands, vernal pools, and large saline flats or depressions. In Riverside County, found in the Domino, Willows, and Traver soils series and is associated with alkali flats and flood plains within the alkali vernal plains community. Within this community vernal barley is primarily associated with alkali annual grasslands and vernal pools and to a lesser extent alkali scrub and alkali playa.	HA	No vernal pools are present within the rare plant study area. Species is fully covered by the MSHCP; therefore, any potential impacts on this species would be fully mitigated by the MSHCP and no survey is required. No further action is necessary.
Mesa Horkelia	*Horkelia cuneata* ssp. *puberula*	-/-/1B.1/-	This perennial herb blooms from February until September. It grows in sandy and gravelly soils in chaparral, cismontane woodland, or coastal scrub at elevations from 230 to 2,657 feet.	HP	Suitable habitat is present in the rare plant study area within coastal scrub. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
California Satintail	*Imperata brevifolia*	-/-/2B.1/-	Found in mesic climates within chaparral, coastal scrub, Mojavean desert scrub, meadows and seeps (often alkali), and riparian scrub. Can occur up to 3,985 feet and bloom between September and May. Threatened by development and agriculture.	HP	Suitable habitat is present in the rare plant study area within coastal and riparian scrub. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Southern California Black Walnut	*Juglans californica*	-/-/4.2/-	Found in alluvial areas within chaparral, cismontane woodlands, coastal scrub, and riparian woodlands. Known to occur between 160 and 2,955 feet and bloom from September to May. Walnut forest is a much fragmented, rare, and declining vegetation community. Threatened by urbanization, grazing, nonnative plants, and possibly by lack of natural reproduction.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and riparian woodlands. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Southwestern Spiny Rush	*Juncus acutus* ssp. *leopoldii*	-/-/4.2/-	Occurs in coastal dunes (in mesic climates), meadows and seeps (alkaline seeps), and marshes and swamps (coastal salt). Can grow from 5 to 2,955 feet and bloom as early as March, but typically blooms from May to June.	HP	Marginally Suitable habitat is present in the rare plant study area within marsh habitat. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Santa Lucia Dwarf Rush	*Juncus luciensis*	-/-/1B.2/-	Occurs in wetlands and wetland-riparian areas. Found in wet areas such as vernal pools, seeps, streambanks, and meadows, in chaparral, Great Basin scrub, and lower montane coniferous forests. Grows between 980 and 6,695 feet and blooms from April to July.	HP	Chaparral habitat with wet areas present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Coulter's Goldfields	*Lasthenia glabrata* ssp. *coulteri*	-/-/1B.1/ MSHCP (d)	Wide-ranging herb in southern California, with known occurrences including Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, among others. This is an annual herb, blooming from February through June. Floodplains (seasonal wetlands) dominated by alkali scrub, alkali plays, vernal pools, and alkali grasslands provide potential habitat for this species. Found on clay and alkaline, silty-clay soils. In Riverside County, primarily restricted to alkali floodplains of the San Jacinto River, Mystic Lake, and Salt Creek in association with Willows, Domino, and Traver Soils. Also known in the alkali flats between Alberhill and Lake Elsinore. Found in grasslands, playas, and vernal pools in these areas, below about 4,002 feet.	HP	This species is a Criteria Area species (Area 1) for the proposed Project. Suitable habitat is present within the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Heart-leaved Pitcher Sage	*Lepechinia cardiophylla*	-/-/1B.2/ MSHCP (d)	Species is a perennial shrub and occurs in closed-cone coniferous forest, chaparral, and cismontane woodland. Species occurs at elevations ranging from 1,280–4,199 feet and blooms from April to July. Within Riverside County, restricted to the Santa Ana Mountains (Sierra Peak, Indian Truck Trail, Bald Peak, Trabuco Peak, Horsethief Trail, Pleasants Peak, and between Ladd Canyon and East Fork Canyon) and primarily within U.S. Forest Service lands.	HA	Not within the required MSHCP survey area for this species and also not within the current known range for this species. This species is not expected to occur within the rare plant study area. While this is a Criteria Area species, surveys for this species are not required within the rare plant study area.
Robinson's Pepper-Grass	*Lepidium virginicum* var. *robinsonii*	-/-/1B.2/-	Found in dry soils in chaparral and coastal sage scrub openings up to 3,100 feet.	HP	Suitable habitat is present in the rare plant study area within coastal sage scrub. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Ocellated Humbolt Lily	*Lilium humboltii* ssp. *ocellatum*	-/-/4.2/ MSHCP (f)	This perennial herb occurs in openings in riparian corridors in coniferous forests, oak woodlands, and chaparral from 95 to 5,905 feet. Typically occurs on lower stream benches but can occur on shaded, dry slopes, beneath a dense coniferous canopy and cismontane oak woodland. Most populations are in the Santa Ana Mountains or the north slope of the Palomar Mountains, but the species is known from Cleveland and San Bernardino Forest in low-elevation riparian areas and seeps of chaparral canyons. Blooming occurs between March and July or as late as August.	HP	Suitable habitat is present in the rare plant study area within chaparral and coastal sage scrub. Historic occurrences in Horse Thief Canyon. Surveys for this species are only necessary within U.S. Forest Service lands; therefore, this species is fully covered in the rare plant study area, and no surveys are warranted.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Lemon Lily	*Lilium parryi*	-/-/1B.2/ MSHCP (f)	This perennial herb occurs in mesic climates within lower montane coniferous forests, meadows and seeps, riparian forests, and upper montane coniferous forests. Flowers bloom from July to August at elevations of 4,000 to 9,005 feet.	HA	No suitable habitat is present within the rare plant study area, and the study area occurs well outside the species geographic and elevation range. This species is not expected to occur within the rare plant study area. Surveys for this species are only necessary within U.S. Forest Service lands; therefore, this species is fully covered in the study area, and no surveys are warranted.
Small-Flowered Microseris	*Microseris douglasii* ssp. *platycarpha*	-/-/4.2/ MSHCP (e)	This annual herb is found in clay soils in cismontane woodlands, coastal scrub, valley and foothill grasslands, and vernal pools. Elevations range from 45 to 3,510 feet, and flowers bloom from March through May.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and grasslands. A focused rare plant survey was performed, and the species was not detected within the rare plant study area. This species is considered a Covered Species Adequately Conserved under the MSHCP, and is therefore afforded full coverage under the MSHCP.
Jokerst's Monardella	*Monardella australis* ssp. *jokerstii*	-/-/1B.1/-	This perennial herb occurs on steep scree or talus slopes between breccia and in secondary alluvial benches along drainages and washes. Habitats include chaparral and lower montane coniferous forests. Flowers bloom between July and September at elevations of 4,425 and 5,740 feet.	HA	No suitable habitat is present within the rare plant study area (not at a suitable elevation), and the study area occurs well outside the species geographic and elevation range. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Intermediate Monardella	*Monardella hypoleuca* ssp. *intermedia*	-/-/1B.3/-	This perennial herb can be found within the understory of chaparral, cismontane woodland, and less frequently in lower montane coniferous forests. It occurs at elevations ranging from 984–3,510 feet. The species is in bloom from June to August.	HP	Marginally suitable chaparral is present in the rare plant study area. Known observations of this species in Riverside County are rare and generally within the Santa Ana Mountains and Santa Rosa Plateau, with one observation at the base of Palomar Mountain. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Felt-leaved Monardella	*Monardella hypoleuca* ssp. *lanata*	-/-/1B.2/-	This perennial herb blooms from June to August. It occurs in chaparral, cismontane woodland, and on rocky, granitic slopes or hilltops, from 984 to 4,921 feet elevation.	HP	Marginally suitable chaparral is present in the rare plant study area. Known observations of this species in Riverside County are rare and generally within the Santa Ana Mountains and Santa Rosa Plateau, with one observation at the base of Palomar Mountain. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Hall's Monardella	*Monardella macrantha* ssp. *hallii*	-/-/1B.3/ MSHCP	This perennial herb blooms from June through August and is found in chaparral, cismontane woodland, lower montane conifer forest, broadleaved upland forest, and valley/foothill grassland, from about 2,394 to 7,200 feet elevation. Within Riverside County, the species is uncommon on north-facing slopes in chaparral or conifer forest; found in the Santa Ana and Agua Tibia Mountains.	HA	The Project occurs outside of the species elevation range. In addition, this is a fully covered species under the MSHCP and as such any potential impacts on the species are fully mitigated by the MSHCP; no survey is required. No further action is required.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Little Mousetail	*Myosurus minimus* ssp. *apus*	-/-/3.1/ MSHCP (d)	Occurs in association with vernal pools and within the alkali vernal pools and alkali annual grassland components of alkali vernal plains. Little Mousetail is found in areas that have semiregular inundation. Within Riverside County the species is locally common in the alkaline vernal pools near Hemet; otherwise, scarce and local in Perris Basin and Santa Rosa Plateau (Roberts et al. 2004).	HA	This species is a Criteria Area species (Area 1) for the proposed Project. No suitable alkaline soils or vernal pools are present in the rare plant study area. Seasonal ponds identified within the study area do not provide the alkaline conditions suitable for this species. This species is not expected to occur.
Mud Nama	*Nama stenocarpum*	-/-/2.2/ MSHCP (d)	This herb blooms from January to July. It inhabits marshes and swamps, such as at lake margins and riverbanks, and grows at elevations ranging from 16 to 1,640 feet. Within Riverside County, only known from the northern shores of Mystic Lake (Roberts et al. 2004).	HA	Known only from Mystic Lake, so not expected in the rare plant study area. The Project study area lies outside the MSHCP survey area for this species; therefore, there is no survey requirement. Any potential impacts on this species would be fully mitigated by the MSHCP. No further action is necessary.
Prostrate Vernal Pool Navarretia	*Navarretia prostrata*	-/-/1B.1/ MSHCP (d)	This annual herb is found in mesic environments such as vernal pools, meadows, seeps, and alkaline grasslands. Within Riverside County, local to Santa Rosa Plateau (Roberts et al. 2004)	HA	The Project site lacks alkaline soils or vernal pools in which this species is endemic. The Project lies outside the MSHCP survey area for the species; therefore, there is no survey requirement. Any potential impacts on the species would be fully mitigated by the MSHCP. No further action is necessary.
Peninsular Nolina	*Nolina cismontana*	-/-/1B.2/-	Inhabits sandstone or gabbro soils in chaparral and coastal scrub at elevations of 459 to 4,182 feet. It is found in mountainous areas along the coast such as Ventura, Matilija, Thousand Oaks, Calabasas, San Juan Capistrano, Santiago Peak, Pala, Sitton Peak, Pechanga, and Viejas Mountains.	HA	No suitable habitats with sandstone or gabbro soils are present in the rare plant study area, and the Project occurs outside of the known geographic range for this species. This species is not expected to occur.

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California Beardtongue	*Penstemon californicus*	-/-/1B.2/-	Found in sandy soils within chaparral, lower montane coniferous forests, and pinyon and juniper woodlands between 3,835 and 7,545 feet elevation. Typically flowers between May and June, though can flower as late as August.	HA	The rare plant study area is outside of the known geographic and elevation range of this species. This species is not expected to occur.
Allen's pentachaeta	*Pentachaeta aurea ssp. allenii*	-/-/1B.1/-	An annual herb occurring at elevations ranging from 164-1,640 feet. Occurs in openings within coastal scrub, southern oak woodland, and valley and foothill grassland. The blooming period occurs from March to June.	HA	This species is not expected to occur, as the rare plant study area is outside the known geographic range of this species.
Hubby's Phacelia	*Phacelia hubbyi*	-/-/4.2/-	Annual herb that occurs within chapparal, coastal scrub, and valley and foothill grasslands. Elevation ranges from 0 to 3,280 feet and typically blooms from April to July.	HA	This species is not expected to occur, as the rare plant study area is outside the known geographic range of this species. This species is known to occur mainly in coastal areas in Santa Barbara, Ventura, Los Angeles, and Orange Counties, with some observed in Kern County.
Santiago Peak Phacelia	*Phacelia keckii*	-/-/1B.3/-	Annual herb the occurs within closed-cone coniferous forests and chaparral. Flowers bloom between May and June and grow from 1,785 to 5,250 feet elevation. Known only from the Santa Ana and Agua Tibia Mountains.	HA	This species is only known to occur on Santiago Peak, and the study area is at a lower elevation, so this species is not expected to occur in the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Brand's Phacelia	*Phacelia stellaris*	-/-/1B.1/ MSHCP (b)	This species occurs within coastal dunes and coastal scrub habitats at elevations ranging between 3 and 131 feet. Blooms from March through June. Local documentation along the Santa Ana River (CNPS 2006). Suitable habitat for Brand's phacelia includes coastal dunes and/or coastal scrub in sandy openings, sandy benches, dunes, sandy washes, or floodplains of rivers and is restricted to clay soils at elevations between 0 and 1,350 feet (RCIP 2003).	HP	This is a NEPSA (Area 7) for the proposed Project. Suitable sandy wash habitat is present within the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Woolly Chaparral-Pea	*Pickeringia montana* ssp. *tomentosa*	-/-/4.3/-	Evergreen shrub found in gabbroic, granitic, and clay soils within chaparral habitat. Can occur up to 5,575 feet and blooms from May to August.	HP	Chaparral habitat with clay soils present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Chaparral Rein Orchid	*Piperia cooperi*	-/-/4.2/-	Perennial herb found in generally dry sites in shrubland, chaparral, cismontane woodlands, and valley and foothill grasslands. Can occur from 45 to 5,200 feet elevation an is known to bloom between March and June.	HP	Suitable chaparral and grassland habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Narrow-Petaled Rein Orchid	*Piperia leptopetala*	-/-/4.3/-	Perennial herb occurring in generally dry sites in shrublands, cismontane woodlands, lower montane coniferous forests, and upper montane coniferous forests. Occur at elevations from 1,245 and 7,300 feet and bloom from May to July.	HA	No suitable habitat is present within the rare plant study area. The Project is outside of the known geographic range of the species. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Fish's Milkwort	*Polygala cornuta* var. *fishiae*	-/-/4.3/ MSHCP (e)	This deciduous shrub blooms from May to August in oak woodland, chaparral, cismontane woodland, and riparian woodland habitats from about 328 to 3,608 feet. It is known from occurrences in Los Angeles, Orange, Riverside, Santa Barbara, San Diego, and Ventura Counties and from Baja California, Mexico.	HP	Suitable habitat is present in the rare plant study area within oak woodland, chaparral, and riparian woodlands. This MSHCP covered species will be considered a Covered Species Adequately Conserved when 10 localities (at least 50 individuals) within the MSHCP Conservation Area have been conserved. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
White Rabbit-tobacco	*Pseudognaphalium leucocephalum*	-/-/2B.2/-	This perennial herb is found in dry, sandy creek bottoms within chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats; often on sandy or gravelly soils; in San Timoteo Canyon and Santa Ana Mountains; appears restricted to the sandy margins of washes or with debris cones feeding from steep canyons and natural, seasonal hydrology.	HP	Suitable habitat is present in the rare plant study area in sandy washes within coastal scrub, riparian, and broom scale scrub habitats. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Nuttall's Scrub Oak	*Quercus dumosa*	-/-/1B.1/-	Grows in sandy, clay soils within closed-cone coniferous forests, chaparral, and coastal scrub from 45 to 1,310 feet. Typically blooms from February to April but can bloom as late as May.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and chaparral habitat with clay soils. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Engelmann Oak	*Quercus engelmannii*	-/-/4.2/-	Found in chaparral, cismontane woodlands, riparian woodlands, and valley and foothill grasslands. Elevations range from 160 to 4,265 feet, and flowers bloom from March to April. Protected in part of the Santa Rosa Plateau Reserve in Riverside County.	HP	Suitable habitat is present within the rare plant study area within the woodlands, chaparral, and grassland habitat. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Coulter's Matilija Poppy	*Romneya coulteri*	-/-/4.2/ MSHCP (e)	Often found in burn areas within chaparral and coastal scrub at 65 to 3,935 feet. Flowers typically bloom from March to July but can bloom as late as August.	HP	Suitable habitat occurs within coastal scrub and disturbed habitats. This MSHCP covered species will be considered a Covered Species Adequately Conserved when 30 localities (not smaller than a quarter section) within the MSHCP Conservation Area have been conserved.
Southern Mountains Skullcap	*Scutellaria bolanderi* ssp. *austromontana*	-/-/1B.2/-	Found in mesic climates within chaparral, cismontane woodlands, and lower montane coniferous forests. Occurs at elevations of 1,390 and 6,560 feet and flowers bloom between June and August.	HA	Marginally suitable chaparral habitat is present within the rare plant study area; however, the study area is outside of the known geographic range for this species.
Chaparral Ragwort	*Senecio aphanactis*	-/-/2.2/-	Found in chaparral, cismontane woodland, and coastal scrub habitats from 49 to 2,625 feet. Also associated with alkaline soils.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and chaparral habitats. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Hammitt's Clay-cress	*Sibaropsis hammittii*	-/-/1B.2/ MSHCP (b)	This species occurs in openings in chaparral and valley and foothill grassland habitat from 2,365 to 3,495 feet in elevation. This species is associated with clay soils. The blooming period is from March to April.	HA	This is a NEPSA (Area 1) for the proposed Project. The rare plant survey area is outside of the known geographic and elevation range for this species. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Salt Spring Checkerbloom	*Sidalcea neomexicana*	-/-/2.2/-	Found thinly scattered throughout Southern California, including Los Angeles, Ventura, Orange, and Riverside Counties as well as Baja California. The documented elevation range in California is 49 to 5,018 feet. This species is associated with alkaline meadows and is typically found associated with Salt Grass (*Distichlis spicata*). Within Riverside County, the species is scarce and tied to alkaline seeps and springs; perhaps extirpated (Roberts et al. 2004).	HA	No suitable alkaline meadows or seeps are present within the rare plant survey area. This species is not expected to occur.
Bottle Liverwort	*Sphaerocarpos drewei*	-/-/1B.1/-	Ephemeral liverwort that grows in openings within chaparral and coastal scrub at elevations of 295 to 1,970 feet. Much of the suitable historical habitat has been lost to urbanization.	HP	Suitable habitat is present within the rare plant study area within coastal scrub and chaparral. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
San Bernardino Aster	*Symphyotrichum defoliatum*	-/-/1B.2/-	Found in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland. Also near ditches and stream springs. Blooms from July to November at elevations from 6 to 6,700 feet.	HP	Suitable habitat is present in the rare plant study area within coastal scrub, marshes, and grasslands. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Parry's Tetracoccus	*Tetracoccus dioicus*	-/-/1B.2/-	Found in chaparral and coastal sage scrub. Grows at elevations of 540 to 3,280 feet and blooms between April to May.	HP	Suitable habitat is present in the rare plant study area within coastal scrub and chaparral. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Woven-Spored Lichen	*Texosporium sancti-jacobi*	-/-/3/-	Found in openings within chaparral on soil, small mammal pellets, dead twigs, and on *Selaginella* spp. Added to CRPR 3 based on prior inclusion in CNDDB; California Lichen Society Conservation Committee sponsorship is pending.	HP	Suitable habitat is present in the rare plant study area within chaparral. A focused rare plant survey was performed, within suitable habitat and the species was not detected within the rare plant study area.
California Screw Moss	*Tortula californica*	-/-/1B.2/-	This moss occurs in sandy soil in chenopod scrub and valley and foothill grassland. Elevation range of 33 to 4,790 feet.	HP	Grassland and sandy soils are present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Wright's Trichocoronis	*Trichocoronis wrightii* var. *wrightii*	-/-/2.1/ MSHCP(b)	In western Riverside County, found in the alkali vernal plains and associated with alkali playa, alkali annual grassland, and alkali vernal pool habitats. This species occupies the more mesic portions of these habitats.	HA	This is a NEPSA (Area 1) for the proposed Project. There are no vernal pools in the rare plant study area, and this species is not expected to occur within the rare plant study area.
San Diego County Viguiera	*Viguiera laciniata*	-/-/4.3/-	A perennial shrub found within chaparral and coastal scrub habitats. This grows between 195 and 2,460 feet and typically blooms between February and June. This is locally common in San Diego County, and occurrences outside of this area are typically introduced.	HA	No suitable coastal bluffs and chaparral are present within the rare plant study area. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
La Purisima Viguiera	*Viguiera purisime*	-/-/2B.3/	Found in coastal bluff scrub and chaparral. Grows from 1,195 to 1,395 feet and blooms between April and September. Known in California from a single disjunct population on Camp Pendleton. Possibly threatened by military activities.	HA	No suitable coastal bluffs and chaparral are present within the rare plant study area. This species is known to be restricted to habitats on Camp Pendleton. This species is not expected to occur within the rare plant study area.

[a] Status Codes
CRPR = California Rare Plant Rank
1B – plants rare or endangered in California or elsewhere
2B – plants rare or endangered in California
3 – plants about which more information is needed
4 – plants of limited distribution
.1 – plants seriously endangered in California
.2 – plants common elsewhere, fairly endangered in California
.3 – plants not very threatened in California

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the Narrow Endemic Plant Species Survey Area (NEPSA)
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a Covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed within U.S. Forest Service land

[b] Habitat Present/Habitat Absent
HP = Habitat is or may be present. The species may be present.
HA = Habitat absent and no further work needed. These areas are shaded gray in the table
P = the species is present

2.4.3.3 Environmental Consequences

The direct and indirect impacts on non-listed special-status plant species that could occur during construction are described below. Direct impacts are those impacts that can be expected from direct removal and disturbances to the land and resources, either temporarily or permanently. Examples of direct impacts include mortality of individuals, temporary impacts from clearing and grubbing, and permanent loss of habitat. Indirect impacts are those impacts that give rise to delayed and/or further removed, secondary impacts. Examples of indirect impacts may include fragmentation, pollination interruption, increased levels of environmental toxins, plant and wildlife dispersal interruption, downstream sedimentation, increased risk of fire, and invasion of nonnative animals and plants that stresses or alters competition among natives. Indirect impacts are those that can be assumed to increase mortality, reduce productivity, and/or reduce the functions and values of natural open space for native species. Operation of the Project may contribute to long-term indirect effects and contribute to edge effects through the degradation of habitat adjacent to the new right of way, the spread of invasive plants from vehicle travel, and an increased risk of fire; however, these potential edge effects would not differ from the effects associated with existing conditions along the California Department of Transportation right of way.

MSHCP Non-Listed Special-Status Plants

Build Alternative

During rare plant focused surveys in 2020 and 2021, none of the Narrow Endemic Plant Species Survey Area 1 and 7 and Criteria Area Plant Species Survey Area 1 non-listed special-status plant species were observed. Therefore, no impacts on any of these species would occur.

Long-spined spineflower was found; however, this species is fully covered under the MSHCP, so any potential Project-related impacts would be covered. No other MSHCP covered species were detected; however, these could potentially occur in the Project vicinity.

Temporary Impacts

Temporary indirect impacts on MSHCP non-listed special-status plant species could result from construction-related dust, erosion, runoff, and the introduction of invasive species on disturbed soils. Increased dust during construction could decrease a plant's ability to photosynthesize. This could result in diminished reproduction or the loss of long-spined spineflower. Construction equipment, vehicles, or imported materials could introduce and spread nonnative invasive plant species within the Project area, which could out-compete MSHCP non-listed special-status plants for resources such as water and space. In addition, suitable habitat could become monotypic, thereby reducing the quality and diversity of native vegetation communities on-site. However, with implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-12 (NES BIO-12)** the impacts are expected to be minor.

Permanent Impacts

No permanent impacts would occur on MSHCP non-listed species-status plants as a result of Project construction. Long-spined spineflower is outside of the LOD and, therefore, no individual plants would be directly affected (e.g., removal of occupied habitat, mortality or injury). Any impacts on MSHCP non-listed special-status plants, should they occur, are considered temporary and are discussed under the *Temporary Impacts* heading above.

No-Build Alternative

Under the No-Build Alternative, no new or additional impacts on MSHCP non-listed special-status plant species would occur beyond those that would be expected from operation of the existing facility.

Non-MSHCP Non-Listed Special-Status Plants

Build Alternative

No non-MSHCP non-listed special-status plants species were observed during the 2020 or 2021 focused studies. These species are considered absent from the rare plant study area.

Temporary Impacts

Because non-MSHCP non-listed special-status plants species are considered absent from the BSA, no temporary impacts are anticipated.

Permanent Impacts

Because non-MSHCP non-listed special-status plants species are considered absent from the BSA, no permanent impacts are anticipated.

No-Build Alternative

No impacts on non-MSHCP non-listed special-status plants species would occur under the No-Build Alternative.

2.4.3.4 Avoidance, Minimization, and/or Mitigation Measures

No Narrow Endemic or Criteria Area Species non-listed special-status plants are present within the rare plant study area; therefore, no avoidance, minimization, or mitigation measures are necessary.

Although long-spined spineflower was found to be present within the rare plant study area, the species is fully covered under the MSHCP. Implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-12 (NES BIO-12)**, described in Section 2.4.1.4, would reduce or avoid the potential for temporary indirect impacts on long-spined spineflower adjacent to the proposed LOD. These measures would also protect adjacent native flora and fauna associated with long-spined spineflower in the BSA during construction.

2.4.4 Animal Species

2.4.4.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.4.5, *Threatened and Endangered Species*. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code (CFG Code)
- Sections 4150 and 4152 of the CFG Code

The Project is also a covered activity under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (Volume I, Section 7.3.5, Planned Roads within the Criteria Area) (RCIP 2003). Participation in the MSHCP by the County is intended to streamline the environmental process for future transportation projects in western Riverside County (e.g., through pre-mitigation) and save money over the long term. The MSHCP would provide take coverage for certain special-status animal species affected by the Project. The consistency review would be performed by the Western Riverside County Regional Conservation Authority (RCA), USFWS, and CDFW.

2.4.4.2 Affected Environment

Unless otherwise noted, the information from this section is based on the September 2023 Natural Environment Study (NES) prepared for the Project (Caltrans 2023). References used in the NES are not carried over into this section. To comply with the provisions of various state and federal environmental statutes and executive orders, potential impacts on natural resources of the region were investigated and documented.

Development of a list of species and habitats within the Project region was based on information compiled by the USFWS (USFWS 2023), California Natural Diversity Database (CNDDB) (CDFW 2024), and current publications (see Section 2.4.1, *Natural Communities*, for details). The Project site was field reviewed to identify animal species and their habitats.

In total, 88 species of wildlife were detected in the biological study area (BSA; i.e., Project limits of disturbance [LOD] plus a 500-foot buffer). The most commonly observed birds were red-tailed hawk (*Buteo jamaicensis*), killdeer (*Charadrius vociferus*), mourning dove (*Zenaida macroura*), white-throated swift (*Aeronautes saxatalis*), horned lark (*Eremophila alpestris*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), European starling (*Sturnus vulgaris*), California towhee (*Melozone crissalis*), song sparrow (*Melospiza melodia*), house finch (*Haemorhous mexicanus*), and lesser goldfinch (*Carduelis psaltria*). The above species are common in this region nearly year-round and are more disturbance-tolerant than most of the other observed species. Additionally, the riparian corridor in the southern portion of the BSA provides habitat for other less frequently observed birds, including the pacific-slope flycatcher (*Empidonax difficilis*) and phainopepla (*Phainopepla nitens*).

The most frequently detected mammals were the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Otospermophilus beecheyi*), and domestic dog (*Canis familiaris*). These are all animals that are typically observed in, and common to, this region.

Amphibians and reptiles detected included American bullfrog (*Lithobates catesbeianus*), western fence lizard (*Sceloporus occidentalis*), and gopher snake (*Pituophis catenifer*). All three are common in the BSA and readily found near human-altered or disturbed areas.

Three non-listed special-status animal species were detected in the BSA during field studies: Belding's orange-throated whiptail (*Aspidocelis hyperythra beldingi;* California Watch List [WL]); yellow-breasted chat (*Icteria virens*; California Species of Special Concern [CSC]); and yellow warbler (*Setophaga petechia*; CSC). All three of these non-listed special-status animals are MSHCP fully covered species, with no additional survey requirements.

A literature review determined that non-listed special-status species may potentially occur within the BSA based on the regional location of the Project. Table 2.4.4-1 identifies the non-listed special-status animals that may be present and their protection status. As mentioned earlier, species listed as threatened or endangered are discussed in Section 2.4.5, *Threatened and Endangered Species*. As displayed in Table 2.4.4-1, 34 non-listed special-status species have suitable habitat within the BSA: 1 fish, 1 insect, 2 amphibians, 8 reptiles, 11 birds, and 11 mammals. Focused studies were performed for burrowing owl and bats due to presence of suitable habitat within the BSA and/or survey requirement under the MSHCP. No other focused studies were performed for non-listed special-status animals or candidate species.

Table 2.4.4-1. Non-Listed Special-Status Animals with Potential to Occur in the Biological Study Area

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
INVERTEBRATES					
Santa Rosa Plateau Fairy Shrimp	*Linderiella santarosae*	-/-/-/MSHCP (a)	Restricted to cool water vernal pools that are formed on Southern basalt flows. This species is known to occur only on the Santa Rosa Plateau.	HA	The study area is not within the Santa Rosa Plateau. Santa Rosa Plateau fairy shrimp are not expected to occur.
Monarch (California overwintering population)	*Danaus plexippus* pop. 1	FC/-/-/-	Overwintering groves trees include Monterey pine (*Pinus radiata*) Monterey cypress (*Cupressus macrocarpa*), Coast redwood (*Sequoia sempervirens*), coast live oak (*Quercus agrifolia*), Douglas fir (*Pseudotsuga menziesii*), Torrey pine (*Pinus torreyana*), western sycamore (*Platanus racemosa*), bishop pine (*Pinus radiata*) and others. Monarchs are reliant on milkweeds (*Asclepias* spp.) as host plants for caterpillars, and adults require a diverse range of flowers for nectar as fuel during breeding.	HP	Suitable potential habitat for overwintering monarchs is present in the BSA. Overwintering groves tree species are present in the BSA, including coast live oak and western sycamore. The BSA does not overlap with any known mapped overwintering groves for monarch. Flowering plant species within grasslands and shrublands in the BSA provide nectar sources for adult monarchs. Milkweeds are required for host plants for caterpillars. There are no *Asclepias* spp. noted in the BSA.
FISH					
Arroyo Chub	*Gila orcuttii*	-/CSC/-/MSHCP	Occur within warm, fluctuating streams and found within slow moving sections of streams containing sandy or muddy bottoms. In Riverside County, occurs within the Santa Ana and	HP	Suitable habitat occurs within Temescal Wash, and the species was previously known to occur in lower Temescal Wash (also known as Temescal Creek), though surveys in the late 1990s found few fish (RCIP 2003). This species is fully

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			Santa Margarita River watersheds.		covered under the MSHCP; no focused survey is required.
Santa Ana Speckled Dace	*Rhinichthys osculus* ssp. 3	-/CSC/-/-	Formerly widespread in mountain portions of the Santa Ana, San Gabriel, and Los Angeles watersheds. Populations were scattered in foothill areas and rare in lowlands. This subspecies of speckled dace is assumed extirpated from most of the Santa Ana River below Seven Oaks Dam (CDFG 1995, CDFW 2015, VanMeter 2017).	HA	The BSA occurs outside of the current range of this species. Therefore, there is no potential for Santa Ana Speckled Dace to occur within the BSA.
AMPHIBIANS					
Coast Range Newt	*Taricha torosa torosa*	-/CSC/- /MSHCP	Species frequent terrestrial habitats, but breed in ponds, reservoirs, and slow-moving streams. Limited information on movement between wetland sites hampers characterization of requirements at this potentially critical period in the life cycle. Loss of wetland habitats and introduction of nonnative predators, including crayfishes, appear to be the main causes of declines.	HP	Potentially suitable habitat occurs within the BSA near and within wetland and aquatic habitats, as well as in riparian and adjacent upland habitats (chaparral, oak woodland, and grasslands). The BSA is within the species' range; however, regionally, the species is mostly known to occur within the coastal slope and upper elevations of the Santa Ana Mountains (RCIP 2003). Therefore, coast range California newt has a low potential to occur within the BSA. This species is fully covered under the MHSCP; there is no survey requirement.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Western Spadefoot	*Scaphiopus hammondii*	-/CSC/- /MSHCP	Found primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools and seasonal ponds are essential for breeding and egg laying. It is found at sea level to 4,500 ft. in elevation.	HP	Marginally suitable habitat occurs within the BSA in grasslands and woodlands in seasonal ponds, such as along Temescal Wash. This species is fully covered under the MHSCP; there is no survey requirement.
REPTILES					
Southern California Legless Lizard	*Anniella stebbinsi*	-/CSC/-/-	Habitat is primarily areas with sandy or loose loamy soils under the sparse vegetation of beaches, chaparral, or pine-oak woodland, and open, well-shaded terraces in mature riparian natural communities. Leaf litter is commonly present. Soil disturbances such as agriculture and mining, as well as requirements for soil moisture and relatively cool microclimates limit distribution, and account in part for local declines and extirpations (Jennings and Hayes 1994).	HP	Suitable habitat is present within chaparral, oak woodland, and riparian areas. This species is relatively common throughout western Riverside County, and the number of individuals directly affected is expected to be low (if present). This species was not observed during surveys.
California Glossy Snake	*Arizona elegans occidentalis*	-/CSC/-/-	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats.	HP	Suitable habitat is present in grassland and chaparral. This species was not observed during surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Coastal Whiptail	*Aspidoscelis tigris stejnegeri*	-/CSC/-/-	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage including chaparral, woodland, and riparian areas.	HP	Suitable habitat is present in chaparral, woodlands, and riparian areas. This species was not observed during surveys.
Belding's Orange-throated Whiptail	*Aspidocelis hyperythra beldingi*	-/WL/-/MSHCP	Most California populations occur on or adjacent to floodplains or the terraces of streams, in or by open sage scrub and chaparral communities. The presence of perennial shrubs appears to be important, with the most strongly associated species being California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), white sage (*Salvia apiana*), and black sage (*S. mellifera*). Termites are reported to constitute 57 - 95% of the diet, and foraging microsites are primarily under shrubs in leaf litter (Brattstrom 2000).	P	Suitable habitat occurs within sage scrub and chaparral habitats. This species was observed during surveys. This species is fully covered under the MSHCP.
San Diego Banded Gecko	*Coleonyx variegatus abbotti*	-/CSC/-/MSHCP	Prefers rocky areas in coastal sage chaparral. Found in burrows or under surface objects during daylight.	HA	Rocky areas are not present in the BSA. This species is fully covered under the MSHCP.
Red-Diamond Rattlesnake	*Crotalus ruber*	-/CSC/-/MSHCP	As far north as Puente Hills in Yorba Linda and southwest San Bernardino County, and occurs south to Loreto, Baja	HP	Suitable habitat occurs within the study area within chamise chaparral.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			California, Mexico; known elevation range is sea level to just under 15,000 ft, but apparently rare above about 3,940 ft; greatest frequency in areas of heavy brush, such as chamise chaparral, but also in open areas at lower densities; boulders and rocky outcrops.		This species was not observed during surveys. This species is fully covered under the MSHCP.
Coronado Skink	*Eumeces skiltonianus interparietalis*	-/CSC/-/-	Found in a variety of habitats (incl. sage scrub, chaparral, grassland) but is most common in early successional stages or open areas within habitats in which they occur. Heavy brush and densely forested areas are generally avoided. Cover for this secretive lizard is provided by rotting logs, surface litter, large flat stones, and sometimes trash or other human debris.	HP	Suitable habitat is present within sage scrub, chaparral, grassland, and early succession riparian vegetation communities. This species was not observed during surveys. This species is relatively common throughout western Riverside County, and the number of individuals directly affected is expected to be low (if present).
California Mountain Kingsnake (San Bernardino population)	*Lampropeltis zonata* (*parvirubra*	-/CSC/MSHCP (f)	Mountain riparian with an abundance of downed wood and snags. Generally above 4,000 ft. Rare at lower elevation in riparian corridors tied to montane areas.	HA	The Project site occurs well outside of the species known range and this species occurs at higher elevations. This species is not expected to occur.
San Diego Coast Horned Lizard	*Phrynosoma coronatum blainvillei*	-/CSC /-/MSHCP	Found in arid and semi-arid climate conditions in chaparral, coastal sage	HP	Suitable habitat occurs within coastal sage scrub and chaparral habitats.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			scrub, primarily below 2,000 ft in elevation. Critical factors are the presence of loose soils with a high sand fraction; an abundance of native ants or other insects, especially harvester ants (*Pogonomyrmex* spp.); and the availability of both sunny basking spots and dense cover for refuge.		This species was not observed during surveys. This species is fully covered under the MSHCP.
Coast Patch-nosed Snake	*Salvadora hexalepis virgultea*	-/CSC/-/-	Mostly restricted to habitats with a strong but broken shrub component, especially somewhat open chaparral and black sage (*Salvia mellifera*) or relatively mature, dense coastal sage scrub (Gervais et al. 2008), and may require ground burrows of unknown characteristics for overwintering and refuge.	HP	Suitable habitat is present within chaparral, sage scrub, oak woodland, and riparian scrub habitat. This species was not observed during surveys. The number of individuals directly affected is expected to be low (if present).
Two-striped Garter Snake	*Thamnophis hammondii*	-/CSC/-/-	It is often in water and rarely found far from it, though it is also known to inhabit intermittent streams having rocky beds bordered by willow thickets or other dense vegetation. They will also inhabit large riverbeds if riparian vegetation is available, and even occur in artificial impoundments if both aquatic vegetation and	HA	Not expected as rocky soils absent from the BSA. Nearest CNDDB observation of this species is up Cole Canyon from Murrieta Creek in 2001 (CDFW 2024)

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			suitable prey items (small amphibians and fish) are present (Jennings and Hayes 1994).		
BIRDS					
White-tailed Kite	*Elanus leucurus*	-/CFP/-/MSHCP	Species hunts in open country. This is a strongly lowland species, apparently rare anywhere in California above 2,000 ft. Nests are flimsy and are located low in trees and large shrubs near foraging areas in savannahs and at edges between open habitat and woodland or forest areas. Its diet is largely restricted to small mammals such as voles and mice.	Nesting: HP Foraging: HP	This species would potentially nest and forage within the study area. This species was not observed during surveys. The removal of foraging habitat of this species is fully covered under the MSHCP, but this is also a fully protected species.
Northern Harrier	*Circus hudsonius*	-/CSC/-/MSHCP	Species hunts low to the ground mostly in open country, nesting on the ground. Prey diversity is high, though small mammals are most commonly taken. It was formerly a fairly common breeder in much of coastal southern California, but now is nearly extirpated in this role due to loss of native open habitats, especially marshes. It remains fairly common in open country with low human	Nesting: HA Foraging: HP	This species no longer breeds within the region and it would only occur in the winter or as a migrant. There is a potential for this species to forage within open habitats and marsh areas. This species was not observed during surveys. This species is covered under the MSHCP.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			disturbance during migration and in winter.		
Golden Eagle	*Aquila chrysaetos*	-/CFP/-/MSHCP	Forages in grassland and open savannah of many types. It tolerates considerable variation in topography and elevation. It prefers to hunt moderate-sized prey, especially California Ground Squirrels (*Spermophilus beecheyi*) and rabbits, but will occasionally take larger prey, such as Mule Deer (*Odocoileus hemionus*) fawns. It is very sensitive to human disturbance, especially near nest sites.	Nesting: HA Foraging: HP	Species would forage within the BSA. May nest in cliff ledges in the Santa Ana Mountains to the west and evidence of nesting in Double Butte to east near Winchester (approximately 11 miles away). Potential foraging habitat is present in the study area, however no nesting would occur. This species was not observed during surveys. This species is covered under the MSHCP but has additional protection under the Bald and Golden Eagle Protection Act (BGEPA).
American Peregrine Falcon	*Falco peregrinus anatum*	D/D,CFP/-/MSHCP	More common along the coasts and feed on birds, especially shorebirds and ducks. Breed in open landscapes with cliffs (or skyscrapers, high bridges) for nest sites. Found along rivers and coastlines or in cities; often feed on rock pigeons. Nest sites are cliffs and structures with very low levels of presence at the nest site.	Nesting: HA Foraging: HP	No suitable nesting habitat is present within the study area. Species would potentially forage within open water portions of the study area. This species was not observed during surveys. This species is covered under the MSHCP, but is also a fully protected species.
Mountain Plover	*Charadrius montanus*	-/CSC (wintering)/-/-	Small numbers are present in winter in the valleys of coastal southern California. The most	HA	The species' distribution is limited to the San Jacinto Valley and there are no records for Mountain Plover along

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			commonly used winter habitat in California is freshly cultivated croplands, but based on habitat studies (Knopf and Rupert 1995), heavily grazed native rangelands and, especially, natural alkali flats are the preferred habitats. Through most of the species' wintering range in California, natural alkali flats have been drastically reduced through conversion to human uses. In Western Riverside County this species only winters in the San Jacinto Valley.		I-15 in the study area. The wintering range for this species does not overlap the study area.
Yellow Rail	*Coturnicops noveboracensis*	-/CSC/-/-	Found in shallow marshes and wet meadows. During the winter, they are found in drier fresh-water and brackish marshes and deep grass and rice fields.	HA	There is no marsh habitat within the BSA suitable for breeding or foraging. This species is not expected to occur.
Burrowing Owl	*Athene cunicularia*	-/CSC/-/ MSHCP (c)	Inhabits open, dry, nearly or quite level, grassland; prairie; desert floor; shrubland should be considered potential habitat if shrub cover is below 30% (CBOC 1993). In coastal southern California, a substantial fraction of birds are found in microhabitats highly altered by man, including flood control and	HP	Suitable burrowing owl habitat was found within the MSCHP burrowing owl survey area throughout the BSA. Burrowing owls were not observed during focused surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			irrigation basins, dikes, and banks, abandoned fields surrounded by agriculture, and road cuts and margins. Strong association between Burrowing Owls and burrowing mammals, especially ground squirrels (*Spermophilus* spp.); however they will also occupy man-made niches such as banks and ditches, piles of broken concrete, and even abandoned structures (Gervais et al. 2008).		
Long-eared Owl	*Asio otus*	-/CSC/-/-	In southern California, the species breeds and roosts in riparian and oak forests, and hunts small mammals at night in adjacent open habitats; known to breed at several dozen locales in San Diego and Orange Counties (Bloom 1994; CDFW 2016), and probably do so in smaller numbers in other coastal Southern California counties as well. Species is relatively intolerant to man-made disturbances and in particular night lighting. Foraging lands need to be rodent rich and relatively close to roosting and/or nesting habitat.	HP	The BSA contains suitable nesting habitat within the riparian forest (California sycamore woodland, Fremont cottonwood forest and woodland, and coast live oak woodland and forest). Potential foraging habitat for this species occurs within open lands. This species was not observed incidentally during biological surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Loggerhead Shrike	*Lanius ludovicianus*	-/CSC/-/MSHCP	Found as a common resident and winter visitor throughout California in lowland and foothill habitats, where it frequents open areas with sparse shrubs and trees.	HP	Suitable nesting and foraging habitat is present within the study area. This species is fully covered under the MSHCP, and no further action is warranted. This species was not observed during surveys.
Coastal Cactus Wren	*Campylorhynchus brunneicapillus sandiegensis*	-/CSC/-/MSHCP	Non-migratory, obligate resident within a subset of coastal sage scrub habitats; require the presence of, but are not entirely restricted within, relatively arborescent (over 3 ft tall) stands of several species of cactus (*Opuntia* spp.)	HP	This species is fully covered by the MSHCP with no survey requirement. Suitable habitat is present within the BSA and Project site within coastal sage scrub where *Opuntia* species are present.
Grasshopper Sparrow	*Ammodramus savannarum*	-/CSC/-/MSHCP(e)	Widespread distribution throughout California. The grasshopper sparrow uses predominantly open grassland with use of some other habitats including alluvial, playa, and sparse coastal sage scrub when sufficient amounts of intermittent grass or grassland habitat are available (Unitt 2008).	HP	Suitable habitat is present; the species was not detected during field studies.
Yellow Warbler	*Setophaga petechia* (formerly *Dendroica*	-/CSC/-/MSHCP	Inhabits riparian vegetation close to water along streams and wet meadows, but favors second growth and edges, so not as vulnerable to habitat	P	Species was documented within the Project site and study area within riparian habitat. This species is fully covered under the MSHCP and no further actions are required.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
	petechia brewsteri)		loss as some warblers. In the west, breeds in streamside thickets. Found in bushes, swamp edges, streams, and gardens. Common trees include willows, alders, and cottonwoods. Nests in the upper story of riparian habitats in southern California. It is also a common, widespread migrant in spring and fall, occupying a wide variety of habitats at that time.		
Yellow-breasted Chat	*Icteria virens*	-/CSC /-/MSHCP	Nests in low thickets in dense riparian habitats. It eats a variety of invertebrates. It is a local and uncommon breeder and rare migrant across southern California.	P	Species was documented within the Project site and study area within riparian habitat. This species is fully covered under the MSHCP and no further actions are required.
MAMMALS					
Pallid Bat	*Antrozous pallidus*	-/CSC/-/-	Throughout southern California most often in grasslands, also in mixed conifer forest; shrublands, woodlands, & forest; most common in open, dry habitats with rocky areas for roosting; yearlong resident in most of range. The species is not thought to migrate so maternity colonies and winter roosts are expected to occur	HP	Both foraging (grassland, shrublands, woodlands and forests) and roosting habitat (bridges, trees) are present. Not detected during bat emergence surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			in vicinity of each other; roost and maternity sites are rock crevices, old buildings, bridges, caves, mines, and hollow trees. Gregarious, often roosting in colonies, but disbanding between August and October and relatively inactive during winter. Low, slow flyers. Forages on invertebrates on the ground such as grasshoppers, crickets, beetles, scorpions, centipedes, etc.		
Townsend's Big-eared Bat	*Corynorhinus townsendii*	-/CSC/-/-	Found throughout California in coastal areas, valleys, deserts, foothills, and mid-elevation montane forest. The occurrence of the species is highly correlated with availability of caves and cave-like roosting habitat (such as cavity forming rock, abandoned mines, buildings, bridges, water diversion tunnels, tree cavities) (Pierson and Rainey 1998). Temperature and humidity are very important factors in occupation of potentially suitable habitat. Often observed in rocky situations where caves or abandoned mine tunnels are	HA	No suitable habitat for Townsend's big-eared bat in the BSA. Roosting potential for this species is restricted to the Santa Ana River (approximately 6 miles north of the BSA) where humidity, temperature, and bridge substrate appears suitable, but it may forage at the river and adjacent lands.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			available. May occasionally inhabit old buildings ("artificial" caves). Roosts in the open, hanging from walls & ceilings. May roost under bridges if bridge designs include cavities that resemble caves. Extremely sensitive to human disturbance. Open water is an important for both drinking and feeding for this species, so a perennial water source is important. Females form maternity groups in the spring in caves and shelters. Maternal roosts form between March and June with pups born between May and July.		
Western Mastiff Bat	*Eumops perotis californicus*	-/CSC/-/-	Found throughout the coastal lowlands up to drier mid-elevation mountains, but avoids the Mojave and Colorado deserts. Habitats include dry woodlands, shrublands, grasslands, and occasionally even developed areas. This big bat forages in flight, primarily taking insects in the order Hymenoptera (bees, wasps, and ants). Most prey species are relatively small,	HP	This species forages in broad, open areas, and may forage miles from a roost. Foraging habitat includes mountain meadows, dry desert washes, floodplains, chaparral, oak woodland, grassland, and agricultural areas, where primarily moths are consumed. This species has a low potential to use bridges and buildings as roosting sites, as it prefers to roost in high structures such as cliffs and high buildings, but possibly tall palm trees. Suitable roosting and foraging habitat occurs

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			low to the ground, and weak-flying. This species has been known to travel more than 25 miles from roost sites to forage in a variety of habitats. For roosting, appears to favor rocky, rugged areas in lowlands where abundant suitable crevices are available for day roosts. There appears to be little use of night roosts. This species is primarily cliff-roosting but also roosts in large boulders or in human constructions such as buildings and bridges and has also been documented roosting in palm trees. It is also found in high buildings, trees, and tunnels. Roost sites may be in natural rock or in tall buildings, large trees or elsewhere, but must be at least 2 inches wide and 12 inches deep, and narrow to at most 1 inch at the upper end. Nursery roosts must be deeper yet. This species prefers deep crevices that are at least 16 to 20 ft above the ground, and roosting sites that have unobstructed moderately		within the study area, but no suitable roosts were found in the study area during survey work. Not detected during bat emergence surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			large openings that can be entered from below as this species cannot take flight from a flat surface and must free-fall to achieve lift for successful flight. Roosts may be communal (up to 100 individuals) or solitary, and commonly include other species of bats. This species appears to not migrate but performs seasonal movements.		
Western Red Bat	*Lasiurus blossevillii*	-/CSC/-/-	Solitary, migratory bat that is linked to mature and intact sycamore and cottonwood riparian vegetation. However, individuals are now being detected in urban areas with ornamental trees in Orange and San Diego Counties with evidence of breeding in Southern California. Western red bats roost in the foliage of broad-leaved trees with dense foliage and require a range of trees for roosting as the bats often move their roost spot from tree to tree. Trees can also include orchard trees such as avocado, apricots and citrus.	HP	Suitable foraging and roosting habitat is present in the BSA. Suitable roosts in California sycamore woodland and Fremont cottonwood forest and woodland habitat present in the BSA. Orchard trees in agricultural areas provide additional roost sites. Not detected during bat emergence surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Western Yellow Bat	*Lasiurus xanthinus*	-/CSC/-/	This non-colonial bat species is often associated with water features such as stock tanks, ponds, streams, and rivers in open grassy areas and scrub, as well as in canyon and riparian habitats. Western yellow bats are often associated with palm oases, but may be expanding their range to include palms in landscaping. Occurs from southern California and western Arizona south into Mexico. Roosts primarily in the untrimmed, dead fronds of fan palms (native and nonnative) but will also use other trees including cottonwoods. Possible for both seasonal movement and year-round residence. Feeds on varied insects. Threats include cosmetic trimming of dead fronds on ornamentally planted palms, domestic predators, and loss of habitat.	HP	Roost sites present in woodland and shrubland areas containing palms (coast live oak woodland and forest, Fremont cottonwood forest and woodland, mulefat thickets, Eucalyptus – tree of heaven – black locust groves, and nonnative woodland). Temescal Wash and associated tributaries and seasonal depressions are water features within the study area. Not detected during bat emergence surveys.
Pocketed Free-tailed Bat	*Nyctinomops (=Tadarida) femorosaccus*	-/CSC/-/-	Pocketed free-tailed bats occur in a variety of habitats in California including desert scrub, desert riparian, chaparral, and pine-oak forests. Species roosts in	HP	Potential foraging habitat is present within the Temescal Wash and associated tributaries. Species probably roosts in canyons in the Santa Ana Mountains, but may roost in bridges.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			high rock crevices, bridges, roofs, buildings, and cliffs, and forage primarily on large moths, especially over water. Little is known about the ecology of this species, other than it is a far-ranging species. It may roost in foothills and forage over larger areas, with water sources funneling bat activity into canyons. It is probable that bats follow canyons and drainages for foraging and to seek out water sources and roost in crevices within foothills.		Not detected during bat emergence surveys.
Big Free-tailed Bat	*Nyctinomops macrotis*	-/CSC/-/-	Occurs within low-lying arid areas of southern California (CDFW 2024). Requires high crevices in cliffs/rock outcrops for roosting, but also roosts in buildings, caves and holes in trees. This species is found associated with desert scrub, arroyo, and woodland habitats. Species feeds on large insects such as moths and grasshoppers. This species is rare, with a scattered distribution throughout much of California. Because of this distribution, big free-tailed	HP	Potential foraging habitat associated with forest habitats in the BSA. Expected to roost in cliff/rock outcrops and high crevices associated with the foothills which would be associated with the Santa Ana Mountains, Estelle Mountain or the Sedco Hills. May also roost in holes in trees, so roosting habitat also present in the BSA. Not detected during bat emergence surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			bats could be expected almost anywhere. This is a far-ranging species that may roost in the foothills but may forage over much larger areas. This species is expected to be foraging high above the forest canopy.		
San Diego Black-tailed Jackrabbit	*Lepus californicus bennettii*	-/-/-/MSHCP	This subspecies of the black-tailed jackrabbit is known from a narrow strip along the southern coast of California and southward about 200 miles along the Baja peninsula (west coast). Commonly feeds in open pastures and rangelands or in commercial crops. Mainly nocturnal and during the day will seek shade, lying under bushes or other cover in a shallow scrape. Home ranges are between 25 to 50 acres. Common throughout state except at high elevations in herbaceous and desert shrub areas, sage scrub, grasslands, open chaparral and woodland/forest areas; relatively disturbance tolerant.	HP	Suitable habitat for this species occurs within the BSA. This species is fully covered under the MSHCP and no further analysis is required. Not detected during surveys.
Northwestern San Diego Pocket Mouse	*Chaetodipus fallax fallax*	-/-/-/MSHCP	Sandy herbaceous areas, usually in association with rocks and course gravel in	HP	Suitable habitat for this species occurs within sage scrub and chaparral habitats in the study area.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			southwest California; coastal and desert border areas in San Bernardino, Riverside, and San Diego Counties. Elevation ranges from sea level to 6,000 ft. Vegetation community preferences include sage scrub, chamise-redshank chaparral, mixed chaparral, sage brush, desert wash, desert scrub, desert succulent scrub, pinyon-juniper, annual grassland.		This species is fully covered under the MSHCP and no further analysis is required.
Los Angeles Pocket Mouse	*Perognathus longimembris brevinasus*	-/CSC/- /MSHCP (c)	Habitat requirements for this subspecies are poorly known; it inhabits areas of open ground, prefers fine sandy soils (for burrowing), but is also found commonly on gravel washes and on stony soils, within brush and woodland habitats. It is rarely found on sites with a high cover of rocks.	HP	Suitable habitat is present within the BSA, including open areas with soils suitable for burrowing, including sandy washes. Project occurs outside MSHCP survey area for this species. No survey is required.
San Diego Desert Woodrat	*Neotoma lepida intermedia*	-/CSC/- /MSHCP	Dry and/or sunny shrublands, especially (but not requiring) areas with cacti and abundant rocks and crevices. Does not require a source of drinking water. Sage scrub communities are frequently occupied.	HP	Suitable habitat for this species occurs within the study area. This species is fully covered under the MSHCP and no further analysis is required.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
Southern Grasshopper Mouse	*Onychomys torridus ramona*	-/CSC/-/-	Wide variety of dry to moderately dry scrub, grassland and woodland habitats across southern California, exclusive of the more mesic coastal areas from Ventura County north. Grasshopper mice have large home ranges and occur in low densities. Little is known about the habitat requirements of this species and it is believed to occur on flat, sandy, valley floors. Known to occur in the San Jacinto Valley in Riverside County among scattered brush on a gravelly valley floor. Probably found in a variety of low, open, and semi-open scrub areas including coastal sage scrub, mixed chaparral, sagebrush, riparian scrub, and annual grasslands with shrubs. Recent records for this species on the desert slopes of the San Gabriel Mountains and the Peninsular Ranges, near Sage (2004) and Aguanga (2015) in Riverside County. There are no recent records from southwestern	HA	Suitable habitat is present within the BSA, however there are no recent records of this species in southwestern Riverside County. This species has low population density and a low fecundity, making it extremely susceptible to local extirpations due to small- and large-scale habitat loss and fragmentation. It is unlikely that this species continues to exist in southwestern Riverside County and is not expected to occur.

Common Name	Scientific Name	Status[a] (Federal/ State/ CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/ Absent	Rationale
			Riverside County (records from 1908, 1923, 1932).		
American Badger	*Taxidea taxus*	-/CSC/-/-	Associated with large grassland and sparse sage scrub habitats. Occupies large dens/burrows and forages on small mammals (e.g., ground squirrels, rabbits), snakes, birds, and insects.	HP	Suitable habitat for this species occurs within the BSA, however no burrows or dens large enough to support species were found. Badgers are somewhat tolerant to human disturbance, but roads are a source of mortality for the species. The trapping of large predators such as badgers and poisoning of rodents are risks to this species and it is expected that badger populations in the BSA would be reduced to low numbers, but this species could occur.

Source: CDFW 2024.

[a] Status Codes

Federal
D = Delisted
FC = Federal Candidate

State
D = Delisted
CFP = California Fully Protected
CSC = California Species of Special Concern
WL = Watch List

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the NEPSA
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a covered Species
MSHCP(f) = Covered species when a Memorandum of Understanding is executed with the Forest Service Land

[b] Habitat Present/Habitat Absent
HP = Habitat is or may be present. The species may be present.
HA = Habitat absent and no further work needed. These areas are shaded out grey in the table.
P = the species is present

Monarch Butterfly

Monarch butterfly is a candidate species under the Federal Endangered Species Act (FESA). A petition to protect monarch butterfly under FESA was submitted to USFWS on August 26, 2014. On December 15, 2020, USFWS determined that the monarch butterfly listing is warranted but precluded by work on higher-priority listing actions. Under that decision, monarch butterfly became a federal candidate species. Although candidate species receive no statutory protection under FESA, USFWS encourages cooperative conservation efforts because they are, by definition, species that may warrant future protection under FESA. Its listing status will be reviewed each year until it is no longer a candidate. Although the species is not protected under the California Endangered Species Act (CESA), CDFW identified monarch butterfly as a "Species of Greatest Conservation Need" in the State Wildlife Action Plan. Monarch butterfly is not covered under the MSHCP.

Larval monarchs are dependent on native milkweed plants; eggs are laid and hatched on milkweed and caterpillars feed exclusively on the host plant. Adult monarchs feed on nectar from a wide variety of flowering plants and will visit many different kinds of flowers in their search for food. Breeding and migratory habitats for monarch butterfly require the presence of native milkweeds and other nectar-bearing flowers, as well as trees or shrubs for shading and roosting. Overwintering habitat comprises wind-protected tree groves (e.g., *Eucalyptus* spp., Monterey pine [*Pinus radiata*], and cypress [*Cupressus macrocarpa*]) at sites that are cool (but above freezing), sheltered from wind, humid, exposed to filtered sunlight, and near nectar and water sources. The majority of overwintering sites are within 1.5 miles of the coast. Overwintering groves tree species are present in the BSA, including coast live oak and western sycamore. The BSA does not overlap with any known mapped overwintering groves for monarch (https://www.westernmonarchcount.org/find-an-overwintering-site-near-you/). Flowering plant species within grasslands and shrublands in the BSA provide nectar sources for adult monarchs. Milkweeds are required as host plants for monarch caterpillars. There were no milkweeds noted during surveys in the BSA.

Because surveys for overwintering sites were not conducted, the potential for the species to occur in the BSA is noted here to be moderate; however, it is unlikely that monarch overwintering sites are present in the BSA. The potential for this species to occur within the LOD is low due to the high level of disturbance, the lack of tree species suitable as overwintering groves, and the lack of milkweeds present for caterpillars in the LOD. There are 743.83 acres of potentially suitable habitat for monarch butterfly in the BSA, including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Tarragon Patches, Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Quailbush Scrub, Eucalyptus-Tree of Heaven-Black Locust Groves, and California Sycamore Woodland. Survey work was not performed for this species.

Burrowing Owl

The burrowing owl is a CSC that is a covered species under the MSHCP. This species inhabits open, dry, level or nearly level grassland, prairie, desert floor, and shrubland habitats when shrub cover is less than 30 percent. In Southern California, a substantial number of birds are found in microhabitats that have been highly altered by man, including flood control and irrigation basins, dikes, and banks; abandoned fields surrounded by agriculture; and road cuts and margins. There is a strong association between burrowing owls and burrowing mammals, especially ground squirrels (*Otospermophilus* spp.); however, they also occupy human-made niches such as banks and ditches, piles of broken concrete, and abandoned structures.

Under the MSHCP, a burrowing owl focused survey is required within the MSHCP burrowing owl survey area (Figure 2.4.4-1) when suitable habitat is present. The burrowing owl study area included up to a 300-foot buffer with an additional 200-foot buffer that was visually assessed only (Figure 2.4.4-2). Within the burrowing owl study area, potentially suitable habitat occurs within approximately 820 acres. Suitable habitat for burrowing owl is shown in Figure 2.4.4-2. The quality of potential habitat within the burrowing owl study area varies based on the level of human disturbance with some low-quality areas and some high-quality areas. In the BSA, potential habitat for burrowing owl occurs within and outside of MSHCP criteria cells. Both potential foraging and nesting habitat exists in the BSA.

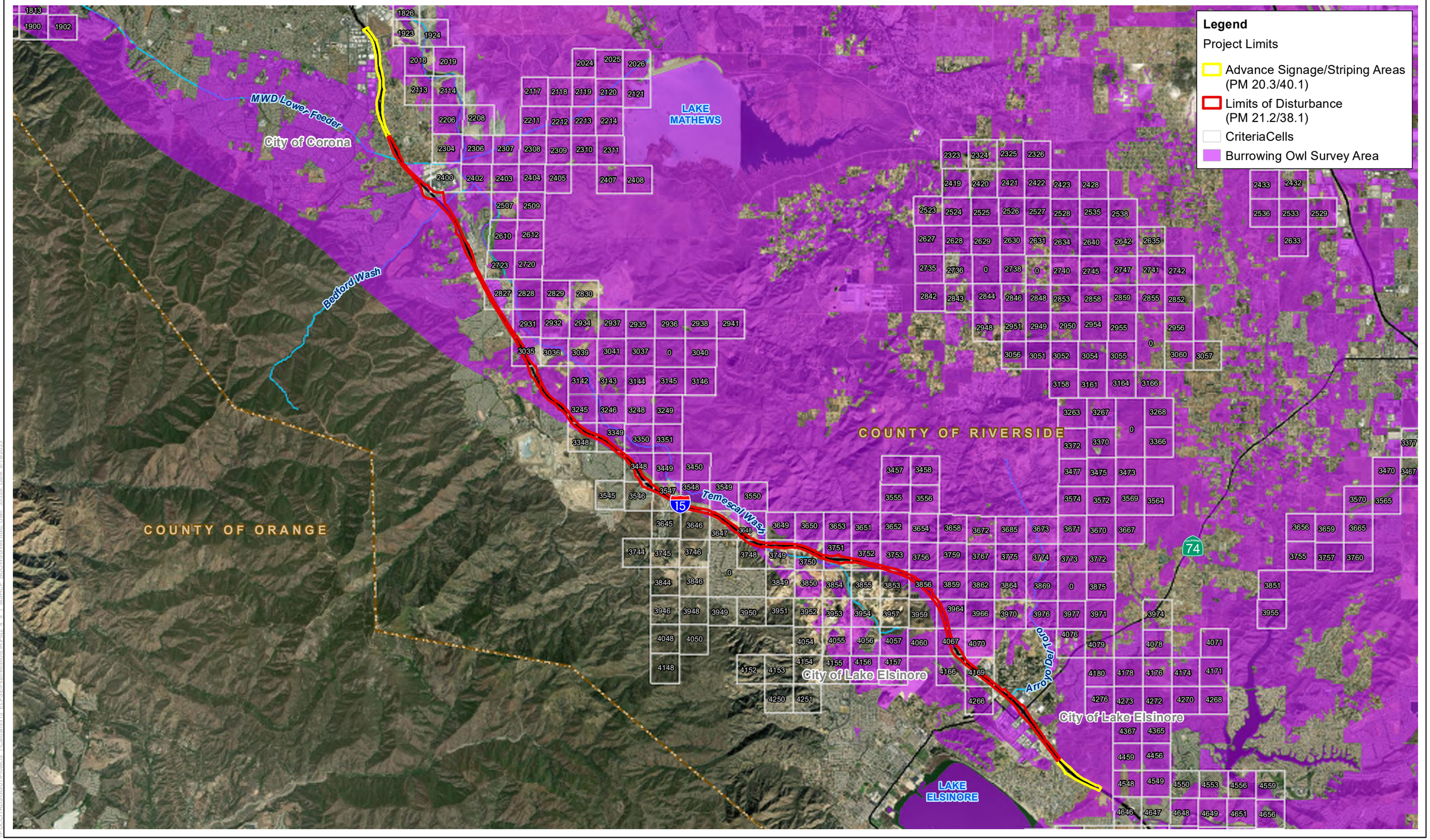
The focused survey for burrowing owl was performed from February to July 2020 where access was available, as detailed in the NES. Additional surveys in areas where access was not possible in 2020 were completed in 2021. Potentially suitable burrow features are illustrated in Figure 2.4.4-2. No burrowing owl signs or individuals were detected in the BSA during the 2020/2021 focused survey work.

Grasshopper Sparrow

The grasshopper sparrow is a state CSC. Under the MSHCP, there are species-specific conservation objectives that need to be met before this is a fully covered species. These conservation objectives have not yet been met for the MSHCP. Therefore, this species is essentially treated in this report as not covered by the MSHCP.

The species occurs predominantly in open grassland, with use of some other habitats, including alluvial playa and sparse coastal sage scrub when enough intermittent grass or grassland habitat are available. Prior to 2005, the grasshopper sparrow was found throughout western Riverside County. Since then, many of the occupied areas have been developed, and the species has become rare.

The BSA contains 387.67 acres of suitable habitat for grasshopper sparrow within grassland habitats including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, and Salt Grass Flats. This species was not detected during any of the field studies for the Project, but there is a moderate likelihood that it is present.



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0 1 2 Miles

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Figure 2.4.4-1
MSHCP Survey Areas - Burrowing Owl Survey Area
Interstate 15 Express Lanes Project Southern Extension

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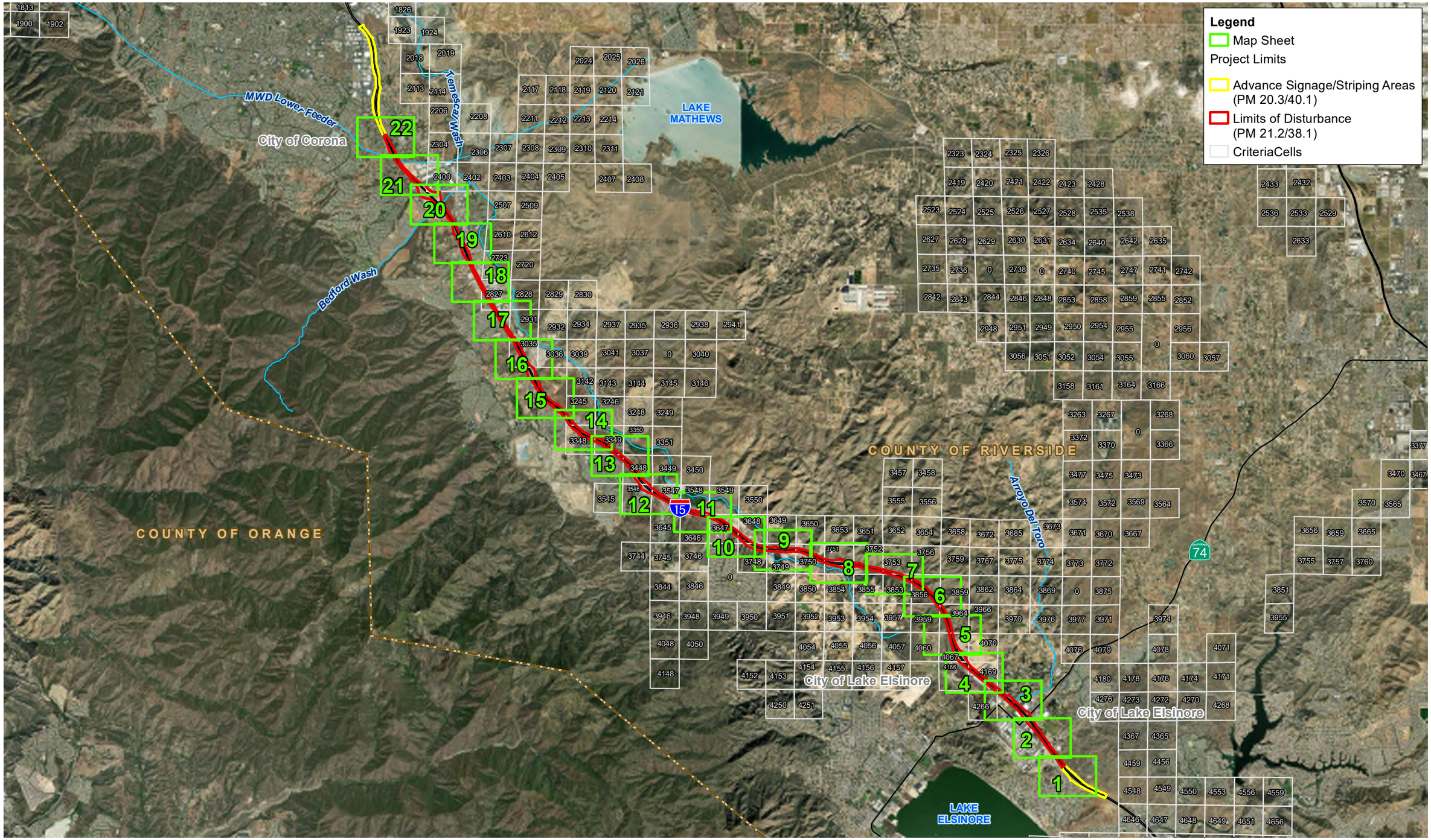

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Figure 2.4.4-2 - Map Index
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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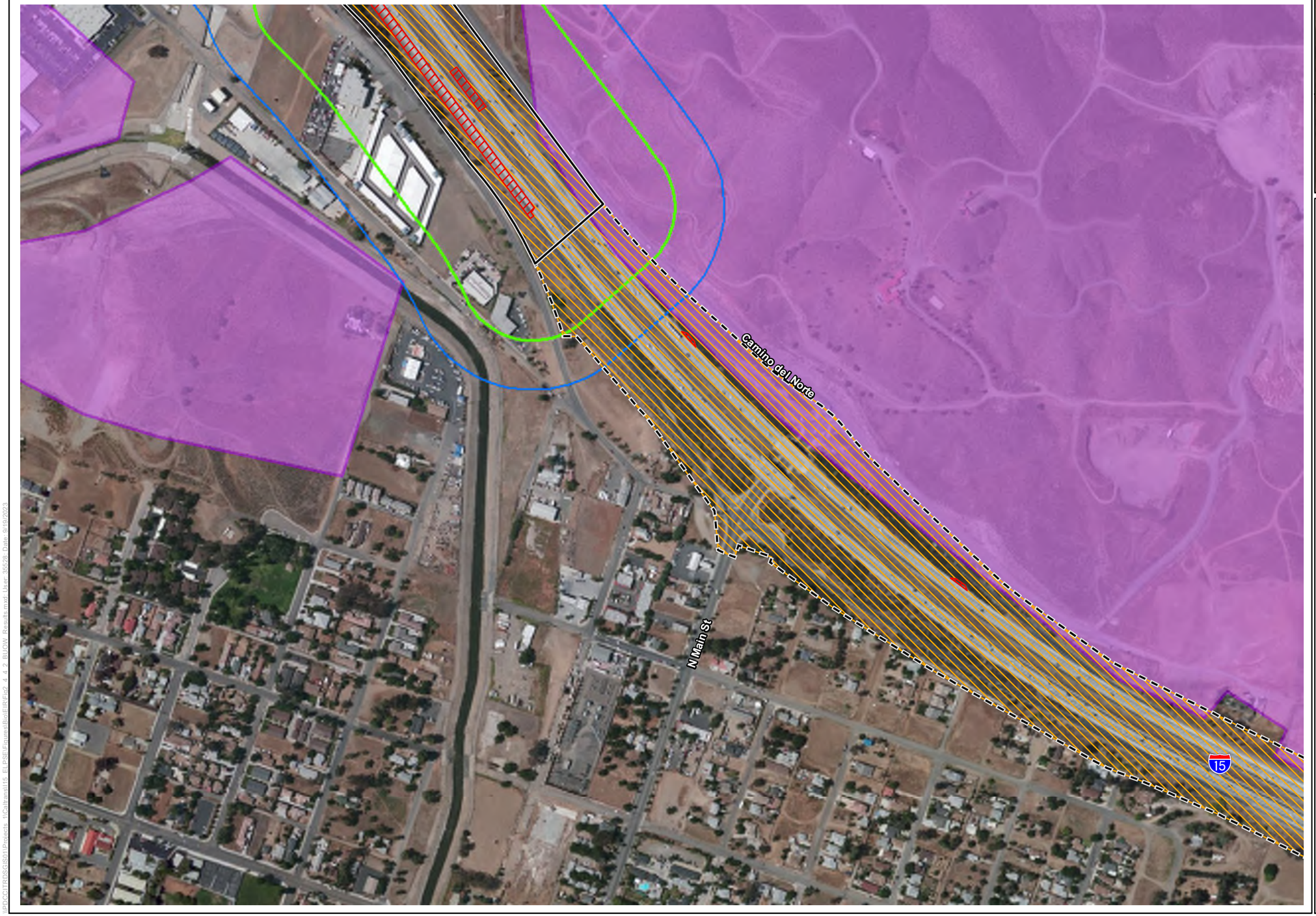

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 1
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 2
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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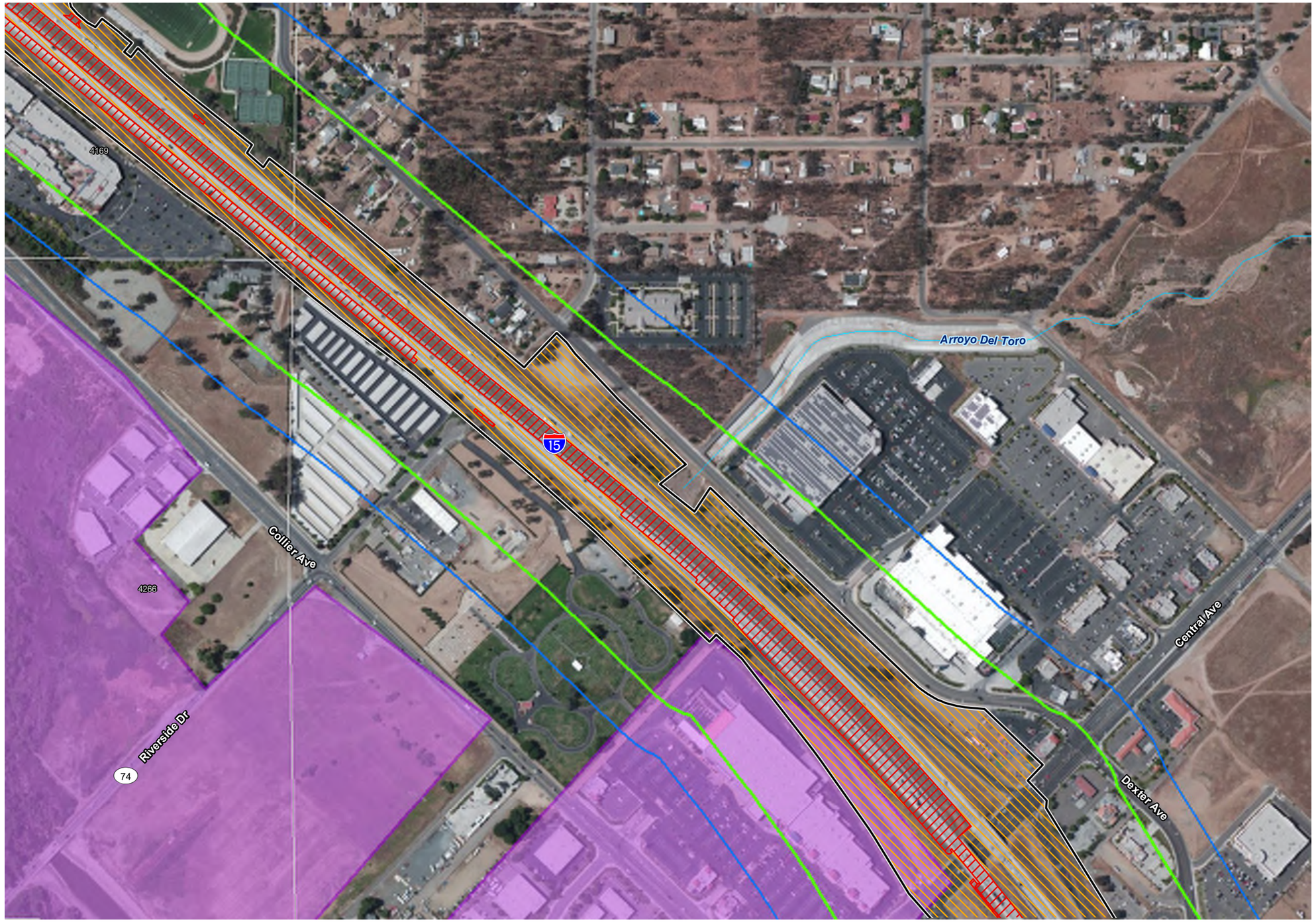

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 3
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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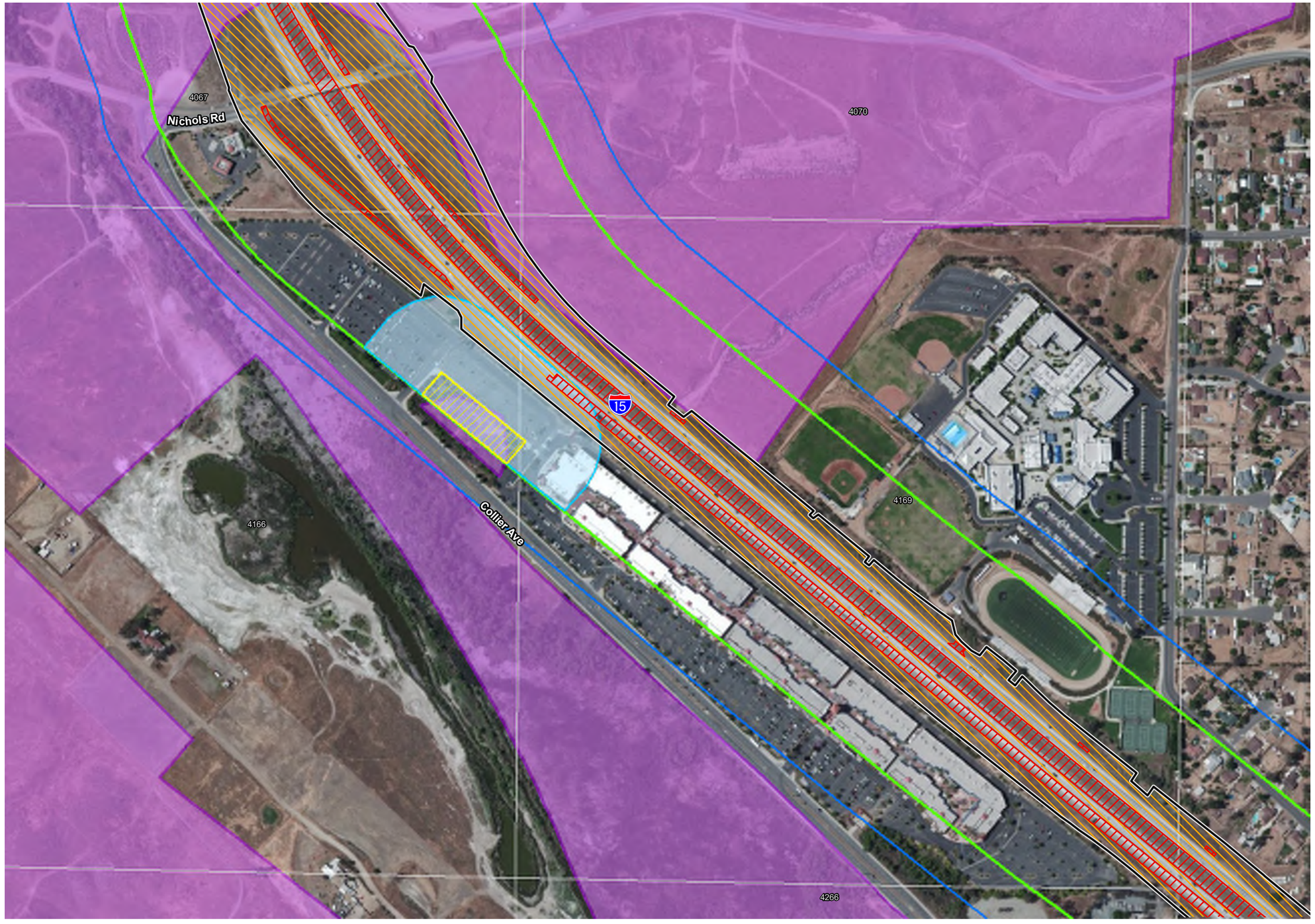

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 4
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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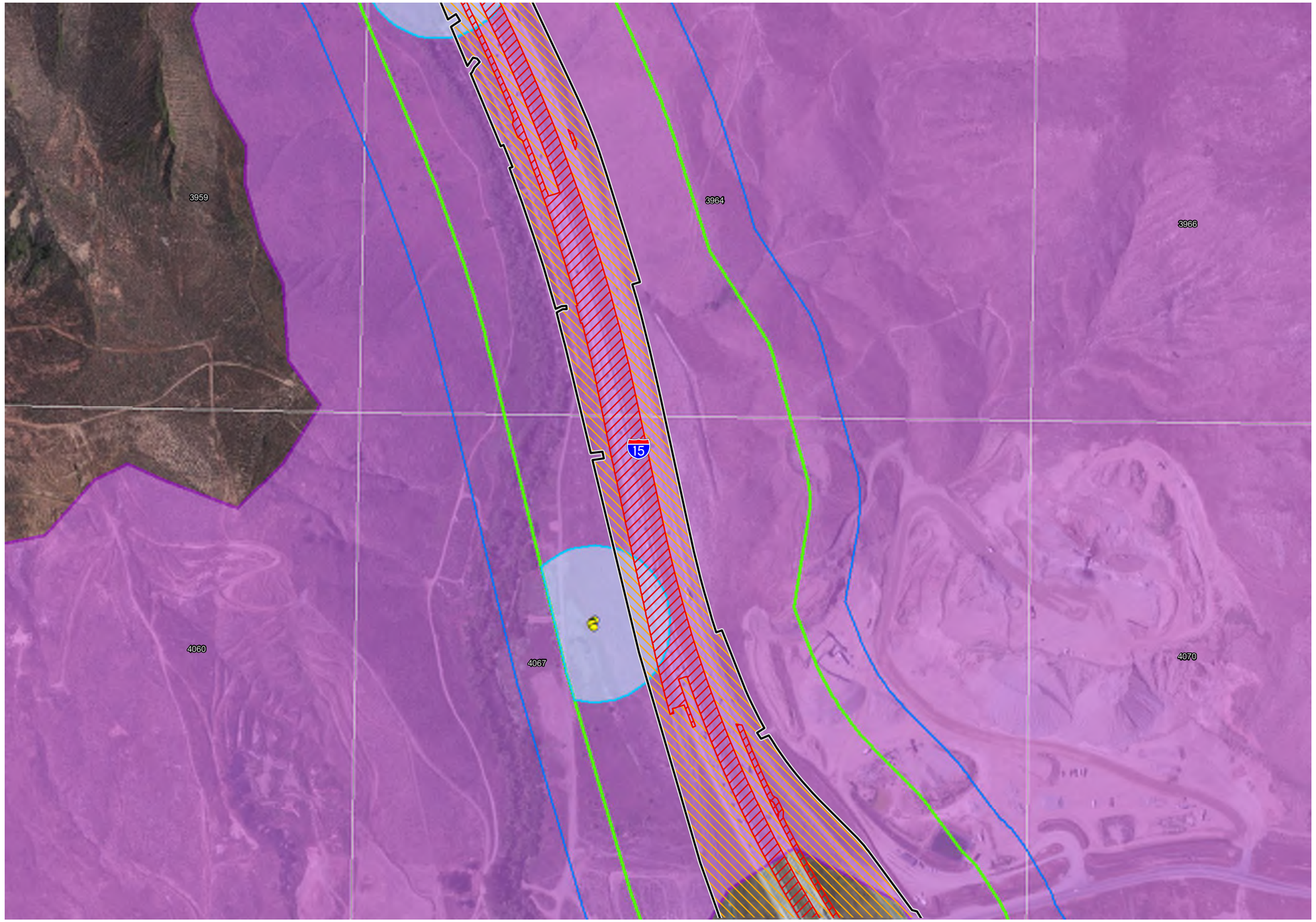

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 5
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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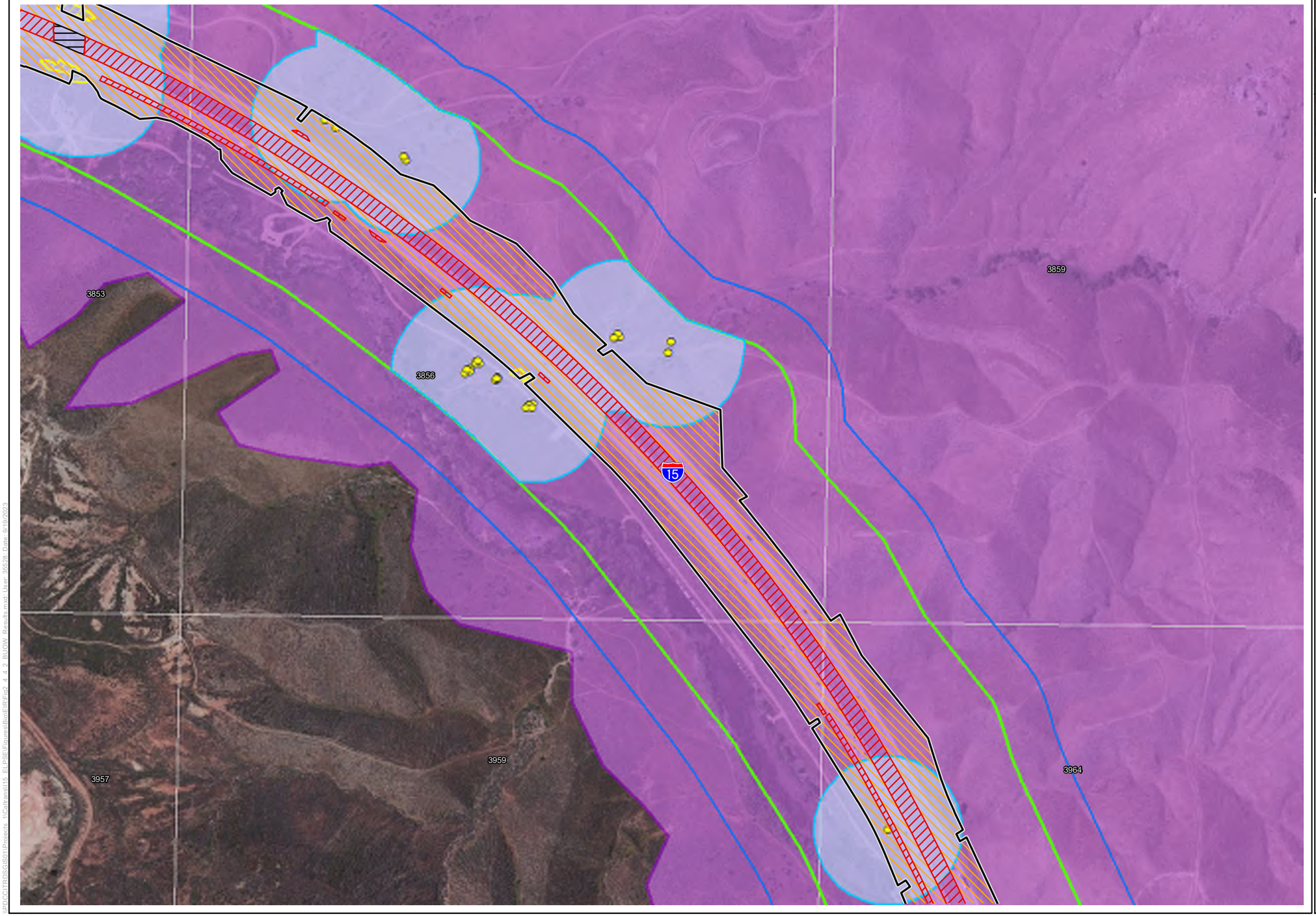

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 6
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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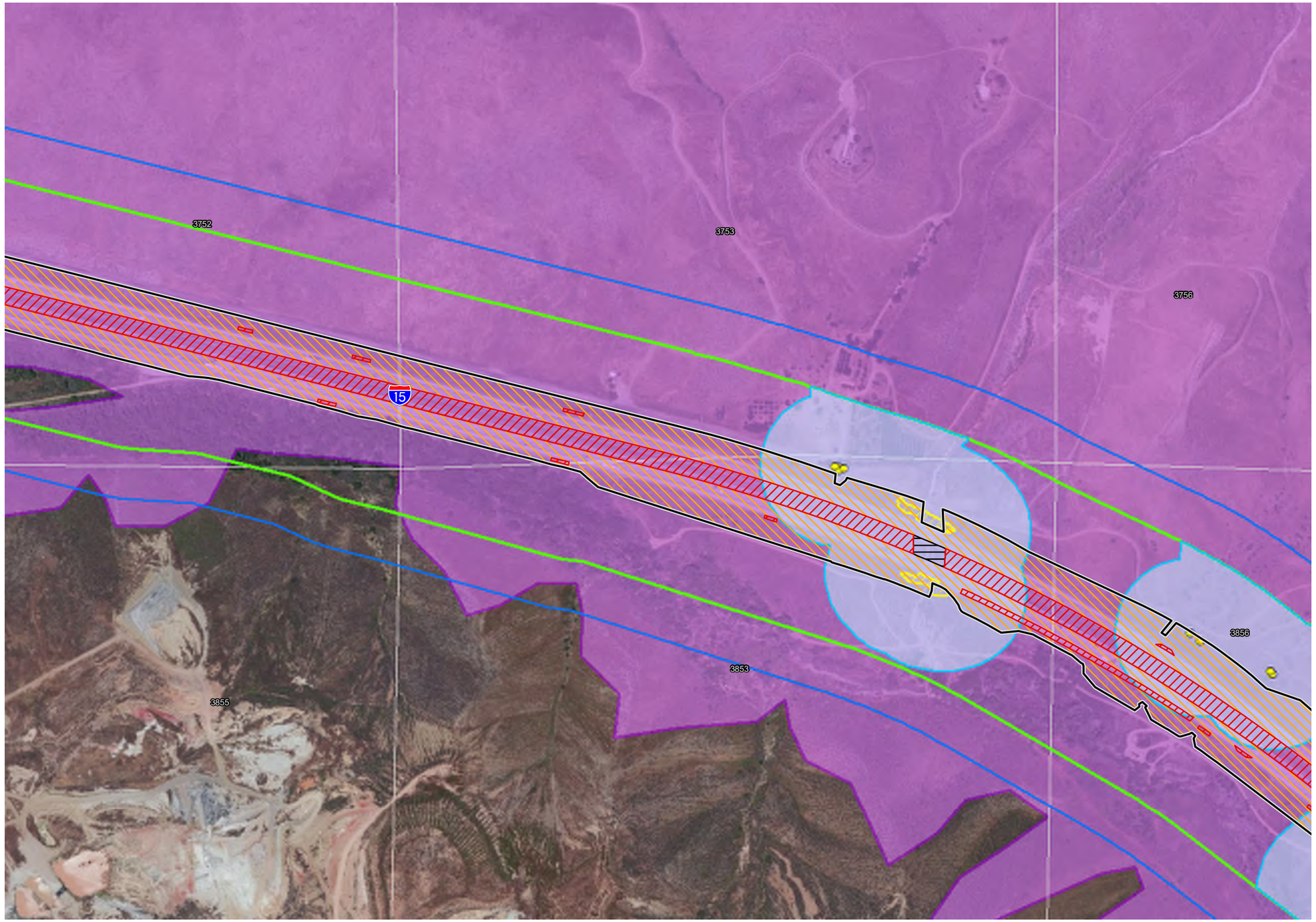

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 7
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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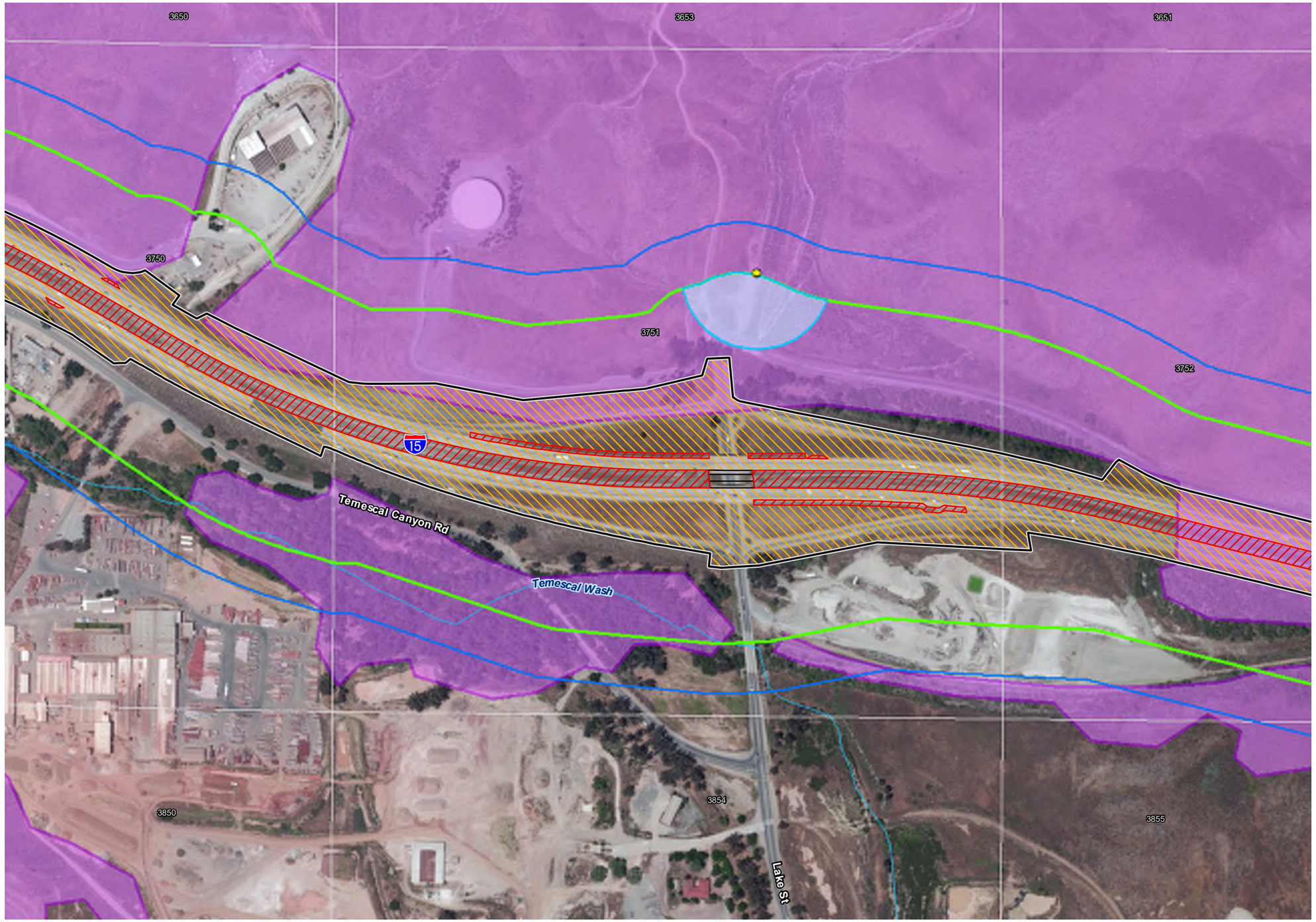

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 8
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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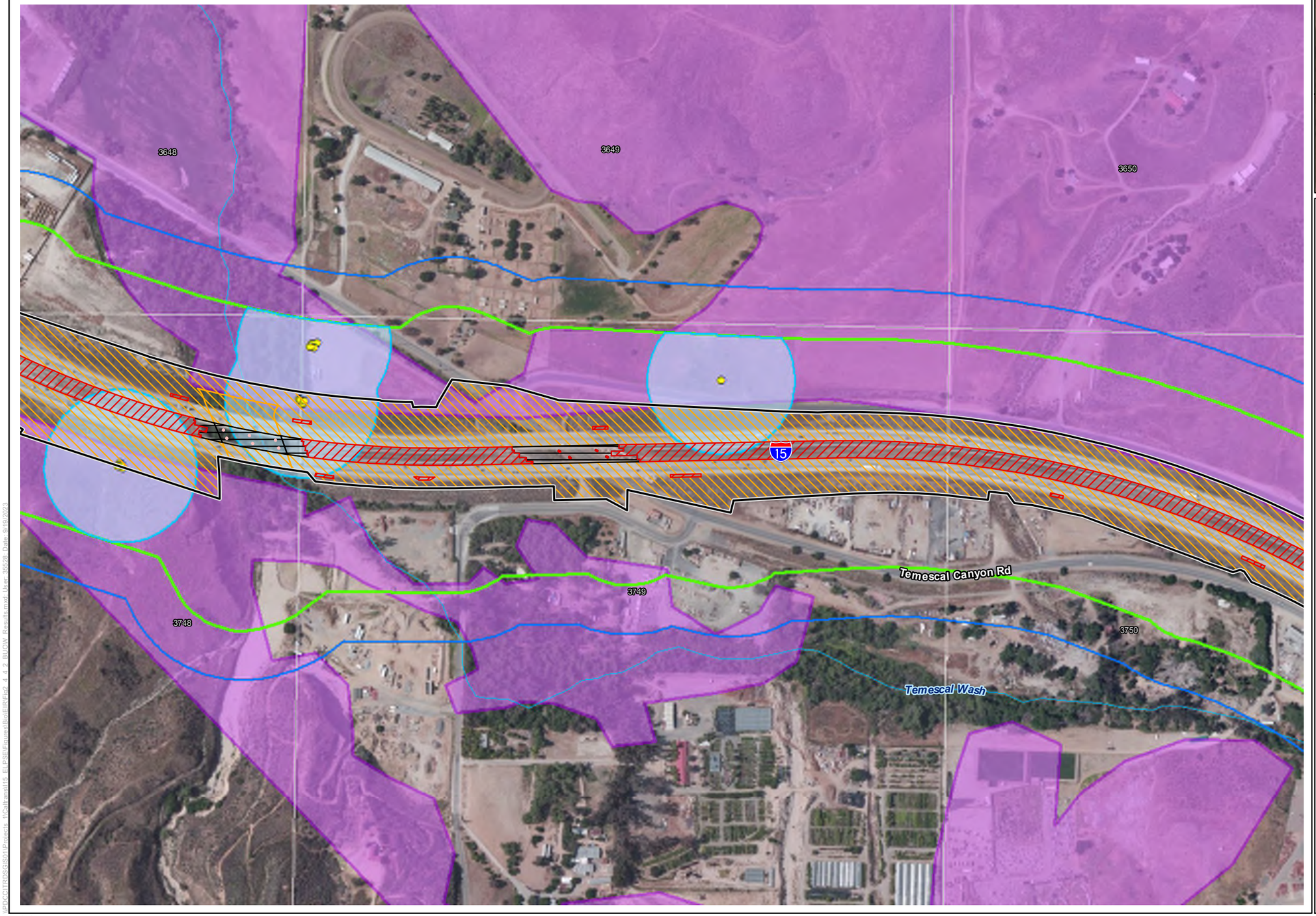

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 9
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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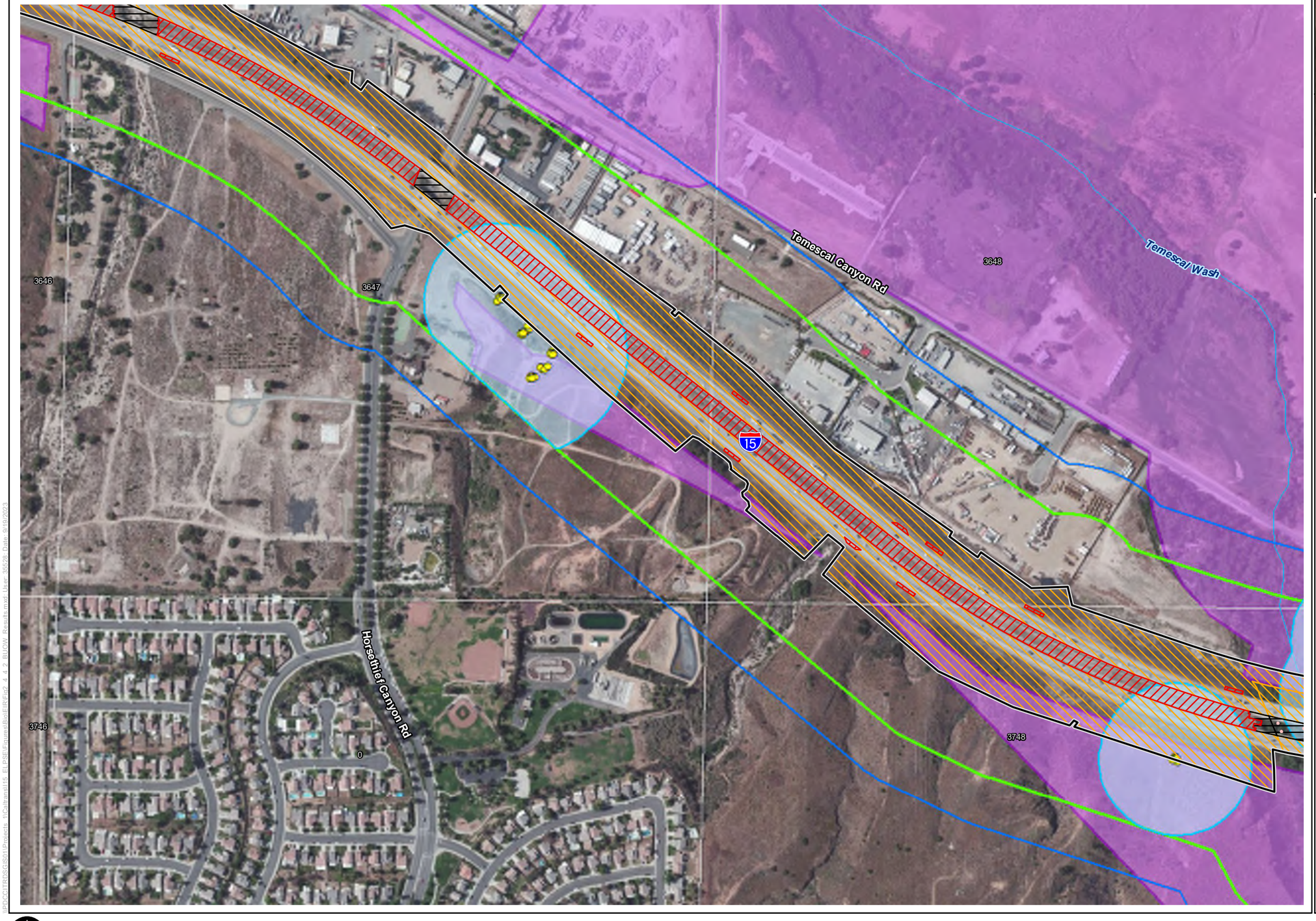

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 10
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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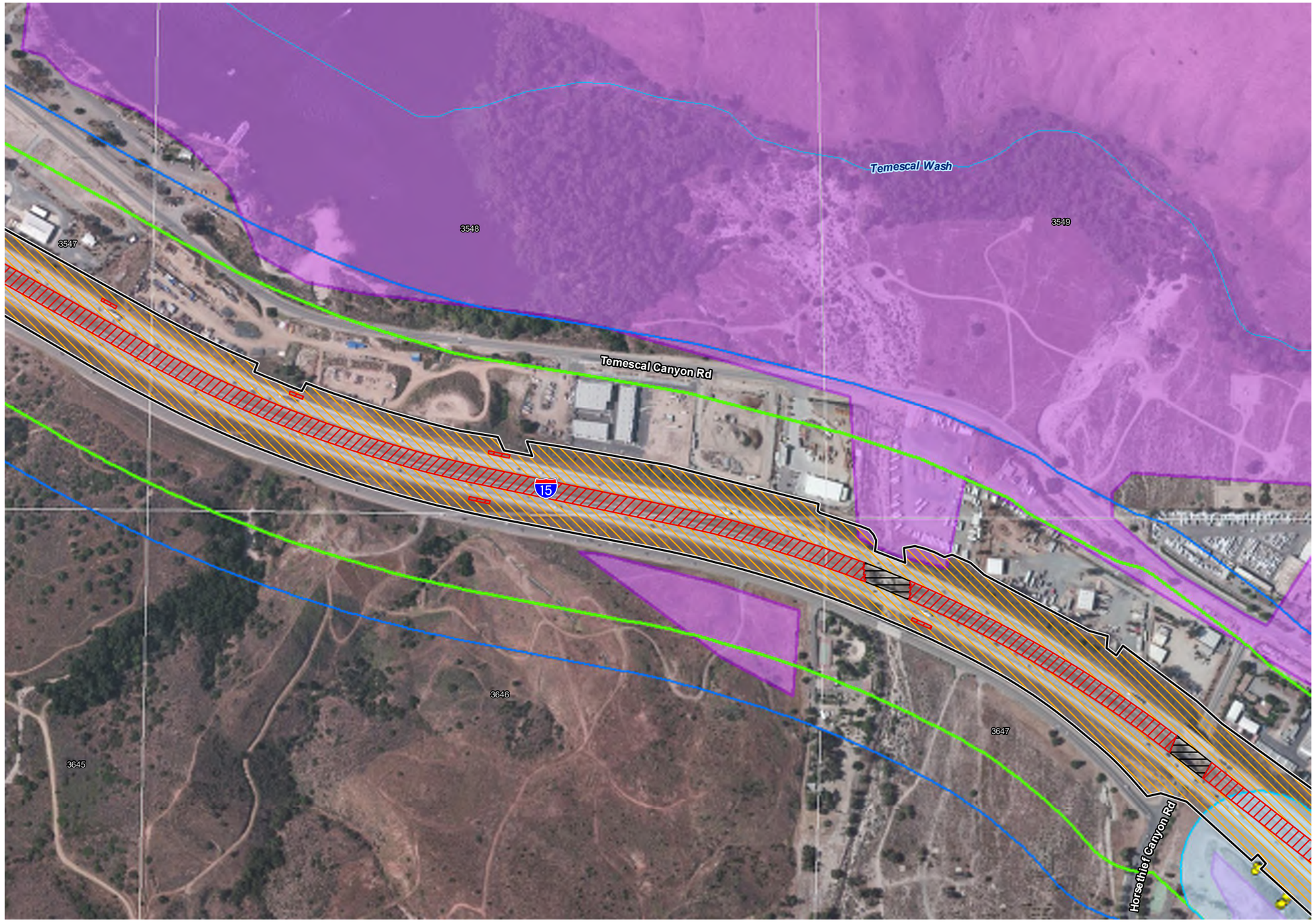

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 11
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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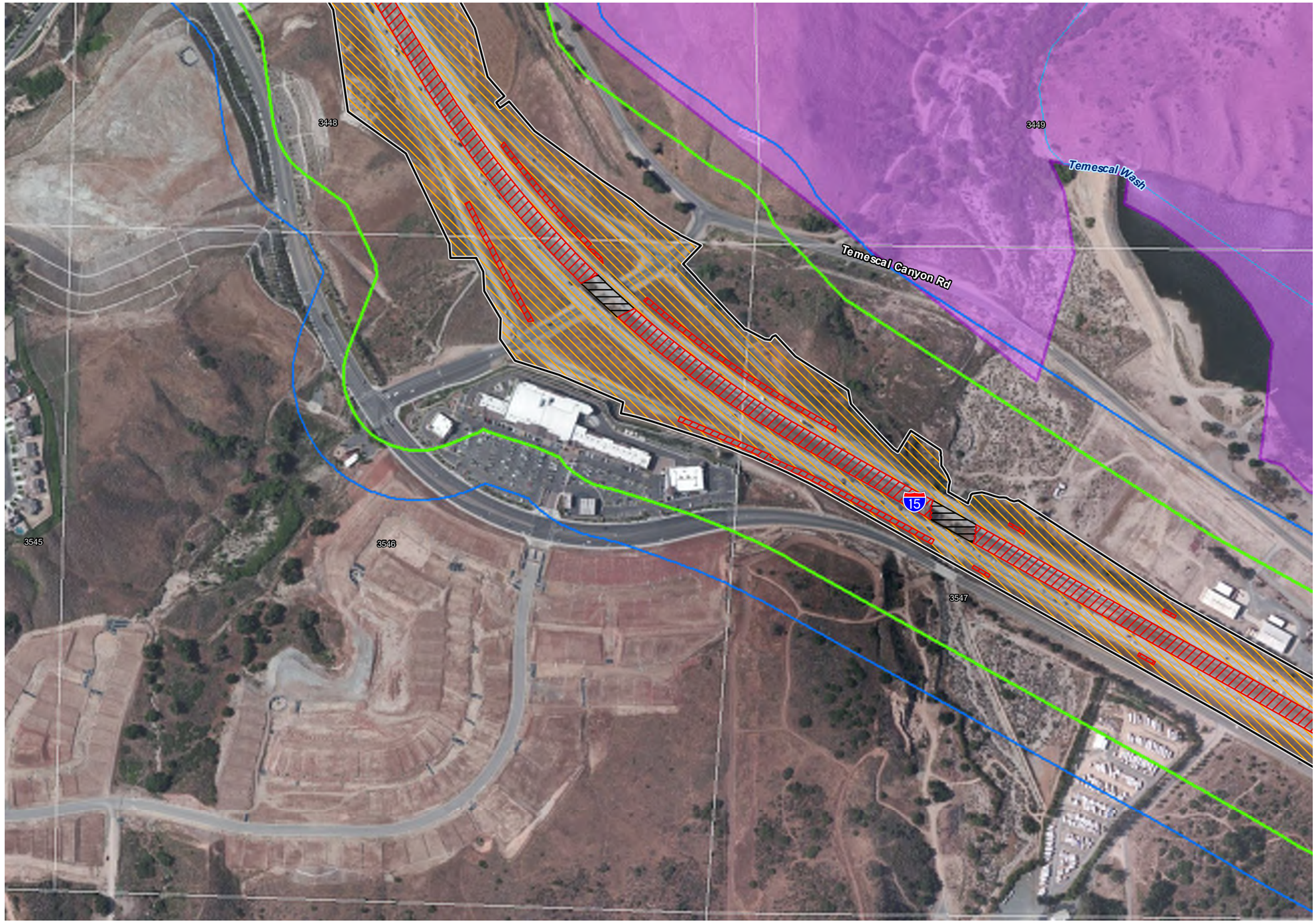

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 12
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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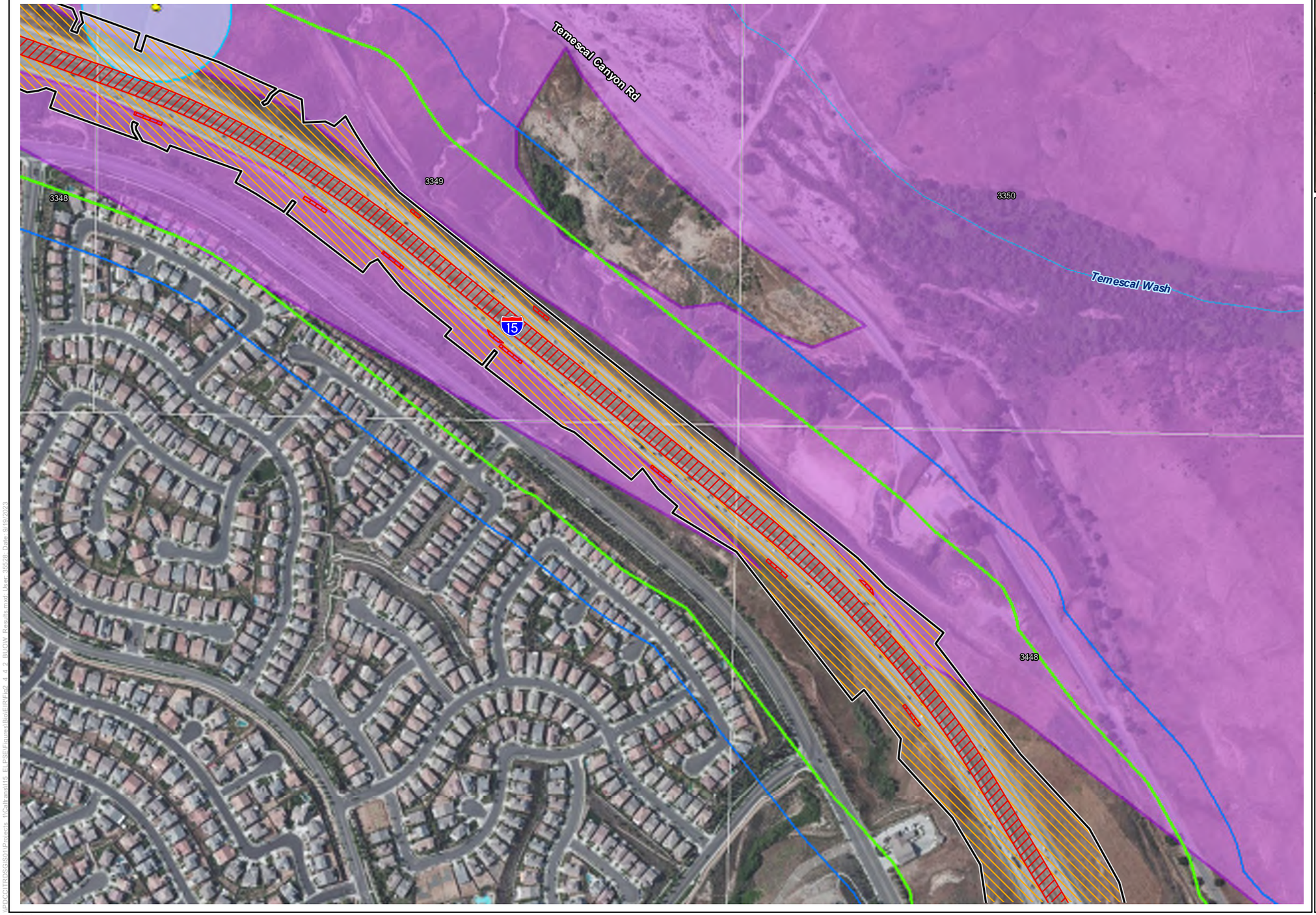

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 13
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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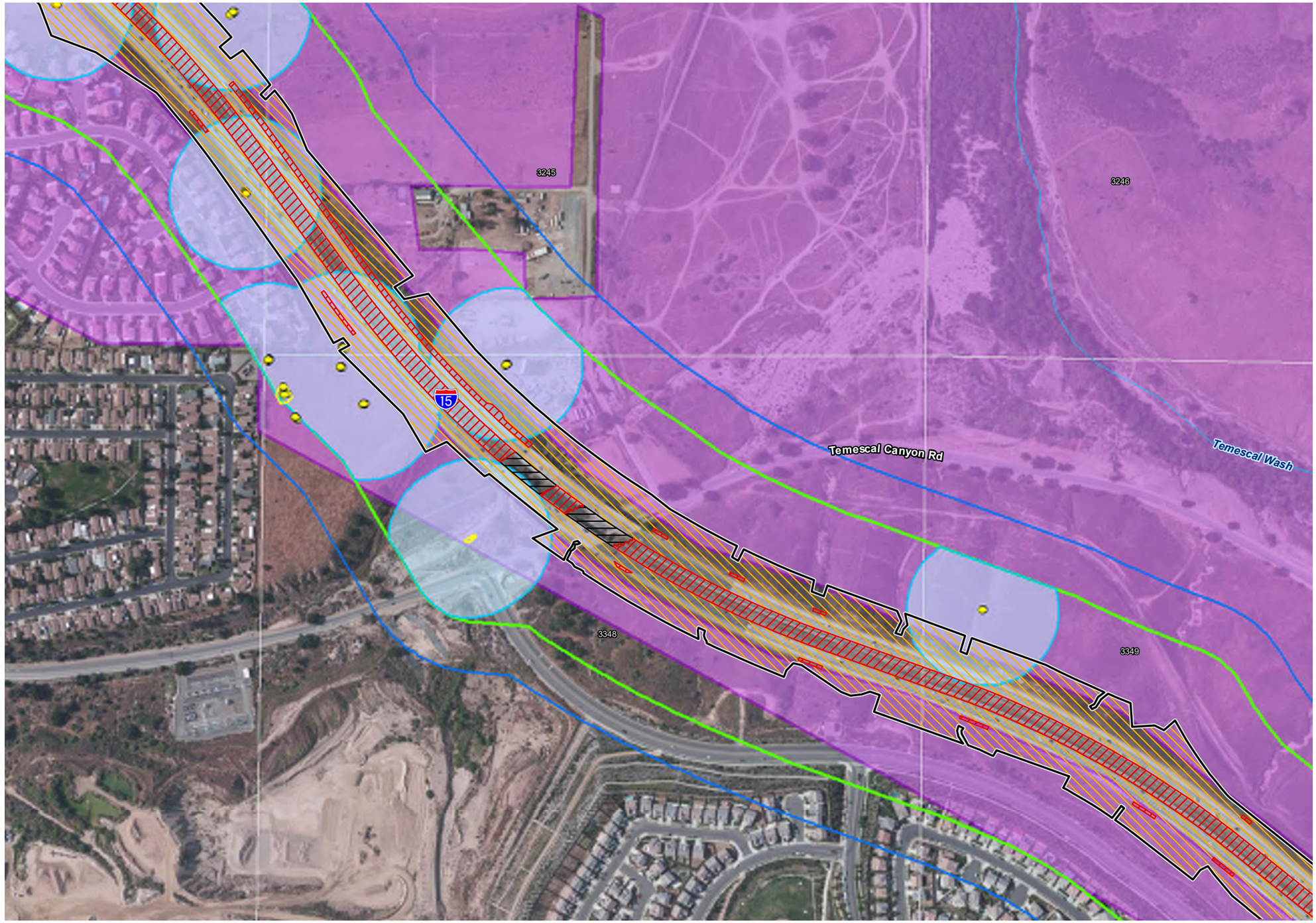

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 14
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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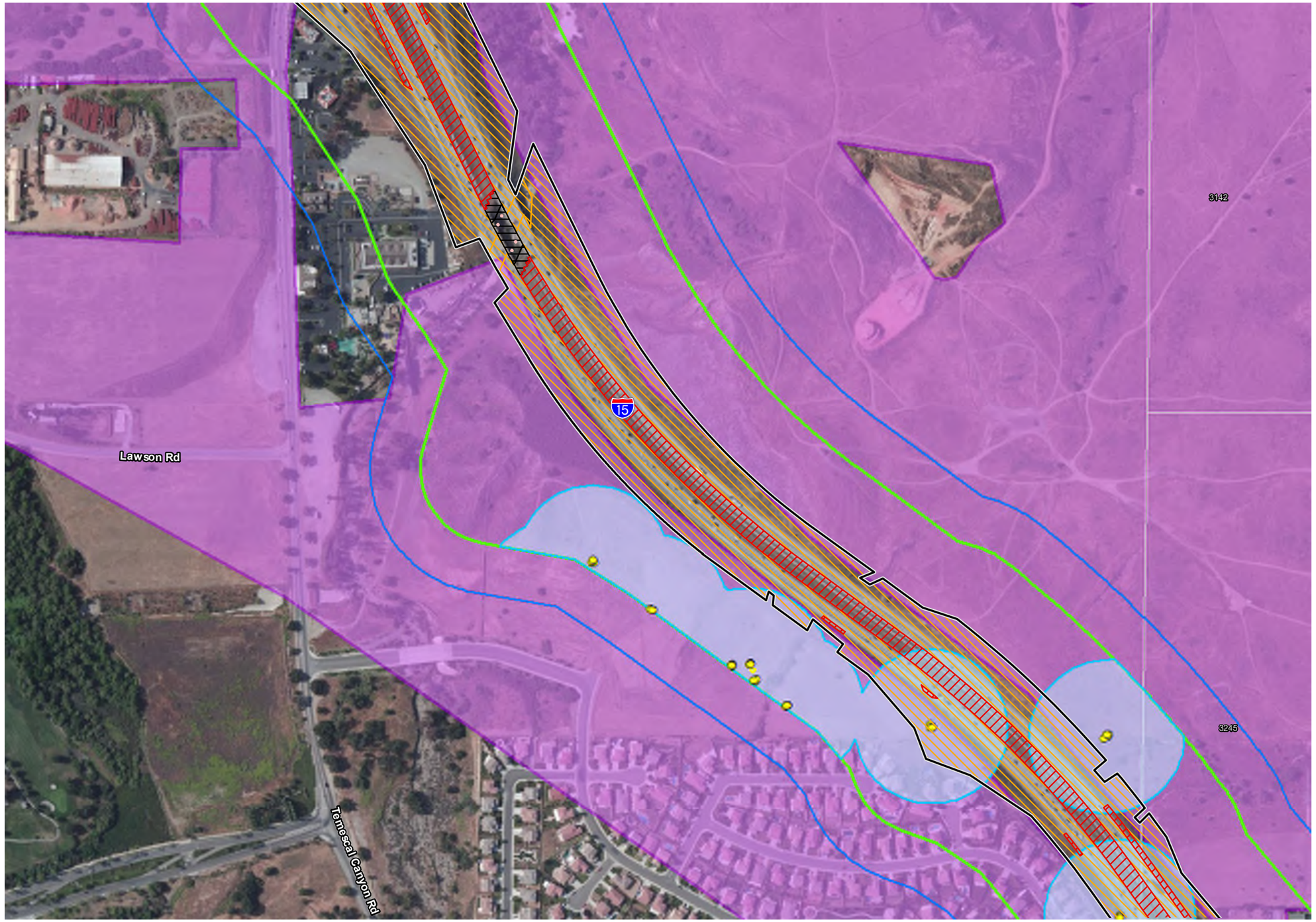

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 15
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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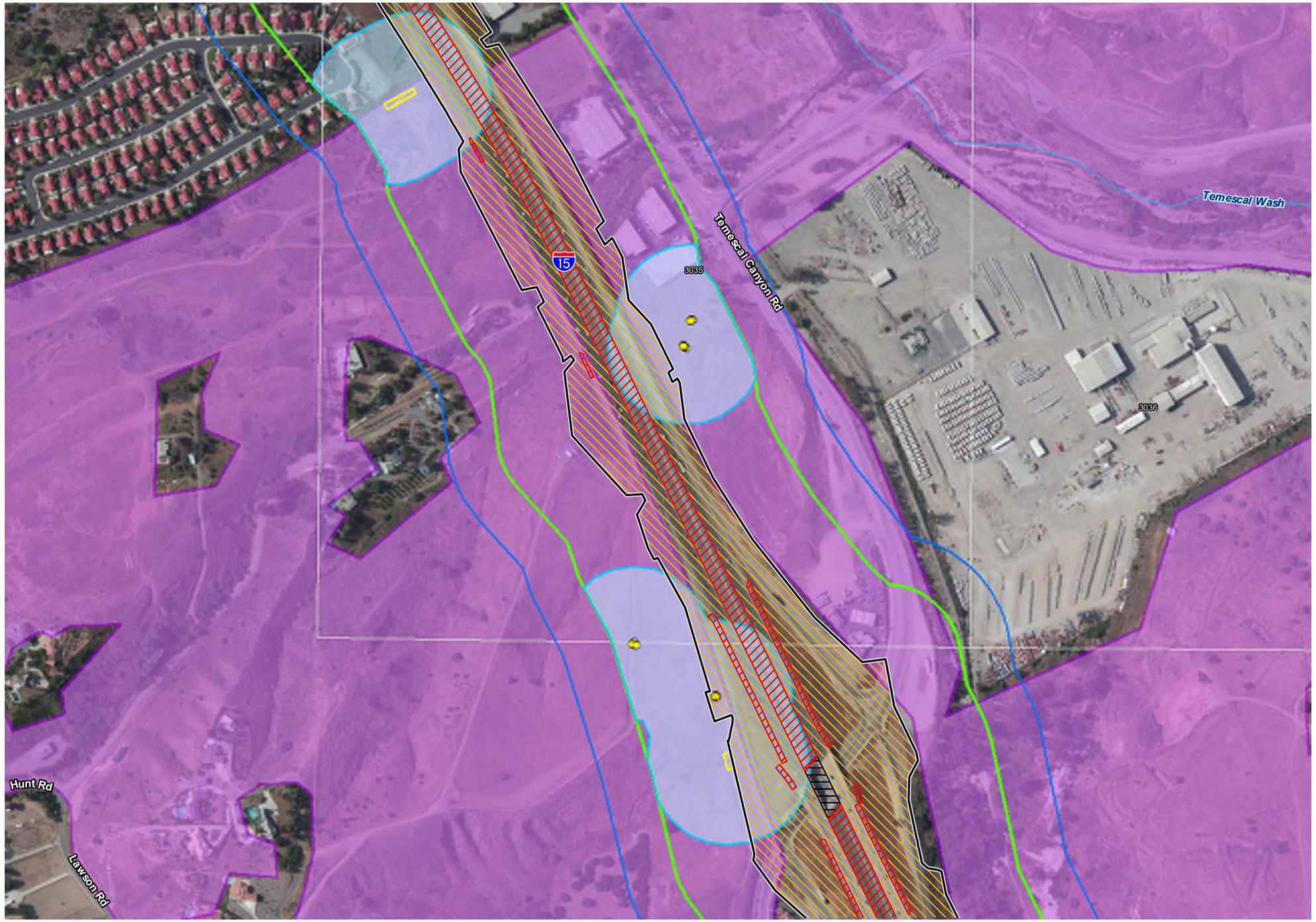

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 16
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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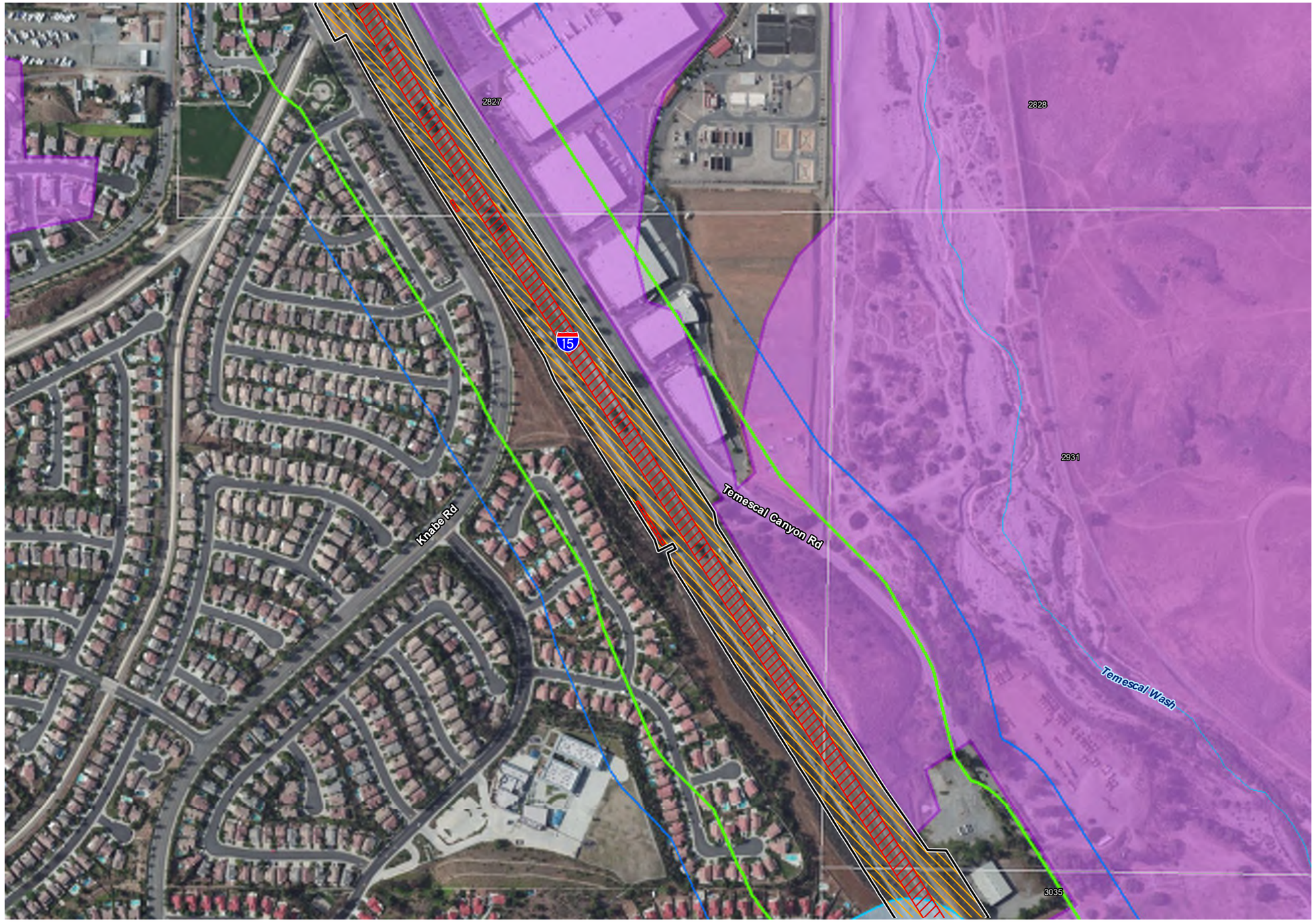

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 17
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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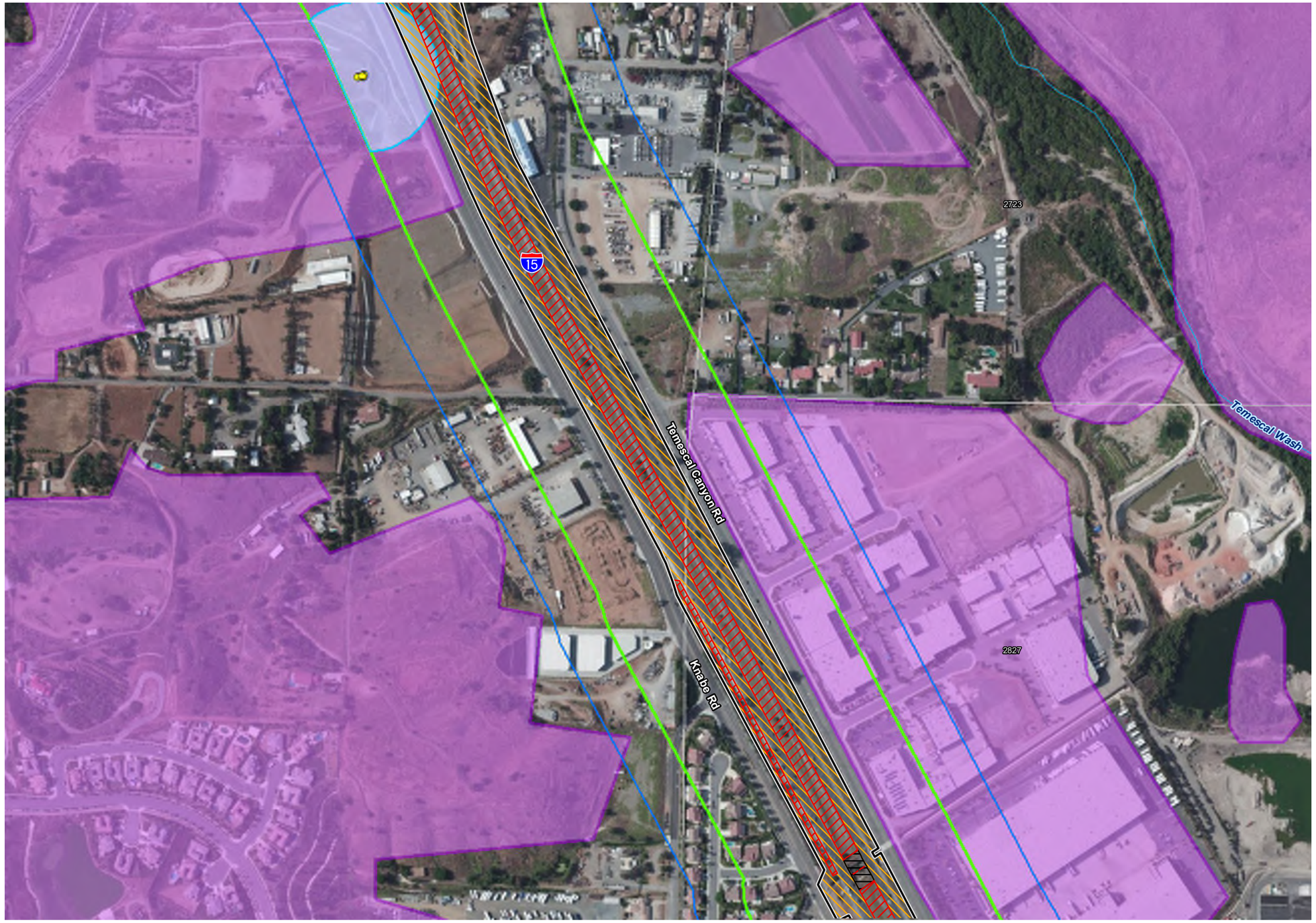

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 18
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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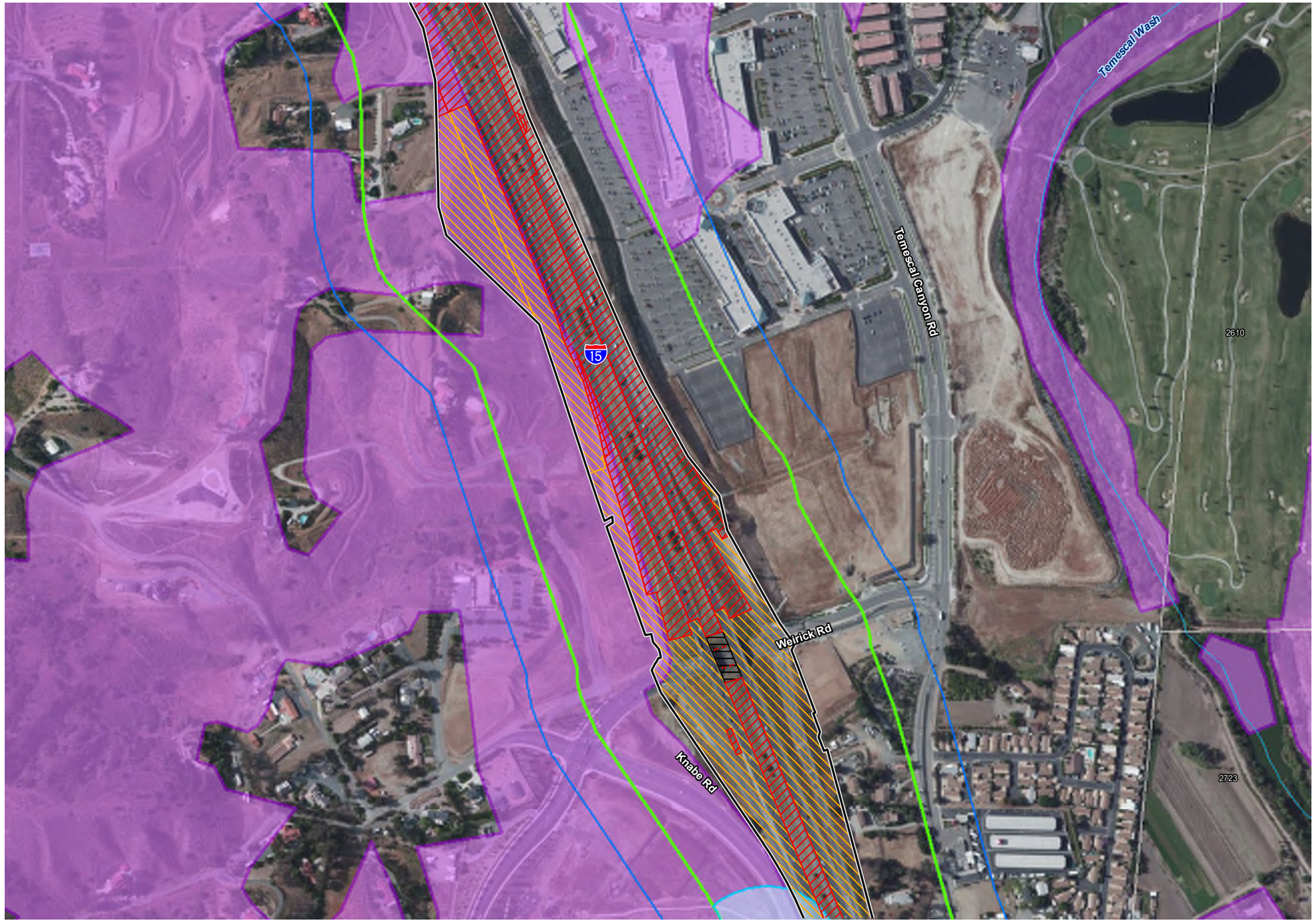

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

0 200 400 Feet

1:4,800

N

Figure 2.4.2-2 - Sheet 19
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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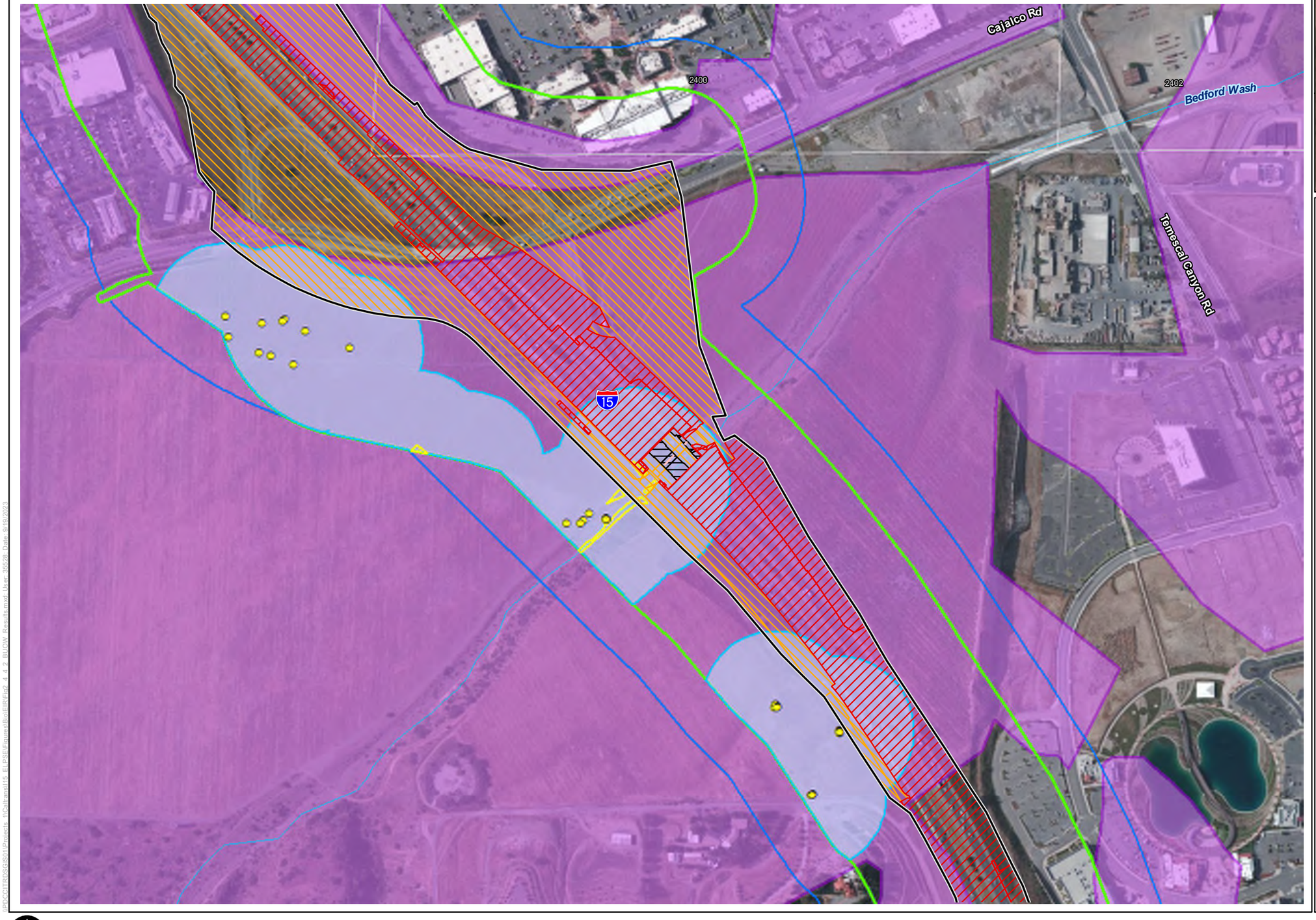

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 20
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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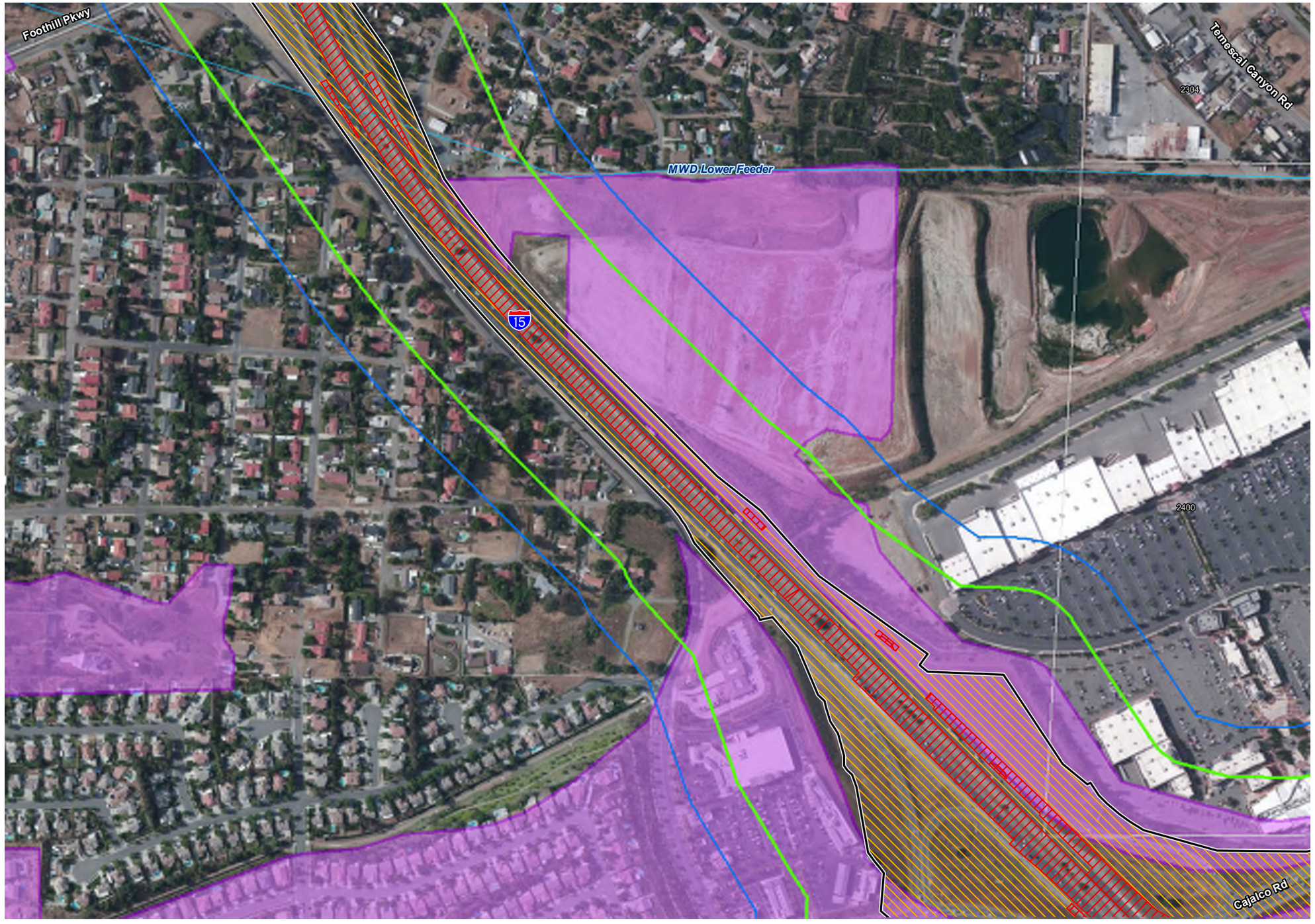

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor Piles
- Temporary Impact
- Shading Impact
- 500-foot BSA
- BUOW Study Area (300-
- CriteriaCells
- MSHCP Burrowing Owl Survey
- Focus Survey Areas
- Potential Burrowing Owl Feature (eg. rip rap)
- Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 21
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor Piles

Temporary Impact

Shading Impact

500-foot BSA

BUOW Study Area (300-

CriteriaCells

MSHCP Burrowing Owl Survey

Focus Survey Areas

Potential Burrowing Owl Feature (eg. rip rap)

Potential Burrowing Owl Burrow

*No Burrowing Owl were detected during the 2020 or 2021 Focused Survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.2-2 - Sheet 22
Burrowing Owl Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Bats

A total of six special-status bats have a potential to occur in the bat study area, which consisted of the LOD plus a 100-foot buffer (Figure 2.4.1-1 in Section 2.4.1, *Natural Communities*): pallid bat (*Antrozous pallidus*; CSC), western mastiff bat (*Eumops perotis*; CSC), pocketed free-tailed bat (*Nyctinomops femorosaccus*; CSC), big free-tailed bat (*N. macrotis*; CSC), western red bat (*Lasiurus blossevillii*; CSC), and western yellow bat (*L. xanthinus*; CSC). Detailed descriptions of habitat requirements are provided in Table 2.4.4-1. Suitable roosting habitat for pallid bat occurs throughout the bat study area under bridges and in habitats containing trees. Marginally suitable habitat is present for western mastiff bat, pocketed free-tailed bat, and big free-tailed bat within bridges and buildings, as well as within tall palm trees for western mastiff bat. Suitable roost sites for western red bats are present within riparian forest and woodland habitat, as well as in orchard trees in agricultural areas, and suitable roost sites for western yellow bat are present in woodland and shrubland areas containing palm trees, as well as riparian woodland and forest habitats along Temescal Wash. All six bat species are CSC and none are covered under the MSHCP.

Many other species of bats have potential to occur but have no special-status. However, they would benefit from the protective measures identified in this section. CDFW has increased its requirements for projects to ensure that direct mortality of bats does not occur regardless of whether the species has special-status. Bat populations throughout the state of California have declined greatly in the past decade because of human development (habitat loss and degradation), increased predation pressures, and possibly disease.

Habitat assessments for bats were conducted in May 2020 and January 2022. Emergence surveys and acoustic analyses were performed at 12 sites within the bat study area in September 2020, July 2021, April 2022, and May 2022. Acoustic surveys determine the species of bats that are foraging or may be roosting in the bat study area. The emergence survey detects bat species emerging from roost sites. Survey results are summarized below, illustrated on Figure 2.4.4-3.

Potential foraging habitat is present throughout the bat study area, with a coarse estimate of 1,640 acres of naturally vegetated and undeveloped areas. No special-status bat species were detected at any of the 12 survey sites. These surveys provide some information regarding special-status bat species use of the BSA, but they cannot definitively rule out the presence of these species in the BSA.

Five sites were identified as having high potential for large colonies of day roosting bats to roost during the habitat assessment: Sites 1, 2, 3, 4, and 11a (Figure 2.4.4-3). Sites 1 and 2 are concrete box culverts under I-15. Approximately 30 to 40 bats emerged from the culvert at Site 1, with approximately 30 bats exiting the culvert at Site 2. *Myotis* sp., Yuma myotis (*Myotis yumanensis*), canyon bat (*Parastrellus hesperus*), and Mexican free-tailed bat (*Tadarida brasiliensis*) were detected at Site 1. Silver-haired bat (*Lasionycteris noctivagans*) was observed at Site 2. Site 3 is a bridge over Coldwater Creek. Approximately 30 to 40 bats emerged from the culvert at Site 3. California myotis (*Myotis californicus*), Yuma myotis, big brown bat (*Eptesicus fuscus)*, and canyon bat

were observed at Site 3. Site 4 consists of two bridges, one over Mayhew Wash and one over Temescal Canyon Road. Only one bat was observed leaving Site 4 and one poor quality call was recorded. The bat species in the call could not be identified. Site 11a includes the Bedford Wash Bridges (Bridge Numbers [Nos.] 56-0540L and 56-0540R), where expansion joints and bridge gaps were identified as potential bat roosting sites. One area of guano deposition below the northbound bridge and staining on the bridge soffit above was determined to be the location of a bat night roost. Numerous canyon bat calls and one potential Mexican free-tailed bat call were recorded by the Bedford Wash Bridges. It is likely that canyon bats are using the wash as a flyway for feeding.

Six sites were identified as having moderate potential for bat species to roost: Sites 5, 6, 7, 8, 9, and 12. Acoustic/emergence surveys for those areas were conducted in 2021. Site 5 is a culvert west of the southbound I-15 off-ramp at Lake Street. The box culvert at Site 6 occurs east of the I-15 along Walker Canyon Road and has moderate potential for bats. Site 7 also occurs east of I-15 just south of Site 6, and it consists of a bridge and the adjacent culvert.

Site 8 is the Cajalco Road overcrossing (Bridge No. 56-0863). There are some vertical openings on the northern wingwall suitable for bat roosting. The vertical gaps are of poor quality for roosting, having openings at the top that expose the gaps to the elements. There were small signs of bat urination on the southern wingwall present. Although drainage holes were present under the bridge, all of the holes that were visible had a wire mesh covering them.

Site 9 is the palm grove between the Cajalco Road overcrossing and the Bedford Wash Bridges. These areas are suitable for western yellow bat. No bat calls were recorded during the emergence surveys at the palm grove, and no guano was observed at the base of the palm trees.

Site 12 is the Weirick Road undercrossing. A central covered gap within each span in Weirick Road (potential bat night roosts) and drainage holes (potential bat day roosts) provide potential bat habitat to be evaluated during the bat preconstruction surveys.

Site 10 is the pond adjacent to the palm grove and is not currently within the LOD. Site 10 would only be used for foraging, and not for roosting. Numerous canyon bat calls were recorded and observed over the pond. These recordings indicate bat presence in the area, but it is likely the canyon bats were using Bedford Wash as a flyway for feeding.

Site 11b is the NB Cajalco Road off-ramp bridge (Bridge No. 58-0864S) to the northeast of the Bedford Wash bridges, and it has a low potential for bat roost sites. Some weep holes were observed under this bridge during the April 20, 2022, surveys; however, it was noted that there was no evidence these were used by bats. A swallow species was flying in and out of the drainage holes of this bridge, and these birds were potentially nesting within the bridge.

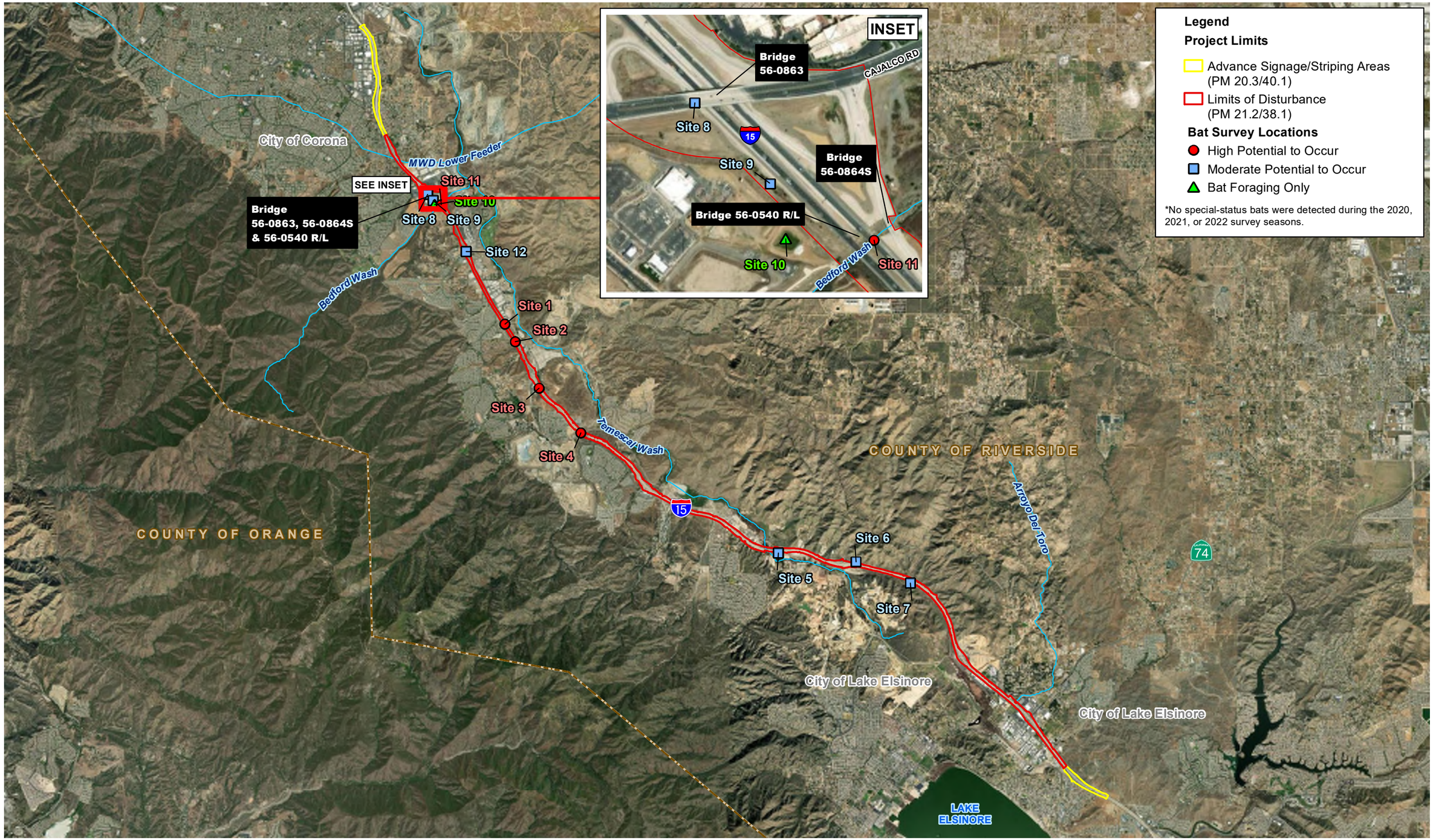

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Figure 2.4.4-3
Special-Status Bat Survey Locations
Interstate 15 Express Lanes Project Southern Extension

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MSHCP Fully Covered Non-Listed Special-Status Animal Species

An additional 18 non-listed special-status species are fully covered under the MSHCP and could occur within the BSA. These species, which do not require additional study at the species level, include arroyo chub (*Gila orcuttii*; CSC), coast range newt (*Taricha torosa torosa*; CSC), western spadefoot (*Scaphiopus hammondii*; CSC), Belding's orange-throated whiptail, red-diamond rattlesnake (*Crotalus ruber*; CSC), San Diego coast horned lizard (*Phrynosoma coronatum blainvillei*; CSC), white-tailed kite (*Elanus leucurus*; California Fully Protected [CFP]), northern harrier (*Circus hudsonius*; CSC), golden eagle (*Aquila chrysaetos*; Bald and Golden Eagle Protection Act [BGEPA], CFP), American peregrine falcon (*Falco peregrinus anatum*; CFP), loggerhead shrike (*Lanius ludovicianus*; CSC), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*; CSC), yellow warbler, yellow-breasted chat, Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; CSC), and San Diego desert woodrat (*Neotoma lepida intermedia*; CSC) (CDFW 2024). San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) are covered under the MSHCP but are no longer CSC (CDFW 2024). Although all of these species are covered under the MSHCP, the birds and their active nests are protected under the MBTA, BGEPA, and CFG Code. Habitat requirements for these species are listed in Table 2.4.4-1.

The only species with a MSHCP survey area is Los Angeles pocket mouse; however, the MSHCP survey area for this species occurs outside of the BSA (RCIP 2003). Therefore, no survey was required, and it is afforded full coverage.

Of the 18 non-listed, MSHCP covered species that could occur in the BSA, three were detected during biological surveys: Belding's orange-throated whiptail, yellow warbler, and yellow-breasted chat. Belding's orange-throated whiptail is a year-round resident for this region, and yellow warbler and yellow-breasted chat are summer residents. Although there is suitable habitat in the BSA for the remaining 15 species, they were not detected during surveys.

The BSA contains 1,295.63 acres of suitable habitat for these non-listed MSHCP covered animal species in the form of grasslands, shrublands, forests and woodlands, riparian habitats, and agricultural areas. Potential suitability of the habitats ranges from low quality to high quality with areas within and directly adjacent to the LOD providing low quality and areas farther from the LOD providing higher quality.

Non-MSHCP Non-Listed Special-Status Animal Species

There is a remainder of eight non-listed special-status species that are not covered under the MSHCP (excluding bats which are addressed in the *Bats* subsection above): Southern California legless lizard (*Anniella stebbinsi*; CSC), California glossy snake (*Arizona elegans occidentalis*; CSC), coastal whiptail (*Aspidoscelis tigris stejnegeri*; CSC), Coronado skink (*Eumeces skiltonianus interparietalis*; CSC), coast patch-nosed snake (*Salvadora hexalepis virgultea*; CSC), long-eared owl (*Asio otus*; CSC), Dulzura pocket mouse (*Chaetodipus californicus femoralis*; CSC), and American badger (*Taxidea taxus*; CSC). Suitable habitat is present throughout the BSA within native

vegetation communities and open areas. Although there is suitable habitat in the BSA for these species, none were detected during surveys; however, focused surveys were not performed. Habitat requirements for these eight species are listed in Table 2.4.4-1.

Nesting Birds

Suitable nesting habitat for native bird species protected under the MBTA and CFG Code is present within the BSA in the native riparian, scrubland, and woodland habitats, as well as open space areas and on some bridge structures. Trees and shrubs within the developed portions of the BSA also provide suitable nesting habitat. Colonial nesting species (barn swallow [*Hirundo rustica*], cliff swallow [*Petrochelidon pyrrhonota*], northern rough-winged swallow [*Stelgidopteryx serripennis*], and white-throated swift) are known to nest on several undercrossings, overcrossings, and bridges. During bat surveys on April 20, 2022, a swallow species was observed flying in and out of drainage holes of the northbound Cajalco Road off-ramp bridge over Bedford Wash, and it is possibly nesting within the bridge. Ground nesters, such as killdeer, California quail (*Callipepla californica*), and horned larks, may nest in the open areas. Raptors, such as red-tailed hawk and white-tailed kite, may nest in the mature trees along the alignment. Appendix J of the NES includes a list of avian species observed during surveys.

2.4.4.3 Environmental Consequences

Build Alternative

Non-listed special-status animals and candidate species are known to occur in the region and are listed in Table 2.4.4-1 above. Of these, 34 have a potential to occur within the BSA and could potentially be affected by the Project. Eighteen of these are fully covered under the MSHCP, 14 are not covered under the MSHCP, and three species have a requirement for additional surveys: burrowing owl, Los Angeles pocket mouse, and grasshopper sparrow. Surveys were completed for burrowing owl and were negative (see Section 4.4 of the NES), the Project is not within the required survey area for Los Angeles pocket mouse, and there is no suitable habitat for grasshopper sparrow in the LOD. No impacts within the LOD are anticipated on monarch butterfly due to the highly disturbed condition of the right of way (ROW). Permanent, temporary, and shading impacts on suitable habitat that could support these non-listed special-status animals and candidate species are included in Table 2.4.4-2 and potential impacts on each of these species are discussed in the subsections below.

Table 2.4.4-2. Potential Impacts of the Build Alternative on Non-Listed Special-Status Wildlife Species

Wildlife Species	Impact (acres)			
	Permanent	Temporary	Shading	Total
Dulzura pocket mouse	13.84	226.76	0.47	241.07
American badger	13.84	226.76	0.47	241.07
California glossy snake	13.84	226.79	0.51	241.14
Coastal whiptail	3.34	137.85	0.44	141.63
California legless lizard	0.00	2.18	0.04	2.22

Wildlife Species	Impact (acres)			
	Permanent	Temporary	Shading	Total
Coronado skink	13.84	226.76	0.47	241.07
Coast western patch-nosed snake	3.33	130.42	0.25	134.00
Monarch butterfly	No direct effects expected			
Burrowing owl	20.65	93.83	0.41	114.89
Long-eared owl	0.00	0.41	0.04	0.45
Grasshopper sparrow	10.51	96.34	0.22	107.07
Pallid bat	0.01	6.41	0.34	6.76
Western mastiff bat	0.01	4.73	0.04	4.78
Western red bat	0.00	0.38	0.0	0.38
Western yellow bat	0.01	4.73	0.04	4.78
Pocketed free-tailed bat	0.00	1.95	0.30	2.25
Big free-tailed bat	0.01	6.41	0.34	6.76
Bat (foraging)	95.91	292.60	3.38	391.89
Non-listed MSHCP Fully Covered Species	13.85	234.19	0.66	248.70

Temporary Impacts

Monarch Butterfly

Direct effects on suitable habitat for monarch butterfly in the LOD are not anticipated due to the highly disturbed nature of the ROW; therefore, no suitable habitat would be permanently removed or temporarily disturbed. The Build Alternative could have temporary indirect impacts on monarch butterfly individuals, should this species be present, and its suitable habitat within the BSA outside of the LOD. Indirect impacts, which are considered minor, are related to dust, erosion, the introduction of invasive species in disturbed soils, roadway runoff, and increased fire risks.

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities*, would ensure that any indirect temporary effects on suitable monarch butterfly habitat adjacent to the LOD would not occur during construction of the Project.

Burrowing Owl

Based on survey results from 2020, the Project is not expected to affect individual burrowing owl during construction or operation of the facility because burrowing owl is absent from the BSA. Additional surveys were completed in 2021 in areas that were not previously accessible, and the species was not found. Burrowing owl is determined to be absent from the BSA; however, because burrowing owl is a highly mobile species, it can occur at any time of year and breed in the BSA area in the future.

Approximately 93.83 acres of suitable habitat for burrowing owl within the MSHCP survey area would be temporarily disturbed during construction (Table 2.4.4-1). Temporary indirect impacts on habitat adjacent to the LOD could occur as well, including degradation of habitat and the spread of exotic plant species, which could contribute to edge effects.

If burrowing owl moves into the BSA prior to construction, then individual burrowing owl or its nest could be temporarily and indirectly affected by Project-related activities such as construction-related noise, rumbling, or general increased human presence, which could cause birds to abandon burrows or cause stress. Trash and food littered in the construction area could attract predators (such as coyotes), increasing potential predation of burrowing owl that may occur within the Project vicinity. If construction occurs at night, night-lighting could disturb owls adjacent to the construction area.

The implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6), NC-9 (NES BIO-9), NC-10 (NES BIO-10)**, and **NC-19 (NES BIO-24)** (in Section 3.17, *Natural Communities*) would avoid or minimize potential temporary impacts on burrowing owl if the species is present adjacent to or in the vicinity of the LOD during construction.

Grasshopper Sparrow

Construction of the Project would result in the temporary disturbance of 96.34 acres of suitable habitat for grasshopper sparrow (Table 2.4.4-2). Indirect impacts from temporary construction-related activities, such as degradation of potential habitat through an increase in dust and noise during construction, could conceivably affect the species in the vicinity of the LOD; however, this is very unlikely. Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6), NC-9 (NES BIO-9)** through **NC-14 (NES BIO-14),** and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); and **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4) would ensure that any temporary impacts on grasshopper sparrow would be minimized or avoided.

Bats

The Project would result in the temporary disturbance of 6.41 acres of pallid bat roosting habitat, 4.73 acres of western mastiff bat roosting habitat, 0.38 acre of western red bat roosting habitat, 4.73 acres of western yellow bat roosting habitat, 1.95 acres of pocketed free-tailed bat roosting habitat, and 6.41 acres of big free-tailed bat roosting habitat. A total of 292.60 acres of bat foraging habitat would be temporarily disturbed as well (Table 2.4.4-2).

Potential foraging and roosting habitat associated with the drainages and bridges over drainages is judged to be of moderate to high quality. During construction, roosting habitat would be temporarily unavailable for the duration of construction at Temescal Wash and associated tributaries, woodland areas (where palms or cottonwoods are present), and if bats are present at other structures, they too may be affected this way.

This would occur at bridges (i.e., within hinges or other structural components) or trees that support bat habitat. For some locations, it may not be the actual roost habitat that would be manipulated during construction, but the bats may still avoid the structure because of human presence and vibration during construction.

Temporary indirect effects during operation of the Project may occur if night work is to occur as a part of roadway maintenance. This may disrupt foraging at water sources, or in areas with night lighting that may be disturbed. Increases in night lighting may also draw bats into or near the work areas, increasing direct effects due to collisions with construction-related equipment.

With implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6)**, **NC-9 (NES BIO-9)** through **NC-14 (NES BIO-14)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21);** and **AS-3 (NES BIO-26) (**in Section 2.4.4.4), the Project is not expected to negatively affect bats or their roosting habitat.

MSHCP Fully Covered Non-Listed Special-Status Animal Species

Construction of the Project would result in the temporary disturbance of 234.19 acres of suitable habitat for non-listed animals fully covered under the MSHCP (Table 2.4.4-2). The potential habitat that would be affected is of low to moderate quality because of the adjacency to I-15 and maintained ROW. During construction, the potential indirect effects on habitat adjacent to the LOD include, but are not limited to, reduced habitat quality from dust, litter, air pollution, and the transport of invasive species, along with habitat avoidance from noise and increased human activity. Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6), NC-9 (NES BIO-9)** through **NC-17 (NES BIO-17), NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*); and **AS-2 (NES BIO-25)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4) would provide the necessary means to avoid temporary impacts on animals and their suitable habitat and would ensure consistency with the MSHCP during construction activities.

Non-MSHCP Non-Listed Special-Status Animal Species

Construction of the Project would result in the temporary disturbance of suitable habitat for non-MSHCP non-listed animals, including 226.79 acres of suitable habitat for California glossy snake and Coronado skink, 137.85 acres of coastal whiptail suitable habitat, 2.18 acres of California legless lizard suitable habitat, 130.42 acres of coast western patch-nosed snake suitable habitat, 0.41 acre of long-eared owl suitable short-term nesting and roosting habitat, and 226.76 acres of suitable habitat for Dulzura pocket mouse and American badger (Table 2.4.4-2).

The potential exists for temporary impacts on individuals in the LOD during construction (e.g., disturbance from noise, human presence, night lighting); however, the number of individuals potentially affected is expected to be low given the low quality of suitable habitat proposed for removal. If long-eared owl is roosting in Temescal Wash,

construction noise and activities could increase the risk of predation and degrade habitat.

The potential also exists for temporary indirect impacts on potential habitat adjacent to the LOD during construction (e.g., habitat degradation through dust, increased risk of fire, introduction of invasive species).

Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6)** and **NC-9 (NES BIO-9)** through **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); **AS-5 (NES BIO-28)** (in Section 2.4.4.4); and **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*) would provide the necessary means to avoid temporary impacts on these species and their suitable habitat.

Nesting Birds

Project construction may additionally have adverse impacts on species that are protected by the MBTA and similar provisions of the CFG Code. This includes bird species previously addressed above as well as those that have no other protections.

As stated above for other species, construction of the Project would result in the temporary removal of habitat throughout the LOD (Table 2.4.4-2). Construction equipment and activity in the vicinity of active nests could disturb birds nesting adjacent to the LOD. Long-term operation may temporarily exclude species from nesting in the vicinity of the Project, although over time small numbers of birds may return. It is expected that if this happened, those birds would be acclimated to the new road conditions, including noise and any visual disturbance, and that under normal circumstances no additional impacts would be expected to those particular nesting birds. Avoidance and Minimization Measures listed in Section 2.4.4.4, specifically **AS-2 (NES BIO-25)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6)** and **NC-9 (NES BIO-9)** through **NC-14 (NES BIO-14)** (in Section 2.4.1, *Natural Communities*); and **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*) would reduce temporary impacts on nesting birds and ensure compliance with the MBTA and CFG Code.

Permanent Impacts

Monarch Butterfly

Because monarch butterfly is not expected to occur within the LOD, it is not anticipated that individual butterflies would be permanently directly affected by Project construction and vegetation clearing (e.g., direct mortality or injury of eggs, caterpillars, or breeding or foraging individuals). Permanent indirect impacts could occur, however, on any individuals present in the adjacent area because of roadside maintenance activities (e.g., use of pesticides and herbicides) or the planting of milkweed within the LOD, which could attract the species to an area where the potential for collision with vehicles is high. Should the nonnative tropical Mexican butterfly milkweed (*Asclepias curassavica*) be included in the planting palette as a part of onsite revegetation of

temporarily disturbed areas following completion of construction, then monarch could be exposed to the monarch pathogen *Ophryocystis elektroscirrha*, which is spread by Mexican butterfly milkweed and can be debilitating or lethal to monarchs. However, nonnative species are not permissible in revegetation plant palettes. Avoidance and Minimization Measure **TE-1 (NES BIO-29)** is intended to avoid and/or minimize potential permanent impacts on monarch butterfly. Consequently, impacts on this species, should it be present, are expected to be limited.

Operation of the interstate is not expected to change as a result of the Project. There is a potential for individual monarch butterflies to fly over I-15 to access habitat on either side of the facility; however, this does not differ from existing conditions.

Burrowing Owl

Approximately 20.65 acres of suitable habitat for burrowing owl within the MSHCP survey area would be permanently removed during construction of the Project. An additional 0.41 acre would be permanently shaded (Table 2.4.4-1).

Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-8 (NES BIO-8)** and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*) and **AS-1 (NES BIO-18)** (in Section 2.4.4.4) would avoid or minimize potential permanent impacts on burrowing owl if the species is present adjacent to or in the vicinity of the LOD during construction. A Burrowing Owl Management Plan would be drafted with final approval by RCA, USFWS, and CDFW (Avoidance and Minimization Measure **AS-2 [NES BIO-25]**) where preconstruction burrowing owl surveys are required within 14 days prior to ground disturbance to avoid any potential direct effects on any individuals that may be present. The Burrowing Owl Management Plan would ensure that an approach is available and agreed upon by the resource agencies for handling the species. This would avoid or minimize potential Project delays and ensure compliance with the MSHCP.

Grasshopper Sparrow

Construction of the Project would result in the permanent removal of approximately 10.51 acres of suitable habitat for grasshopper sparrow, as well as permanent shading effects on 0.22 acre (Table 2.4.4-2). Direct removal of habitat could affect breeding individuals and remove potential foraging habitat.

The low likelihood for grasshopper sparrow to occur adjacent to the highway in any measurable numbers (if at all) greatly reduces the potential of the Project to impact grasshopper sparrows above existing baseline conditions. The number of individuals potentially killed from vehicle strikes or affected by existing highway noise and pollution is so low that the addition of lanes within the existing median by the Project is not expected to increase this potential impact. Implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-8 (NES BIO-84)**, **NC-12 (NES BIO-12)** through **NC-14 (NES BIO-14),** and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4); and **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*) would

avoid or minimize any permanent indirect and direct impacts on grasshopper sparrow as a result of the Project.

Bats

Construction of the Project would result in the permanent removal of approximately 0.01 acre of roosting habitat for pallid bat, western mastiff bat, western yellow bat, and big free-tailed bat, and <0.01 acre of roosting habitat for western red bat and pocketed free-tailed bat. A total of 95.91 acres of bat foraging habitat would be permanently removed as well (Table 2.4.4-2). Implementation of Avoidance and Minimization Measure **AS-4 (NES BIO-27)** in Section 2.4.4.4 would ensure that the Project would not result in a permanent loss of bat roosting habitat.

Project implementation would also result in permanent shading effects on approximately 0.34 acre of pallid bat and big free-tailed bat roosting habitat, 0.04 acre of western mastiff bat and western yellow bat roosting habitat, <0.01 acre of western red bat roosting habitat, and 0.30 acre of pocketed free-tailed bat roosting habitat. A total of 3.38 acres of bat foraging habitat would be permanently shaded as well (Table 2.4.4-2).

Bridge construction or the removal or trimming of suitable roost trees could harm roosting bats as a direct result of implementation of the Project. The Bat Management Plan (Avoidance and Minimization Measure **AS-3 [NES BIO-26]** in Section 2.4.4.4) reduces the potential that direct mortality of bats would occur and ensures that a streamlined approach to handling the presence of bats would be created for the Project to avoid or minimize potential Project delays.

Implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6)**, **NC-9 (NES BIO-9)** through **NC-14 (NES BIO-14)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*); **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4); and **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*) would avoid or minimize any permanent indirect impacts on bats as a result of the Project.

Operation of the Project may have the potential to affect bats negatively, but whether this would differ from existing baseline conditions is difficult to ascertain. As discussed previously, bats are not expected to forage directly adjacent to the ROW, and any bats present at the Temescal Wash would most likely not suffer any greater risk of vehicle strike than what currently exists. Increases in permanent shading effects for species that use bridges (including pallid bat, pocketed free-tailed bat, and big free-tailed bat) may reduce foraging areas but, at the same time, increase potential roost sites within the widened bridges for these species, which would be beneficial. The closure of the gap between the bridges may also reduce the risk of vehicle strikes from bats leaving roosts, also creating a beneficial effect.

MSHCP Fully Covered Non-Listed Special-Status Animal Species

Construction of the Project would result in the permanent removal of approximately 13.85 acres of suitable habitat for non-listed animals fully covered under the MSHCP, as well as permanent shading effects on 0.66 acre (Table 2.4.4-2). Direct removal of

habitat could affect breeding individuals and remove potential foraging habitat. However, habitat within and directly adjacent to the LOD is of low quality and is unlikely to support these species. If these species are present, there is potential for direct mortality and loss of live-in, breeding, and foraging habitat. Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-6 (NES BIO-6)**, **NC-9 (NES BIO-9)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, and **NC-20 (NES BIO-19)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*); and **AS-1 (NES BIO-18)**, **AS-2 (NES BIO-25),** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4) would provide the necessary means to avoid permanent impacts on animals and their suitable habitat and would ensure consistency with the MSHCP during construction activities. In addition, Mitigation Measure **NC-17 (NES BIO-17)** provides compensatory mitigation which would mitigate impacts on suitable habitat.

The potential exists for direct impacts on active bird nests during construction of the Project. Although these species are covered under the MSHCP, the removal of an active nest would trigger consideration of the MBTA and CFG Code. Avoidance and Minimization Measure **AS-5 (NES BIO-28)** (in Section 2.4.4.4) would protect nesting birds and ensure that the Project would not result in direct mortality of any of the bird species, including white-tailed kite.

Non-MSHCP Non-Listed Special-Status Animal Species

Construction of the Project would result in the permanent removal of suitable habitat for non-MSHCP non-listed animals, including 13.84 acres of suitable habitat for California glossy snake and Coronado skink, 3.34 acres of coastal whiptail suitable habitat, <0.01 acre of California legless lizard suitable habitat, 3.33 acres of coast western patch-nosed snake suitable habitat, <0.01 acre of long-eared owl suitable short-term nesting and roosting habitat, and 13.84 acres of suitable habitat for Dulzura pocket mouse and American badger (Table 2.4.4-2). Most of these permanent impacts on suitable habitat would occur within the median, which is very low quality due to lack of foraging and high potential for mortality under existing conditions.

Shading effects would degrade suitable habitat and result in a permanent loss of habitat (see Table 2.4.4-2 for shading impacts on suitable habitat for each non-MSHCP non-listed animal). The potential also exists for direct mortality and injury of individuals during vegetation clearing and grading or by predators attracted to the construction area. Measures **NC-1 (NES BIO-1)** through **NC-8 (NES BIO-8)**, **NC-12 (NES BIO-12)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, **NC-19 (NES BIO-24)**, and **NC-20 (NES BIO-19)** (in Section 2.4.1, *Natural Communities*); **TE-2 (NES BIO-21)** (in Section 2.4.5, *Threatened and Endangered Species*); **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** (in Section 2.4.4.4); and **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*) would provide protection to these species that may occur adjacent to the LOD during construction. In addition, Mitigation Measures **NC-15 (NES BIO-15)**, **NC-16 (NES BIO-16)** and **NC-17 (NES BIO-17)** provides mitigation for riparian/riverine resources, aquatic resources and compensatory mitigation, which would mitigate impacts on suitable habitat.

The potential exists for direct effects on these reptile and mammal species from operation of the Project. The increase in vehicle lanes would reduce the ability of the species to move across the highway safely, thus potentially increasing mortality rates. The number of individuals that may be affected in this way is not known, but it is not expected to be high given the low-quality habitat adjacent to the roadway, and the already-wide I-15 facility. Potential indirect impacts from operation of the Project would include continued degradation of potential habitat (adjacent to I-15) and introduction of invasive nonnative weeds. However, these potential indirect effects from operation of the highway are expected to remain the same as existing conditions. The proposed removal of low-quality potential habitat for these species, along with the potential low incremental increase in mortality of individuals attempting to cross the improved facility, would not be a biologically substantial impact.

It is less than reasonable to assume that operation and maintenance of the Project would affect long-eared owl beyond existing baseline conditions. There is a low likelihood for the species' presence, and only a very low number of individuals (if present) could be affected by the Project; therefore, the risk of vehicle strikes from a widened median is not expected to increase. The Project would not pose a biologically substantial risk to long-eared owl.

Nesting Birds

Construction of the Project would result in the permanent loss of habitat throughout the LOD (Table 2.4.4.-2). The act of removing this vegetation may result in increased stress to adult and young birds, nest abandonment, or direct take of nests that are in the construction footprint, as well as injury or mortality of birds at, in, or nearby to the nest. Avoidance and minimization measures listed in Section 2.4.4.4, specifically Avoidance and Minimization Measures **AS-1 (NES BIO-18)**, **AS-2 (NES BIO-25)**, and **AS-5 (NES BIO-28)**, as well as **NC-1 (NES BIO-1)** through **NC-8 (NES BIO-8)**, **NC-12 (NES BIO-12)** through **NC-14 (NES BIO-14)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*) would reduce permanent impacts on nesting birds and ensure compliance with the MBTA and CFG Code.

No-Build Alternative

If the Project is not constructed, no new or additional impacts on non-listed special-status animals or candidate species would occur beyond those that would be expected to occur from operation of the existing facility.

2.4.4.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-14** and Mitigation Measures **NC-16 (BIO-16)** and **NC-17 (BIO-17)** in Section 2.4.1, *Natural Communities*; and Avoidance and Minimization Measures **TE-1 (NES BIO-29)** and **TE-2 (NES BIO-21)** in Section 2.4.5, *Threatened and Endangered Species*; and Avoidance and Minimization Measures **AS-1 (NES BIO-18)** through **AS-5 (NES BIO-28)** below will ensure that the direct and indirect effects on non-listed special-status animals and candidate species from Project-related activities are avoided and/or minimized.

AS-1 (NES BIO-18). Night Lighting Management. Night lighting will be directed away from natural lands within potential MSHCP conservation areas in order to support potential linkage and core functions during construction. This is intended to protect species within potential MSHCP conservation areas from direct night lighting during construction if activities occur at night. The MSHCP requires that shielding be incorporated in Project designs to ensure ambient lighting in MSHCP conservation areas is not increased (MSHCP Volume I, Section 6.1.4). For this Project, there are no proposed modifications to existing signals or proposed new signals.

AS-2 (NES BIO-25). Burrowing Owl Management Plan. A Burrowing Owl Management Plan will be prepared by a qualified biologist and will include:

a) Focused Survey for Burrowing Owl: Include within the plan the results of the MSHCP protocol survey conducted.

b) Preconstruction Survey for Burrowing Owl: Surveys by a qualified biologist shall be conducted in areas containing burrows and/or suitable habitat for burrowing owl within 14 days prior to ground disturbance. The BSA shall be the LOD and a 500-foot BSA.

c) Protocol for Presence: Take steps necessary for handling the presence of burrowing owl (if found during either of the two surveys), which may include full avoidance, if feasible, or passive relocation by a qualified ornithologist.

d) Agency Approval: The plan will need approval USFWS and CDFW. Additional approval of the plan will be required by RCA if RCA-owned lands are involved.

AS-3 (BIO-26). Bat Management Plan. A Bat Management Plan will be prepared by a qualified biologist. Because bat exclusion activities require specific timing, it is recommended to begin bat pre-Project emergence surveys and planning in late spring/summer prior to construction. Both the hibernation season and the maternity season have restrictions, which introduce timing restrictions for bat exclusion activities, should these be required. These are briefly described below.

- The hibernation season begins in November (November 1 through November 30), where exclusion is dependent upon weather conditions and is at the bat biologist's discretion. If the low temperatures on the evening of exclusion and the subsequent four evenings are not forecasted to drop below 45°F, then the exclusion may occur. If the forecasted low temperatures are anticipated to be 45°F or less, then no exclusion will be performed.

- During the hibernation season (December 1 through February 14), no exclusions will be performed. During the maternity season (April 1 through August 31), no bat exclusions will be performed to avoid "take" of flightless young.

- From February 15 through March 31 and September 1 through October 31, bat exclusion generally has no timing constraints.

The Bat Management Plan will include the following requirements:

a) A qualified bat biologist will conduct bat pre-Project emergence surveys at all bridges, culverts, or other significant features (within at least 150 feet of the Project) that show any potential for bat roosts if any disruptive construction work is expected to come within the suggested protective bat buffer distances for potential bat roosts at these sites. These buffer distances can be found in Table 7-1 of the 2019 *Caltrans Bat Mitigation* guide (H.T. Harvey & Associates 2019). Such locations include, but are not limited to, the potential bat roost structures identified in Figure 2.4.4-3. The field review will determine the level of survey needed to assess presence/absence of bats at each structure and will be performed in late spring/summer prior to construction.

b) A qualified bat biologist will evaluate all mature trees, palm trees and fronds, and snags to be removed for their potential to support roosting bats. If potential bat roost sites are identified in trees to be removed, the removal will be conducted over a two-day period (two-step removal process). On day 1, the qualified biologist will identify branches and limbs without crevices or cavities to be removed using hand tools or chainsaws. On day 2, the remainder of the tree may be removed.

    - From February 15 through March 31 and September 1 through October 31, tree removal follows the 2-day process with no other constraints.
    - During the start of the hibernation season (November 1 through November 30), tree removal is dependent upon weather conditions and will be at the bat biologist’s discretion. If the low temperatures on the evening of removal and the subsequent four evenings are not forecast to drop below 45°F, then the contractor may remove trees following the two-step removal process. If the forecasted low temperatures are anticipated to be 45°F or less, then no tree removal will be performed.
    - During the hibernation season (December 1 through February 14), no tree removal will be performed.
    - During the maternity season (April 1 through August 31), tree removal should be avoided to prevent "take" of flightless young. Tree removal can only be performed if a qualified bat biologist surveys all of the trees containing suitable bat roosting habitat to be removed and no roosting bats are found. These surveys will consist of acoustic detectors placed near each tree for 1 to 2 evenings (with data retrieved and analyzed), and emergence surveys will be conducted at trees where bat acoustic activity was recorded during the emergence period. If roosting bats are found, the tree cannot be removed until the end of the maternity season.

c) Night lighting associated with construction will be directed away from bridges, palm trees, and other significant features determined by the qualified bat biologist to have potential for bats. In addition, night lighting will be directed away from areas of natural vegetation adjacent to the western side of southbound I-15 in the vicinity of the Cajalco Road Bridge, the Bedford Wash Bridges, the Weirick Road undercrossing, and the palm grove between these bridges.

d) To minimize impacts on roosting bats, the Bat Management Plan will require that no staging or storage of equipment or vehicles will occur under or on top of bridges with potential for bats. This will include, but is not limited to the Cajalco Road Bridge, Bedford Wash Bridges, and Weirick Road undercrossing.

e) Preconstruction bat emergence surveys will be completed 14 days prior to construction by a qualified bat biologist, in coordination with the Caltrans biologists, within the Project area at all bridges, culverts, or other significant features that show any potential for bat roosts if any disruptive construction work is expected to come within the recommended disturbance buffer zones for potential bat roosts per Table 7-1 of the 2019 *Caltrans Bat Mitigation* guide (H.T. Harvey & Associates 2019) at these sites. Such locations include, but are not limited to, the Weirick Road undercrossing, the Cajalco Road OC bridges, the three Bedford Wash bridges, and the palm grove near Bedford Wash. If bats are detected, the qualified bat biologist will coordinate with the Caltrans biologist to determine if additional avoidance and minimization measures are needed.

f) For bridges, culverts, or other significant features confirmed to be potentially suitable for bat roosting/nursery, exit counts and acoustic surveys will be performed to determine whether a structure supports a nursery or roost and by which species. This survey work will occur in the late spring/summer in the year prior to construction and potentially again in the fall in the year prior to construction, depending on the results of the summer work. This would be determined by the bat biologist. Where the timing for these surveys is not possible for every potential bat roost, the implementation of BIO-26, section “e” will be performed in lieu of these surveys if conditions (e.g., temperature) permit the feasibility of surveys at these sites at least 14 days prior to construction.

g) For each location confirmed to be occupied by bats, the Bat Management Plan will provide details both in text and graphically where exclusion devices will need to be placed, the timing for exclusion work, and the timeline and methodology needed to exclude the bats.

h) Monitoring activities and schedule will be included in the Bat Management Plan, including frequency of monitoring, which structures would need to be monitored, and reporting requirements.

i) Details on placement of human-made roosting habitat panels, including design, placement location, and timing of placement will be included in the Bat Management Plan. These panels must be placed at least 9 months prior to the exclusion of the bats.

j) The draft Bat Management Plan will be reviewed and approved by CDFW.

AS-4 (NES BIO-27). Bat Roosting Habitat. All structures on bridges and/or culverts supporting bat roosting habitat will be returned to original or better condition at the completion of construction, where feasible. Where this is not feasible, permanent loss of such habitat will be mitigated through creation of suitable roosting habitat at no less than a 1:1 ratio. This shall be coordinated with CDFW. If trees with the potential to provide roost sites for solitary bats are removed as determined by the qualified bat

biologist (i.e., fan palms, riparian trees), trees will be replaced with equivalent or better at the completion of construction.

AS-5 (BIO-28). Nesting Bird Management Plan. Due to the complexity of the Project at the Temescal Wash, as well as the presence of many bridges and mature trees along the Caltrans ROW, a Nesting Bird Management Plan will be drafted to provide a comprehensive approach to handling nesting birds well prior to the commencement of construction. It will include, at a minimum, the following items:

a) A qualified biologist will perform a detailed field review and document the location of raptor and/or corvid nests along with sign of colonial nesting birds within the LOD and adjacent lands. The colonial nesting bird review should be performed in conjunction with measure **AS-3 (NES BIO-26)**. This field review should occur in late spring/early summer to provide the best results.

b) Results of the field review will be used to draft approaches and survey methodologies for addressing potential nesting species. A single approach and methodology will not suffice for all species with potential to nest. This Nesting Bird Management Plan should be coordinated with USFWS and CDFW with final approval being provided by both agencies. Below is a basic nesting bird survey method that can be incorporated into the document. At the very least, the plan must provide assurance that birds protected under the MBTA and similar protections under the California Fish and Game Code will not be harmed.

Within 7 days prior to the commencement of construction activities (if between January 15 and September 1), a qualified biologist will perform a nesting bird and raptor survey that will consist of at least two site visits to each area with potential nesting habitat to determine whether there are active nests within 200 feet of the LOD. This survey will also identify the species, and to the degree feasible, nesting stage (e.g., incubation of young, feeding of young, near fledging). Nests will be mapped (not by using GPS as close encroachment may cause nest abandonment). If active nests are found, construction will not occur within 200 feet of the nest, or as directed by a qualified biologist, until the nesting attempt has been completed and/or abandoned because of non-Project-related reasons.

2.4.5 Threatened and Endangered Species

2.4.5.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA) (and the Department, as assigned), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a biological opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code (CFG Code) Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2080 of the CFG Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the CFG Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a biological opinion under Section 7 of FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the CFG Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) would provide take coverage for state-listed species affected by the Project, with the consistency review performed by the Western Riverside Regional Conservation Authority (RCA), USFWS, and CDFW (see Section 2.4.5.2).

The Project is a covered activity under the MSHCP (Volume I, Section 7.2.2); therefore, take authorization for impacts on covered federal and state endangered species would occur through consistency with the MSHCP and the plan's permits. A consistency review by the RCA, USFWS, and CDFW will be performed to ensure that the Project is consistent with the requirements of the MSHCP. The consistency review will result in a streamlined biological opinion from USFWS for covered species. Formal consultation under USFWS Section 7 and/or a CDFW 2081 permit independent of the MSHCP consistency review may be required for non-covered species (i.e., federal candidate species monarch butterfly [*Danaus plexippus* pop. 1][see Section 2.4.4, *Animal Species*, for details], and state candidate species Crotch bumble bee [*Bombus crotchii*]).

2.4.5.2 Affected Environment

Unless otherwise noted, the information from this section was based on the September 2023 Natural Environment Study (NES) prepared for the Project (Caltrans 2023). References used in the NES are not carried over into this section.

To comply with the provisions of various state and federal environmental statutes and executive orders, the potential impacts on natural resources of the region were investigated and documented. A list of species and habitats within the Project region was developed based on information compiled from USFWS, California Natural Diversity Database (CNDDB) (CDFW 2024), and other current publications (CNPS 2024). An official USFWS species list was generated September 14, 2023 (Appendix D of the NES). The Biological Study Area (BSA; i.e., Project limits of disturbance [LOD] plus a 500-foot buffer) was field reviewed to identify habitat types, potential to support threatened and endangered species, and potential problem areas.

A literature review determined that 40 federally and/or state-listed as threatened or endangered species may potentially occur within the regional vicinity of the BSA (16 of which are plants, seven are invertebrates, two are fish, two are amphibians, one is a reptile, nine are birds, and three are mammals). Twenty of the 40 threatened or endangered plant and animal species identified in the literature review were determined to be absent due to a lack of suitable habitat. Potential habitat for the following 19 threatened, endangered, or state candidate species was judged present within the BSA: Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), San Jacinto valley crownscale (*Atriplex coronata* var*. notatior*), thread-leaved brodiaea (*Brodiaea filifolia*), slender-horned spineflower (*Dodecahema leptoceras*), vernal pool fairy shrimp (*Branchinecta lynchi*), Riverside fairy shrimp (*Streptocephalus woottoni*), San Diego fairy shrimp (*Branchinecta sandiegonensis*), Quino checkerspot butterfly (*Euphydryas editha quino*), arroyo toad (*Anaxyrus californicus*), bald eagle (*Haliaeetus leucocephalus*), southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*), least Bell's vireo (LBV; *Vireo bellii pusillus*), tricolored blackbird (*Agelaius tricolor*), coastal California gnatcatcher (*Polioptila californica californica*), San Bernardino kangaroo rat

(SBKR; *Dipodomys merriami parvus*), Crotch bumble bee, mountain lion (*Puma concolor*), and Stephens' kangaroo rat (SKR; *Dipodomys stephensi*). Focused surveys were performed for rare plants, fairy shrimp, LBV, and SWFL based on the survey requirements identified in MSHCP Volume I, Section 6.1.2, 6.1.3, and 6.3.2.

Study areas for these species were applied to the LOD as follows: (1) the rare plant study area and fairy shrimp study area included up to a 100-foot LOD buffer; and (2) the riparian bird study area included up to a 300-foot buffer from the LOD that was applied to surveys focused on LBV and SWFL. Refer to Figure 2.4.1-1 for the limits of each study area. All other species with potential to occur within the BSA have no survey requirements.

Threatened and endangered species evaluated for the Project and their habitat requirements, regulatory status, and potential for occurrence within the BSA are provided in Table 2.4.5-1 on the following page, and are described in more detail in the NES report prepared for the Project.

Critical Habitat

Based on a review of the USFWS Critical Habitat mapper and the official USFWS IPaC List of Proposed, Threatened, and Endangered Species and Critical Habitats for the Project, it was determined that critical habitat for coastal California gnatcatcher and San Diego ambrosia occurs within the BSA. However, the critical habitat for these species was designated as excluded within the MSHCP boundary. Because of this, no additional actions beyond demonstrating consistency with the MSHCP would be required.

Survey Results

Listed Plants

Of the 16 federal and/or state endangered or threatened plant species known to occur in the regional vicinity of the BSA, suitable habitat is present only for Munz's onion, San Diego ambrosia, thread-leaved brodiaea, slender-horned spineflower, and San Jacinto Valley crown scale. All five of the species are Covered Species under the MSHCP with additional survey requirements. The Project occurs within Narrow Endemic Plant Species Survey Area 1, which includes requirements for surveys for Munz's onion, San Diego ambrosia, and slender-horned spineflower. Surveys for San Diego ambrosia are also required in Narrow Endemic Plant Species Survey Area 7, which the Project occurs within. Surveys for thread-leaved brodiaea are required in Criteria Area Survey Area 1. Surveys are required per the MSHCP for San Jacinto Valley crownscale if a project occurs within the MSHCP survey area for this species. However, the Project does not occur within the survey area for San Jacinto Valley crownscale, so it is fully covered under the MSHCP and has no survey requirement. The remaining species required focused surveys within the rare plant study area (LOD plus a 100-foot buffer) (see Figure 2.4.1-1 in Section 2.4.4, *Natural Communities*). Federal and/or state listing status and specific habitat requirements for each plant species is provided in Table 2.4.5-1 below.

Table 2.4.5-1. Threatened and Endangered Species with Potential to Occur in the Biological Study Area

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
PLANTS					
Munz's onion	*Allium munzii*	E/T/1B.1/ MSHCP (b)	Found on mesic exposures or seasonally moist microsites in grassy openings in coastal sage scrub, chaparral, juniper woodland, valley, and foothill grasslands in clay soils. Associated with a special "clay soil flora" found in southwestern Riverside County. At least one population (Bachelor Mountain) is reported to be associated with pyroxenite outcrops instead of clay.	HP	The Project occurs in NEPSA 1. Suitable habitat is present in the BSA within coastal sage scrub with clay soils. This species was not detected in the rare plant study area during the focused rare plant surveys.
San Diego ambrosia	*Ambrosia pumila*	E/-/1B.1/ MSHCP (b)	Occurs in open floodplain terraces or in the watershed margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse nonnative grasslands or ruderal habitat in association with river terraces, vernal pools, and alkali playas. San Diego ambrosia generally occurs at low elevations generally less than 1,600 ft in the Riverside populations and less than 600 ft in San Diego County.	HP, CH	Project occurs within the NEPSA 1 and 7 for this species. Suitable habitat is present in the BSA within habitats associated with floodplain terraces. This species was not detected in the rare plant study area during the focused rare plant surveys. Critical habitat for this species does occur within the BSA, with a small area occurring within the edge of the limits of disturbance (just over 0.3 acre) just north of Nichols Road, west of I-15.
marsh sandwort	*Arenaria paludicola*	E/E/1B.1/-	Occurs in wetland and freshwater marshes and grows up through dense mats of *Typha* sp., *Juncus* sp. and *Scirpus* sp. within freshwater marshes. Elevation ranges from sea level to 558 ft. Was documented	HA	Suitable habitat is present in the rare plant study area within freshwater marshes; however, this species is considered extirpated from southern California, and is not expected to occur.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			within the Santa Ana River in the late 1899 (USFWS 1998); however, the species is now believed to be extirpated from southern California (USFWS 2008).		
Braunton's milk-vetch	*Astragalus brauntonii*	E/-/1B.1/-	Can be found within chaparral, coastal scrub, and valley and foothill grasslands. Often found within recently burned areas. Flowers emerge between January and August. Occurs at an elevation of 13 to 2,099 ft.	HA	Suitable habitat is present in the rare plant study area within coastal scrub and grassland, however the nearest known location is at Santiago Peak, Orange County, so this species is not expected to occur.
San Jacinto Valley crownscale	*Atriplex coronata* var. *notatior*	E/--1B.1/ MSHCP (d)	Found in alkaline soils within playas, valley and foothill grasslands (mesic), and vernal pools. Elevations range from 455 to 1,640 ft and blooms between April and August. Threatened by flood control, agriculture, nonnative plants, urbanization, vehicles, road maintenance, and pipeline construction.	HP	Clay soils, foothill grasslands present in the rare plant study area. The Project does not occur within the Criteria Area Survey Area for this species; it is fully covered under the Plan. This species was not detected in the rare plant study area during the focused rare plant surveys.
Nevin's barberry	*Berberis nevinii*	E/E/1B.1/ MSHCP (d)	This evergreen shrub is very rare and local; found on steep north facing slopes or in low-grade sandy washes in chaparral, coastal sage scrub, riparian scrub, and cismontane woodland from 968 ft to 2,700 ft. In western Riverside County; known only in the vicinity of Vail Lake (Roberts et al. 2004).	HA	The rare plant study area is not in the vicinity of Vail Lake so Nevin's barberry is not expected to occur. The Project does not occur in the Criteria Area Species Survey Area; therefore this species is covered by the MSHCP. As such any potential impacts would be completely mitigated by the MSHCP. No survey is required, and no further action is necessary.
thread-leaved brodiaea	*Brodiaea filifolia*	T/E/1B.1/ MSHCP (d)	Found in heavy soils (e.g., clay) in coastal sage scrub, chaparral, cismontane woodland, and vernal pools from 1,575–4,000 ft.	HP	This species is a Criteria Area species (Area 1) for the Project. Heavy clay soils in scrub, chaparral, and woodland

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			Within western Riverside County found in southern Santa Ana Mountains, Santa Rosa Plateau, and alkali flats of the San Jacinto River flood plain and west of Hemet (Roberts et al. 2004).		habitats are mapped in the rare plant study area. This species was not observed during surveys.
salt marsh bird's-beak	*Chloropyron maritimum* ssp. *maritimum*	E/E/1B.2/-	Occurs within coastal dunes, salt marshes, and coastal swamps, but has been documented inland in the San Bernardino Valley within alkaline meadows (CDFW 2024). Elevations range from sea level to 99 ft.	HA	No suitable alkaline meadow habitat is present in the BSA, and the study area is outside of the known geographic and elevation range for this species. This species is not expected to occur within the rare plant study area.
San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FC/E/1B.1/-	An annual herb found in sandy areas within mixed grassland and chaparral communities. The species occurs at elevations ranging from 295–1,640 ft. Blooming period is from April to July. This species has a severely limited distribution and is only known in Los Angeles, Orange, and Ventura Counties.	HA	Suitable grasslands and chaparral habitats with sandy soils are present in the rare plant study area, but the rare plant study area is located outside of the known geographic range of this species. This species is not expected to occur within the rare plant study area.
slender-horned spineflower	*Dodecahema leptoceras*	E/E/1B.1/ MSHCP (b)	Found on flood deposited fine sand terraces and washes in Riversidian alluvial fan sage scrub from 656 to 2,493 ft. Also associated with cismontane woodland and chaparral having suitable hydrology and fine sands.	HP	This species is a NEPSA (Area 1) for the Project. Suitable Riversidian alluvial fan sage scrub and chaparral habitat is present in the rare plant study area. A focused rare plant survey was performed, and the species was not detected within the rare plant study area.
Santa Monica dudleya	*Dudleya cymosa* ssp. *ovatifolia*	T/-/1B.2/-	This perennial herb is found in chaparral and coastal sage scrub on volcanic and rocky sedimentary soils. Known to occur at elevations of 500 to 5,400 ft.	HA	No suitable habitats with rocky or volcanic soils are present in the rare plant study area. This species is typically found on the coastal slopes in Los Angeles and Orange Counties, and is

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
					not expected to occur with the rare plant study area.
Santa Ana River woollystar	*Eriastrum densifolium* ssp. *sanctorum*	E/E/1B.1/ MSHCP	A perennial herb known from a single extended but heavily fragmented population in Riverside and San Bernardino Counties; it formerly extended into Orange County. An inhabitant of alluvial fan sage scrub in sandy to gravelly soils and typically blooms during the period of June through August. Can be found from 450 to 2,000 ft.	HA	This species is not expected as the Santa Ana River is not within the rare plant study area. Species is fully covered by the MSHCP; therefore, any potential impacts on this species would be fully mitigated by the plan; no survey is required. No further action is necessary.
San Diego button-celery	*Eryngium aristulatum* var. *parishii*	E/E/1B.1/ MSHCP	Found in mesic climates in coastal scrub, valley and foothill grasslands, and vernal pools on the Santa Rosa Plateau. Grows at an elevation between 65 and 2,035 ft and blooms between April and June. Threatened by agriculture, urbanization, road maintenance, grazing, vehicles, illegal dumping, nonnative plants, and foot traffic.	HA	The rare plant study area lacks suitable habitat for this species, as it is only found within the vernal pools of the Santa Rosa Plateau. This species is not expected to occur in the rare plant study area. This species is fully covered under the MSHCP and as such any potential impacts would be completely mitigated by the MSHCP.
Parish's meadowfoam	*Limnanthes alba* ssp. *parishii*	-/E/1B.2/ MSHCP	This annual herb grows in vernally mesic climates within lower montane coniferous forests, meadows and seeps, and vernal pools. Flowers bloom from April to June between elevations of 1,965 and 6.560 ft.	HA	This species is fully covered under the MSHCP, and as such any potential impacts would be completely mitigated by the MSHCP. No suitable habitat is present within the rare plant study area, and the study area occurs well outside the species geographic and elevation range. This species is not expected to occur within the rare plant study area.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
spreading navarretia	*Navarretia fossalis*	T/-/1B.1/ MSHCP (b)	Associated with vernal pools and depressions and ditches in areas that once supported vernal pools. In western Riverside County, Spreading Navarretia has been found in relatively undisturbed and moderately disturbed vernal pools, within larger vernal floodplains dominated by annual alkali grassland or alkali playa. The alkali vernal playa/pool habitat found in the Hemet area is based primarily on silty clay soils in the Willows and Travers series. These soils are usually saline-alkaline in nature and reliably pond water for long durations.	HA	This is a NEPSA (Area 1) for the Project. No suitable alkaline soils or vernal pools are present in the rare plant study area. This species is not expected to occur within the rare plant study area. Seasonal ponds identified within the study area do not provide the alkaline conditions suitable for this species.
California Orcutt grass	*Orcuttia californica*	E/E/1B.1/ MSHCP (b)	Restricted to the deeper portions of undisturbed vernal pools. In Riverside County, this species is found in southern basaltic claypan vernal pools at the Santa Rosa Plateau and alkaline vernal pools as at Skunk Hollow and at Salt Creek west of Hemet.	HA	This is a NEPSA (Area 1) for the Project. Vernal pools are not present in the study area. Although seasonal ponds were identified, the Project lacks deep vernal pools. This species is not expected to occur within the rare plant study area.
INVERTEBRATES					
vernal pool fairy shrimp	*Branchinecta lynchi*	T/-/-/MSHCP (a)	Restricted to seasonal vernal pools. The vernal pool fairy shrimp prefers cool water pools that have low to moderate dissolved solids, are unpredictable, and often short-lived.	HP	Wet and dry season focused surveys were performed. The species was not detected within the study area during focused surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
San Diego fairy shrimp	*Branchinecta sandiegonensis*	E/-/-/-	A commonly found fairy shrimp on coastal mesas of San Diego County. Also documented within Orange and Riverside Counties but not as frequently. Occurs within shallow (< 30 centimeters deep), unpredictable, and seasonally astatic pools (Erikson & Belk 1999). Soils where species has been found are often associated with chaparral, coastal sage scrub, and annual grasslands.	HP	Wet and dry season focused surveys were performed. The species was not detected within the study area during focused surveys.
Quino checkerspot butterfly	*Euphydryas editha quino*	E/-/-/MSHCP	Habitat associations seem to be tied to both host plant species and topography. Larvae feed on *Plantago erecta*, *Plantago patagonia*, *Antirrhinum coulterianum*, *Cordylanthus rigidus* (and possibly other *Plantago* species), and *Collinsia concolor* and *Castilleja exserta*. Adults nectar mostly on small annuals; often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops. Habitat components have been found in association with, but not restricted to, vernal pools, sage scrub, chaparral, native and nonnative grassland, and open oak and juniper woodland communities. The key component seems to be open-canopied habitats.	HP	Suitable habitat is present throughout the study area. *Plantago erecta* is present in the study area, but the majority of the study area is flat, with few hilltops or ridgelines and no rocky outcrops. Therefore, there is low potential for Quino checkerspot butterfly to occur within the study area. Because this species is fully covered by the MSHCP, there is no survey requirement.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
Crotch bumble bee	*Bombus crotchii*	-/SC/-/-	Nests underground. Coastal California east to the Sierra–Cascade crest and south into Mexico. Food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*. In California, this species inhabits open grassland and scrub habitats. Nests in the ground, using abandoned rodent burrows or similar cavities, or above ground in logs or similar structures.	HP	Open grassland and scrub habitats are present in the BSA. This species is unlikely to occur in the LOD due to the disturbed nature of the LOD but could occur in the BSA. Indirect effects on this species are therefore possible.
Delhi Sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	E/-/-/MSHCP	Found within 12 disjunct locations within the cities of Colton, Rialto, and Fontana. Only found in areas with Delhi sands and is typically associated with the following native plants: California Buckwheat (*Eriogonum fasciculatum*), Telegraph Plant *(Heterotheca grandiflora*), and California Croton (*Croton californica*). Low tolerance to disturbances.	HA	No Delhi sands habitats occur within the BSA. Additionally, the BSA is outside the known range of the species. Therefore, there is no potential for the Delhi sands flower-loving fly to occur within the BSA.
Riverside fairy shrimp	*Streptocephalus woottoni*	E/-/-/MSHCP (a)	Restricted to deep seasonal vernal pools, vernal pool-like ephemeral ponds, and stock ponds and other human-modified depressions. Species prefers warm water pools that have low to moderate dissolved solids, are less predictable, and remain filled for extended periods of time. Basins that support Riverside fairy shrimp are	HP	Wet and dry season focused surveys were performed. The species was not detected within the study area during focused surveys.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			typically dry a portion of the year, but usually are filled by late fall, winter, or spring rains, and may persist through. All known habitat lies within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation. In Riverside County, found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils.		
FISH					
Santa Ana sucker	*Catostomus santaanae*	T/CSC/-/MSHCP	Previously, has been found in the Los Angeles, San Gabriel, and Santa Ana River systems of Southern California. Most streams are fairly small and shallow, with currents ranging from swift to sluggish. Streams are subject to periodic severe flooding. Species is abundant where waters are cool and unpolluted, though they can occur where waters are fairly turbid. Often occurs where boulders, rubble, and sand are the main bottom materials and they are associated with growths of filamentous algae and Chara; the species feeds mostly on algae, and detritus; small numbers of aquatic insect larvae are also taken, mostly by the larger individuals (Greenfield et al. 1970).	HA	Santa Ana sucker may have occurred historically in Temescal Wash but has been extirpated (USFWS 2017). There is currently no suitable habitat for Santa Ana sucker within Temescal Wash and its tributaries (RCRCD 2015). Therefore, the species has no potential to occur within the BSA.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
southern steelhead-southern California distinct population segment	*Oncorhynchus mykiss*	E/CSC/-/-	An anadromous fish that has physiological tolerances to warm water and changing conditions. Historically occurred throughout coastal drainages of Southern California. South of Los Angeles, the species is now restricted to the San Juan Creek and San Mateo Creek, San Luis Rey River watersheds.	HA	The BSA occurs outside of the species' known extant range. Therefore, this species is not expected to occur in the BSA.
REPTILES					
southwestern pond turtle	*Clemmys marmorata pallida*	FC/CSC/-/MSHCP	Found in association with permanent or nearly permanent water in a fairly wide variety of habitat types. Western pond turtles inhabit slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds and sewage treatment lagoons, with pools being the preferred habitat within streams, with a water depth greater than 2 meters required. It is omnivorous, taking a wide variety of plant and animal food. The pond turtle requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks.	HA	Deep, slow-moving permanent or intermittent water areas are not present in the BSA. This species is fully covered under the MSHCP.
AMPHIBIANS					
arroyo toad	*Anaxyrus californicus*	E/CSC/-/MSHCP (c)	Found in rivers with willows, cottonwoods, and sycamores. This species prefers	HP	Potential suitable to marginal habitat may occur within the BSA at Temescal Wash and tributary washes. However,

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			sandy/gravelly areas in drier parts of its range near washes or intermittent streams with clear standing water that is required for egg deposition.		within western Riverside County, arroyo toads are currently only known to occur in the Santa Ana Mountains (in Santiago Creek on the west slope) and south of Lake Elsinore (Nafis 2020; RCIP 2003; USFWS 2009). Therefore, there is only a low potential for the species to occur within the BSA. Project occurs outside of MSHCP survey area for species; no focused survey is required.
California red-legged frog	*Rana draytonii*	T/CSC/-/MSHCP (c)	This large frog inhabits the quiet pools of streams, marshes, and ponds up to about 4,920 feet in elevation. Adults feed on aquatic and terrestrial insects, snails, and a wide variety of other aquatic prey, and will also move up to a mile through riparian communities under wet conditions, such as rainfall. It prefers shorelines with extensive vegetation, and is very vulnerable to the introduction of exotic competitors such as bullfrogs (*Rana catesbeiana*), crayfishes, and a variety of nonnative fishes. Requires pools at least 2 ft deep that stay wetted for 4 to 7 months for reproduction.	HA	No suitable habitat for the species may occur at intermittent wetland and stream habitats within the BSA, such as along Temescal Wash or its tributaries. Pools that are at least 2 ft deep that stay wetted most of the year were not present within the BSA. Historically, California red-legged frog may have occurred in the vicinity of the BSA, such as near Temescal Valley. Currently, the species is only known within western Riverside County at Cole Creek on the Santa Rosa Plateau (RCIP 2003; USFWS 2010). Therefore, considering the restricted known range of the species and lack of suitable habitat within the BSA, California red-legged frog is not expected to occur within the BSA. Project occurs outside of the MSHCP survey area for species; no focused survey is required. If this species is present, it would be covered under the MSHCP.
BIRDS					
Swainson's hawk	*Buteo swainsoni*	-/T/-/-	Only occurs as a migrant in southern California and can	Nesting: HA	Swainson's hawks would only occur within the BSA as migrants. There are

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			occur in a group, foraging over recently disked agricultural fields. The species breeds on the western plains of North America and southwest Canada from Texas to the Yukon. Preferred foraging habitats include prairies, plains, and other wide-open ranges with minimal tree cover.	Foraging: HA	known nesting populations in the Antelope Valley (approximately 10 breeding pairs), Owens Valley, Shasta Valley, the Mojave Desert, the Central Valley, and the Great Basin area of northeastern California. This species is not expected.
bald eagle	*Haliaeetus leucocephalus*	D/E,CFP/-/MSHCP	Occurs primarily at or near seacoasts, rivers, swamps, and large lakes (large bodies of open water with an abundant supply of fish). Requires suitable perching structures consisting of large trees or snags with heavy limbs. Old growth and mature stands of coniferous and hardwood trees are needed for perching, roosting, and nesting and these large trees surrounding the body of water are an essential component of suitable habitat. Bald eagles are sensitive to human disturbance while nesting and nests are at least 0.75 mile from low-density human disturbance and over 1 mile from medium- to high-density human disturbance. Wintering bald eagles may be found closer to human disturbance and may spend more time in upland habitats, sometimes quite far away from large water bodies. Bald eagles subsist mainly on fish, but also consume birds	Nesting: HA Foraging: HP	Bald eagles are present at Lake Skinner, approximately 14 miles east of the BSA. No suitable nesting habitat (large trees or snags with heavy limbs in old growth and mature stands of coniferous and hardwood trees) present in the BSA. Bald eagle nest (CDFW 2024) known 15 miles to the southeast that was discovered in 1994 and successful, unoccupied in 1995, occupied and unsuccessful in 1996 and 1997 on Municipal Water District Land. This species was not observed during surveys. Species would be present for foraging or as a migrant. This species is covered under the MSHCP but has additional protection under the BGEPA.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			(often water birds), mammals and other prey. This species is a localized winter resident and rare migrant, with only very rare breeding efforts in coastal southern California (e.g., Lake Skinner, Riverside County).		
western snowy plover	*Charadrius alexandrinus nivosus*	T/CSC/-/-	Requires open, relatively flat areas with little or no vegetation, including undisturbed beaches, salt flats, playas, dredge spoils, levees, and river bars. Winter distribution is more coastal, and may include sewage treatment ponds and agricultural wastewater sites.	HA	No suitable habitat is present in the study area. Human presence and disturbances and lack of suitable unvegetated areas within the study area preclude this species presence; therefore, it is not expected to occur.
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	T/E/-/MSHCP (a)	Only a handful of tiny populations remaining in all of California today. Losses are tied to obvious loss of nearly all suitable habitat, but other factors may also be involved. Relatively broad, well-shaded riparian forests are utilized, although it tolerates some disturbance. A specialist to some degree on tent caterpillars, with a remarkably fast development of young covering only 18–21 days from incubation to fledging.	HA	Riparian forest in Temescal Wash does not provide the dense structure necessary for this species. This species is not expected to occur.
California black rail	*Laterallus jamaicensis coturniculus*	-/T, CFP/-/-	Nests in wet meadows, shallow freshwater marshes and shallow upland portions of saltmarshes.	HA	There is no marsh habitat within the BSA suitable for breeding or foraging. This species is not expected to occur.
southwestern willow flycatcher	*Empidonax traillii extimus*	E/E/-/MSHCP (a)	Highly restricted distribution in southern California as a breeder. It occupies extensive riparian forests, wet meadows, and lower	HP	Suitable southwestern willow flycatcher habitat typically consists of a dense mid-story and understory and can also include a dense canopy (USFWS 1995).

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/A bsent	Rationale
			montane riparian habitats primarily below 4,000 ft. Occurs in riparian habitats along rivers, streams, or other wetlands, where dense growths of willows (*Salix* spp.), *Baccharis* spp., Arrowweed (*Pluchea* spp.), buttonbush (*Cephalanthus* spp.), tamarisk (*Tamarix* spp.), Russian olive (*Eleagnus* spp.), or other plants are present, often with a scattered overstory of cottonwood (*Populus* spp.).		The riparian habitat within the BSA only provides sufficient structure within portions of Temescal Wash west of I-15. As such, the riparian corridor provides low to moderate suitable foraging and nesting habitat for flycatchers at the BSA. This species was not observed during surveys. Compliance with 6.1.2 Protection of Species Associated with Riparian/ Riverine Areas and Vernal Pools of the MSHCP is required for this species.
least Bell's vireo	*Vireo bellii pusillus*	E/E/-/MSHCP (a)	Found as a summer resident of southern California where it inhabits low riparian growth in the vicinity of water or in dry river bottoms below 2,000 ft. Species selects dense vegetation low in riparian zones for nesting; most frequently located in riparian stands between 5 and 10 years old; when mature riparian woodland is selected, vireos nest in areas with a substantial robust understory of willows as well as other plant species (Goldwasser 1981).	HP	Least Bell's vireo was observed in the BSA. Eleven use areas for LBV were found within Temescal Wash and its tributaries during surveys. Compliance with 6.1.2 Protection of Species Associated with Riparian/ Riverine Areas and Vernal Pools of the MSHCP is required for this species.
coastal California gnatcatcher	*Polioptila californica californica*	T/CSC/-/MSHCP	Year-round obligate, permanent resident of sage scrub habitat.	P, CH	Species was documented within the Project site. This species is considered fully covered species by the MSHCP. Suitable habitat occurs within coastal sage scrub. Critical habitat for this species occurs within the BSA, but not within the limits of disturbance.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
tricolored blackbird	*Agelaius tricolor*	-/T, CSC/-/MSHCP	Nests in dense colonies in marshes and occasionally in moist thickets, agricultural fields, or sewage treatment plants.	HP	Suitable habitat is present within freshwater marsh and agricultural fields. This species is fully covered under the MSHCP and no further action is required.
California spotted owl	*Strix occidentalis occidentalis* (coastal-Southern California DPS)	PE, PT/-/SSC/ MSHCP (f)	The coastal-Southern California distinct population segment (DPS) covers all California spotted owls in the vicinity of the Coast, Transverse, and Peninsular mountain ranges from Monterey County in the north to San Diego County in the south, and south of the Tehachapi Pass within Kern County. California spotted owls breed in old, large trees with multiple layers and dense canopies.	HA	The oak woodlands and riparian areas present in the BSA do not provide woodlands of sufficient density and complexity for this species.
MAMMALS					
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	E/SC, CSC/-/MSHCP (c)	Prefers soils of sandy loam, occasionally to sandy gravel, in open to moderately shrubby habitats, especially intermediate seral stages of alluvial fan sage scrub up to 1,970 ft from active channels.	HP	Suitable habitat is present for this species in the BSA. Project occurs outside the MSHCP survey area for this species; therefore, there is no survey requirement.
Stephens' kangaroo rat	*Dipodomys stephensi*	T/T/-/MSHCP	SKR is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50 percent during the summer. Species avoids dense grasses (for example, nonnative bromes [*Bromus* spp.]) and are more likely to inhabit areas where the annual forbs	HP	Suitable habitat is present for SKR, including open grasslands and sparse shrublands. This species is fully covered by the MSHCP and SKR HCP with no survey requirement.

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale
			disarticulate in the summer and leave more open areas. Soil type is also an important habitat factor. As a burrowing animal, SKR is typically found in sandy and sandy loam soils with a low clay to gravel content, although there are exceptions where they can use the burrows of Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Spermophilus beecheyi*). SKR tend to avoid rocky soils. SKR tend to use flatter slopes (i.e., <30%), but may be found on steeper slopes in trace densities (i.e., <1 individual per hectare). Furthermore, the species may use steeper slopes for foraging, but not for burrows. In general, the highest abundances of SKR occur on gentle slopes less than 15 percent.		
mountain lion (Southern California/Central Coast ESU)	*Puma concolor*	-/ SC/-/MSHCP	Found from sea level to alpine meadows in nearly all habitats, except xeric regions of the Mojave and Colorado deserts that do not support mule deer populations as well as agricultural lands of the Central Valley. Most abundant in riparian areas, and brushy stages of most habitats.	HP	This species is covered under the MSHCP. Mountain lions are known to occur in the Santa Ana Mountains and surrounding foothills and have also been observed in "lowland" areas such as Lake Mathews-Estelle Mountain (RCIP 2003). Therefore, there is potential for mountain lion to occur within the BSA, particularly along washes.

[a] Status Codes

Federal *State*

Common Name	Scientific Name	Status[a] (Federal/ State/CNPS/ MSHCP)	General Habitat Description	Habitat[b] Present/Absent	Rationale

E = Federally listed; Endangered
T = Federally listed; Threatened
FC = Federal Candidate
D = Delisted
PE = Proposed endangered
P = Proposed threatened

T = State listed; Endangered
E = State listed; Threatened
SC = State Candidate
CSC = California Species of Special Concern
CFP = California Fully Protected Species
CNPS = California Native Plant Society
CRPR = California Rare Plant Rank
1B – plants rare or endangered in California or elsewhere
2B – plants rare or endangered in California
3 – plants about which more information is needed
4 – plants of limited distribution
.1 – plants seriously endangered in California
.2 – plants common elsewhere, fairly endangered in California
.3 – plants not very threatened in California

MSHCP
MSHCP = No additional action necessary
MSHCP(a) = Surveys may be required as part of wetlands mapping
MSHCP(b) = Surveys may be required within the NEPSA
MSHCP(c) = Surveys may be required within locations shown on survey maps
MSHCP(d) = Surveys may be required within Criteria Area
MSHCP(e) = Conservation requirements identified in species-specific conservation objectives need to be met before classified as a covered Species
MSHCP(f) = These Covered Species will be considered to be Covered Species Adequately Conserved when a Memorandum of Understanding is executed with the Forest Service that addresses management for these species on Forest Service Land. Please refer to Table 9-3 of the MSHCP.

[b] Habitat Present/Habitat Absent
HP = Habitat is, or may be present. The species may be present
HA = Habitat absent and no further work needed. These areas are shaded out grey in the table
CH = the limits of disturbance are located within a designated critical habitat unit, but this does not necessarily mean that appropriate habitat is present
P = the species is present
Additional definitions: BGEPA = Bald and Golden Eagle Protection Act; ESU = evolutionarily significant unit; I- = Interstate; NEPSA = Narrow Endemic Plant Species Survey Area

Up to 1,286.20 acres of potentially suitable habitat for threatened and endangered plants were surveyed in the BSA in Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Salt Grass Flats, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, Scrub Oak Chaparral, California Sycamore Woodland, Eucalyptus–Tree of Heaven–Black Locust Groves, Pepper Tree or Myoporum Forest and Woodland, and Agriculture habitats. Potential habitat for special-status plants is mapped in Figure 2.4.3-3 in Section 2.4.3, *Plant Species*.

No threatened or endangered plant species were observed within the rare plant study area during the 2020 or 2021 rare plant surveys performed for the Project.

Designated critical habitat for San Diego ambrosia occurs in the BSA at Nichols Road and Lake Street in Lake Elsinore and overlaps slightly with the LOD. USFWS critical habitat does not apply to covered activities within the MSHCP area.

Listed Fairy Shrimp

Riverside fairy shrimp and San Diego fairy shrimp are federally listed as endangered, and vernal pool fairy shrimp is listed as federally threatened. They are not listed by the state; however, Riverside fairy shrimp and vernal pool fairy shrimp are MSHCP vernal pool species with survey requirements triggered when potentially suitable habitat is present (refer to Table 2.4.5-1 for a summary of the habitat requirements for each species).

During the 2019/2020 wet season survey, approximately 95 features that could potentially support fairy shrimp were found in the fairy shrimp study area (i.e., LOD and up to a 100-foot buffer). An additional 36 features were identified during the 2020/2021 wet season survey. Of these, 128 seasonal depressions were inundated for a sufficient time to collect samples, and approximately 23 features were found to support versatile fairy shrimp (*Branchinecta lindahli*), a common species within the region. Many of the features sampled were road ruts, ditches, or other depressions that had become inundated at some point during the wet season. None of the seasonal depressions are considered vernal pools given their lack of vernal pool indicators, such as vernal pool–associated vegetation or clay soils, and have been degraded due to heavy and frequent vehicular traffic, and construction disturbances. Locations of the surveyed seasonal depressions found in the fairy shrimp study area and wet- and dry-season survey results are provided in Appendix M of the NES. No listed fairy shrimp were found during the focused surveys.

Quino Checkerspot Butterfly

Quino checkerspot butterfly is federally listed as endangered and is an MSHCP fully covered species with no survey requirement.

Habitat associations for this species seem to be tied to both host plant species and topography. Larvae feed on *Plantago erecta, P. patagonia* (and possibly other Plantago species), *Antirrhinum coulterianum*, *Cordylanthus rigidus*, *Collinsia concolor*, and *Castilleja exserta*. Adults nectar feed mostly on small annuals and often occur on open or sparsely vegetated rounded hilltops, ridgelines, and occasionally rocky outcrops. Habitat components have been found in association with, but not restricted to, vernal pools, sage scrub, chaparral, native and nonnative grassland, and open oak and juniper woodland communities. The key component seems to be open-canopied habitats.

The potential for Quino checkerspot butterfly to occur within the BSA is very low (see Table 2.4.5-1 for details). Focused surveys are not required for this species under the MSHCP. There are 1,068.27 acres of potentially suitable habitat for Quino checkerspot butterfly in the BSA, including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, and Scrub Oak Chaparral.

Crotch Bumble Bee

CDFW accepted Crotch bumble bee for consideration as endangered under CESA in June of 2019, and this species is considered a candidate species. CDFW is currently completing a status review of Crotch bumble bee. At the end of the review, CDFW will make its recommendation on listing to the California Department of Fish and Game Commission. Under CESA, species classified as candidate species are afforded the same protection as listed species and, as a result, Crotch bumble bee is CESA-protected during the review period. Crotch bumble bee is not covered under the MSHCP.

The potential for the species to occur in the BSA is moderate, but the potential for this species to occur within the LOD is low due to the high level of disturbance in the LOD and lack of resources necessary for the natural life history of this species. There are 1,100.04 acres of potentially suitable habitat for Crotch bumble bee in the BSA, including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, and Scrub Oak Chaparral. Survey work was not performed for this species.

Arroyo Toad

Arroyo toad is federally listed as endangered and is a species on the Additional Survey Needs and Procedures (Section 6.3.2) of the MSHCP. Arroyo toad surveys are required where suitable habitat is present as specified on the Amphibian Species Survey Area Map, Figure 6-3 of the MSHCP. Outside of the required survey area, this species is covered by the MSHCP. The Project is located outside of the arroyo toad survey area and is therefore a covered species under the MSHCP.

Arroyo toad is found in riparian habitats and aestivates in upland adjacent coastal sage scrub, oak, and chaparral habitats. They are restricted to headwaters of large streams with persistent water from March to mid-June with shallow, gravely pools less than 18 inches deep, and adjacent sandy terraces. Breeding pools are an important component of suitable habitat, and the pools must be open and shallow with sand substrate overlain with silt and minimal current. Banks must have little herbaceous cover and a moderate canopy of cottonwood, willow, or oak. Heavily shaded pools are unsuitable due to lower water and soil temperatures. There are historic occurrences of arroyo toad near the southwest of Lake Elsinore in Temescal Wash with recent surveys locating populations in Temecula.

The potential for arroyo toad to occur within the BSA is low (see Table 2.4.5-1). Focused surveys are not required for this species under the MSHCP as the Project is not within the mapped survey area for this species. There are 166.43 acres of potentially suitable habitat for arroyo toad in the BSA, including Coast Live Oak Woodland and Forest, Arrow Weed Thickets, Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, California Sycamore Woodland, Scale Broom Scrub, and Mulefat Thickets. Adjacent upland habitats within 0.75 mile of these habitat types would also be suitable for this species for estivation.

Least Bell's Vireo

LBV is a federally and state-listed endangered species. It is covered under the MSHCP but is not yet adequately conserved. Focused studies are required when the species potentially occupies riparian/riverine vegetation and could be directly and/or indirectly affected (MSHCP Volume I, Section 6.1.2).

LBV is found as a summer resident of Southern California where it inhabits low riparian growth in the vicinity of water or dry river bottoms below 2,000 feet. Nests are found in dense vegetation located low in the riparian zones, most frequently in 5- to 10-year-old stands. When LBV nest in mature riparian woodlands, they nest in areas with a substantial robust understory of willows, as well as other plant species.

There are 88.43 acres of potentially suitable habitat for LBV within the riparian bird study area (i.e., LOD plus 300-foot buffer; Figure 2.4.5-1). Because potential habitat for LBV is present, focused surveys were performed in 2020 and 2021 within suitable riparian habitat, during which time LBV was determined to be using the riparian bird survey area for breeding. Eleven LBV use areas were detected within the riparian bird

survey area during the 2020 surveys, most of which are associated with Temescal Wash. None of the use areas occur within the LOD (previously Use Area #10, [Figure 2.4.5-1, Sheet 7] occurred within the LOD, but the Project was redesigned to avoid this area). No additional use areas were identified in 2021.

Southwestern Willow Flycatcher

SWFL is a federally and state-listed endangered species. This species is covered under the MSHCP but is not yet adequately conserved. Focused studies are required when potentially suitable habitat is present, and a potential impact is foreseeable (MSHCP Volume I, Section 6.1.2).

SWFL is found from late spring to summer in Southern California where it inhabits dense riparian vegetation occurring along streams or other wetlands. The structure of these habitats typically consists of a dense midstory and understory and can also include a dense canopy. However, suitable vegetation is not uniformly dense and typically includes interspersed patches of open habitat.

There are 61.32 acres of potentially suitable habitat for SWFL within the riparian bird study area (Figure 2.4.5-1). Because potential habitat for SWFL is present, focused surveys were conducted in 2020 and 2021 within suitable riparian habitat (Figure 2.4.5-1). No SWFL were detected in the riparian bird study area during the focused surveys. Focused survey reports for the 2020 and 2021 survey work are provided in Appendix H of the NES.

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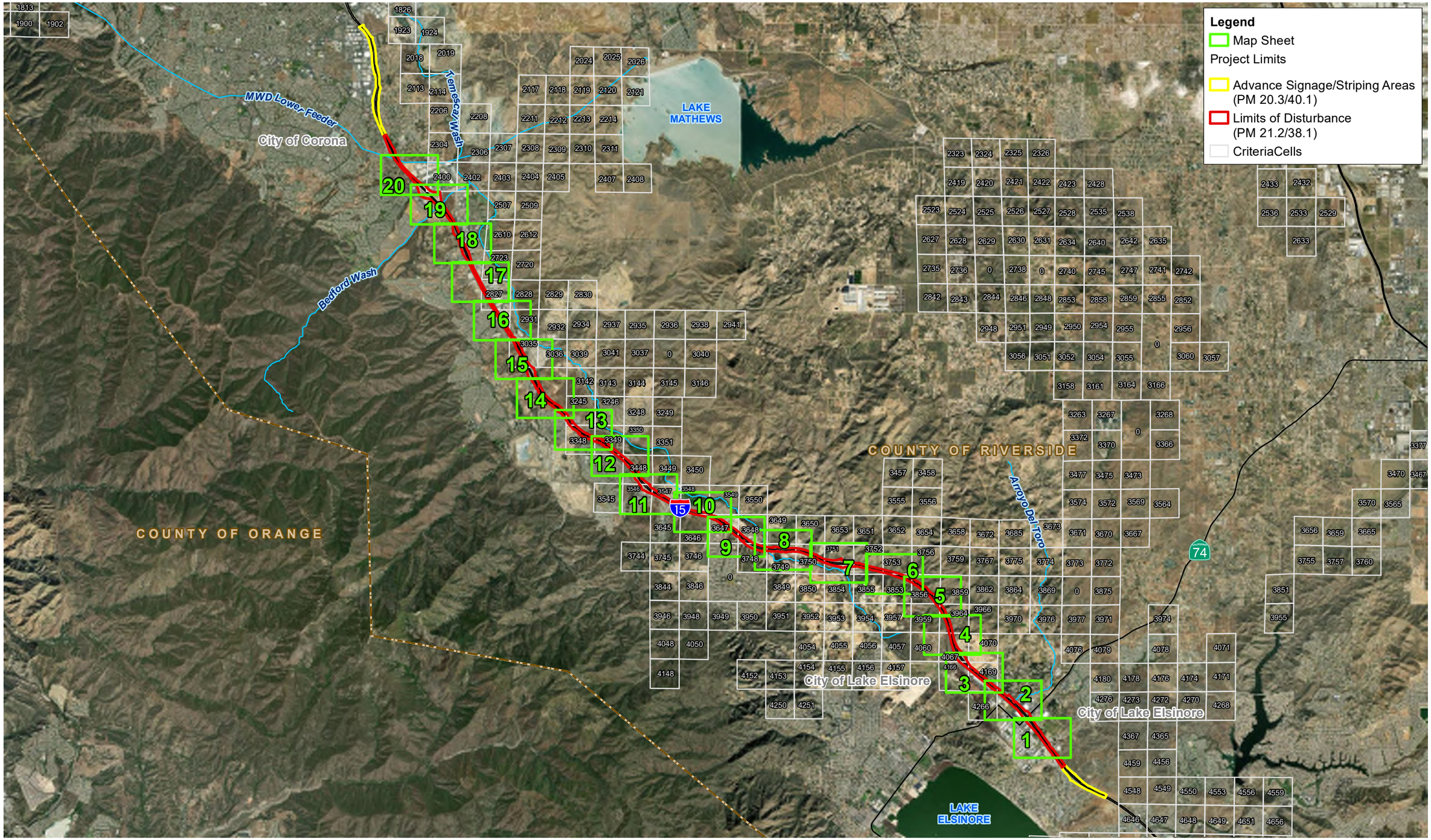

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N

Figure 2.4.5-1 - Map Index
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 1
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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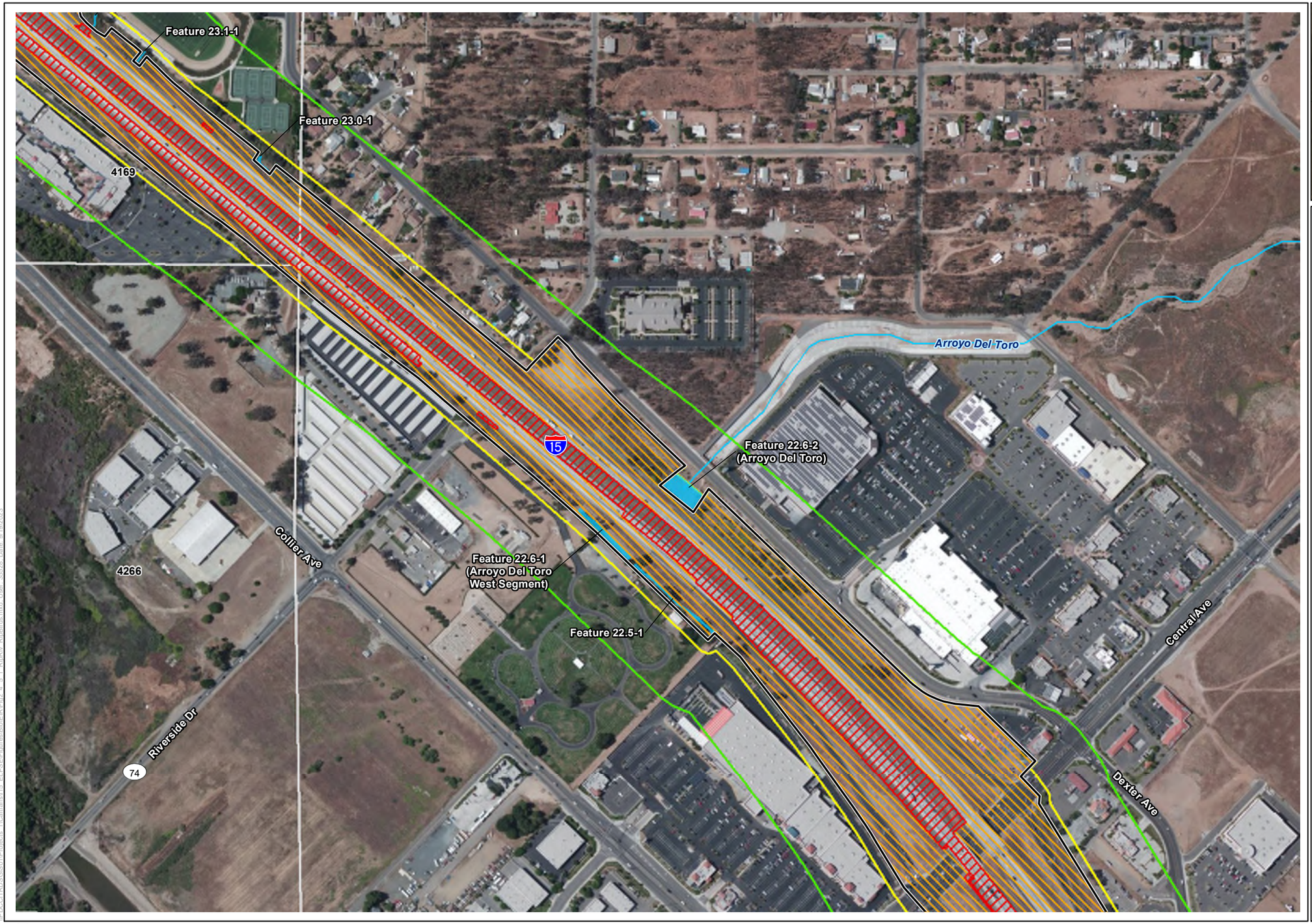

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 2
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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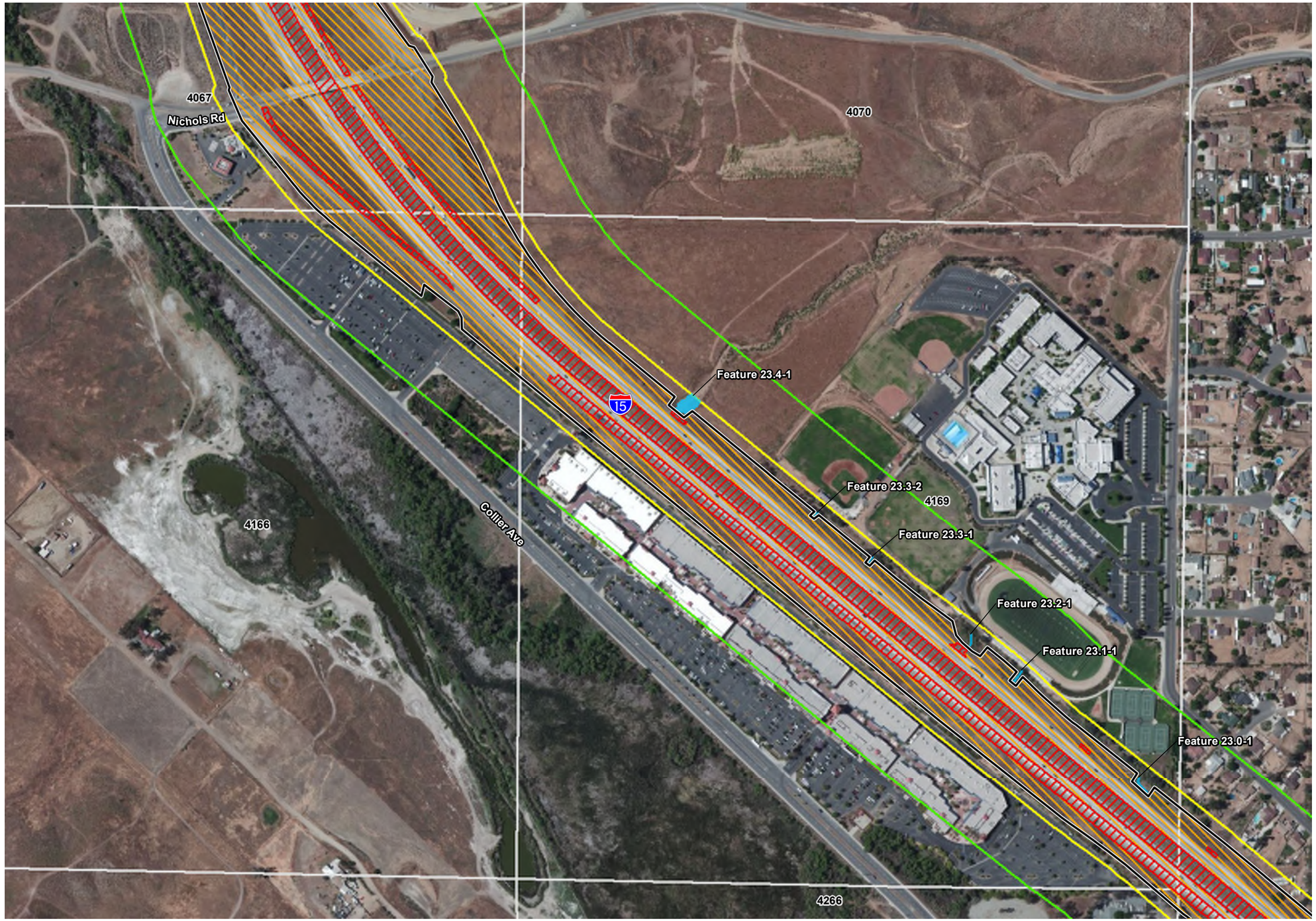

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 3
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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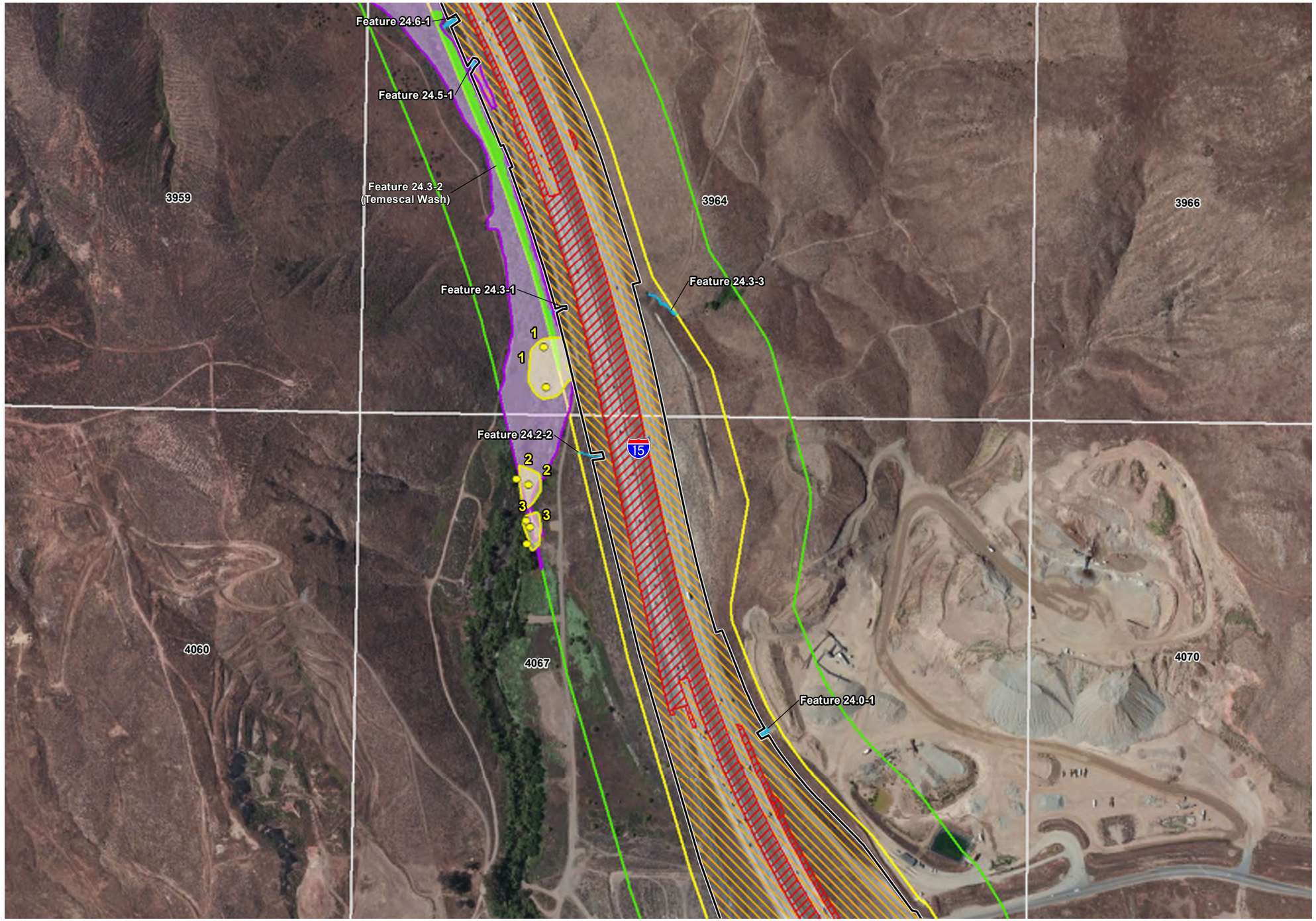

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 4
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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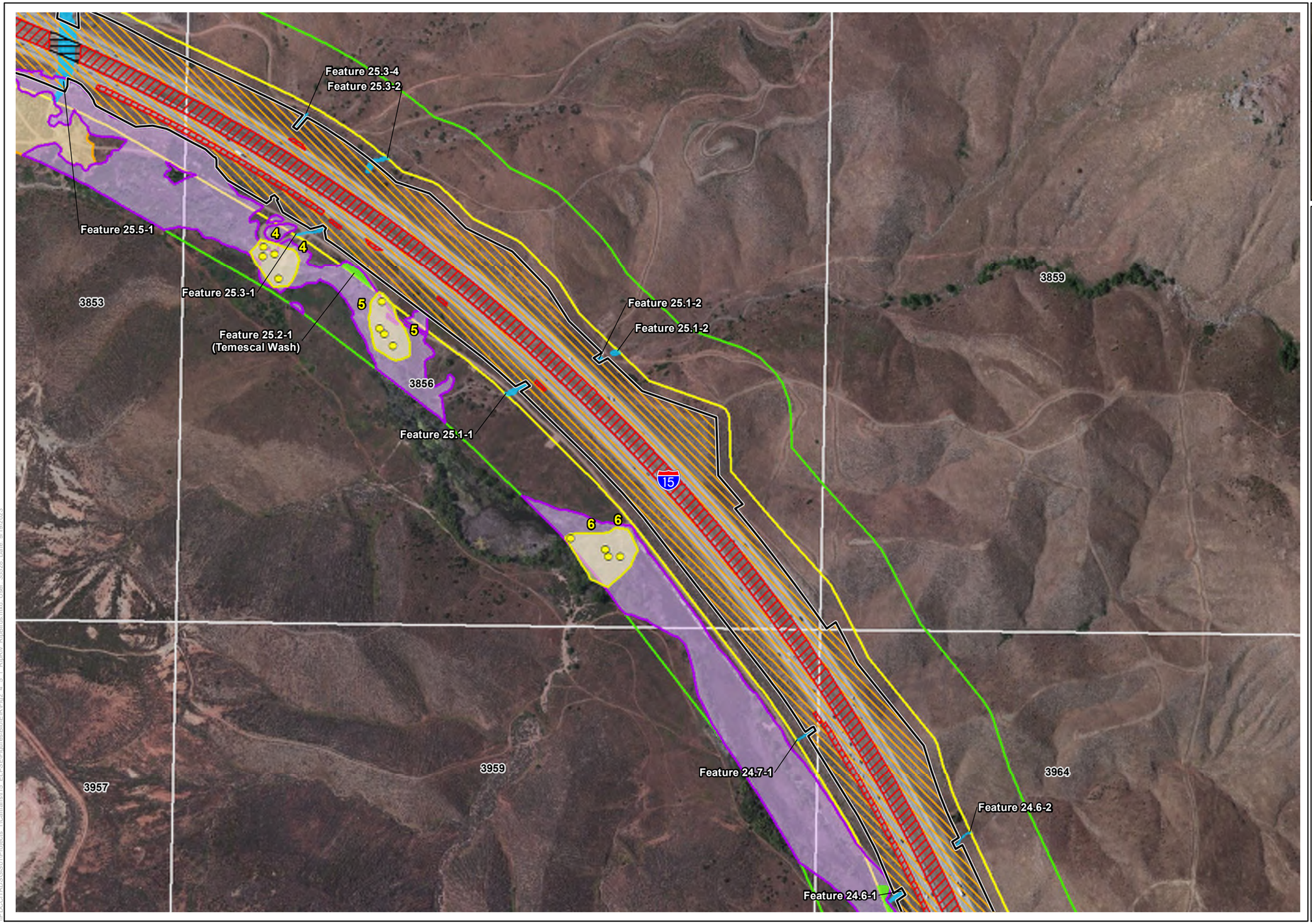

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 5
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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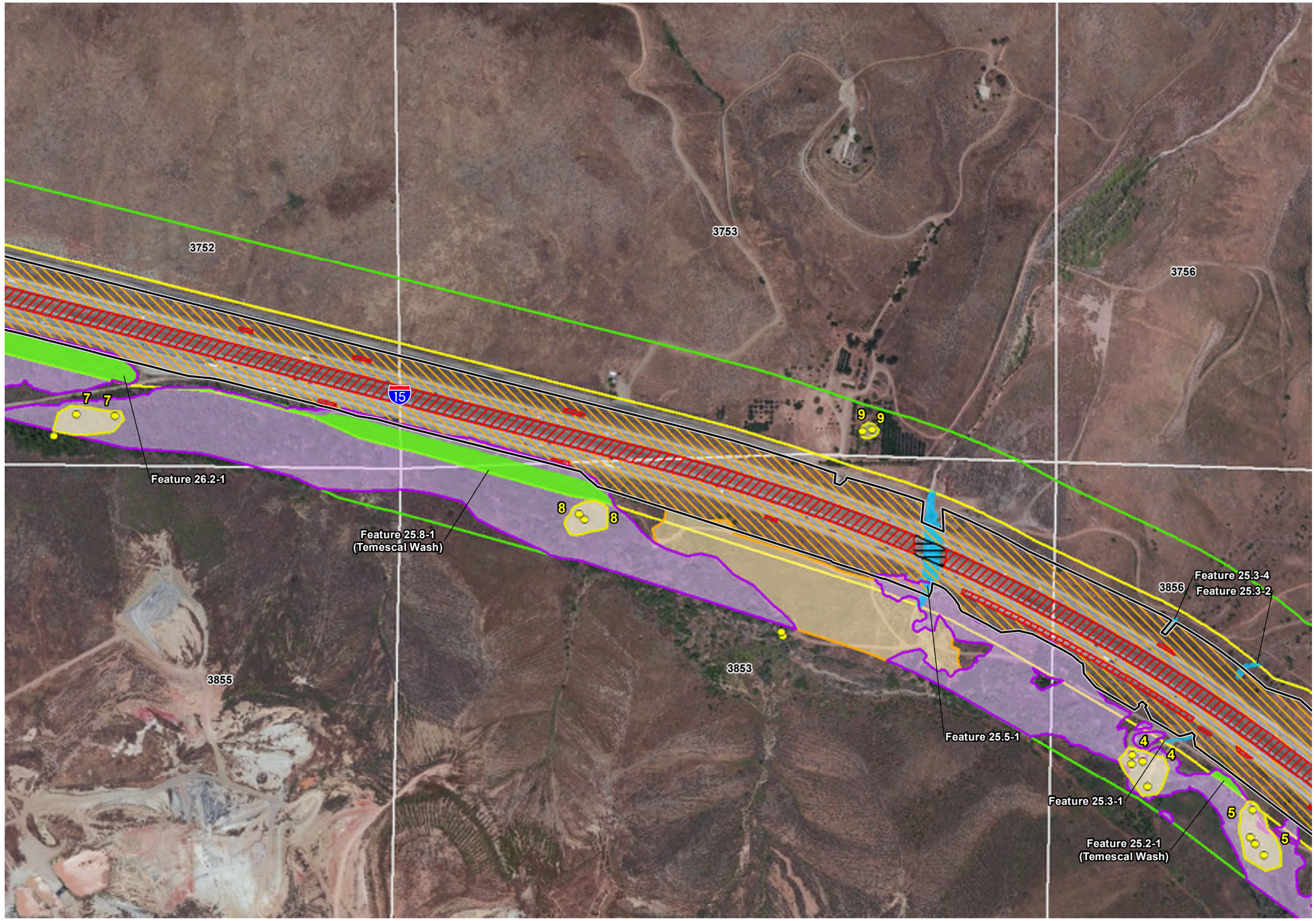

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 6
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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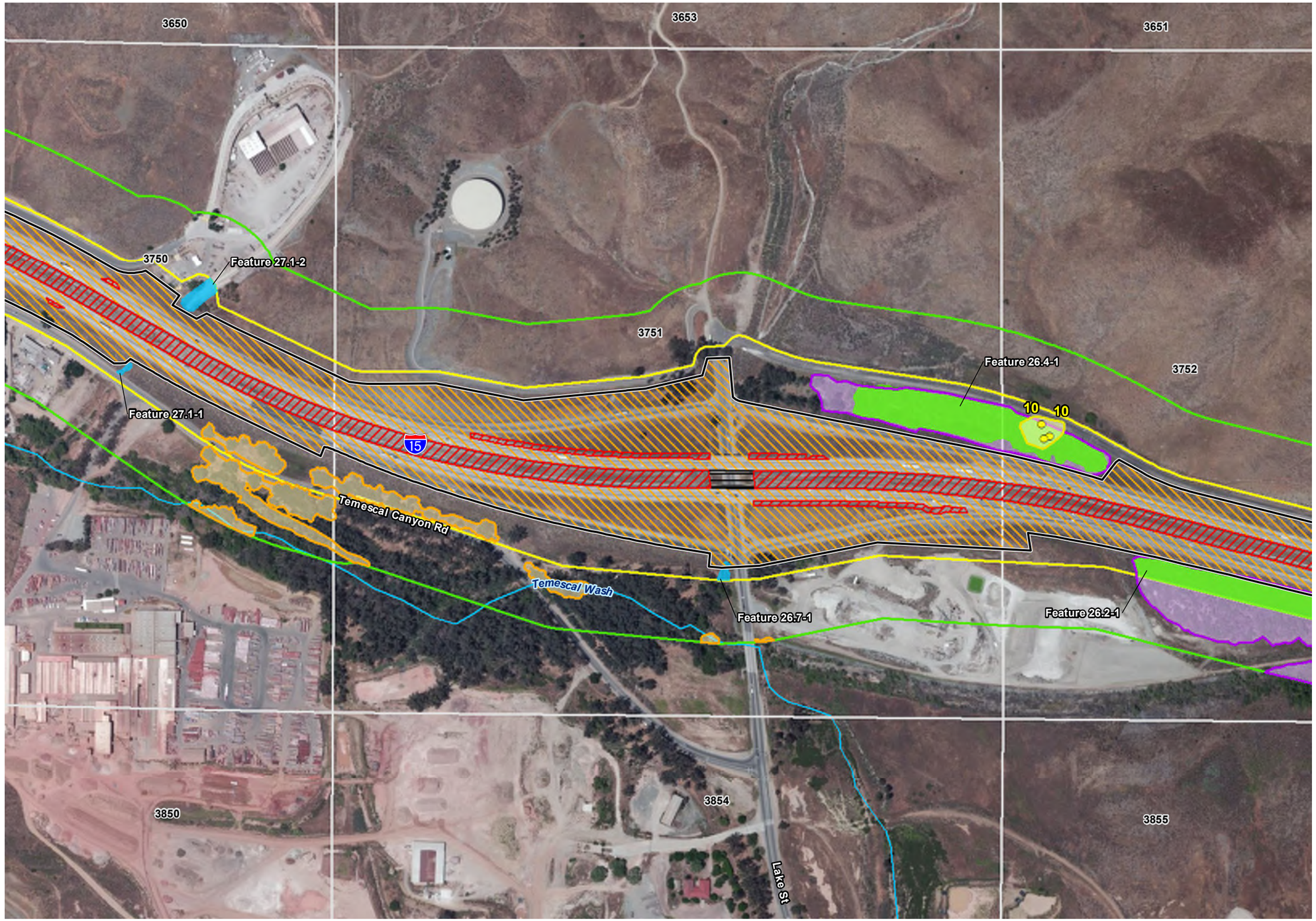

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 7
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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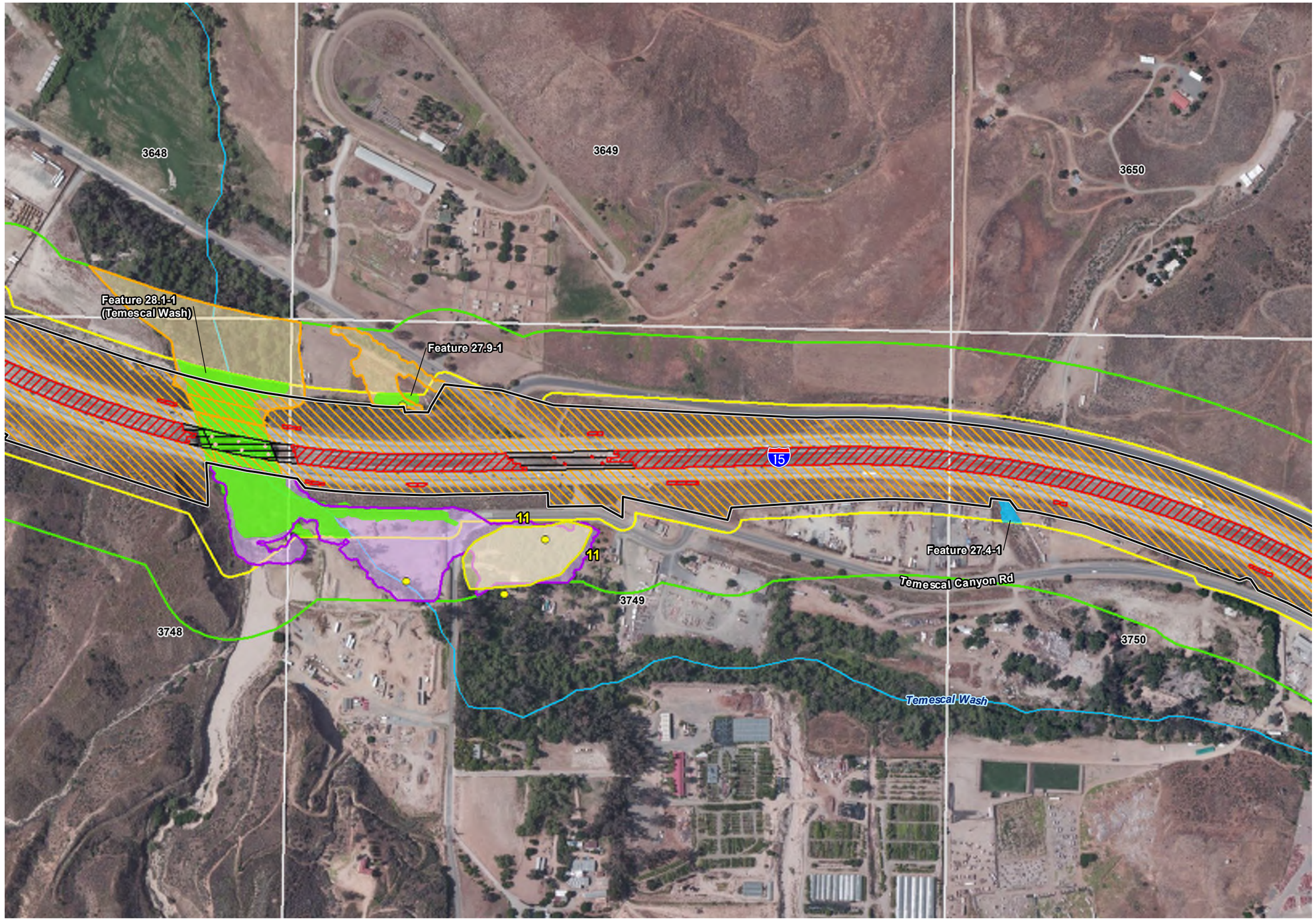

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 8
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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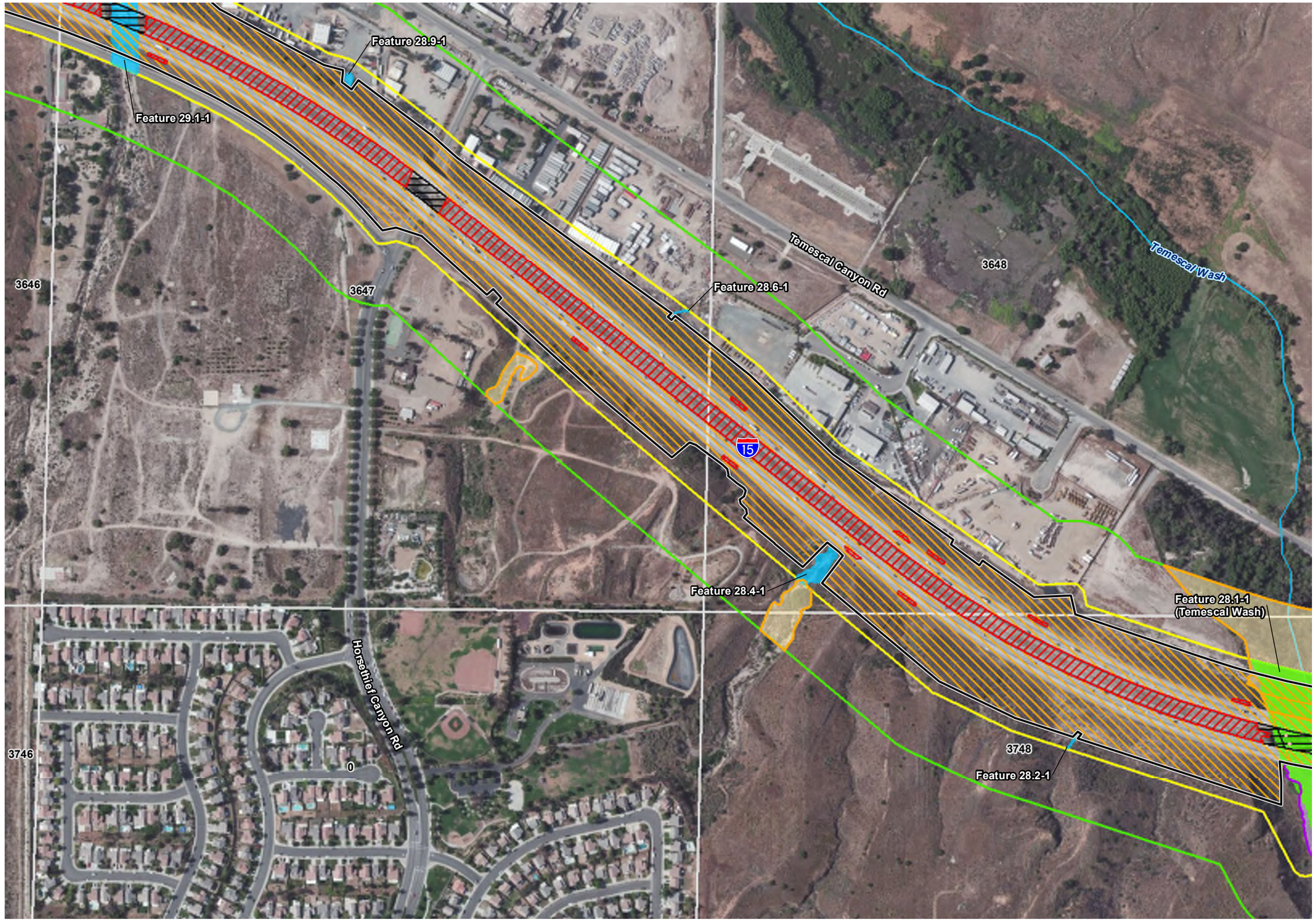

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 9
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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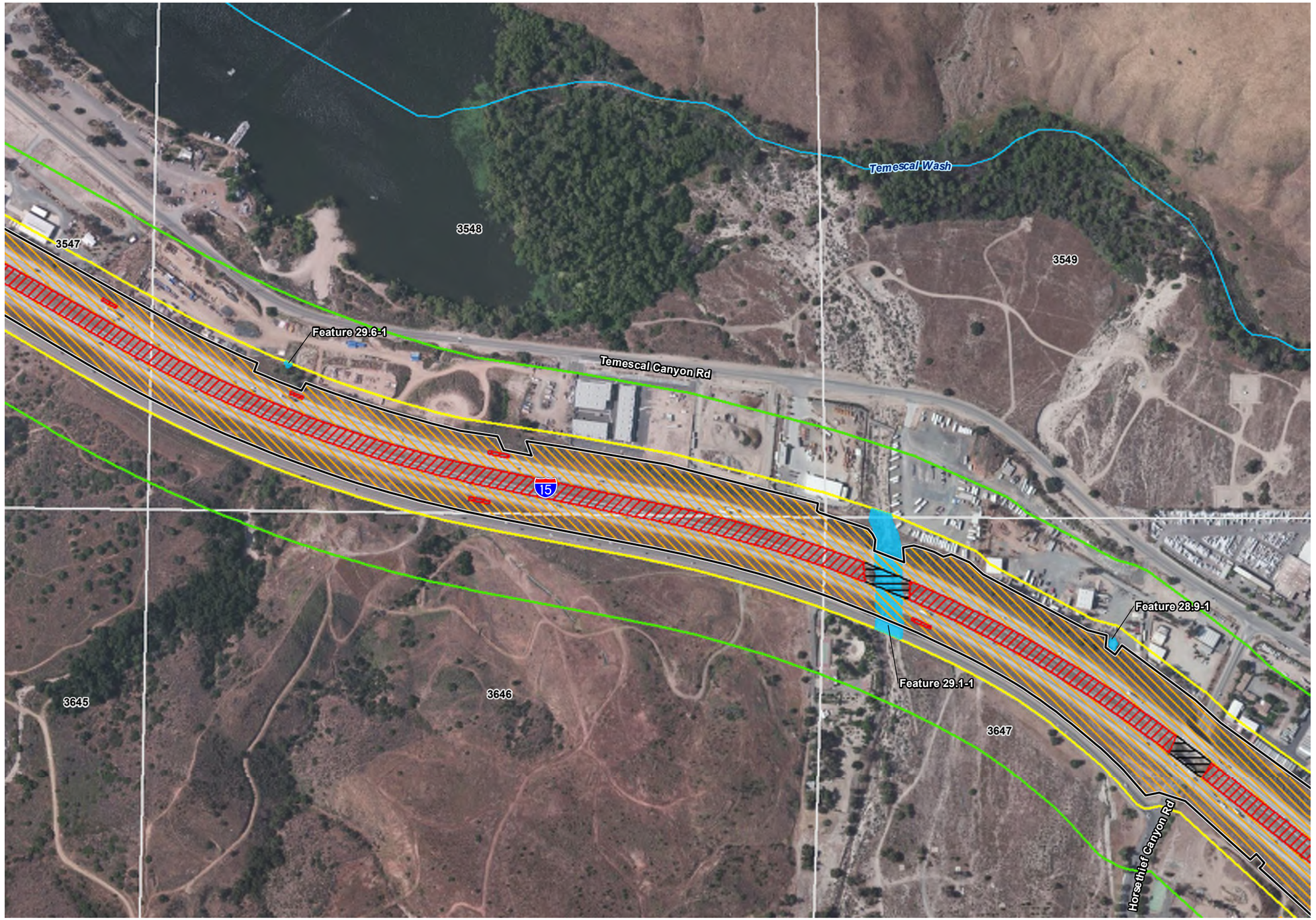

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 10
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 11
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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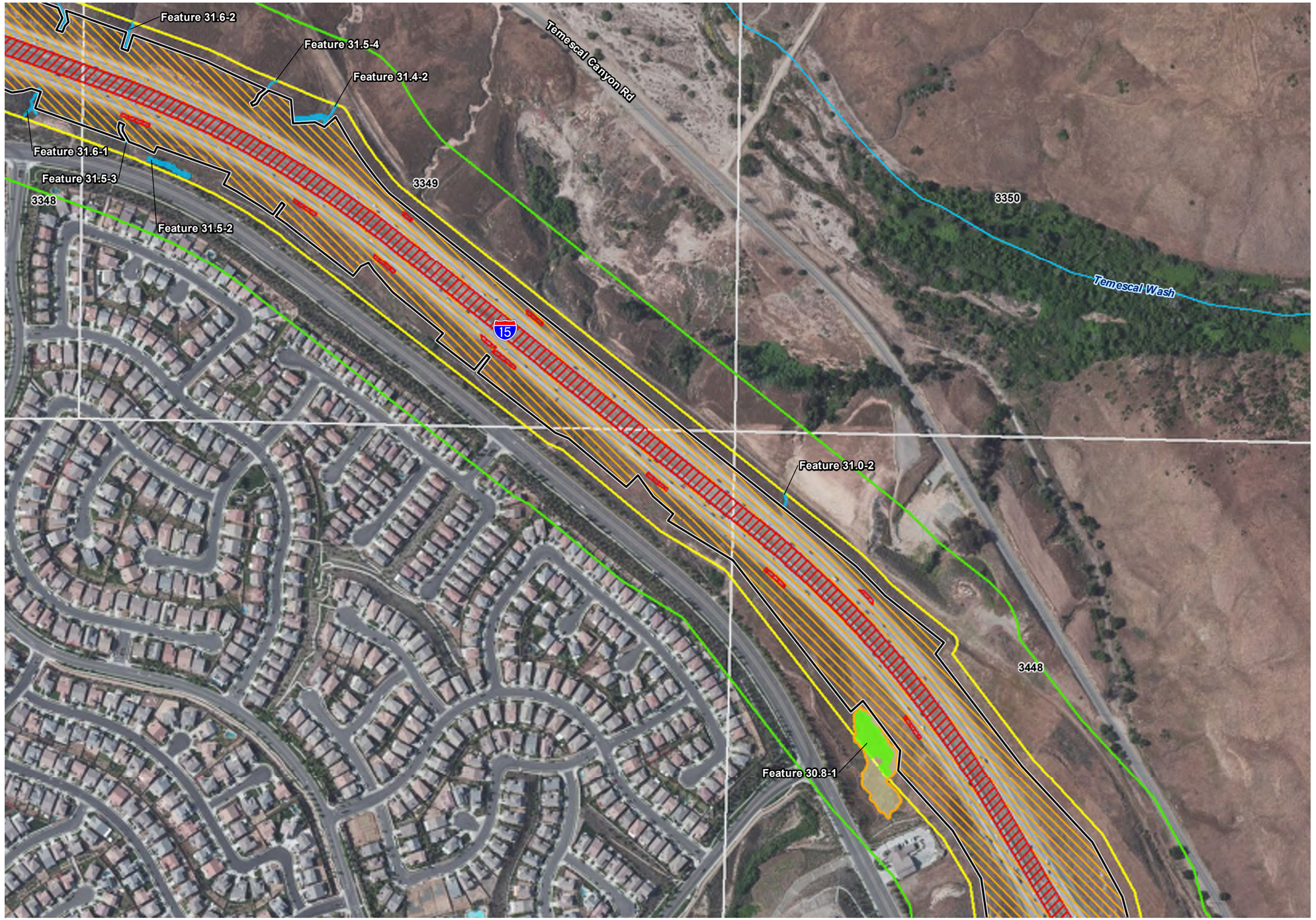

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Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 12
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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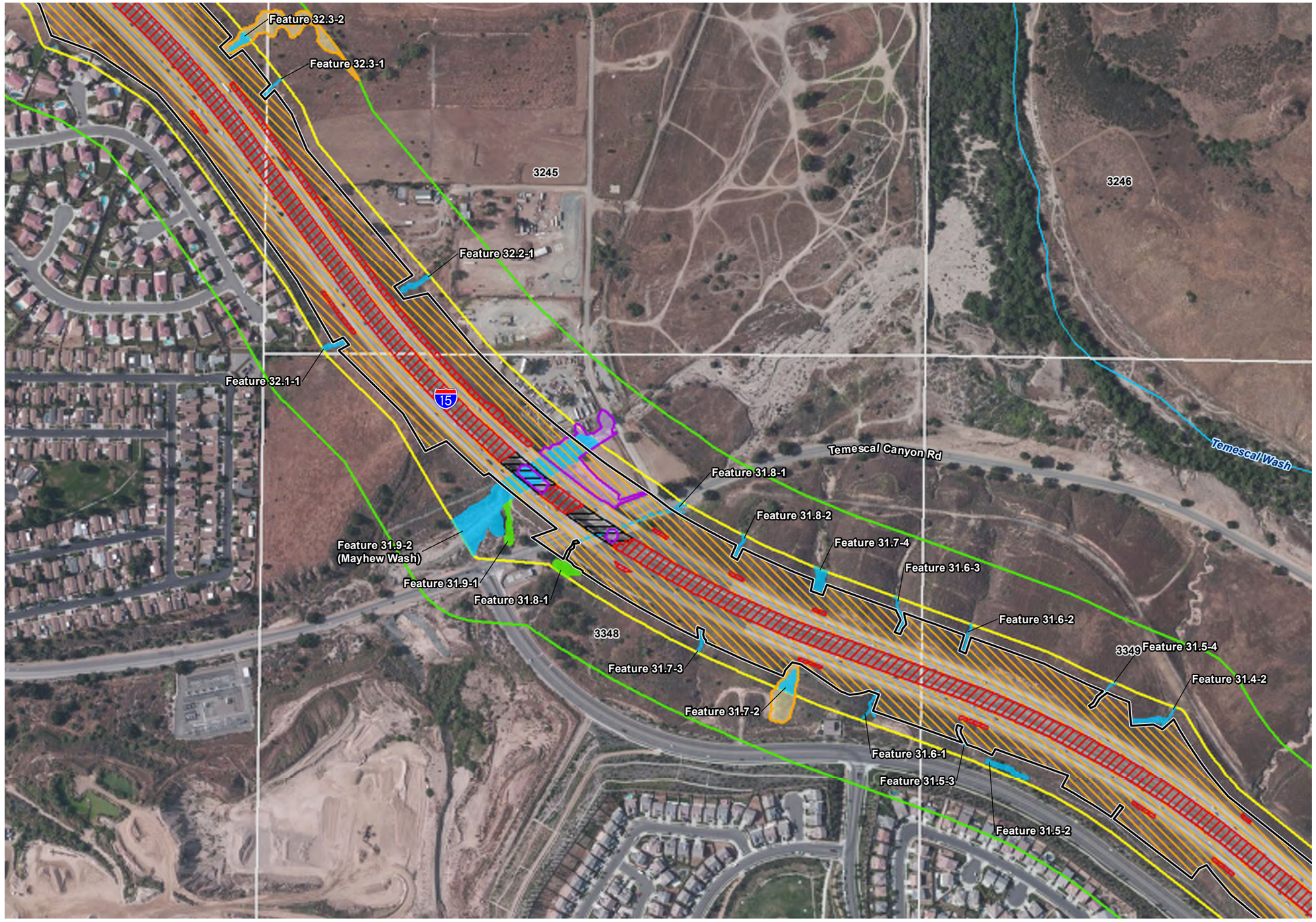

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 13
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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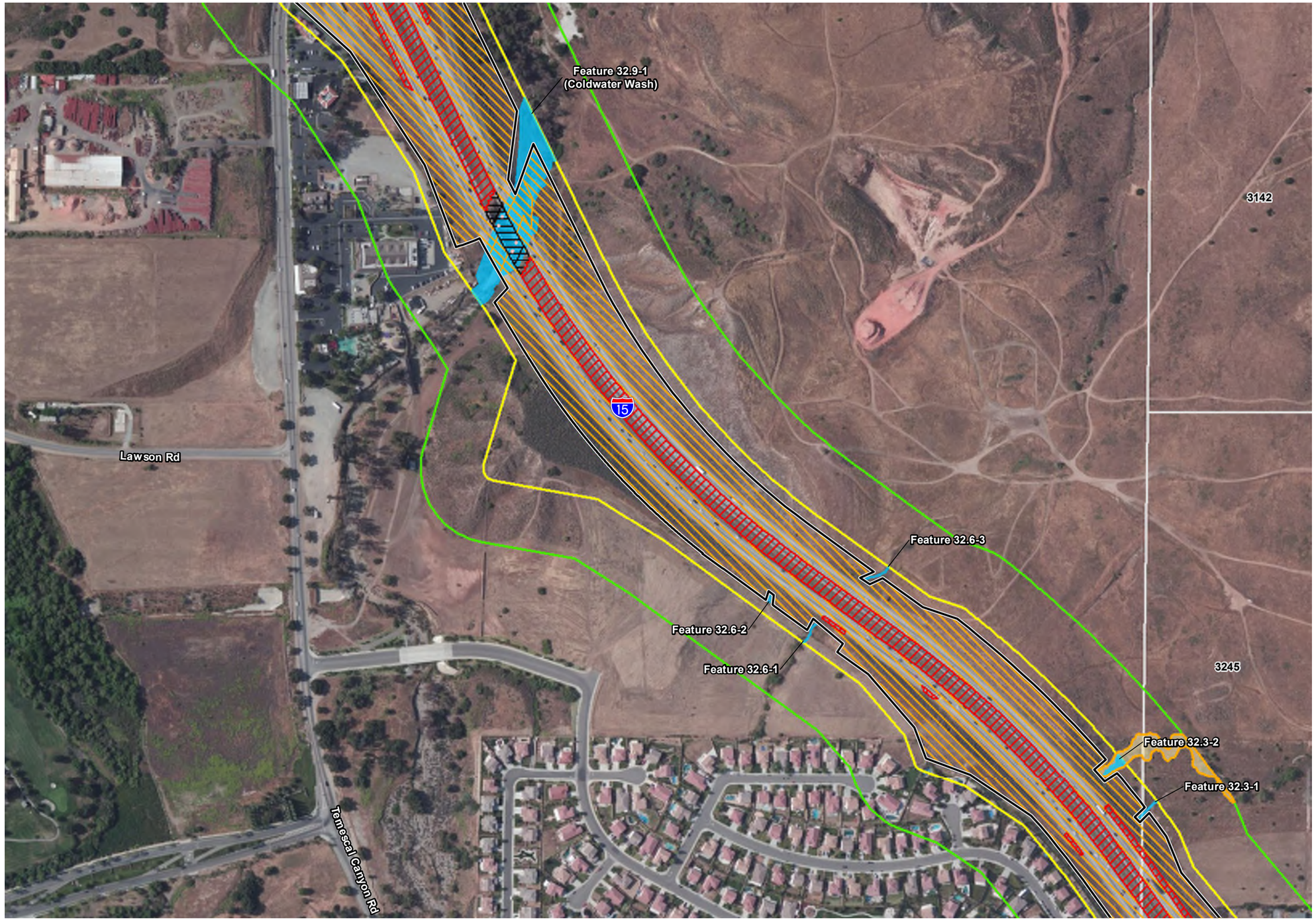

Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 14
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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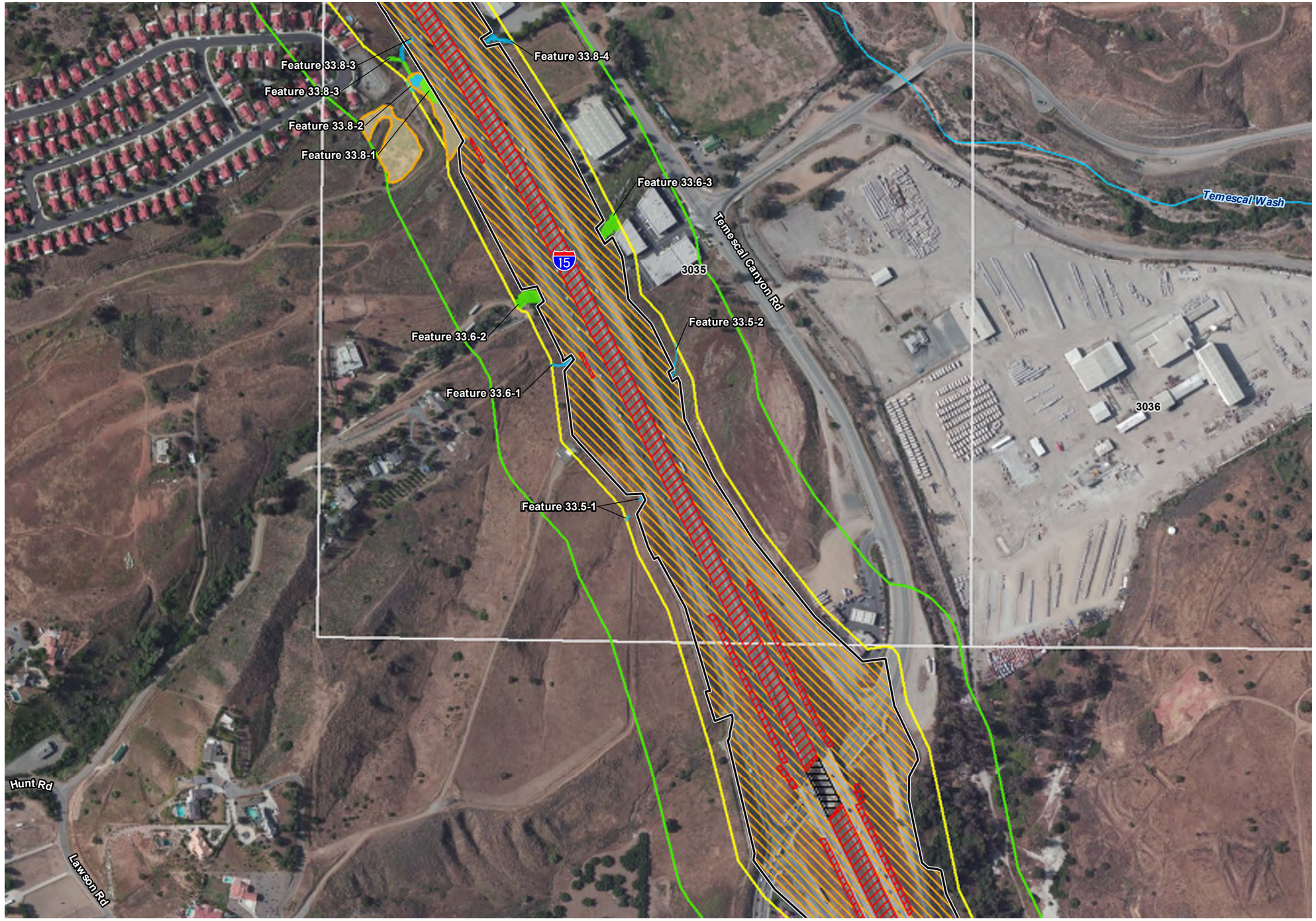

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Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 15
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 16
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

- Advance Signage/Striping Areas (PM 20.3/40.1)
- Limits of Disturbance (PM 21.2/38.1)

Project Impacts

- Permanent Impact
- Permanent Ground Anchor
- Temporary Impact
- Shading Impact
- 50-foot Study Area - Jurisdictional Delineation
- Riparian Bird Study Area (300-
- CriteriaCells

Riparian Birds Suitable Habitat

- Least Bell's Vireo
- Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

- Least Bell's Vireo
- Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

- Riparian
- Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 17
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 18
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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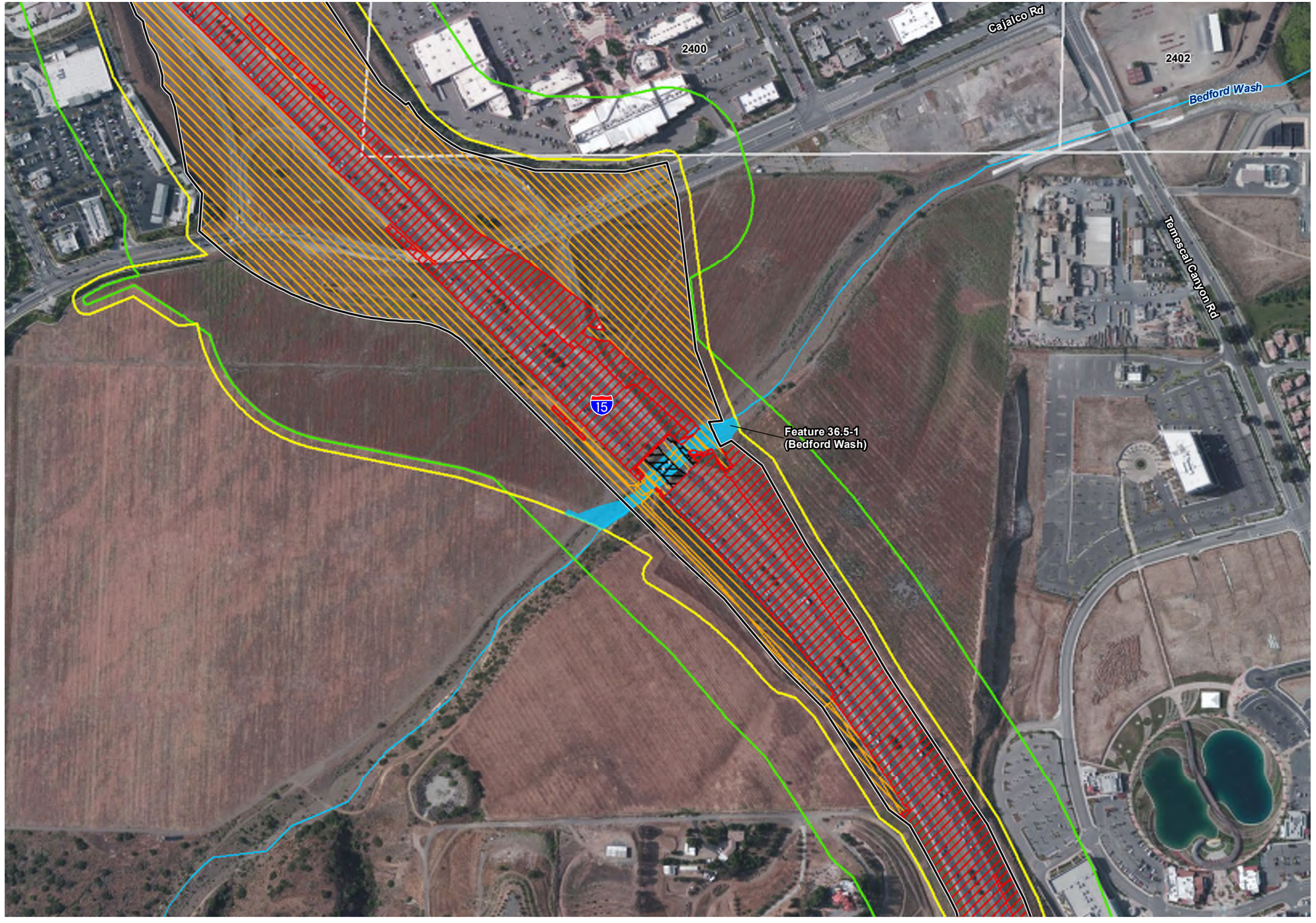

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

Riparian Birds Suitable Habitat

Least Bell's Vireo

Least Bell's Vireo and Southwestern Willow Flycatcher

Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 19
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Project Impacts

Permanent Impact

Permanent Ground Anchor

Temporary Impact

Shading Impact

50-foot Study Area - Jurisdictional Delineation

Riparian Bird Study Area (300-

CriteriaCells

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Riparian Bird Occurences

Least Bell's Vireo

Least Bell's Vireo Use

MSHCP Riparian/Riverine Resources

Riparian

Riverine

*No Southwestern Willow Flycatcher were found during the 2020 and 2021 focused survey.

Source: ESRI USA Imagery

N

0 200 400 Feet

1:4,800

Figure 2.4.5-1 - Sheet 20
Riparian Bird Survey Results
Interstate 15 Express Lanes Project Southern Extension

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Tricolored Blackbird

Tricolored blackbird is state-listed as threatened. It is also a covered species under the MSHCP, with no survey requirement.

Most historical large colonies of tricolored blackbirds were associated with freshwater emergent wetlands. The species is found in cattail marshes and other freshwater marshes, nesting in canopies of willows and other riparian trees, sometimes building nests on the ground. Basic requirements for selecting a breeding site are: open accessible water; a protected nesting substrate including vegetation; and a suitable foraging space providing adequate insect prey within a few miles of the nesting colony. Wetlands, marshes, alkali flats, native grasslands, riparian forests, oak forests, irrigated agricultural areas, and seasonal wetlands all form suitable habitat for this species.

Habitat that is suitable to support tricolored blackbird in the BSA was mapped as a part of the reconnaissance surveys and vegetation mapping. Approximately 144.17 acres of potentially suitable habitat in the BSA for tricolored blackbird occurs in Coast Live Oak Woodland and Forest, Goodding's Willow-Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Salt Grass Flats, Tamarisk Thickets, and California Sycamore Woodland.

Coastal California Gnatcatcher

Coastal California gnatcatcher is federally listed as threatened and is a California Species of Special Concern (CSC). It is also a covered species under the MSHCP, with no survey requirement.

Coastal California gnatcatcher is essentially a year-round obligate inhabitant of sage scrub. The species is known to include the edges of riparian habitat as part of its foraging grounds, particularly during drought years and post-breeding dispersal.

During reconnaissance surveys and vegetation mapping within the BSA, suitable habitat for coastal California gnatcatcher was identified within 644.46 acres of Riversidian sage scrub habitats (Brittle Bush Scrub, California Buckwheat Scrub, California Sagebrush–California Black Sage Scrub, and Deer Weed Scrub). In addition, it is important to identify potential habitat because there are habitat removal constraints if suitable habitat occurs within a criteria cell and/or on Public/Quasi-Public (PQP) lands. The species was also incidentally observed during biological studies.

Federal USFWS designated critical habitat for coastal California gnatcatcher occurs in the BSA at Nichols Road in Lake Elsinore, but just outside the LOD. USFWS critical habitat does not apply to covered activities within the MSHCP area.

Stephens' Kangaroo Rat

SKR is a federally and state-listed threatened species. The Project occurs within the boundaries of the SKR long-term habitat conservation plan (SKR HCP) and is a fully covered species under the MSHCP.

SKR is found almost exclusively in open grasslands or sparse shrublands with cover of less than 50 percent during the summer. The species avoids dense grasses. Soil type is an important habitat factor, and SKR is typically found in sandy and sandy loam soils with low clay-to-gravel content. Slope is also a factor in occupied lands, with the highest abundance of this species occurring on gentle slopes.

There are no survey requirements for SKR under the MSHCP or SKR HCP. A total of 1,027.85 acres of potentially suitable habitat is found in the BSA in the form of grassland, agricultural areas and Riversidian sage scrub, including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Salt Grass Flats, Brittle Bush Scrub, Scale Broom Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, and Agriculture. Although survey work was not performed, it is highly probable that the species occupies at least a portion of the potential habitat within the BSA. Whether it inhabits potential habitat within the LOD is less clear because these lands reside within the existing right of way (ROW) and have endured routine ROW maintenance over decades, as well as being adjacent to the interstate. While ROW maintenance is likely beneficial for this species, keeping vegetation low and open, the disturbance of burrows and introduction of invasive species would be deleterious.

San Bernardino Kangaroo Rat

SBKR is federally listed as endangered and state-listed as candidate endangered. SBKR is on the MSHCP Additional Survey Needs and Procedures (Section 6.3.2) list of the MSHCP and surveys for this species are required as a part of the Project review in specified areas where suitable habitat is present. The BSA is outside of the designated survey area for this species and, therefore, surveys are not required for the Project.

The main populations of SBKR in the MSHCP Plan area are in the San Jacinto River and Bautista Creek. There is known occupied habitat in the San Jacinto River, ranging from the San Bernardino National Forest boundary to the east and State Route 79 to the west. Suitable habitat for this species includes Riversidian alluvial fan sage scrub, Riversidian sage scrub, chaparral, and grasslands within and adjacent to the San Jacinto River, Bautista Creek, San Timoteo Creek, the Santa Ana River, and an area at the base of the Jurupa Mountains. While most current records are north and east of the BSA, the current USFWS range map for this species includes the BSA.

A total of 875.06 acres of potentially suitable habitat is found in the BSA in the form of Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Arrow Weed Thickets, Salt Grass Flats, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, and Scrub Oak Chaparral. Survey work was not performed for this species. Despite the USFWS range map including the BSA, it is unlikely that this species is present in the BSA as it is most commonly observed associated with the San Jacinto River and Bautista Creek. Therefore, it is unlikely that

SBKR occupies the BSA and even less likely it inhabits the more disturbed habitat in the LOD.

Mountain Lion

The evolutionarily significant unit (ESU) of mountain lions in southern and central coastal California were accepted by CDFW for consideration as threatened or endangered under CESA in April of 2020 and are considered a candidate species. CDFW is currently completing a status review of mountain lions within the proposed ESU. At the end of the review, CDFW would make its recommendation on listing to the California Department of Fish and Game Commission. Under CESA, species classified as candidate species are afforded the same protection as listed species and, as a result, mountain lions in this proposed ESU are CESA protected during the review period. Mountain lion is a covered species under the MSHCP.

Suitable habitat for mountains lions within western Riverside County includes chaparral, coastal sage scrub, desert scrub, Riversidian alluvial fan sage scrub, pinyon juniper woodland, riparian areas, coniferous forests, grasslands, and oak woodlands and forests. Mountain lions are mainly found in the Agua Tibia Mountains, the San Bernardino Mountains, the San Jacinto Foothills and Mountains, and the Santa Ana Mountains, as well as in the desert transition area. Except for the Santa Ana Mountains, these ranges provide continuous habitat for the species throughout Southern California. The only potential large mammal connections between Lake Mathews-Estelle Mountain and the Santa Ana Mountains are along Indian Canyon and possibly Horsethief Canyon.

Approximately 71 percent of the habitat suitable in the MSHCP Plan Area for this species would be conserved in the MSHCP Conservation Area. Specific objectives have been incorporated into the MSHCP conservation strategy to minimize the risk to dispersing mountain lions. The primary threats to mountain lions are habitat fragmentation, collisions with vehicles, animal control measures (rodenticides), and loss of natural prey base.

There are approximately 1,293.24 acres of potentially suitable habitat for mountain lion in the BSA, including Needle Grass–Melic Grass Grasslands, Clustered Tarweed Fields, Wild Oats and Annual Brome Grasslands, Upland Mustard and Star Thistle Fields, Wild Tarragon Patches, Arrow Weed Thickets, Coast Live Oak Woodland and Forest, Fremont Cottonwood Forest and Woodland, Goodding's Willow–Red Willow Riparian Woodland, Hardstem and California Bulrush Marshes, Mulefat Thickets, Salt Grass Flats, Tamarisk Thickets, Brittle Bush Scrub, Scale Broom Scrub, Bush Penstemon Scrub, California Buckwheat Scrub, California Sagebrush–Black Sage Scrub, Deer Weed Scrub, Holly Leaf Cherry—Toyon—Greenbark Ceanothus Chaparral, Quailbush Scrub, Scrub Oak Chaparral, California Sycamore Woodland, Eucalyptus–Tree of Heaven–Black Locust Groves, and Pepper Tree or Myoporum Forest and Woodland. Survey work was not performed for this species.

2.4.5.3 Environmental Consequences

Federal and Resource Agency Consultation

U.S. Fish and Wildlife Service

The following coordination with USFWS as part of Section 7 consultation for this Project has occurred:

- December 4, 2020. An official USFWS species list of proposed, threatened, and endangered species, as well as critical habitat, within and adjacent to the BSA was obtained through the USFWS IPaC system.
- August 20, 2021. An updated official USFWS species list was obtained.
- May 16, 2023. An updated USFWS species list was obtained.
- September 14, 2023. An updated official USFWS species list was obtained (Appendix D of NES).
- September 17, 2024. An updated official USFWS species list was obtained (Chapter 4.3, Community Outreach and Public Involvement).

A pre-application meeting related to the Determination of Biologically Equivalent or Superior Preservation (DBESP) for the MSHCP riparian/riverine requirements was held on January 18, 2024, between the permittee, RCA, U.S. Army Corps of Engineers, State Water Quality Control Board, CDFW, and USFWS regarding the Project. Consultation will continue once the DBESP and other necessary documents are provided to RCA, USFWS, and CDFW. As Riverside County Transportation Commission (RCTC) is a permittee of the MSHCP, take authorization would occur through the Project's consistency with the MSHCP. This would occur through the Joint Project Review (JPR) process, whereby the JPR application and supporting documentation will be reviewed and concurrence with the Project's consistency with the MSHCP would be provided. The consistency review will result in a streamlined biological opinion from USFWS for covered species. Formal consultation under Section 7 independent of the MSHCP consistency review may be required for non-covered species.

The Project *may affect, and is likely to adversely affect* federally listed Quino checkerspot butterfly, arroyo toad, coastal California gnatcatcher, LBV, SKR, and SBKR.

The Project would have *no effect* on the remaining 25 federally listed species included in the USFWS Official Species List. No further consultation for these species is anticipated.

Within the BSA, critical habitat for San Diego ambrosia and coastal California gnatcatcher was formerly designated; however, following approval of the MSHCP, the critical habitat within the BSA was designated as excluded. Because of this, no additional actions, beyond demonstrating consistency with the MSHCP, would be

required for San Diego ambrosia or coastal California gnatcatcher critical habitat impacts.

Table 2.4.5-2 below provides the FESA effects findings for each federally listed species and USFWS-designated critical habitat included in the USFWS Official Species List issued for the Project. The Project impacts (direct and indirect) on individual species and their critical habitat are described in the subsections below.

National Marine Fisheries Service

There is no essential fish habitat within the BSA; therefore, no consultation with NOAA Fisheries is necessary.

California Department of Fish and Wildlife

Consultation with CDFW was initiated on January 18, 2024, at the pre-application meeting related to the DBESP for the MSHCP. As RCTC is a permittee of the MSHCP, take authorization for covered species would occur through the Project's consistency with the MSHCP. This would occur through the JPR process, whereby the JPR application and supporting documentation will be reviewed and concurrence with the Project's consistency with the MSHCP would be provided.

The Project may result in direct impacts that could harm or kill individual tricolored blackbird, LBV, SKR, mountain lion, and SBKR and, therefore, would result in the state CESA definition of take[1] for these state-listed species. No take would occur for state-listed Munz's onion, marsh sandwort, Nevin's barberry, thread-leaved brodiaea, salt marsh bird's-beak, San Fernando Valley spineflower, slender-horned spineflower, Santa Ana River woollystar, San Diego button-celery, Parish's meadowfoam, California orcutt grass, Swainson's hawk, western yellow-billed cuckoo, SWFL, bald eagle, or California black rail.

Table 2.4.5-2 below provides the CESA take statements for each state-listed species potentially affected by the Project. The Project impacts (direct and indirect) on individual species are described in the subsections below.

[1] CESA take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill".

Table 2.4.5-2. Federally and State-Listed or Candidate Species Potentially Affected by the Project

Common Name	Scientific Name	Status[1]	FESA Effect Finding	FESA Effect Finding for Critical Habitat (as applicable)	CESA Take Finding
Plants					
Munz's onion	*Allium munzii*	FE, ST	No Effect	n/a	No Take
San Diego ambrosia	*Ambrosia pumila*	FE	No Effect	May Affect, Not Likely to Adversely Affect[2]	n/a
marsh sandwort	*Arenaria paludicola*	FE, SE	No Effect	n/a	No Take
Braunton's milkvetch	*Astragalus brauntonii*	FE	No Effect	n/a	n/a
San Jacinto Valley crownscale	*Atriplex coronata* var. *notatior*	FE	No Effect	n/a	n/a
Nevin's barberry	*Berberis nevinii*	FE, SE	No Effect	n/a	No Take
thread-leaved brodiaea	*Brodiaea filifolia*	FT, SE	No Effect	n/a	No Take
salt marsh bird's-beak	*Chloropyron maritimum* ssp. *maritimum*	FE, SE	No Effect	n/a	No Take
San Fernando Valley spineflower	*Chorizanthe parryi* var. *fernandina*	FC, SE	No Effect	n/a	No Take
slender-horned spineflower	*Dodecahema leptoceras*	FE, SE	No Effect	n/a	No Take
Santa Monica dudleya	*Dudleya cymosa* ssp. *ovatifolia*	FT	No Effect	n/a	n/a
Santa Ana River woollystar	*Eriastrum densifolium* ssp. *sanctorum*	FE, SE	No Effect	n/a	No Take
San Diego button-celery	*Eryngium aristulatum* var. *parishii*	FE, SE	No Effect	n/a	No Take
Parish's meadowfoam	*Limnanthes alba* ssp. *parishii*	SE	n/a	n/a	No Take
spreading navarretia	*Navarretia fossalis*	FT	No Effect	n/a	n/a
California Orcutt grass	*Orcuttia californica*	FE, SE	No Effect	n/a	No Take
Invertebrates					
Crotch bumble bee	*Bombus crotchii*	SC	n/a	n/a	No Take
vernal pool fairy shrimp	*Branchinecta lynchi*	FT	No Effect	n/a	n/a

Common Name	Scientific Name	Status[1]	FESA Effect Finding	FESA Effect Finding for Critical Habitat (as applicable)	CESA Take Finding
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	No Effect	n/a	n/a
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	May Affect, Likely to Adversely Affect	n/a	n/a
Delhi Sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	FE	No Effect	n/a	n/a
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	No Effect	n/a	n/a
Fish					
Santa Ana sucker	*Catostomus santaanae*	FT	No Effect	n/a	n/a
southern steelhead (southern California distinct population segment)	*Oncorhynchus mykiss*	FE	No Effect	n/a	n/a
Amphibians					
arroyo toad	*Anaxyrus californicus*	FE	May Affect, Likely to Adversely Affect	n/a	n/a
California red-legged frog	*Rana draytonii*	FT	No Effect	n/a	n/a
Birds					
tricolored blackbird	*Agelaius tricolor*	ST	n/a	n/a	Take may Occur
Swainson's hawk	*Buteo swainsoni*	ST	n/a	n/a	No Take
western snowy plover	*Charadrius alexandrinus nivosus*	FT	No Effect	n/a	n/a
western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT, SE	No Effect	n/a	No Take
southwestern willow flycatcher	*Empidonax traillii extimus*	FE, SE	No Effect	n/a	No Take
bald eagle	*Haliaeetus leucocephalus*	SE	n/a	n/a	No Take
California black rail	*Laterallus jamaicensis coturniculus*	ST	n/a	n/a	No Take
coastal California gnatcatcher	*Polioptila californica*	FT	May Affect, Likely to Adversely Affect	May Affect, Not Likely to Adversely Affect[2]	n/a

Common Name	Scientific Name	Status[1]	FESA Effect Finding	FESA Effect Finding for Critical Habitat (as applicable)	CESA Take Finding
least Bell's vireo	*Vireo bellii pusillus*	FE, SE	May Affect, Likely to Adversely Affect	n/a	Take will Occur
Mammals					
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	FE, SC	May Affect, Likely to Adversely Affect	n/a	Take may Occur
Stephens' kangaroo rat	*Dipodomys stephensi*	FT, ST	May Affect, Likely to Adversely Affect	n/a	Take may Occur
mountain lion (southern California/central coast ESU)	*Puma concolor*	SC	n/a	n/a	Take may Occur

[1] Federal Endangered (FE); Federal Threatened (FT); Federal Candidate (FC); State Endangered (SE); State Threatened (ST); State Candidate (SC)
[2] Because this Project is covered under the MSHCP, all species Critical Habitat in the Project vicinity is excluded.

Build Alternative

Impacts on federally and state-listed threatened and endangered species are based on the habitat evaluations and focused studies performed per the requirements of the MSHCP.

Listed species are known to occur in the region and are listed in Table 2.4.5-1 above. Of these, 19 have the potential to occur within the BSA and could potentially be affected by the Project. All except for San Diego fairy shrimp and Crotch bumble bee are covered species under the MSHCP. However, the listed plants, fairy shrimp, and riparian birds require focused studies within the BSA under the Plan (Volume I, Sections 6.1.2, 6.1.3, and 6.3.2). No impacts within the LOD are anticipated on Crotch bumble bee. Permanent, temporary, and shading impacts on suitable habitat that could support these listed species are included in Table 2.4.5-3 and potential impacts on each of these species are discussed in the subsections below.

Table 2.4.5-3. Potential Impacts of the Build Alternative on Listed Species

Listed Species	Impact (acres)			
	Permanent	Temporary	Shading	Total
Listed plants	Not present			
Fairy shrimp	Not present			
Crotch bumble bee	No direct effects expected			
Quino checkerspot butterfly[1]	13.84	226.46	0.29	240.59
Arroyo toad[1]	0.00	2.65	0.22	2.87
Least Bell's vireo	0.00	2.76	0.19	2.95
Southwestern willow flycatcher	Not present			
Tricolored blackbird[1]	0.00	3.38	0.19	3.57
Coastal California gnatcatcher[1]	3.33	129.15	0.07	132.55
Stephens' kangaroo rat[1]	13.84	225.80	0.47	240.11
San Bernardino kangaroo rat	13.67	190.46	0.47	204.60
Mountain lion[1]	13.85	234.19	0.66	248.70

[1] MSHCP fully covered species

Temporary Impacts

Listed Plants

No threatened or endangered plant species were observed during the 2020 and 2021 focused surveys, including Munz's onion, San Diego ambrosia, thread-leaved brodiaea, slender-horned spineflower, and San Jacinto Valley crownscale. Therefore, these species are considered absent from the rare plant study area and, as such, the Project is not expected to affect listed plants.

No temporary impacts on listed plants would occur.

Listed Fairy Shrimp

No listed fairy shrimp were observed during the 2020 and 2021 focused surveys, including Riverside fairy shrimp, San Diego fairy shrimp, and vernal pool fairy shrimp. Therefore, these species are considered absent from the fairy shrimp study area and, as such, the Project is not expected to affect listed fairy shrimp.

No temporary impacts on listed fairy shrimp would occur.

Quino Checkerspot Butterfly

Approximately 226.46 acres of suitable habitat for Quino checkerspot butterfly would be temporarily disturbed during construction (Table 2.4.5-1). Temporary indirect impacts on habitat adjacent to the LOD could occur as well, including degradation of habitat (e.g., dust, erosion, roadway runoff, increased fire risks) and the spread of exotic plant species, which could contribute to edge effects.

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities,* would ensure that any temporary effects on both suitable habitat and individual Quino checkerspot butterfly adjacent to the LOD would not occur during construction of the Project.

Crotch Bumble Bee

Direct effects on suitable habitat for Crotch bumble bee in the LOD are not anticipated due to the highly disturbed nature of the ROW and lack of suitable resources; therefore, no suitable habitat would be permanently removed or temporarily disturbed.

The Build Alternative could have temporary indirect impacts on Crotch bumble bee individuals, should this species be present, and its suitable habitat within the BSA outside of the LOD. Indirect impacts, which are considered minor, are related to dust, erosion, the introduction of invasive species in disturbed soils, roadway runoff, and increased fire risks.

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities*, would ensure that any indirect temporary effects on suitable Crotch bumble bee habitat adjacent to the LOD would not occur during construction of the Project.

Arroyo Toad

Approximately 2.65 acres of suitable habitat for arroyo toad would be temporarily disturbed during construction of the Project (Table 2.4.5-3).

The potential exists for temporary impacts on individual arroyo toad in the LOD during construction, should they be present (e.g., disturbance from noise, night lighting, human presence); however, the number of individuals potentially affected is expected to be low given the low quality of suitable habitat proposed for removal. The potential also exists

for temporary indirect impacts on potential habitat adjacent to the LOD during construction (e.g., habitat degradation through dust, increased risk of fire, introduction of invasive species). However, Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)**, **NC-12 (NES BIO-12)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*), and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** (in Section 2.4.2, *Wetlands and Other Waters*) would provide the necessary means to avoid temporary impacts on arroyo toad and its suitable habitat.

Least Bell's Vireo

Approximately 2.76 acres of suitable habitat for LBV would be temporarily disturbed during construction of the Project (Table 2.4.5-3). Temporary indirect impacts on habitat adjacent to the LOD could occur as well, including degradation of habitat and the spread of exotic plant species, which could contribute to edge effects.

Impacts on areas occupied by LBV would be limited to construction-related disturbances (e.g., noise, night lighting, increased human presence, opportunistic predators) because all of the use areas are located outside of the LOD. Indirect impacts from noise associated with construction could potentially be substantial if construction is to occur during the breeding season. However, Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, along with Avoidance and Minimization Measures **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, would provide the necessary means to avoid temporary impacts on LBV and its suitable habitat.

Southwestern Willow Flycatcher

SWFL was not observed during the 2020 and 2021 focused surveys. Therefore, SWFL is considered absent from the riparian bird survey area and, as such, the Project is not expected to affect this species.

No temporary impacts on SWFL would occur.

Tricolored Blackbird

Construction of the Project would result in the temporary disturbance of 3.38 acres of suitable habitat for tricolored blackbird (Table 2.4.5-3). Indirect impacts may also occur on suitable habitat from temporary construction-related activities, such as an increase in dust, trash, fire, erosion, and introduction of invasive species.

Temporary indirect effects during construction may also include impacts on individual birds breeding adjacent to the LOD, should they be present, due to noise and vibrations from construction equipment, human presence, night lighting, habitat fragmentation, and edge effects that reduce the quality of habitat.

Avoidance and Minimization Measures **NC-1 (NES BIO-2)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural*

Communities, and Avoidance and Minimization Measure **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, would ensure that any temporary impacts on tricolored blackbird and its suitable habitat would be minimized or avoided.

Coastal California Gnatcatcher

Construction of the Project would result in the temporary disturbance of 129.15 acres of suitable habitat for coastal California gnatcatcher (Table 2.4.5-3). Indirect impacts may also occur on suitable habitat from temporary construction-related activities, such as an increase in dust, trash, fire, erosion, and introduction of invasive species.

Temporary indirect effects during construction may also include impacts on individual birds breeding adjacent to the LOD, should they be present, due to noise and vibrations from construction equipment, human presence, night lighting, habitat fragmentation, and edge effects that reduce the quality of habitat.

Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-11 (NES BIO-11)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measures **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, would ensure that any temporary impacts on coastal California gnatcatcher and its suitable habitat would be minimized or avoided.

Stephens' Kangaroo Rat

Approximately 225.80 acres of suitable habitat for SKR would be temporarily disturbed during construction of the Project (Table 2.4.5-3).

There are no MSHCP linkages or cores within the LOD with potential habitat for SKR. The majority of potential SKR habitat occurs within narrow linear strips of grassland and Riversidian sage scrub. These linear strips have increased edge effects and are therefore not expected to be used by SKR given the ongoing disturbances from maintenance along the highway, such as mowing for weed abatement. There may be an incremental increase in temporary indirect effects during construction, including the potential introduction of invasive weeds, an increase in dust, and increased risk of fire, which would decrease the quality of potential habitat adjacent to the LOD.

Project construction activities could also temporarily affect SKR within the BSA because of increased noise, night lighting, or the presence of equipment and construction personnel, which may temporarily disturb SKR and disrupt behavior of individuals within the Project area.

These temporary indirect effects would be avoided and/or greatly minimized with Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, and Avoidance and Minimization Measure **TE-4**.

San Bernardino Kangaroo Rat

Approximately 190.46 acres of suitable habitat for SBKR would be temporarily disturbed during construction of the Project (Table 2.4.5-3).

There are no MSHCP linkages or cores within the LOD with potential habitat for SBKR. The majority of potential SBKR habitat occurs within narrow linear strips of Riversidian alluvial fan sage scrub, Riversidian sage scrub, chaparral, and grasslands. These linear strips have increased edge effects and are therefore not expected to be used by SBKR given the ongoing disturbances from maintenance along the highway, such as mowing for weed abatement. There may be an incremental increase in indirect effects during construction, including the potential introduction of invasive weeds, an increase in dust, and increased risk of fire, which would decrease the quality of potential habitat adjacent to the LOD.

Project construction activities could also temporarily affect SBKR within the BSA because of increased noise, night lighting, or the presence of equipment and construction personnel, which may temporarily disturb SBKR and disrupt behavior of individuals within the Project area.

These temporary indirect effects would be avoided and/or greatly minimized with Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*.

Mountain Lion

Approximately 234.19 acres of suitable habitat for mountain lion would be temporarily disturbed during construction of the Project (Table 2.4.5-3).

Proposed Extension of Existing Core 2 (Lake Mathews/Estelle Mountain Extension), Proposed Linkage 1 (foothills of Santa Ana Mountains), and Proposed Constrained Linkage 5 (Horsethief Canyon) all overlap with the BSA and the LOD and all have mountain lion as a planning species. The majority of potentially suitable habitat occurs within the LOD in these areas and contains linear strips of suitable habitat associated with drainages that flow under I-15. There may be an incremental increase in temporary indirect effects during construction, including the potential introduction of invasive weeds, an increase in dust, and increased risk of fire, which would decrease the quality of potential habitat adjacent to the LOD.

Project construction activities could also temporarily affect mountain lion within the BSA because of increased noise or the presence of equipment and construction personnel, which may temporarily deter mountain lion movement in the Project area.

There are no specific avoidance measures required for mountain lion under the MSHCP; however, Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*), and Avoidance and Minimization Measure **AS-1 (NES**

BIO-18) in Section 2.4.4, *Animal Species*, would minimize potential temporary indirect effects on mountain lion habitat and movement during construction. The measures would also maintain undercrossing functionality for mountain lions.

Permanent Impacts

Listed Plants

No permanent impacts on listed plants would occur.

Listed Fairy Shrimp

No permanent impacts on listed fairy shrimp would occur.

Quino Checkerspot Butterfly

Approximately 13.84 acres of suitable habitat for Quino checkerspot butterfly would be permanently removed during construction of the Project. An additional 0.29 acre would be permanently shaded (Table 2.4.5-3).

If Quino checkerspot butterfly is present, there is the potential for direct mortality as well as loss of habitat. Permanent indirect impacts could also occur on any individuals that are present in the adjacent area as a result of roadside maintenance activities (e.g., use of pesticides and herbicides). The measures described in Section 2.4.5.4 below are intended to avoid and/or minimize such potential permanent impacts on Quino checkerspot butterfly.

Operation of the interstate is not expected to change as a result of the Project. There is the potential for individual Quino checkerspot butterfly to fly over Interstate (I-) 15 to access habitat on either side of the facility, which could increase the risk of vehicle strikes; however, this does not differ from existing conditions.

Under Section 7 of FESA, formal consultation with USFWS may be required due to the potential presence of Quino checkerspot butterfly within the BSA. However, because this species is fully covered under the MSHCP, potential impacts for the covered Project have been authorized and the consistency review will result in a streamlined biological opinion from USFWS.

Crotch Bumble Bee

Because Crotch bumble bee is not expected to occur within the LOD, it is not anticipated that individual bees would be permanently directly affected by Project construction and vegetation clearing (e.g., direct mortality or injury of individuals, crushing or entombment of nesting colonies or over-wintering queens in underground burrows). Permanent indirect impacts could occur, however, on any individuals present in the adjacent area as a result of roadside maintenance activities (e.g., use of pesticides and herbicides). Avoidance and Minimization Measure **TE-1 (NES BIO-29)** is intended to avoid and/or minimize potential permanent impacts on Crotch bumble bee. Consequently, impacts on this species, should it be present, are expected to be limited.

Operation of the interstate is not expected to change because of the Project. There is a potential for individual Crotch bumble bees to fly over I-15 to access habitat on either side of the facility; however, this does not differ from existing conditions.

Arroyo Toad

No suitable habitat for arroyo toad would be permanently removed under the Project; however, 0.22 acre would be permanently shaded (Table 2.4.5-3). Shading effects would degrade suitable habitat and result in a permanent loss of habitat.

The MSHCP does not require compensation for impacts on arroyo toad unless the impact occurs on PQP lands with arroyo toad conservation value (no PQP lands occur in the LOD). None of the potential impacts on arroyo toad would occur on PQP lands. Consistency with all measures required by the MSHCP provides full mitigation of potential impacts on arroyo toad.

Operation of the Project is not expected to change conditions, as vehicle strikes are not anticipated to increase due to the Project.

Overall, the Project could have a biologically substantial impact on arroyo toad due to the loss of habitat if the species is present, and this could be considered “take” under FESA.

Under Section 7 of FESA, formal consultation with USFWS may be required due to the potential presence of arroyo toad within the BSA. However, because this species is fully covered under the MSHCP, potential impacts for the covered Project have been authorized and the consistency review will result in a streamlined biological opinion from USFWS.

Least Bell’s Vireo

No suitable habitat for LBV would be permanently removed under the Project; however, 0.19 acre would be permanently shaded (Table 2.4.5-3). Shading effects would degrade suitable habitat and result in a permanent loss of habitat.

None of the 11 LBV use areas are located within the LOD; therefore, they would not be directly affected by Project implementation. However, direct effects on individuals during construction could occur from increased risk of fire, strikes with construction equipment/ vehicles, or by predators attracted to the construction area.

The proposed construction impacts on LBV habitat would be biologically substantial and would trigger take considerations under FESA, CESA, MBTA, and similar provisions of the CFG Code. Implementation of the avoidance and minimization measures in Section 2.4.5.4 below for LBV would ensure direct impacts do not occur during construction within the Criteria Area and would ensure consistency with the MSHCP.

Operation of the widened bridges would have the potential for indirect impacts, such as depredation due to traffic noise and degradation of habitat from increased surface flow runoff. Both impacts are expected to be no greater than the impacts under existing conditions with potential surface flow runoff improving.

Under Section 7 of FESA, formal consultation with USFWS would be required due to the presence of the species within the BSA. However, because LBV is covered under the MSHCP (per required focused surveys under MSHCP Section 6.1.2, Volume 1), potential impacts for the covered Project have been authorized and the consistency review will result in a streamlined biological opinion from USFWS.

Additionally, implementation of Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*, is intended to avoid or minimize potential indirect impacts (permanent) on LBV. Those measures that apply to riparian/riverine vegetation also apply to LBV-occupied habitat. Avoidance and Minimization Measure **TE-2 (NES BIO-21)** and Mitigation Measure **TE-3 (NES BIO-23)** would ensure that potential indirect impacts on nesting LBV will be avoided and compensation for temporary or permanent direct impacts on LBV use areas and adjacent potential habitat would occur.

Southwestern Willow Flycatcher

No permanent impacts on southwestern willow flycatcher would occur.

Tricolored Blackbird

No suitable habitat for tricolored blackbird would be permanently removed under the Project; however, 0.19 acre would be permanently shaded (Table 2.4.5-3). Shading effects would degrade suitable habitat and result in a permanent loss of habitat.

The potential also exists for direct mortality and injury of tricolored blackbird individuals that may be occupying habitat that would be removed during construction of the Project. Additional direct effects on individuals during construction could occur though from increased risk of fire, strikes with construction equipment/vehicles, or by predators attracted to the construction area. Avoidance and Minimization Measures **NC-1 (NES BIO-2)** through **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, would avoid or minimize any permanent impacts on tricolored blackbird during Project construction.

The potential exists for direct and indirect effects on tricolored blackbird from operation of the Build Alternative. Tricolored blackbird would be at a greater risk of vehicle strikes from the increase in the number of vehicle lanes (i.e., removal of median). Maintenance (e.g., mowing for weed abatement) within the ROW could remove occupied habitat or contribute to fragmentation of adjacent suitable habitat. However, it would be unlikely for any of these potential operational impacts to be greater than the existing condition.

The proposed removal of 3.57 acres of potentially suitable habitat for tricolored blackbird would be biologically substantial and would trigger CESA, MBTA, and similar provisions under the CFG Code. However, tricolored blackbird is a covered species under the MSHCP. MSHCP consistency would provide full mitigation under CESA.

Coastal California Gnatcatcher

Construction of the Project would result in the permanent removal of approximately 3.33 acres of suitable habitat for coastal California gnatcatcher, as well as permanent

shading effects on 0.07 acre (Table 2.4.5-3). Direct removal of habitat could affect breeding individuals and remove potential foraging habitat.

Because coastal California gnatcatcher is a year-round resident, there is a potential for direct impacts, including mortality or injury, to any individuals that may be occupying habitat that would be removed during construction of the Project. Additional direct effects on individuals during construction could occur though from increased risk of fire, strikes with construction equipment/vehicles, or by predators attracted to the construction area. Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-11 (NES BIO-11)** and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measures **AS-1 (NES BIO-18)** and **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, would avoid or minimize any permanent impacts on coastal California gnatcatcher during Project construction.

The potential exists for direct and indirect effects on coastal California gnatcatcher from operation of the Build Alternative. Coastal California gnatcatcher is a low-flying species, and any individuals traversing the highway would be at increased risk of vehicle strikes from the increase in the number of vehicle lanes (removal of median). Maintenance (e.g., mowing for weed abatement) within the ROW could remove occupied habitat or contribute to fragmentation of adjacent suitable habitat. It would be unlikely for any of these potential operational impacts to be greater than the existing condition.

In all, the potential removal of 132.55 acres of potentially suitable habitat for coastal California gnatcatcher would be biologically substantial and would trigger FESA, MBTA, and similar provisions under the CFG Code.

Under Section 7 of FESA, formal consultation with USFWS would be required due to the presence of the species and its critical habitat within the BSA. However, because coastal California gnatcatcher is fully covered under the MSHCP and the critical habitat for coastal California gnatcatcher within the Plan area is excluded, potential impacts for the covered Project have been authorized and the consistency review will result in a streamlined biological opinion from USFWS.

Stephens' Kangaroo Rat

Up to 13.84 acres of potentially suitable SKR habitat would be permanently removed and 0.47 acre would be permanently shaded as a result of the Project (Table 2.4.5-3).

Project construction and vegetation clearing could result in direct mortality, injury, or harassment of individual SKR as a result of construction equipment. Other direct impacts may include individuals being crushed or entombed in their burrows and injury or mortality from opportunistic predators during construction activity. Activities associated with construction, including disturbance from noise or vibrations, may result in disruption of SKR behavior. If construction occurs during the breeding season, it could disturb breeding behavior, resulting in negative impacts on reproduction. Soil compaction could decrease the availability of friable soils for burrow creation. Capturing, handling, and relocating SKR that occur within the construction area could cause injury or death if proper handling and relocation techniques are not used. Avoidance and

Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, and Avoidance and Minimization Measure **TE-4** would avoid or minimize any permanent impacts on SKR during Project construction.

Operation and maintenance associated with the Build Alternative is not expected to differ measurably from existing operating conditions along I-15. The potential direct and indirect effects associated with operation and maintenance of the Build Alternative include the introduction of invasive weeds, air pollution, noise, and risk of fire. These potential indirect effects would not be greater than existing conditions. The replacement of the median with two traffic lanes increases roadway surface area and therefore increases potential for vehicle strikes if individual SKR attempt to cross the interstate, hence potentially further fragmenting occupied lands east and west of I-15.

Overall, the potential removal of 240.11 acres of potentially suitable habitat for SKR and potential impacts on individuals from the Build Alternative could be biologically substantial and would trigger FESA and CESA considerations.

Under Section 7 of FESA, formal consultation with USFWS may be required due to the potential presence of the species within the BSA. However, because SKR is fully covered under the MSHCP, USFWS would perform a consistency review to confirm that the Build Alternative is consistent with the MSHCP and issue a streamlined biological opinion. Compliance with the SKR HCP and consistency with the MSHCP provides full mitigation under FESA.

<u>San Bernardino Kangaroo Rat</u>

Up to 13.67 acres of potentially suitable SBKR habitat would be permanently removed and 0.47 acre would be permanently shaded as a result of the Project (Table 2.4.5-3).

Project construction and vegetation clearing could result in direct mortality, injury, or harassment of individual SBKR as a result of construction equipment. Other direct impacts may include individuals being crushed or entombed in their burrows and injury or mortality from opportunistic predators during construction activity. Activities associated with construction, including disturbance from noise or vibrations, may result in disruption of SBKR behavior. If construction occurs during the breeding season, it could disturb breeding behavior, resulting in negative impacts on reproduction. Soil compaction could decrease the availability of friable soils for burrow creation. Capturing, handling, and relocating SBKR that occur within the construction area could cause injury or death if proper handling and relocation techniques are not used. Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, would avoid or minimize any permanent impacts on SBKR during Project construction.

Operation and maintenance associated with the Build Alternative is not expected to differ measurably from existing operating conditions along I-15. The potential direct and indirect effects associated with operation and maintenance of the Build Alternative include the introduction of invasive weeds, air pollution, noise, and risk of fire. These potential indirect effects would not be greater than existing conditions. The replacement of the median with two traffic lanes increases roadway surface area and therefore increases potential for vehicle strikes if individual SBKR attempt to cross the highway surface, hence potentially further fragmenting occupied lands east and west of the I-15.

Overall, the potential removal of 204.60 acres of potentially suitable habitat for SBKR and potential impacts on individuals from the Build Alternative could be biologically substantial and would trigger FESA and CESA considerations.

Under Section 7 of FESA, formal consultation with USFWS may be required due to the potential presence of the species within the BSA. However, because SBKR is covered under the MSHCP (per required focused surveys under MSHCP survey area requirements), potential impacts for the covered Project have been authorized and the consistency review will result in a streamlined biological opinion from USFWS.

Mountain Lion

Up to 13.85 acres of potentially suitable mountain lion habitat would be permanently removed and 0.66 acre would be permanently shaded as a result of the Project (Table 2.4.5-3).

The main Project effect at Proposed Extension of Existing Core 2 (Lake Mathews/ Estelle Mountain Extension), Proposed Linkage 1 (foothills of Santa Ana Mountains), and Proposed Constrained Linkage 5 (Horsethief Canyon) would be an increase in permanent shading at wildlife crossings, which could result in loss of habitat (see Section 2.4.1, *Natural Communities*, for details).

Except for increased shading at wildlife crossings, operation and maintenance associated with the Project is not expected to differ measurably from existing operating conditions along I-15. The potential direct and indirect effects associated with operation and maintenance of the Build Alternative includes the introduction of invasive weeds, air pollution, noise, and risk of fire. These potential indirect effects would not be greater than existing conditions. The replacement of the median with two traffic lanes increases roadway surface area and therefore increases potential for vehicle strikes if mountain lions attempt to cross the highway surface, hence potentially further fragmenting occupied lands east and west of I-15.

Overall, due to an increase in shading at wildlife crossings, potential impacts on mountain lion from the Build Alternative could be biologically substantial and would trigger CESA considerations. However, this species is fully covered under the MSHCP.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, no new or additional impacts on threatened or endangered species would occur beyond those that would be expected to occur from operation of the existing facility.

2.4.5.4 Avoidance, Minimization, and/or Mitigation Measures

Listed Plants

No listed plants were found during 2020 or 2021 focused surveys. Therefore, no avoidance, minimization, or mitigation measures are necessary.

Listed Fairy Shrimp

Because listed fairy shrimp are not present within the fairy shrimp study area, avoidance, minimization, and mitigation measures are not required under the MSHCP.

Quino Checkerspot Butterfly

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities*, will ensure that direct and indirect effects on Quino checkerspot butterfly and its potentially suitable habitat adjacent to the LOD will not occur during construction of the Build Alternative. These measures are required for MSHCP consistency. They are not specific to Quino checkerspot butterfly but provide a level of protection to covered species outside a project footprint and are considered general requirements for construction projects. In addition, Avoidance and Minimization Measure **TE-1 (NES BIO-29)** will avoid and minimize potential permanent impacts on Quino checkerspot butterfly as a result of roadside maintenance activities (e.g., use of pesticides and herbicides).

The MSHCP does not require compensation for impacts on Quino checkerspot butterfly unless the impact occurs on PQP lands with conservation value for Quino checkerspot butterfly. For the Project, none of the potential impacts on Quino checkerspot butterfly would occur on PQP lands. Consistency with all measures required by the MSHCP provides full mitigation of potential impacts on Quino checkerspot butterfly.

Avoidance and Minimization Measure **TE-1 (NES BIO-29) Insect Measures.** The planting of milkweed (for monarch) and nectar sources (for monarch and Crotch bumble bee) is not recommended within the LOD, as this may attract these species to an area where the potential for collision with vehicles is high. To protect monarch, Crotch bumble bee, and other pollinators, the following measures are to be implemented:

- Avoid the planting of milkweed (for monarch) and nectar sources (for Crotch bumble bee).

- Avoid the use of pesticides (i.e., insecticides and herbicides) wherever possible. If pesticides are to be used, conduct applications between March 16 and September 14, when possible.

- Screen pesticides for pollinator risk to avoid harmful applications. Bee precaution pesticide ratings can be found here: https://www2.ipm.ucanr.edu/beeprecaution/.

- Avoid the use of neonicotinoids or other systematic insecticides, including coated seeds, at any time of year, due to their toxic nature.

- Avoid the use of soil fumigants.

- Use non-chemical weed control techniques when possible (https://www.cal-ipc.org/resources/library/publications/non-chem/) (Cal-IPC 2020).

- If possible, avoid the use of herbicide on blooming flowers. Herbicide use should be conducted on young plant phases, when plants are more responsive to treatment, and when pollinators are less likely to be nectaring on plants.

- Use a targeted herbicide approach whenever possible, not large-scale broadcast application. Also, use precautions to limit herbicide drift from wind and discharge from surface water flows.

- Do not plant nonnative tropical milkweed *Asclepias curassavica*. This plant species contributes to the spread of the monarch pathogen *Ophryocystis elektroscirrha*, which can be debilitating and/or lethal to monarchs. Remove any detected *Asclepias curassavica*.

Crotch Bumble Bee

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities*, will ensure that direct and indirect effects on Crotch bumble bee and its potentially suitable habitat adjacent to the LOD will not occur during construction of the Build Alternative.

Avoidance and Minimization Measure **TE-1 (NES BIO-29)** is intended to avoid and/or minimize potential permanent impacts on Crotch bumble bee. Consequently, impacts on this species, should it be present, are expected to be limited.

Arroyo Toad

Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** (in Section 2.4.1, *Natural Communities*) will ensure that indirect effects on potentially suitable habitat for arroyo toad adjacent to the LOD will not occur during construction of the Project. These measures are required by the MSHCP. They are not specific to arroyo toad, but provide a level of protection to covered species outside a project footprint. They are considered general requirements for construction projects. In addition, Avoidance and Minimization Measures **NC-12 (NES BIO-12)**, **NC-13 (NES BIO-13)**, and **NC-14 (NES BIO-14)** (in Section 2.4.1, *Natural Communities*) will reduce impacts on water quality and indirect effects on arroyo toad. Also, Avoidance and Minimization Measure **NC-18 (NES BIO-20)** will maintain functional movement through Temescal Wash; Avoidance and Minimization Measure **WET-1 (NES BIO-22)** (in

Section 2.4.2, *Wetlands and Other Waters*) will provide biomonitoring in the vicinity of Temescal Wash to prevent inadvertent impacts on biological resources; and Avoidance and Minimization Measure **NC-19 (NES BIO-24)** will avoid attracting predators to or near the Project site during construction, thereby minimizing Project-related predation of arroyo toad (in Section 2.4.1, *Natural Communities*).

The MSHCP does not require compensation for impacts on arroyo toad unless the impact occurs on PQP lands with arroyo toad conservation value (no PQP lands occur in the LOD). None of the potential impacts on arroyo toad would occur on PQP lands. Consistency with all measures required by the MSHCP provides full mitigation of potential impacts on arroyo toad.

Least Bell's Vireo

The implementation of Avoidance and Minimization Measure **NC-1 (NES BIO-1)** (in Section 2.4.1, *Natural Communities*) will ensure that potentially occupied LBV habitat will not be removed during the species' core breeding season; as such, no direct impacts on eggs, nestlings, or nesting adults are anticipated. Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-14 (NES BIO-14)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, provide protection to LBV occurring adjacent to the disturbance footprint during construction. Avoidance and Minimization Measure **NC-18 (NES BIO-20)** (in Section 2.4.1, *Natural Communities*) will maintain functional movement through Temescal Wash. Avoidance and Minimization Measure **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*) will avoid attracting predators to or near the Project site during construction, thereby minimizing Project-related predation of LBV. Avoidance and Minimization Measure **AS-5 (NES BIO-28)** (in Section 2.4.4, *Animal Species*) will prevent disturbance of active nests.

Implementation of Mitigation Measure **NC-15 (NES BIO-15)** in Section 2.4.1, *Natural Communities*, is intended to avoid or minimize potential indirect impacts (permanent) on LBV. Those measures that apply to riparian/riverine vegetation also apply to LBV occupied habitat. Avoidance and Minimization Measure **TE-2 (NES BIO-21)** below will ensure that potential indirect impacts on nesting LBV will be avoided and minimized.

Compensation for direct impacts on LBV use areas and adjacent potential habitat would be necessary to ensure no net loss of occupied LBV habitat (i.e., equivalent or superior preservation). The ratio of compensation for impacts depends on whether the impact would be permanent or temporary. Permanent impact compensation would occur at no less than a 2:1 ratio, whereas temporary impacts would be compensated at no less than a 1:1 ratio (Mitigation Measure **TE-3 [NES BIO-23]** below). A DBESP (Mitigation Measure **NC-15 [NES BIO-15]** in Section 2.4.1, *Natural Communities*) was be prepared to detail compensatory requirements for LBV. The DBESP will ensure that the Project will be consistent with the MSHCP.

TE-2 (NES BIO-21). Temescal Wash – Nesting Season Noise Requirements. Between March 15 and September 15, all heavy equipment will install and maintain mufflers or other noise-reducing features when working within 300 feet of Temescal

Wash. A biological monitor will monitor and log sound levels at the edge of the LOD with the riparian area to ensure noise levels do not result in a disruption to nesting birds (typically over 60 decibels). If construction noise is negatively affecting nesting birds, work will cease (unless authorized by the wildlife agencies) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. It may be most effective to construct noise barriers well prior to March 15 to ensure construction delays do not occur. All noise barriers would need to be constructed within the LOD.

TE-3 (NES BIO-23). LBV Habitat Compensation. Because the federally and State-listed as endangered LBV occupies the riparian/riverine areas at Temescal Wash and associated tributaries proposed for impact, compensation for both riparian/riverine and LBV will be integrated and approval of the equivalency analysis by RCA and wildlife agencies shall occur to ensure any occupied LBV lands affected by construction are replaced with equivalent lands (i.e., mitigation lands are occupied or restored to occupation). Final mitigation ratios will be determined after consultation with RCA and wildlife agencies; however, at least 1:1 mitigation consisting of establishment or re-establishment of occupied, or potentially occupied, lands will occur to ensure no net loss of occupied habitat. Final approval will occur prior to the start of Project construction, including any ground disturbance work and/or vegetation clearing.

Southwestern Willow Flycatcher

Because SWFL is not present within the riparian bird study area, no avoidance, minimization, or mitigation measures are required under the MSHCP.

Tricolored Blackbird

Vegetation clearing would be performed outside of the active breeding season for this species (see Avoidance and Minimization Measure **NC-1 [NES BIO-1]** in Section 2.4.1, *Natural Communities*); as such, no direct impacts on eggs, nestlings, or nesting adults are anticipated. Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-14 (NES BIO-14)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, will reduce degradation of suitable tricolored blackbird habitat occurring adjacent to the disturbance footprint during construction. Avoidance and Minimization Measure **NC-18 (NES BIO-20)** will maintain functional movement through Temescal Wash and Avoidance and Minimization Measure **NC-19 (NES BIO-24)** will avoid attracting predators to or near the Project site during construction (in Section 2.4.1, *Natural Communities*), thereby minimizing Project-related predation of tricolored blackbird. Avoidance and Minimization Measure **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, ensures that no breeding individuals would be directly harmed during Project construction. Nesting bird surveys will be completed, and no active nests will be disturbed. These measures are sufficient to ensure that impacts on tricolored blackbird will be minimized and avoided per the requirements of the MSHCP.

Full mitigation of potential direct and indirect impacts on tricolored blackbird would be provided through consistency with the MSHCP. The inclusion of Avoidance and

Minimization Measures, along with all other measures provided in this document, provides full consistency with the MSHCP for tricolored blackbird. No additional measures or mitigation beyond those required by the MSHCP would be necessary.

Coastal California Gnatcatcher

Avoidance and Minimization Measure **NC-1 (NES BIO-1)** (in Section 2.4.1, *Natural Communities*) will ensure that potentially occupied coastal California gnatcatcher habitat will not be removed during the species' core breeding season (it can be removed if preconstruction surveys confirm the species is absent). Measures **NC-2 (NES BIO-2)** through **NC-11 (NES BIO-11)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, will reduce the potential degradation of coastal California gnatcatcher habitat adjacent to the disturbance footprint during construction. Avoidance and Minimization Measure **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, will avoid attracting predators to or near the Project site during construction, thereby minimizing Project-related predation of coastal California gnatcatcher. Avoidance and Minimization Measure **AS-5 (NES BIO-28)** in Section 2.4.4, *Animal Species*, is a nesting bird management plan.

Full mitigation of potential direct and indirect impacts on coastal California gnatcatcher would be provided through consistency with the MSHCP. The Avoidance and Minimization Measures, along with all other measures provided in this document, provides full consistency with the MSHCP for coastal California gnatcatcher. During formal Section 7 consultation, USFWS would perform a review of the Project's consistency with the MSHCP, resulting in the issuance of a streamlined biological opinion. No additional measures or mitigation beyond those required by the MSHCP would be necessary.

Stephens' Kangaroo Rat

There are no specific avoidance measures required for SKR under the MSHCP; however, Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, and Avoidance and Minimization Measure **TE-4** below will minimize potential direct and indirect effects on SKR and its suitable habitat during construction. These measures are consistent with general MSHCP avoidance and minimization requirements for covered projects.

Full mitigation of potential direct and indirect impacts on SKR would be provided through consistency with the MSHCP and compliance with the SKR HCP. Implementation of the avoidance and minimization measures, along with all other measures provided in this document, provides full consistency with the MSHCP for SKR. During formal Section 7 consultation, USFWS would perform a review of the Project's consistency with the MSHCP and issue a streamlined biological opinion.

TE-4. Stephens' Kangaroo Rat. To avoid and minimize effects on SKR and associated habitat, RCTC will implement the following:

- Payment of the SKR HCP fee.

- Monitor and report on compliance with the established take threshold for all SKR habitat associated with the Project. A biological monitor will track and identify SKR habitat that is subject to disturbance. Once the biological monitor has determined that permanent and temporary impacts on SKR habitat has reached 80 percent of the anticipated disturbance (192.1 acres), the biological monitor will map all potential SKR habitat disturbed with a sub-meter global positioning system weekly.

- Reports, including geographic information system files, will be submitted to USFWS at the end of every week until ground disturbance has occurred in all planned areas.

San Bernardino Kangaroo Rat

There are no specific avoidance measures required for SBKR under the MSHCP; however, Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12)**, **NC-18 (NES BIO-20)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, will minimize potential direct and indirect effects on SBKR and its suitable habitat during construction. These measures are consistent with general MSHCP avoidance and minimization requirements for covered projects.

Full mitigation of potential direct and indirect impacts on SBKR would be provided through consistency with the MSHCP. Implementation of the avoidance and minimization measures, along with all other measures provided in this document, provides full consistency with the MSHCP for SBKR. During formal Section 7 consultation, USFWS would perform a review of the Project's consistency with the MSHCP, resulting in a streamlined biological opinion. No additional measures or mitigation beyond those required by the MSHCP would be necessary.

Mountain Lion

There are no specific avoidance measures required for mountain lion under the MSHCP; however, Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-12 (NES BIO-12),** and **NC-19 (NES BIO-24)** (in Section 2.4.1, *Natural Communities*) would minimize potential effects on suitable mountain lion habitat during construction. Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*, would reduce potential indirect impacts on mountain lion movement during construction and Avoidance and Minimization Measure **NC-18 (NES BIO-20)** would maintain undercrossing functionality at the Temescal Wash during construction. These measures are consistent with general MSHCP avoidance and minimization requirements for covered projects.

Full mitigation of potential direct and indirect impacts on mountain lions would be provided through consistency with the MSHCP. Implementation of the avoidance and minimization measures, along with all other measures provided in this document, provides full consistency with the MSHCP for mountain lions. No additional measures or mitigation beyond those required by the MSHCP would be necessary.

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2.4.6 Invasive Species

2.4.6.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.4.6.2 Affected Environment

Unless otherwise noted, the information from this section is based upon the September 2023 Natural Environment Study (NES) prepared for the Project (Caltrans 2023).

Nonnative invasive plants invade natural communities in California and can outcompete and displace native plants that many native wildlife species depend on for food and cover. Invasive plants are a leading cause of declines in native plant and animal numbers, and are a factor in federal Endangered Species Act listings. They also increase wildfire and flood danger and diminish productive rangeland and timberland. Nonnative invasive animal species compete with native wildlife for limited resources and have the potential to displace, remove resources for, or consume native wildlife and can lead to population declines and potentially extinction of native plants and animals, lower biodiversity, and altered habitats for considerable time periods.

During the field surveys conducted for the Project, all plant species observed were recorded, and a list was compiled. Included in the floral list are species classified as invasive by the California Invasive Plant Council (Cal-IPC) as High, Moderate, or Limited on the Cal-IPC plant inventory.

Exotic plant species exist within the nonnative plant communities, as well as within patches of native plant communities, landscaped areas, and in areas that have been disturbed by human uses throughout the Biological Study Area (BSA). Exotic species are typically more numerous in disturbed and ruderal areas. Based on the Cal-IPC classification, 40 species of plants observed within the BSA are classified as invasive exotic plant species (Table 2.4.6-1). Six of these are ranked as high, 18 as moderate, and 16 as limited. Invasive species that have severe ecological effects are given a rating of High by Cal-IPC.

Table 2.4.6-1. Cal-IPC Classified Invasive Species Observed within the BSA

Scientific Name	Common Name	Cal-IPC Rating
Arundo donax	Giant reed	High
Bromus madritensis ssp. *rubens*	Red brome	High
Centaurea solstitialis	Yellow starthistle	High
Oncosiphon piluliferum	Stinknet	High
Tamarix parviflora	Smallflower tamarisk	High
Tamarix ramosissima	Saltcedar	High
Ailanthus altissima	Tree of heaven	Moderate
Avena barbata	Slender wild oat	Moderate
Avena fatua	Wild oat	Moderate
Brassica nigra	Black mustard	Moderate
Bromus diandrus	Ripgut grass	Moderate
Centaurea melitensis	Tocalote	Moderate
Cynodon dactylon	Bermuda grass	Moderate
Festuca myuros	Rattail fescue	Moderate
Festuca perennis	Rye grass	Moderate
Ficus carica	Edible fig	Moderate
Hirschfeldia incana	Shortpod mustard	Moderate
Hordeum murinum	Wall barley	Moderate
Lythrum hyssopifolia	Grass poly	Moderate
Myoporum laetum	Ngaio tree	Moderate
Nicotiana glauca	Tree tobacco	Moderate
Oxalis pes-caprae	Bermuda buttercup	Moderate
Schinus terebinthifolius	Brazilian pepper tree	Moderate
Washingtonia robusta	Mexican fan palm	Moderate
Bromus hordeaceus	Soft chess	Limited
Cotula coronopifolia	Brass-buttons	Limited
Erodium cicutarium	Redstem filaree	Limited
Eucalyptus camaldulensis	Red gum	Limited
Eucalyptus globulus	Blue gum	Limited
Medicago polymorpha	California burclover	Limited
Mesembryanthemum nodiflorum	Slender-leaved ice plant	Limited
Olea europaea	Olive	Limited
Raphanus sativus	Radish	Limited
Ricinus communis	Castorbean	Limited
Robinia pseudoacacia	Black locust	Limited
Rumex crispus	Curly dock	Limited
Salsola tragus	Prickly Russian thistle	Limited

Scientific Name	Common Name	Cal-IPC Rating
Schinus molle	Pepper tree	Limited
Schismus barbatus	Mediterranean schismus	Limited
Sisymbrium irio	London rocket	Limited

Source: Cal-IPC 2021

Seven nonnative and/or invasive wildlife species were observed (not including domestic animals) and documented within the BSA during field studies. Table 2.4.6-2 summarizes the invasive wildlife detected within the BSA.

Table 2.4.6-2. Invasive Wildlife Species Observed within the BSA

Scientific Name	Common Name
Procambarus clarkii	Red swamp crayfish
Lithobates catesbeianus	American bullfrog
Xenopus laevis	African clawed frog
Columba livia	Rock pigeon
Passer domesticus	House sparrow
Streptopelia decaocto	Eurasian collared-dove
Sturnus vulgaris	European starling

2.4.6.3 Environmental Consequences

Invasive plant and animal species are known for their propensity to invade and negatively affect natural ecosystems. Seeds of invasive plant species can be transported to natural open space areas through a variety of mechanisms such as wind, wildlife, vehicles, imported soils, and landscaping. Recurring fires can encourage the establishment of colonial invasive species, as can some forms of routine land disturbance (e.g., disking, fire breaks). Invasive plant species can have profound impacts on native vegetation communities, removing or diminishing the value of required habitat for native plants and animals. Invasive animal species may dominate habitat otherwise available to native species and may prey on native species, which can have substantial effects on native wildlife populations. Therefore, a need exists to identify and recommend measures that avoid and/or reduce further transport of invasive species into natural open space areas. Because this Project has a federal nexus, EO 13112 is applicable and the Project must comply with its requirements, which state that federal agencies are required to prevent the introduction and spread of invasive species and to support efforts to eradicate and control invasive species that are established.

Build Alternative

Temporary Impacts

Any impacts resulting from the introduction of invasive species, should they occur, are considered permanent impacts and are discussed under the *Permanent Impacts* heading below.

Permanent Impacts

The Project is expected to disturb the ground and remove both nonnative and native vegetation. During construction activities, construction vehicles may transport invasive plant species from past work sites to the BSA, or between work areas within the Project limits of disturbance. Post-construction bare ground can serve as a breeding ground for invasive plant species. There is potential for adverse effects on natural open spaces from the introduction of invasive species, and potential impacts could be severe. However, Avoidance and Minimization Measures **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-5 (NES BIO-5)**, **NC-10 (NES-BIO-10)**, **NC-12 (NES-BIO-12)**, and **NC-14 (NES BIO-14)** and Mitigation Measure **NC-17 (NES BIO-17)** in Section 2.4.1, *Natural Communities*, would reduce any potential indirect impacts from the introduction of invasive species during construction of the Project, which would be expected to have minimal effects on biological resources.

In compliance with the EO 13112 and guidance from FHWA, the landscaping and erosion control included in the Project would not use species listed as invasive. None of the species on the California list of invasive species is used by the California Department of Transportation for erosion control or landscaping. All equipment and materials would be inspected for the presence of invasive species and cleaned if necessary. In areas of particular sensitivity, extra precautions would be taken if invasive species are found in the construction areas or in the right of way. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

No-Build Alternative

Under the No-Build Alternative, the Project would not be implemented. Therefore, there would be no new or additional impacts related to the introduction of invasive species to open space beyond those that would be expected to occur from the existing facility.

2.4.6.4 Avoidance, Minimization, and/or Mitigation Measures

To ensure that the Project does not promote the introduction of invasive species to open space within the BSA, Avoidance and Minimization Measures **NC-2 (NES BIO-2)**, **NC-3 (NES BIO-3)**, **NC-5 (NES BIO-5)**, **NC-10 (NES-BIO-10)**, **NC-12 (NES-BIO-12)**, and **NC-14 (NES BIO-14)** and Mitigation Measure **NC-17 (NES BIO-17)** described in Section 2.4.1, *Natural Communities*, would be implemented for the Project.

2.5 CUMULATIVE IMPACTS

2.5.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the Project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts on resources in the Project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the Project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR) Section 1508.7.

2.5.2 Methodology

The cumulative impact analysis methodology utilized was based on the eight-step process set forth in the California Department of Transportation (Caltrans) Standard Environmental Reference Guidance for Preparers of Cumulative Impact Analysis (Caltrans 2005). The eight-step process is as follows:

- Identify resources to be analyzed.
- Define the study area for each resource (i.e., Resource Study Area [RSA]).
- Describe the current health and historical context for each resource.
- Identify direct and indirect impacts of the proposed project.
- Identify other reasonably foreseeable actions that affect each resource.
- Assess potential cumulative impacts.

- Report results.
- Assess the need for mitigation, if needed.

2.5.3 Resources Excluded from Cumulative Impacts Analysis

If a project would not result in a direct or indirect impact on a resource, it would not contribute to a cumulative impact on that resource and need not be evaluated with respect to potential cumulative impacts. Similarly, CEQA requires analysis of potential environmental impacts that are individually limited but cumulatively considerable. CEQA does not require an analysis of incremental effects that are not cumulatively considerable, nor is there a requirement to discuss impacts that do not result in part from the project evaluated. The following resources are excluded from the cumulative impacts analysis for the reasons provided above.

- Coastal zone
- Wild and scenic rivers
- Farmlands and timberlands
- Relocations and property acquisitions
- Parks and recreation
- Growth
- Community character and cohesion
- Environmental justice
- Equity
- Utilities and emergency services

2.5.4 Resources Evaluated for Cumulative Impacts

The following discussion of potential cumulative impacts is presented by environmental resource topic. The following resources are evaluated in this section for cumulative impacts: traffic and transportation/pedestrian and bicycle facilities, visual/aesthetics, cultural resources, hydrology and floodplains, water quality, geology, paleontology, hazardous waste/materials, air quality, climate change, noise, energy, natural communities, wetlands and other waters, plant species, animal species, threatened and endangered species, and invasive species.

The planned, completed, and proposed projects considered in this analysis are presented in Table 2.5-1 and shown on Figure 2.5-1. In general, most of the projects listed are infill projects, and the listed transportation projects would improve existing facilities rather than construct new facilities.

Table 2.5-1. Planned, Completed, and Proposed Projects in the Project Vicinity

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
1	I-15/Railroad Canyon Road and Franklin Interchange Project (Phase 2)	City of Lake Elsinore	Interstate (I-)15 and Franklin Street	• Construct new full interchange at I-15/ Franklin Street. • Add auxiliary lanes from Franklin Street Interchange to Main Street Interchange and from Franklin Street Interchange to Railroad Canyon Road Interchange. • Widen Main Street and realign/widen southbound on-ramps from 1 to 2 lanes. • Construct new frontage road on the east side of 1-15.	**Proposed:** Final design of Franklin Interchange was initiated in April and is planned to be in construction by 2028. **Constructed:** Phase 1 (Railroad Canyon) was completed and open to the public in summer 2022.
2	Ashland Springs - 90 Condominium Units	City of Lake Elsinore	Southwest corner of Franklin Street and Avenue 6, APNs: 373-071-020, 021, 022, 023, 024, 025, 026, 027, 028	90 condominium units	**Constructed**

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
3	Eight-Unit Apartment Complex	City of Lake Elsinore	125 Heald Avenue (APN: 373-025-008)	6,839-square-foot, 8-unit apartment complex, laundry facility, trash enclosure, and related improvements	**Proposed:** This project was approved in 2019: Residential Design Review No. 2015-03.
4	Camino Del Norte Extension	City of Lake Elsinore	Camino Del Norte and Canyon Estates Drive, south of Main Street	Extension of Camino Del Norte from Main Street to Franklin Street, realignment of Canyon Estates Drive, and extension of Canyon View Drive and Sagecrest Drive	**Constructed:** March 2020
5	Boos Commercial Development Main Street	City of Lake Elsinore	East side of Main Street between Flint Street and I-15 southbound on-ramp; APNs: 377-243-002, 003, 004, 005, 006, and 007	Commercial center	**Constructed:** 2021
6	I-15/Main Street Interchange	City of Lake Elsinore	I-15 Main Street interchange	Interchange improvements	**Under Construction:** May 2024
7	Commercial construction on Minthorn Street	City of Lake Elsinore	APN: 377220024	Not available	**Under Construction**

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
8	Pennington Industrial Project	City of Lake Elsinore	Southeast corner of Chaney Street and Minthorn Street, APN: 377-160-014	Construct 3 industrial buildings that are 91,140 square feet in total, with 167 parking spaces.	**Constructed:** 2021
9	Fairway Business Park II	City of Lake Elsinore	445–495 Birch Street	Development of 6 industrial buildings ranging in size from 8,154 to 18,411 square feet (70,705 square feet total)	**Constructed:** 2022
10	Lake Elsinore Honda	City of Lake Elsinore	18450 Collier Avenue, APNs: 377-080-053, 377-080-057, and 377-080-079	53,425-square-foot single-story building	**Constructed:** 2020
11	Commercial Development, Southeast corner of Collier Avenue and Central Avenue	City of Lake Elsinore	Miguel's Jr. (18320 Collier Avenue) and commercial building (18330 Collier Avenue, Suite 102); APN: 377-081-004	Commercial building and a restaurant	**Constructed**

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
12	La Quinta Inn & Suites	City of Lake Elsinore	Northeast corner of Dexter Avenue and Third Street; APN 377-090-036	36,664-square-foot, 4-story, 64-room hotel on an approximately 1.05-acre site	**Currently vacant site in entitlement stage**
13	Wasson Canyon	City of Lake Elsinore	North, south, and east of 3rd Street; west of Diana Lane	TTM No. 37381 is a subdivision of 19.54 acres into 73 single-family residential lots. TTM No. 37382 is a subdivision of 55.06 acres into 199 single-family residential lots.	**Proposed:** 1-year extension of time to May 14, 2024 for TTM Nos. 37381 and 37382
14	I-15/Central Avenue Interchange	City of Lake Elsinore	I-15/State Route (SR-)74 (Central Avenue), between 1,000 feet west of Collier Avenue to Riverside Street	Add northbound loop off-ramp with a deceleration lane, realign northbound entry and exit ramps, add southbound acceleration/ deceleration lanes, add northbound deceleration lane, widen SR-74 from Riverside Drive to Central Avenue from 2 to 4 through lanes and from Collier Avenue to Cambern Avenue from 6 to 8 through lanes, and construct new Riverside Avenue Overcrossing and SR-74 PM 15.5.	**Proposed:** Construction is anticipated in 2025–2026.

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
15	Kassab Travel Center	City of Lake Elsinore	Northwest corner of Collier Avenue and Riverside Drive	8,360-square-foot convenience store with 3 quick-serve restaurants, 2 covered gas dispensing areas totaling 6,092 square feet, and a freestanding 2,543-square-foot fast food restaurant with a drive-through on 2.39 acres	**Proposed:** This project was approved by City Council on July 14, 2020.
16	Nichols Ranch Specific Plan	City of Lake Elsinore	APNs 389-200-(038, 039); 389-210-(008, 032, 034, 036) and portions of current APNs 289-200-035 and 289-200-036	Master-planned, low-medium–density residential community with commercial uses on an approximately 72.5-acre site	**Adopted:** This project was adopted by City Council June 11, 2019.
17	Lake Street Storage	City of Lake Elsinore	APN: 390-130-018	3,528-square-foot service station with convenience store, fuel canopy with 6 fuel pumps; new 90,000-square-foot, single-story indoor RV and boat storage facility, with 24,000 square feet of mezzanine and 192 surface RV parking spaces partially covered with 3 canopies with	**Under Construction**

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
				solar panels on 10.63 net acres	
18	PP26403 Self Storage facility	County of Riverside	Construction off Temescal Canyon, south of Hostettler Road	Storage facility	**Under construction**
19	Modular Building Fabricator	County of Riverside	North side of Concordia Ranch Road, east of Temescal Canyon Road	Construction/assembly of modular buildings	**Operational**
20	Horsethief Canyon Road (Interchange)	County of Riverside	Riverside County	Reconstruct/widen interchange from 2 to 4 lanes and reconstruct ramps.	**Proposed:** RTP# 3M0729; projected completion year 2035
21	Residential Development - TTM 37155	County of Riverside	South of Kingbird Drive, east of Towhee Lane, and west of Indian Truck Trail; APN: 290-150-004	53.7 acres into 85 single-family residential lots and 6 open space lots for 2 detention basins, 3.55-acre park area, and a 1,347-square-foot passive park	**Proposed:** TTM 37155, Change of Zone No. 1800010

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
22	Toscana Village Center	County of Riverside	Northwest of Indian Truck Trail, southwest of Temescal Canyon Road, northeast of I-15; APNs: 290-130-003, -004, -005, -006, -052, -053, -085, -086	Six buildings consisting of fast-food restaurants, a sit-down restaurant, office/retail, a daycare center, and a tire store	**Approved:** Approved by County Board of Supervisors on January 29, 2019; unknown when construction will begin
23	Temescal Village (Condo Development)	County of Riverside	North of Temescal Canyon Road, west of I-15, east of Wrangler Way, and south of Mojeska Summit Road; APNs: 290-060-024, -025.	Condominiums	**Proposed:** Approved June 5, 2018, by the Board of Supervisors Hearing on GPA01203, CZ07913, TR37153, PP26209
24	Tom's Farms Expansion Project	County of Riverside	Southwest of I-15, north of Squaw Mountain Road, east of Temescal Canyon Road	A phased expansion of the existing Tom's Farms facility to include an 8,559-square-foot banquet building, 1,800-square-foot multipurpose facility, 81,573-square-foot retail/	**Proposed**

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
				commercial buildings, 6,790-square-foot bakery with drive-through, 12,844-square-foot greenhouse, 6,850-square-foot barn, 4,400-square-foot amusement park building, and 8,198-square-foot water park	
25	Temescal Canyon Road (Interchange)	County of Riverside	Riverside County	Reconstruct/widen Temescal Canyon interchange from 2 to 4 lanes and reconstruct ramps.	**Proposed:** RTP# 3M0728; projected completion year 2040
26	The Hydro-Conduit Site	County of Riverside	North, south, and east of Dawson Canyon Road and west of Temescal Canyon Road and I-15	Warehouse buildings ranging from 36,500 to 227,400 square feet, and retail buildings range from 2,900 to 4,300 square feet, including a gas station with convenience store and car wash, a fueling position canopy, and 2 drive-through restaurants	**Proposed**
27	Knabe Road Commercial Center	County of Riverside	Northeast of Knabe Road, south of Weirick Road, and west of I-15	2,695-square-foot convenience store, 2,462-square-foot fast-food restaurant, and a gas station	**Proposed**

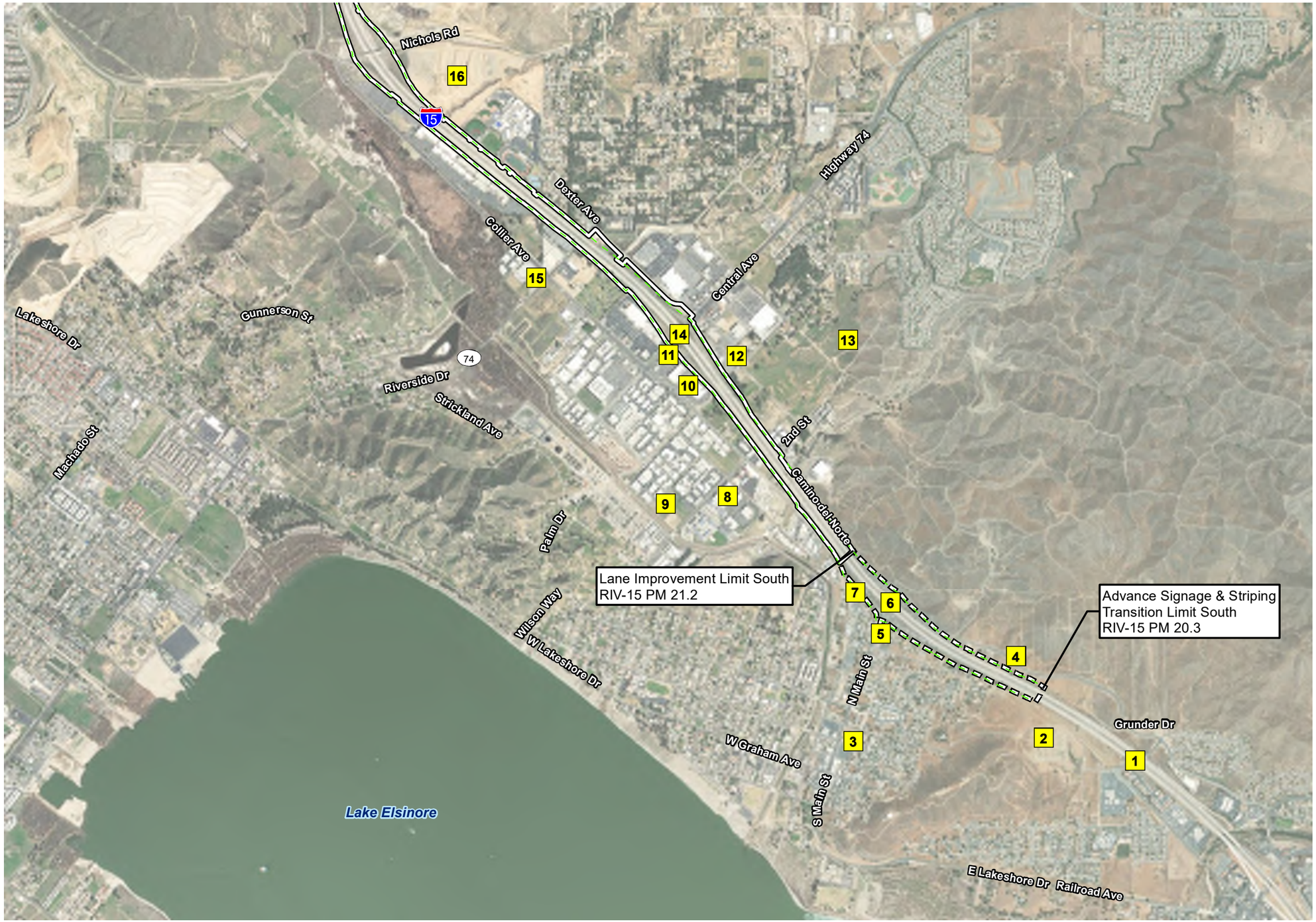
Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
28	Seven Oaks	County of Riverside	Southwest corner of Temescal Canyon Road and Dos Lagos Drive	Gas station, car wash, convenience store, and 2 drive-through restaurants on 20.24 acres	**Constructed**
29	Interstate 15 Interim Corridor Operations Project	County of Riverside	I-15 from Cajalco Road in Corona to Weirick Road in Temescal Valley	Add a non-tolled lane on southbound I-15 from the Cajalco Road On-Ramp to the Weirick Road Off-Ramp, next to the outer shoulder.	**Constructed:** 2022
30	Arantine Hills	City of Corona	Southwest of I-15, south of Cajalco Road	A specific plan that proposes 1,621 residential units on 129 acres, 38 acres of general commercial development, 40 acres of mixed-use development, 37 acres of open space, and 15 acres of park land	**Proposed:** Precise Plan (PP16-012) and a merchant builder map (TTM 37030) approved for the first phase of development; under construction. Second phase is under plan check. City approved 12/19/2018. General Plan Amendment (GPA2018-0001)

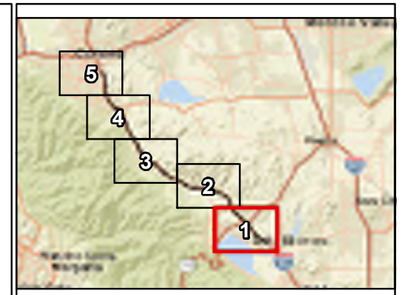
Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
					with Specific Plan Amendment (SPA2018-0001), Parcel Map (PM 37036), and amendment to the Development Agreement (AEC724, DA15-001).
31	Cajalco Road Widening	County of Riverside	Cajalco Road between Temescal Canyon Road to the west and I-215 to the east	Widen Cajalco Road between Temescal Canyon Road and I-215.	**Proposed:** Final design anticipated to begin in fall 2025.
32	Woodspring Suites Hotel	City of Corona	South side of Tom Barnes Street, east of I-15	48,413-square-foot, 4-story hotel containing 122 rooms on 5.02 acres	**Constructed** 2023
33	Latitude Business Park	City of Corona	East of I-15, at the northwest corner of Tom Barns Street and Temescal Canyon Road	15 parcels totaling 74.49 acres for the development of 13 industrial buildings	**Constructed** 2022

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
34	I-15 Express Lanes Project	County of Riverside	I-15 from Cajalco Road to SR-60	Addition of two tolled Express Lanes to I-15 in each direction, a distance of approximately 15 miles	**Constructed** 2021
35	Foothill Center	City of Corona	Corner of Foothill Parkway and I-15	82,870-square-foot commercial center consisting of a service station, 2 drive-through restaurant pads, 2 dine-in pads, 24,000-square-foot in-line tenant building, and a 4-story, 119-room hotel	**Constructed** 2023
36	Temescal Canyon Corridor—Ontario Avenue Segment	County of Riverside	Ontario Avenue from El Cerrito Road north 0.6 mile to State Street	Road widening from 2 to 4 lanes	**Under construction:** Completion is expected in 2026.
37	Ontario Avenue Widening	City of Corona	Ontario Avenue from California Avenue to State Street	Widen the north side of Ontario Avenue to increase the vehicle capacity	**Under construction:** Completion is expected in 2025.
38	Car Wash	City of Corona	South of Magnolia Avenue, west of Downs Way	10,000-square-foot car wash	**Proposed:** DPR2018-0019, under environmental review and design

Figure 2.5-1 Reference No.	Name	Jurisdiction	Location	Proposed Uses	Status
39	Temescal Canyon Corridor–Dawson Canyon Widening Segment	City of Corona	Dos Lagos Drive to Dawson Canyon Road	Widen the roadway to 4 lanes between Dos Lagos Drive and Dawson Canyon Road.	**Under construction**
40	Cajalco Road Widening and Safety Enhancement Project	City of Corona	Harvill Avenue to Temescal Canyon Road	Widen and realign Cajalco Road between Temescal Canyon Road and I-215.	**Proposed:** Under environmental review
41	Ontario Avenue Widening/Complete Streets Project	City of Corona	Ontario Avenue from Lincoln Avenue to Buena Vista Avenue	Widen Ontario Avenue; install ADA-compliant sidewalks and ramps, curbs and gutters, and a Class II bike lane along the eastbound direction of travel.	**Proposed:** Under environmental review and design; expected to be constructed in 2025

Source: County of Riverside n.d.; City of Lake Elsinore n.d.a., n.d.b., n.d.c.; RCTD n.d.
ADA = Americans with Disabilities Act; APN = Assessor's Parcel Number; No. = number; PA&ED = Project Approval and Environmental Document; RV = recreational vehicle; SR = State Route; TTM = Tentative Tract Map





Existing Right-of-Way (2008)

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Future Development Projects

1 - I-15/Railroad Canyon Road & Franklin Interchange Project (Phase 2)

2 - Ashland Springs - 90 Condominium Units

3 - Eight Unit Apartment Complex

4 - Camino Del Norte Extension

5 - Boos Commercial Development

6 - I-15/Main Street Interchange

7 - Commercial construction on Minthorn

8 - Pennington Industrial Project

9 - Fairway Business Park II

10 - Automobile Sales and Service Facility

11 - Commercial Development – SE corner of Collier and Central

12 - La Quinta Inn & Suites

13 - Wasson Canyon

14 - I-15/Central Avenue Interchange

15 - Kassab Travel Center

16 - Nichols Ranch Specific Plan

N

0 1,000 2,000 Feet

1:24,000

Figure 2.5-1, Sheet 1
Planned, Completed, and Proposed Projects
Interstate 15 Express Lanes Project Southern Extension

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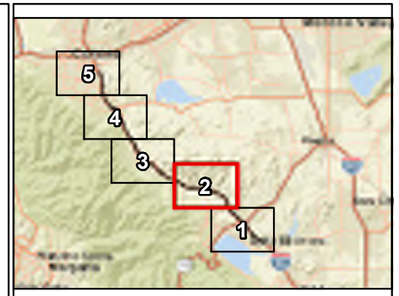

Existing Right-of-Way (2008)

Project Limits

Limits of Disturbance (PM 21.2/38.1)

Future Development Projects

17 - Lake Street Storage

18 - PP26403 - self storage facility (under construction)

19 - Modular Building Fabricator

20 - Horsethief Canyon Road (Interchange)

N

0 1,000 2,000 Feet

1:24,000

Figure 2.5-1, Sheet 2
Planned, Completed, and Proposed Projects
Interstate 15 Express Lanes Project Southern Extension

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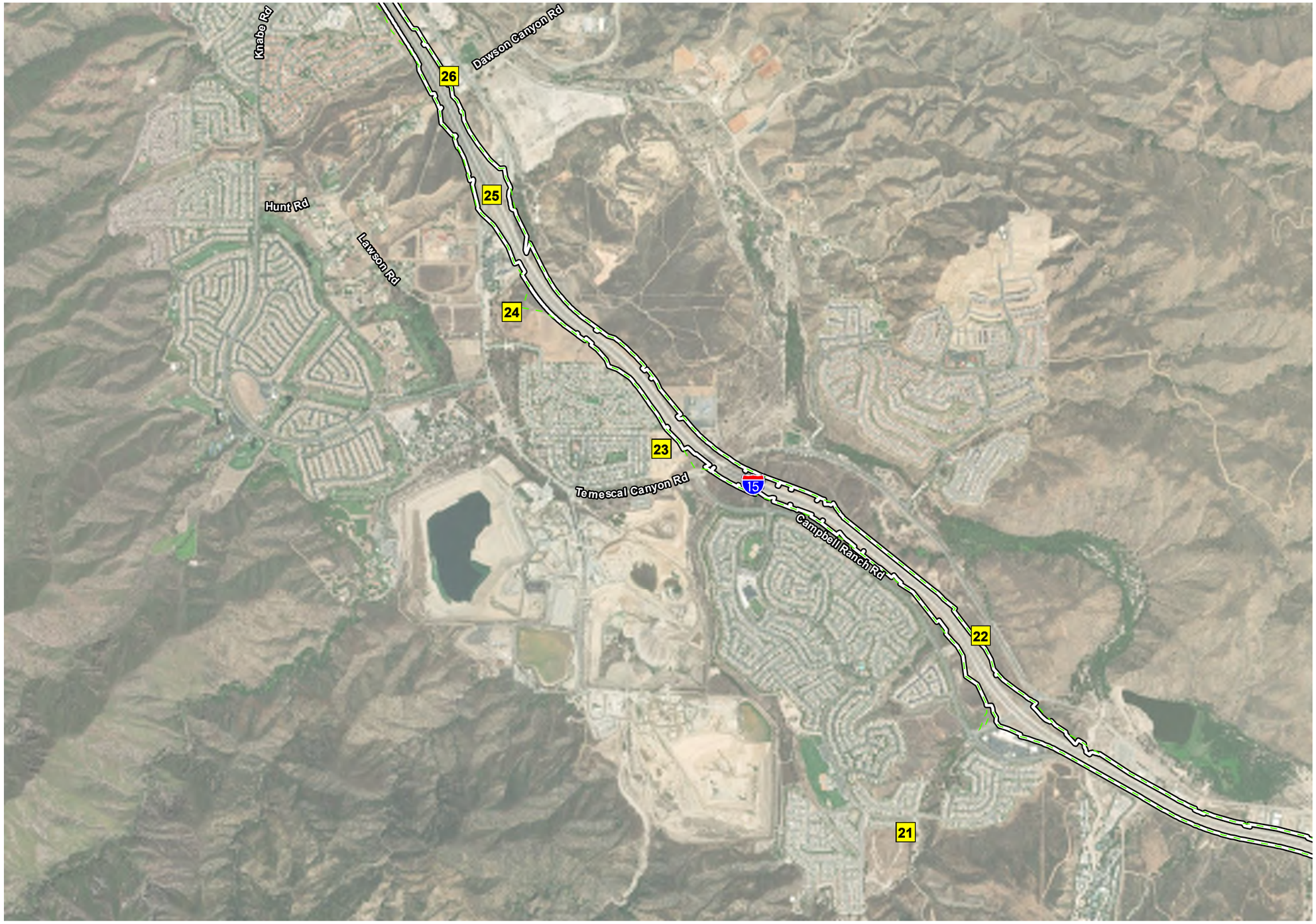

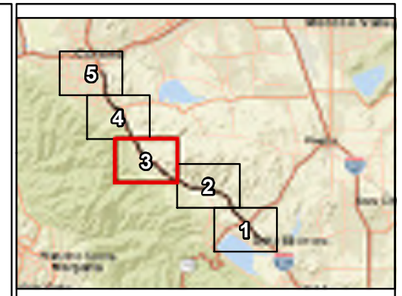

Existing Right-of-Way (2008)

Project Limits

Limits of Disturbance (PM 21.2/38.1)

Future Development Projects

21 - Residential Development - TTM 37155

22 - Toscana Village Center

23 - Temescal Village (condo development)

24 - Tom's Farms Expansion Project

25 - Temescal Canyon Road (Interchange)

26 - The Hydro-Conduit Site

N

0 1,000 2,000 Feet

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Figure 2.5-1, Sheet 3
Planned, Completed, and Proposed Projects
Interstate 15 Express Lanes Project Southern Extension

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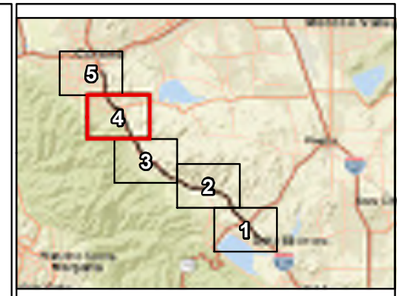

Existing Right-of-Way (2008)

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Future Development Projects

27 - Knabe Road Commercial Center

28 - Seven Oaks

29 - Interstate 15 Interim Corridor Operations Project

30 - Arantine Hills

31 - Cajalco Road Widening

32 - Woodspring Suites Hotel

33 - Latitude Business Park

34 - I-15 Express Lanes Project

35 - Foothill Center

36 - Temescal Canyon Corridor—Ontario avenue Segment

39 - Temescal Canyon Corridor-Dawson Canyon Widening Segment

40 - Cajalco Road Widening and Safety Enhancement Project

N

0 1,000 2,000 Feet

1:24,000

Figure 2.5-1, Sheet 4
Planned, Completed, and Proposed Projects
Interstate 15 Express Lanes Project Southern Extension

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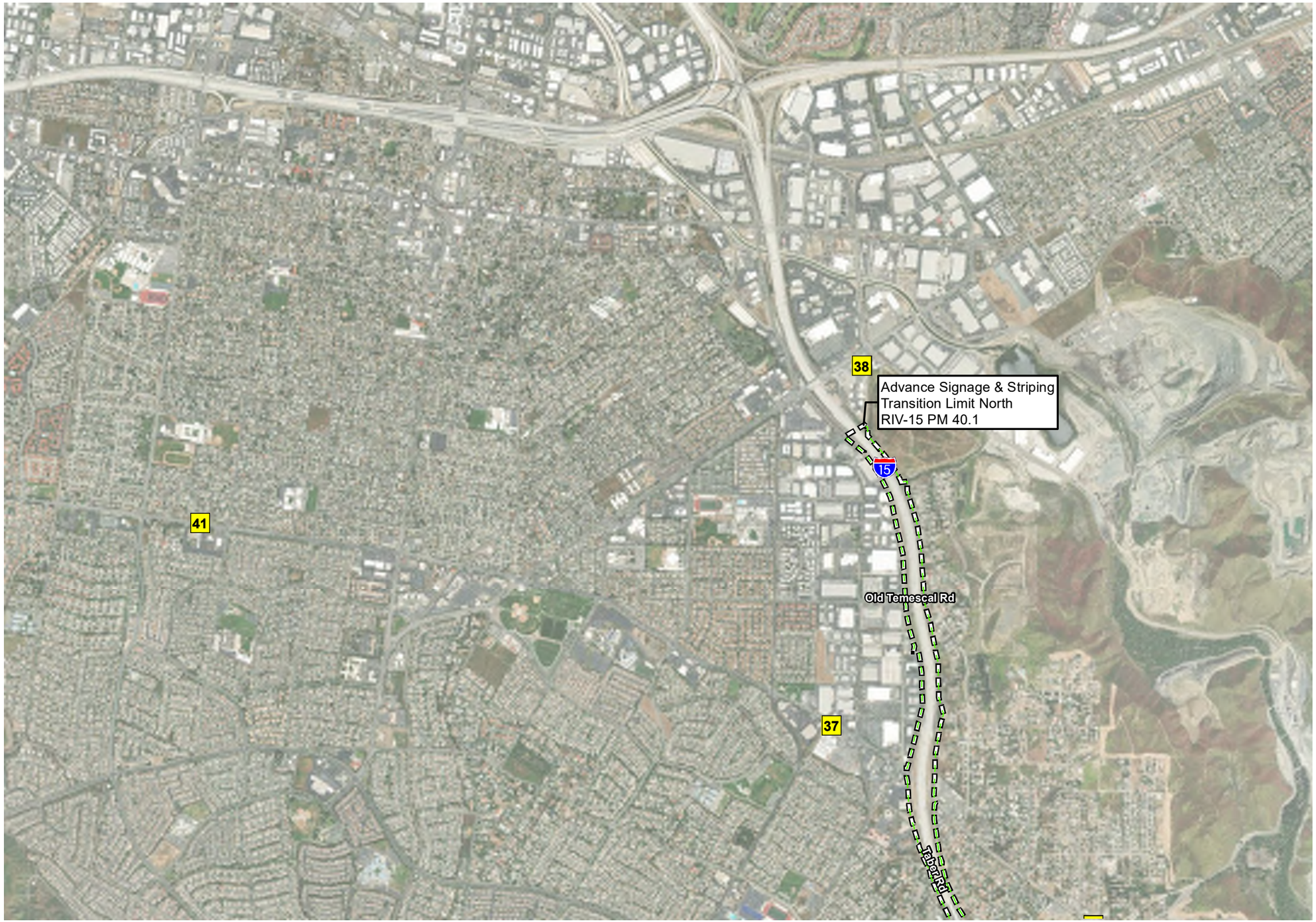

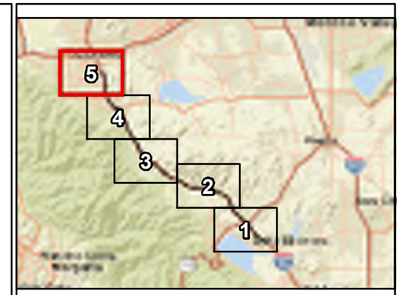

Existing Right-of-Way (2008)

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Future Development Projects

36 - Temescal Canyon Corridor—Ontario avenue Segment

37 - Ontario Avenue Widening

38 - Car wash

41 - Ontario Avenue Widening/Complete Streets Project

N

0 1,000 2,000 Feet

1:24,000

Figure 2.5-1, Sheet 5
Planned, Completed, and Proposed Projects
Interstate 15 Express Lanes Project Southern Extension

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Table 2.5-2 identifies the RSA that corresponds to the cumulative analysis for each included resource. A cumulative impact analysis reviews the resources in the Project vicinity as a whole; as a result, the RSAs in the context of the cumulative analysis are often different than the study areas defined in the preceding sections of the EIR/EA.

Table 2.5-2. Resource Study Areas Included in Cumulative Impact Analysis

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
Land use	Temporary impacts on access of land use during construction	Communities within 0.5 mile of the Project limits, including adjacent Census Tracts in the Cities of Corona and Lake Elsinore, and unincorporated areas of Temescal Valley and Alberhill. (Project limits are defined as the Project footprint and the area of direct impacts where construction and operation activities under the Project have the potential to directly affect surrounding communities.)
Traffic and transportation/ pedestrian and bicycle facilities	Temporary impacts on traffic and circulation	22 miles on I-15 generally between the Franklin Street Overcrossing (to the south) and the I-15/Hidden Valley Parkway Interchange (to the north). The traffic study area also includes on- and off-ramps at the following 13 local interchanges: Main Street, SR-74 (Central Avenue), Nichols Road, Lake Street, Indian Truck Trail, Temescal Canyon Road, Weirick Road, Cajalco Road, El Cerrito Road, Ontario Avenue, Magnolia Avenue, SR-91, and Hidden Valley Parkway.
Visual/ aesthetics	Temporary and permanent impacts on visual and aesthetic resources	The area within 0.5 mile of the Project limits
Cultural resources	Temporary and permanent impacts on cultural resources	Area of Potential Effects
Hydrology and floodplains	Temporary and permanent impacts on hydrology and floodplains	Santa Ana River Hydrologic Unit (HU 801.0) and the Terra Colta (801.35), Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) hydrologic sub-areas

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
Water quality	Temporary and permanent impacts on the watershed	Santa Ana River Hydrologic Unit (HU 801.0) and the Terra Colta (801.35), Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) hydrologic sub-areas
Geology/soils/ seismic/ topography	Temporary and permanent impacts on soils and geologic conditions	Regional and local geology
Paleontology	Potential for destruction or damage on paleontological resources	Properties within and immediately adjacent to the Project limits
Hazardous waste/materials	Potential to encounter unexpected or unknown contaminants during construction-related soil disturbance activities	Project limits and a 300-foot buffer to account for adjoining properties
Air quality	Temporary impacts on air quality during construction and permanent criteria pollutant emission impacts during operations	South Coast Air Basin (SCAB)
Climate change	Permanent increase in operational GHG emissions	South Coast Air Basin (SCAB)
Noise	Temporary and permanent impacts from noise during construction and operation	500-foot buffer around Project limits
Energy	Temporary and permanent impacts from energy during construction and operation	Project construction limits, including several miles upstream and downstream of the Project limits
Natural communities	Temporary and permanent impacts on natural communities	Biological Study Area (BSA) and Western Riverside County Multiple Species Habitat Conservation Plan

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
		(MSHCP) areas in the Cities of Corona and Lake Elsinore, and in unincorporated areas of Temescal Valley and Alberhill. (MSHCP conserved lands occur within the BSA, just north of the City of Lake Elsinore along the western and eastern sides of I-15; smaller parcels are west of I-15 at the Temescal Wash crossing and between Corona Lake and I-15. Conservation easements under the MSHCP occur at the BSA near the Shops at Sycamore Creek complex, west of I-15.)
Wetlands and other waters	Temporary and permanent impacts on wetlands and other waters	Bedford Wash-Temescal Wash (Hydrologic Unit Code [HUC] 180702030604), Dawson Canyon-Temescal Wash (HUC 180702030602), Arroyo del Toro-Temescal Wash (HUC 180702030601), and Lake Elsinore (HUC 180702020308) subwatersheds of the Santa Ana River Watershed (HUC 18070105)
Plant species	Temporary and permanent impacts on rare plant species	BSA and Western Riverside County MSHCP areas in the Cities of Corona and Lake Elsinore, and in the unincorporated areas of Temescal Valley and Alberhill. (MSHCP conserved lands occur within BSA, just north of the City of Lake Elsinore along the western and eastern sides of I-15; smaller parcels are west of I-15 at the Temescal Wash crossing and between Corona Lake and I-15. Conservation easements under the MSHCP occur at the BSA near the Shops at Sycamore Creek complex, west of I-15.)
Animal species	Temporary and permanent impacts on special-status animal species	BSA and Western Riverside County MSHCP areas in the Cities of Corona and Lake Elsinore, and in unincorporated areas of Temescal Valley and Alberhill. (MSHCP conserved lands occur within BSA, just north of the City of Lake Elsinore along the western and eastern sides of I-15; smaller parcels are west of

Resource Area	Reason Included in Cumulative Analysis	Resource Study Area
		I-15 at the Temescal Wash crossing and between Corona Lake and I-15. Conservation easements under the MSHCP occur at the BSA near the Shops at Sycamore Creek complex, west of I-15.)
Threatened and endangered species	Temporary and permanent impacts on threatened and endangered species	BSA and MSHCP areas in the Cities of Corona and Lake Elsinore, and in unincorporated areas of Temescal Valley and Alberhill. (MSHCP conserved lands occur within BSA, just north of the City of Lake Elsinore along the western and eastern sides of I-15; smaller parcels are west of I-15 at the Temescal Wash crossing and between Corona Lake and I-15. Conservation easements under the MSHCP occur at the BSA near the Shops at Sycamore Creek complex, west of I-15.)
Invasive species	Potential for adverse effects during construction and post construction	BSA

2.5.4.1 Traffic and Transportation/Pedestrian and Bicycle Facilities

Within the Project limits, I-15 traverses developed and undeveloped areas of the City of Lake Elsinore, unincorporated areas of Riverside County (including Temescal Valley area), and the City of Corona. It is a major regional connection between the southwest and northwest Riverside County communities. I-15 provides continuity for regular commuters traveling for work and school to Temecula and San Diego to the south, Riverside and San Bernardino County to the north, and Los Angeles County and Orange County to the west.

Existing traffic volumes often exceed current highway capacity along several segments of I-15 between SR-74 (Central Avenue) and El Cerrito Road. Because of forecasted population growth and the continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline, as discussed in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*.

Construction activities associated with the Project would temporarily affect traffic and circulation. Temporary 55-hour full ramp closures may be needed to complete ramp

widening improvements on I-15. In addition, the Project may periodically affect pedestrian and bicycle facilities during construction of the bridge widenings over local roadways. There is a potential for construction activities to occur at the same time between the Project and the listed projects in Table 2.5-1, which may lead to cumulative impacts on traffic operations during construction.

As discussed in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilitie*s, it is anticipated that access to pedestrian and bicycle facilities would be maintained during construction activities. If temporary closures to pedestrian and bicycle facilities are unexpectedly needed, then detour routes would be provided. Potential construction-related traffic and circulation impacts, and impacts on pedestrian and bicycle facilities, would be minimized through implementation of a comprehensive TMP, included as Standard Project Measure **TR-1**, in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*. The TMP would be prepared to minimize motorist delays and impacts on pedestrians and bicyclists when performing work activities. In addition, Project construction is not anticipated to affect existing emergency or transit services within the Project limits; however, the TMP would ensure that such impacts are minimized. The Project's temporary impact on traffic would not be substantial.

Similar to the Project, other projects, including those listed in Table 2.5-1, are required to minimize and reduce impacts on traffic and transportation facilities during construction activities. Therefore, the Project, when combined with other projects, would not result in cumulative impacts related to traffic and transportation facilities.

In Opening Year (2030), the Build Alternative is projected to improve traffic operation level of service (LOS) where the number of freeway mainline and ramp locations during the AM and PM peak hour operating at LOS E or worse would be reduced by approximately 8 percent when compared to the No-Build Alternative (Table 2.2.8-18). The Build Alternative is expected to serve approximately 2,089 more vehicles during the peak period, particularly those making longer trips, and reduce overall vehicle delay within the traffic study limits by approximately 4.4 percent (Table 2.2.8-18). When comparing the projected volume served and total distance traveled, it is expected that the Build Alternative would serve trips with longer lengths than the No-Build Alternative.

In Design Year (2050), the Build Alternative is projected to degrade traffic operation LOS at approximately 14 percent of the freeway mainline and ramp locations during the AM and PM peak hours when compared to the No-Build Alternative (Table 2.2.8-24), primarily because the Project is projected to shift the bottlenecks downstream by providing additional throughput capacity (projected to serve 3,646 more vehicles during the peak hour). With the increased capacity that would be provided on the freeway system associated with the express lanes under the Build Alternative, more demand is expected to occur and to be served. Similar to Opening Year (2030), the Build Alternative is projected to serve longer trip lengths on the freeway in Design Year (2050) because vehicles are expected to prefer to stay on I-15 rather than exit and divert to cut through or parallel local facilities. On average, trip lengths are projected to increase by 1.6 miles between the No-Build and Build Alternatives. The delay within the

traffic study area is expected to be reduced by 5.7 percent when accounting for local roadways. However, vehicle miles traveled (VMT) would increase under the Build Alternative as compared to the No-Build Alternative, resulting in worsened congestion in some localized areas.

The transportation system in the Southern California region consists of a modal network of roads and highways, public transit, and rail facilities. The transportation system is planned to support the region's economic needs as well as the demand for personal travel. The 2024–2050 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) lists several thousand transportation projects for meeting the increase in transportation demand and improving the region's mobility while, at the same time, meeting the goals for air quality and revitalizing the economy. The development of an extensive regional express lanes network is a key strategy in the 2024–2050 RTP/SCS that aims to improve travel time reliability, provide travel choice, and optimize existing freeway capacity within the Southern California Association of Governments (SCAG) region. Several tolled express lanes projects have already been completed in the Inland Empire, including the SR-91 Express Lanes in 2017 and the I-15 Express Lanes Project in 2021. In addition, the I-10 Corridor Project, which is sponsored by the San Bernardino County Transportation Authority, will also add express lanes to the freeway system and are anticipated to be completed in 2026. The addition of the Project would extend the I-15 Express Lanes an additional 14.5 miles in the Inland Empire.

As discussed in Section 2.2.8, the Build Alternative is not expected to result in substantial impacts relating to conflicts with the circulation system, roadway design hazards, and emergency access. Although VMT would increase under the Build Alternative as compared to the No-Build Alternative, Mitigation Measure **VMT-1** would be implemented to reduce VMT and the associated environmental impacts.

As part of Mitigation Measure **VMT-1**, Riverside County Transportation Commission (RCTC) is mitigating VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. As part of the Vehicle Miles Traveled Mitigation Program (VMTMP) RCTC is developing, RCTC will be launching the Riverside County Free Rail Pass Program. The approximately 2-year program would offer Metrolink passes to Riverside County residents starting in 2025 to increase the number of passenger rail riders within Riverside County. This program would help expand access to public transportation for disadvantaged and low-income populations and target travelers on the most congested corridors such as SR-91, SR-74, I-15, and I-215. The Metrolink passes will last for approximately 3–6 months each. These temporary free Metrolink passes would reduce the cost of using public transportation in order to attract new riders and encourage existing riders to take more trips. This program would help develop new lifelong commuting habits and contribute to VMT and GHG reduction. The program is designed to be in place for a minimum of 2 years, but could last up to 3 years depending on ticket distribution rates.

The program would allow riders to sign up through RCTC's existing Commuter Assistance website "IE Commuter"(https://www.iecommuter.org/rp2/Home/Home) and be issued free passes through Metrolink's Mobile Ticketing Application. For riders

without access to mobile devices, the program would provide promotional codes to purchase the passes at ticket vending machines. This would help expand access to public transportation for disadvantaged and low-income populations and reduce the financial barriers to trying public transportation.

In addition to the discounted Metrolink Pass program, RCTC will work with Riverside Transit Agency (RTA) to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses would be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project. Increased use of RTA bus service would promote travel mode shift, help address competing passenger and commercial traffic in the County of Riverside, and contribute to VMT reduction and improvement in air quality.

Other past, present, and reasonably foreseeable projects in the region would be required to meet standard requirements to provide transportation facilities that accommodate pedestrian, bicycle, and vehicle travel. Therefore, the Build Alternative, when considered with the projects identified in Table 2.5-1, could result in a VMT increase resulting in worsened congestion in some localized areas that are cumulatively considerable under NEPA or significant cumulative impacts under CEQA.

2.5.4.2 Visual/Aesthetics

The Project may result in travelers experiencing minor short-term visual impacts during construction from the presence of construction equipment. Viewsheds containing identified visual resources are not expected to be affected by the implementation of the Project because the overall visual character of the Project is considered low. Additionally, the design of the Build Alternative and other proposed or planned highway improvement projects along I-15 would be consistent with Caltrans highway landscape and design policies/best management practices (BMPs), reducing the potential for cumulative visual impacts to occur. The viewshed has already been substantially affected by I-15 and other area development. The Build Alternative would not substantially change the existing views of or from I-15, and impacts on visual quality would be low or neutral. In addition, Avoidance and Minimization Measures **AES-1** through **AES-4** would reduce or avoid any potential visual impacts during construction. Therefore, the Project would not contribute to cumulative adverse effects under NEPA, or have significant cumulative impacts under CEQA, related to visual resources.

2.5.4.3 Cultural Resources

The Advisory Council on Historic Preservation regulations, which govern implementation of Section 106 of the National Historic Preservation Act (Section 106), state that adverse effects on historic properties may include reasonably foreseeable effects that may occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5(a)(1)). Analysis of cumulative effects under Section 106 requires the consideration of past, present, and future projects that may result in a cumulative effect on historic properties.

There are four archaeological resources (P-33-000108, -000630, -001099, and -002992; with Cultural Studies Office [CSO] approval on January 27, 2023) and three Traditional Cultural Properties (TCPs) (Túu'uv [TCP-1], Qaxáalku Payómik [TCP 2], and Qaxáalku Kwíimik [TCP-3]; with CSO approval on March 10, 2022) within or adjacent to the Project Area of Direct Impact (ADI)/Area of Potential Effects (APE) that are assumed eligible for listing on the National Register of Historic Places (NRHP) for the purposes of the Project only. The cumulative contribution of the proposed direct and indirect Project impacts and effects on the four archaeological resources and the three TCPs is considered in the context of the APE and vicinity, which stretches from the City of Lake Elsinore through the unincorporated Riverside County community of Temescal Valley to El Cerrito Road in the City of Corona. The impacts of past and foreseeable projects in this area are combined with the potential Project effects on the archaeological sites and the TCPs to assess the Project's contribution to cumulative effects on the character-defining features of the properties.

P-33-000108 (CA-RIV-108)

Site P-33-000108 is outside of the Project ADI/APE; however, its proximity warrants analysis and an assumption of eligibility for the purposes of the Project in an abundance of caution to protect any intact portions of the site. The site has been assumed eligible for the purposes of the Project only with CSO approval on January 27, 2023. P-33-000108 is in an area that is relatively undisturbed physically except for a natural wash and a dirt road. As mentioned, the site is not within the Project ADI or APE, and the setting of the site has been substantially altered from earlier construction related to I-15 and the Temescal Canyon Road Off-Ramp. Direct impacts related to the Project would occur approximately 160 to 220 feet west of the site boundaries. The substantial portion of Project construction is to be conducted in previously disturbed areas, such as the median, or along the edges of the roadway. While previous projects may have affected features that would contribute to the site's potential eligibility for the NRHP, the Project is not expected to result in impacts on this site and, therefore, would not contribute to a cumulative adverse effect on the site.

P-33-000630 (CA-RIV-630)

Site P-33-000630 is outside of the Project ADI and APE. Because of the site's proximity to the Project, the site was assumed eligible for the purposes of the Project only with CSO approval on January 27, 2023, and it is considered here for potential cumulative effects of the Project. P-33-000630 has been severely affected by both natural and human-induced activities. While previous projects have had a significant adverse effect on the site, the Project would not have any direct impact on the features of the site that might otherwise contribute to the site's potential eligibility for the NRHP. As such, the Project would not have an incremental impact and would not contribute to a cumulative adverse effect on the site.

P-33-001099 (CA-RIV-1099)

The heavily disturbed archaeological site P-33-001099 is within the Project APE but outside of the ADI. P-33-001099 has been affected by past construction of I-15, which has bisected the site. Additionally, the past construction of Temescal Canyon Road and

associated landscape modifications have altered the site. Presently, there are only small remnants of the site that are possibly intact outside of the Project ADI but within the APE. As noted, proposed direct Project impacts are expected to avoid the site and are anticipated to occur anywhere from 75 to 150 feet from the existing intact site boundaries. Furthermore, the intact portions of the site are along the remnants of a ridge, portions of which were previously excavated as part of the construction of I-15. All Project work near the intact site boundaries would be within the areas previously disturbed when the highway was originally constructed. While previous projects such as construction of the highway and housing developments on the highway's west side have had an adverse effect on the site, the Project would not result in a direct impact on the features of the site that might otherwise contribute to its eligibility for the NRHP. As such, the Project would not have an incremental impact and would not contribute to a cumulative adverse effect on the site.

P-33-002992 (CA-RIV-2992)

Site P-33-002992 is outside of the Project ADI and APE and partially within the Caltrans right of way. Due to the site's proximity to the Project, the site was assumed eligible for the purposes of the Project only with CSO approval on January 27, 2023, and it is considered here for potential cumulative effects of the Project. A small northern portion of the site has been destroyed during highway construction in the past. This portion of the site is adjacent to the ADI and APE; however, direct impacts related to the Project would occur approximately 250 to 500 feet east of the site boundaries. As such, the Project would not have any impact on the site. A large housing development was constructed in the late 1990s to early 2000s to the south of the site and likely had an adverse effect on the site through an increase in foot traffic, some minor grading, and loss of setting. While previous projects such as construction of the highway and housing developments on the highway's west side have had an adverse effect on the site, the Project would not result in a direct impact on the features of the site that might otherwise contribute to its eligibility for the NRHP. As such, the Project would not have an incremental impact and would not contribute to a cumulative adverse effect on the site.

Traditional Cultural Properties

The TCPs, portions of which are within the Project APE, are significant for their religious and cultural significance to the Luiseño; are associated with cultural practices, traditions, and beliefs; and are embodied in the landscape. Overall, the proposed Project APE is 981 acres, while the approximate acreage of the TCPs (determined previously) is greater than 28,000 acres. Because the full boundaries have yet to be determined for the TCPs, this number is an underestimate. This would indicate that the entire APE is approximately 0.03 percent of the currently identified area of the TCPs; however, not all of the APE is within the currently identified boundaries of the TCPs. The total amount of acreage from the APE that is within the TCPs is approximately 96.34 acres or 0.003 percent of the estimated total TCP acreage.

Although the outer boundaries and all of the individual components or contributing elements of the TCPs are not fully defined, changes to the location, setting, and visual

character of the TCPs resulting from the Project and other past and planned future projects are not expected to be significant because they have affected or would affect only a minute portion of the overall geographic extent of the TCPs. Ground-disturbing activities associated with the Project would not affect potential individual components of the TCPs (which may include archaeological sites adjacent to the ADI). Therefore, their loss would not be cumulatively adverse because the impact on the landscape and intangible cultural values held by the Luiseño caused by the Project would not change the integrity of setting, feeling, character, and location of *Túu'uv* (TCP-1)*, Qaxáalku Payómik* (TCP-2)*,* and *Qaxáalku Kwíimik* (TCP-3). Therefore, with respect to the TCPs, there would be no contribution by the Project to a cumulative adverse effect.

Summary

Considered with past impacts, the projects in the region potentially represent various forms of direct and indirect impacts on historic properties identified as part of the Project and in the region. Four archaeological sites and three TCPs are considered historic properties for the purposes of the Project only. The four archaeological sites (P-33-000108, -000630, -001099, and -002992) are all outside of the Project ADI and are not anticipated to be affected by Project activities. If any unforeseen impacts should occur, Standard Project Measures **CR-1** through **CR-4** would avoid or minimize potential impacts. (See Section 2.2.10, *Cultural Resources*, for full text of the measures.)

Direct impacts could include complete removal of features and cultural constituents on portions of sites and removal of undocumented potential subsurface components relating to construction activities. Indirect impacts could include loss of setting, loss of traditional viewsheds, and increases in noise and vehicular and pedestrian traffic. However, as explained above, the Project would not represent an incremental increase of adverse effects from past and future projects. Therefore, there would be no adverse cumulative effects on the seven historic properties (four archaeological sites and three TCPs) considered eligible for the NRHP for the purposes of the Project only and identified within or adjacent to the Project's APE. As such, the Project would not result in a cumulative adverse effect on historic properties. Consequently, the Project would not have a cumulative adverse effect under NEPA or significant cumulative impacts under CEQA related to historic properties.

2.5.4.4 Hydrology and Floodplains

As discussed in Section 2.3.1, *Hydrology and Floodplain*, the Project is within or adjacent to Federal Emergency Management Agency–designated 100-year floodplains Zones A, AE, and AO, which are associated with the following six channels: Arroyo del Toro, Stovepipe Canyon Wash, Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash. The Project includes bridge widening work at Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash. The Project does not alter the existing drainage facilities at Arroyo del Toro or Stovepipe Canyon Wash.

Temescal Creek is designated as Zone AE and is classified as a Regulatory Floodway within the Project limits. The *I-15 Express Lanes Project Southern Extension Location*

Hydraulic Study (Caltrans 2023) determined that Temescal Creek would experience approximately a 0.51-foot water surface elevation (WSE) increase as a result of the Project, which exceeds the 0.0-foot rise allowance for a Regulatory Floodway. Changed conditions in Temescal Creek would require preparation of a conditional letter of map revision during final design, a hydraulic analysis, and remapping the floodplain. Mayhew Wash is anticipated to experience a 0.02-foot increase in WSE as a result of the Project. Coldwater Wash is anticipated to experience a 0.13-foot decrease in WSE as a result of the Project. Bedford Wash is anticipated to experience a 0.54-foot increase in WSE as a result of the Project.

Project improvements would meet Caltrans requirements listed in the *Caltrans Highway Design Manual*, Section 821.3 (1) Bridges, which states the hydraulic design of bridges should pass a 2 percent probability flood (50-year). The Project's hydraulic models for Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash show that under proposed conditions the WSE would still match the existing conditions within a foot of the channels, and there would be sufficient waterway area to pass the 1 percent (100-year) probability base flood without freeboard under proposed conditions. Therefore, the new bridge widening within these channels would not interfere with the flows within the channels, and the minimal increase in WSE would be contained within the boundaries of the mapped floodplains. The Arroyo del Toro and Stovepipe Canyon Wash hydraulics and floodplains would not be affected because the existing drainage facilities at these channels would remain the same.

The Project would not support incompatible floodplain development. In addition, the minimal increase in WSE would not introduce additional risk for traffic disruptions or loss of life and property. Based on the assessment of level of risk in the *I-15 Express Lanes Project Southern Extension Location Hydraulic Study* (Caltrans 2023), the Project is considered low risk. Work within any floodplains, including the proposed bridge widening work at Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash, would require an encroachment permit from the Riverside County Flood Control and Water Conservation District.

Similar to the Project, the listed projects in Table 2.5-1 are subject to comply with applicable local, State, and federal floodplain management regulations and policies. Therefore, the Project would not contribute to cumulative adverse effects under NEPA or significant cumulative impacts under CEQA related to hydrology and floodplains.

2.5.4.5 Water Quality

The cumulative RSA for water quality includes the Santa Ana River Hydrologic Unit (HU 801.0) and the Terra Colta (801.35), Lee Lake (801.34), Bedford (801.32), Coldwater (801.31), and Temescal (801.25) hydrologic sub-areas. The Project would result in approximately 125 acres of new impervious surface, which would include a permanent increase in impervious surface of approximately 82 acres, and approximately 43 acres in replaced impervious surface. The increase in impervious areas is expected to result in increased pollutant build up and wash off. A greater volume and rate of stormwater runoff could cause or contribute to erosion and off-site pollutant transport. Runoff would be minimized by the implementation of post-construction water quality BMPs required

by the Caltrans Municipal Separate Storm Sewer System Permit, as discussed in Section 2.3.2, *Water Quality and Stormwater Runoff*. These BMPs, which are designed to handle Project runoff, in addition to Standard Project Measures **WQ-1** through **WQ-4**, **WQ-6** through **WQ-8**, and Avoidance and Minimization Measure **WQ-5** in Section 2.3.2, *Water Quality and Stormwater Runoff*, would sufficiently address any off-site runoff that may occur and are expected to avoid and/or minimize impacts related to surface runoff and water quality. Therefore, the Project has a low potential to cause adverse water quality impacts on surface waters or groundwater in the area.

The Project, in conjunction with other projects listed in Table 2.5-1, would contribute to an increase in impervious surfaces within the cumulative resource study area for water quality, which would result in an increase in stormwater runoff. However, the listed projects are subject to water quality rules and regulations and would be required to be developed in compliance with water quality regulations to avoid any impacts on water resources. Therefore, the Project is not anticipated to result in substantial cumulative impacts under NEPA or significant cumulative impacts under CEQA related to water quality.

2.5.4.6 Geology/Soils/Seismic/Topography

The Project is within a seismically active region subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. However, the potential impacts of the Project related to geologic conditions and soils, as discussed in Section 2.3.3, *Geology, Soils, Seismic, and Topography*, would be addressed with adherence to Caltrans' standard design and construction practices, which are required on all State Highway System projects; as such, impacts related to geology, soils, seismicity, and topography would be avoided or minimized. Additionally, construction or operation of the Project would not exacerbate existing geological conditions. As a result, the Project would not contribute to cumulative adverse impacts under NEPA or significant cumulative impacts under CEQA related to geology, soils, seismicity, and topography.

2.5.4.7 Paleontology

Geologic mapping and geotechnical studies indicate the Project footprint is underlain, in part, by the following geologic units with high paleontological sensitivity: late to middle Pleistocene-age old alluvial fan deposits, middle to early Pleistocene-age very old alluvial fan deposits, late to middle Pleistocene-age old axial channel deposits, and middle to early Pleistocene-age very old axial channel deposits. Project construction is expected to affect these units and therefore could result in impacts if paleontological resources are present.

During the pedestrian field survey that was conducted, no fossils were observed or collected. High-sensitivity early Miocene- to Oligocene-age Vaqueros and Sespe Formations, undivided (Tvs), were observed in nearby hill exposures immediately adjacent to the survey area, but they were not observed directly along the survey corridor.

In the event that unanticipated paleontological resources are identified during construction, Avoidance and Minimization Measure **PAL-1** in Section 2.3.4, *Paleontology*, would require the development of a Paleontological Mitigation Plan for the Project to ensure impacts on paleontological resources are avoided or minimized in the unlikely event that they are discovered.

The Build Alternative and other projects in the vicinity of the RSA could disturb sensitive sediments that may contain paleontological resources, thereby contributing to cumulative impacts on paleontological resources. Projects that include excavation in previously undisturbed areas could, in conjunction with nearby construction requiring ground disturbance, contribute cumulatively to impacts on paleontological resources. However, impacts on paleontological resources as a result of other projects would depend on the depth of excavation, if excavation is required, and the presence of sensitive sediments. Because the potential to encounter paleontological resources would be highly dependent on factors mentioned previously, the potential to encounter paleontological resources during construction activities would be minimal. Therefore, the Project, in combination with other planned projects, is not expected to result in substantial cumulative impacts on paleontological resources under NEPA or significant cumulative impacts under CEQA.

2.5.4.8 Hazardous Waste/Materials

Although the Project would not require any right of way acquisition at any known hazardous material sites within or adjoining the Project limits, as described in Section 2.3.5, *Hazardous Waste/Materials*, there is a potential for the Project to encounter unexpected or unknown contaminates during construction-related soil disturbance activities, such as soil and groundwater contamination or abandoned underground storage tanks. In addition, the Project also has the potential to encounter non-hazardous aerially deposited lead soils within the median, shoulders, and ramps along I-15; asbestos-containing materials and lead-based paint associated with I-15 bridge structures that are proposed for widening; treated wood waste from wooden guardrail posts; lead chromate from paint and thermoplastic striping; and construction-generated hazardous waste such as lubricants (both grease and oils), petroleum fuels, cleaning solvents, and paint. Hazardous wastes and materials that may be encountered during Project construction activities would be properly handled, contained, transported, and disposed of in compliance with applicable regulations and requirements, which may include those of the Resource Conservation and Recovery Act, Clean Air Act, Clean Water Act (CWA), Department of Toxic Substances Control Environmental Health Standards for the Management of Hazardous Waste, and provisions of the Riverside County Department of Environmental Health Hazardous Materials Branch and U.S. Department of Transportation. In addition, Standard Project Measures **HW-1** through **HW-4**, **HW-6**, and **HW-8,** and Avoidance and Minimization Measures **HW-5** and **HW-7** as described in Section 2.3.5, *Hazardous Waste/Materials*, would be implemented to help protect worker health and safety, the public, and the environment from encountering hazardous waste and materials during construction activities. During operation of the Project, routine maintenance activities, such as repaving or striping,

would be required to follow applicable federal and State regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials.

Similar to the Project, the listed projects in Table 2.5-1 are subject to comply with applicable local, State, and federal regulations and policies with respect to the use, storage, handling, transport, and disposal of potentially hazardous waste/materials during construction and operation. Therefore, the Project, when combined with other projects, would not result in adverse cumulative impacts under NEPA or significant cumulative impacts under CEQA related to hazardous waste/materials.

2.5.4.9 Air Quality

The Southern California Association of Governments' 2024–2050 RTP/SCS Final Program Environmental Impact Report (2024–2050 RTP/SCS PEIR; SCAG 2024) analyzed and determined the following, which is relevant to the cumulative condition and conclusions for the ELPSE:

> *The main health concerns associated with PM_{10} and $PM_{2.5}$ exposure (such as from vehicle exhaust or windblown dust events) include worsening of symptoms in sensitive patients with respiratory disease and excess seasonal declines in pulmonary function, especially in children. This can include an increase in the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is much smaller and it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.*
>
> *The Plan's [RTP 2024-2050 PIER] increase in PM_{10} and $PM_{2.5}$ emissions could worsen the health concerns listed above or result in Air Quality Index values that are unhealthy for sensitive groups and other populations.*

Permanent Impacts

The operational emissions analysis compares forecast emissions for existing/baseline conditions, the Build Alternative, and the No-Build Alternative using the VMT estimates. The operational emissions analysis compares forecast emissions for existing/baseline conditions, the Build Alternative, and the No-Build Alternative using the VMT estimates discussed above. The regional VMT data for existing conditions, the No-Build Alternative, and the Build Alternative, along with the CT-EMFAC2017 emission rates, were used to calculate the carbon monoxide (CO), nitrogen oxides (NO_X), particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and reactive organic gas (ROG) emissions for the Existing (2019) and

Opening Year and Design Year conditions. The results of the modeling are summarized in Table 2.5-3.

Table 2.5-3. Operational Criteria Pollutant Emissions (pounds per day)

Scenario/Analysis Year	PM_{10}	$PM_{2.5}$	CO	NO_X	ROG
Existing Year (2019)	1,594.2	8,015.4	9,049.5	22,446.9	1,848.1
Opening Year (2030) No-Build Alternative	2,326.0	12,381.4	5,765.7	17,172.7	1,417.2
Opening Year (2030) Build Alternative	2,396.3	12,752.0	5,830.8	17,467.2	1,429.4
Design Year (2050) No-Build Alternative	2,449.6	13,179.0	5,464.7	14,394.8	950.0
Design Year (2050) Build Alternative	2,507.2	13,485.3	5,441.7	14,536.9	947.7
Net Emissions Comparison to Existing Conditions					
Opening Year (2030) Build Alternative	802.1	4,736.7	-3,218.8	-4,979.6	-418.8
Design Year (2050) Build Alternative	913.1	5,469.9	-3,607.8	-7,910.0	-900.5
Net Emissions Comparison to No-Build Conditions					
Opening Year (2030) Build Alternative	70.3	370.7	65.1	294.5	12.2
Design Year (2050) Build Alternative	57.6	306.2	-23.0	142.1	-2.3

Source: Modeled using CT-EMFAC2017.

The emissions analysis presented in Table 2.5-3 indicates that operation of the Build Alternative under Opening Year (2030) and Design Year (2050) conditions is expected to increase PM_{10} and $PM_{2.5}$ emissions compared with existing conditions and decrease ROG, NO_X, and CO emissions. This impact would be significant and unavoidable under CEQA for the Project-level analysis because of cumulative impacts related to PM_{10} and $PM_{2.5}$ emissions.

The Project's increases in air pollutant emissions detailed in Section 2.3.6, *Air Quality*, would individually not be considered substantial under NEPA, given the existing and future cumulative conditions described in the 2024–2050 RTP/SCS PEIR. However, the Project's incremental increase in PM_{10} and $PM_{2.5}$ emissions would be cumulatively considerable under NEPA. In addition, as the project increases in air pollutant emissions would be individually significant and unavoidable under CEQA, the Project's incremental increase in PM_{10} and $PM_{2.5}$ emissions would be a significant cumulative impact under CEQA. However, Mitigation Measure **VMT-1** would be implemented to reduce VMT and the associated environmental impacts.

Even with implementation of **VMT-1**, impacts are considered to be cumulatively considerable under NEPA and significant under CEQA.

Temporary Impacts

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust), particulate matter, construction equipment emissions, and other construction-related activities. Because the Project is in the South Coast Air Basin (SCAB), the SCAB is the appropriate study area for the evaluation of cumulative impacts on air quality. According to the 2022 Air Quality Report completed for the Project, the South Coast Air Quality Management District (SCAQMD) is responsible for managing the SCAB's air resources and is therefore responsible for bringing the basin into attainment with respect to the National Ambient Air Quality Standards and California Ambient Air Quality Standards. This requires SCAQMD to prepare updates to the air quality management plans for the SCAB concerning the various pollutants with emissions inventories based on data from SCAG. The Project is included in the SCAG 2024–2050 RTP/SCS under project number 3160001-RIV170901 and has been identified in the SCAG 2023 Federal Transportation Improvement Program, which was approved by the Federal Transit Administration on December 16, 2022. Section 2.3.6, *Air Quality*, discusses how the Project would incorporate Standard Project Measures **AQ-1** through **AQ-4** to avoid and minimize impacts related to air quality.

Per State CEQA Guidelines Section 15130(d), where a project is included in an approved regional transportation plan (among other land use plans) that adequately address the affected resource area, no additional analysis is required. Because the Project is listed, as currently proposed, in the region's currently conforming SCAG 2024–2050 RTP/SCS and 2023 Federal Transportation Improvement Program regional transportation planning documents, Project emissions would not be cumulatively considerable. However, short-term air quality impacts, taken into consideration with other relevant projects in the air quality RSA, would not be cumulatively considerable under NEPA or result in significant cumulative impacts under CEQA.

2.5.4.10 Climate Change

The analysis of greenhouse gas (GHG) emissions provided in Section 3.3, *Climate Change*, is a cumulative analysis in that it considers the emissions of traffic generated by existing and future planned land uses and the effects of other future planned transportation improvements. As discussed in Section 3.3, the Build Alternative would increase travel speeds and throughput, but operational GHG emissions would increase over time compared to existing conditions. Because operational emissions would increase, the Project would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the Build Alternative would contribute to cumulative impacts related to climate change. Standard Project Measure **EN-1** would be implemented to help conserve energy. Mitigation Measures **GHG-1** through **GHG-4** are expected to reduce the Project's construction GHG emissions. Mitigation Measures **GHG-5** through **GHG-11** and **VMT-1** would reduce the GHG emissions and potential climate change impacts from the operational

and maintenance of the Project. However, the impacts would remain significant and unavoidable; refer to Section 3.3, *Climate Change*.

2.5.4.11 Noise

Although other nearby projects may be constructed during the same timeframe as the Project, it is not anticipated that temporary noise impacts would contribute to a cumulative effect within the cumulative RSA for noise. Construction-related worker commutes and equipment transport from the projected construction traffic would be minimal when compared with existing traffic volumes on I-15 and other affected streets, and the associated noise level changes would not be perceptible. Therefore, construction-related worker commutes and equipment transport noise impacts would be short term, intermittent, and overshadowed by local traffic noise.

Noise associated with the construction of the Project may overlap with noise from the construction of reasonably foreseeable projects. In general, doubling a noise source (introducing a new noise source of equal power) would result in a 3-decibel (dB) increase in the overall noise level. Therefore, construction noise from the Project and any reasonably foreseeable project would have to be near each other to be considered cumulatively considerable. Furthermore, a noise control plan (NCP) may be prepared for the Project (based on public comment), which will address construction noise monitoring, corrective actions, etc. (as discussed in the *I-15 Express Lanes Project Southern Extension Noise Study Report* [NSR]) as regulated by Caltrans' provisions in Section 14-8.02, "Noise Control," of the 2023 Standard Specifications and Special Provisions (SSP 14-8.02). The NCP would be edited specifically to include any other city and/or county provisions (as applicable) that regulate construction noise for this Project during the plans, specifications, and estimates phase; therefore, no adverse noise impacts from construction are anticipated.

The NSR analyzed the existing and design-year (No-Build and Build) conditions (Caltrans 2024). The design-year conditions take into account cumulative traffic growth from reasonably foreseeable projects and general growth throughout the region, with the No-Build condition representing the future baseline (without Project) and the Build condition representing the baseline plus Project (or Project contribution). As a result, the NSR effectively analyzes the cumulative traffic noise impacts associated with the Project. A list of projects included in the noise analysis is included in the NSR.

The NSR predicted that the inclusion of the Project (design-year Build condition) would result in a change of -2 dB to 2 dB over the design-year No-Build condition. A change of 3 dB is generally the accepted change at which the human ear begins to recognize differences in noise levels. Similarly, the NSR predicted a change of -26 dB to 9 dB (design-year No-Build versus existing) and -24 dB to 9 dB (design-year Build versus existing). As such, the design-year Build condition would not result in any appreciable change over the existing noise level relative to the design-year No-Build condition. Therefore, impacts from the Project would not be considered cumulatively considerable under NEPA and would not have significant cumulative impacts under CEQA related to noise.

2.5.4.12 Energy

Because nearly all Project-related energy consumption would result from fuel use by vehicles and equipment during the construction period as well as vehicles during everyday operation of the Build Alternative, for the purposes of this cumulative impacts discussion the only form of energy use considered is gasoline and diesel fuel use. Due to the specialized requirements for fuel formulation in California, the RSA for cumulative energy use is the State of California. For the purposes of fuel consumption, this cumulative impact discussion uses the list of past, present, and reasonably foreseeable projects list approach identified in State CEQA Guidelines Section 15130 (b)(1).

The Project, in combination with the projects identified in Table 2.5-1 as well as numerous other projects and ongoing operations of transportation facilities throughout the state, requires the use of gasoline and diesel fuel for construction and long-term operations. Direct diesel and gasoline consumption would result from the use of construction vehicles and equipment as well as from employee and maintenance trips during operation.

Short-term construction impacts include energy consumed by on and off-road vehicles and construction equipment. However, as discussed in Section 2.3.8, *Energy*, Standard Project Measure **EN-1** would be implemented to help conserve energy. This would include using recycled materials—including removed asphalt concrete pavement and cement concrete pavement—where feasible during construction. Standard Project Measure **EN-1** would be consistent with State and local policies to reduce energy consumption.

Operation of traffic lights, streetlights, sensors, and changeable message signs such as toll pricing signs consumes electricity. These features are required to manage traffic and provide safe driving conditions. Light-emitting diode (LED) fixtures would be used wherever traffic lights or streetlights are installed or replaced (Avoidance and Minimization Measure **EN-2**).

Indirect fuel consumption would result from redistribution of trips that would occur from capacity changes along the proposed alignment. The Build Alternative would result in increased fuel use compared to the No-Build Alternative, as shown in Table 2.3.8-3 (see Section 2.3.8, *Energy*). When compared to the Existing Conditions (2019), the Build Alternative would increase the annual energy consumption by 3,055 billion British thermal units (BTUs) (17.8 percent) in 2030 and by 973 billion BTUs (5.7 percent) in 2050. When compared to the Existing Conditions (2019), annual vehicle miles traveled are projected to increase by 62.0 percent in 2030 and by 67.4 percent by 2050 (Caltrans 2021). This disparity is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time. These later-model replacement vehicles would also include hybrid and all-electric vehicles. Compared to the No-Build Alternative, the Build Alternative is projected to result in a 541-billion BTU increase (2.8 percent) in 2030 and a 332-billion BTU increase (1.9 percent) in 2050. This increase is not significant in the context of statewide consumption, as it would represent approximately 0.001 percent of statewide energy consumption. As such, Project operation would not result in a wasteful, inefficient, or

unnecessary consumption of energy. Therefore, the Project would not contribute to substantial cumulative adverse effects under NEPA or significant cumulative impacts under CEQA related to the consumption of energy.

2.5.4.13 Biological Resources

Natural Communities

Twenty-five vegetation communities and three land use types were identified in the BSA and 11 of the vegetation communities are classified as sensitive natural communities by the California Department of Fish and Wildlife (CDFW 2024). Of these 11 communities, seven would be affected by the Build Alternative:

- Clustered tarweed fields: 0.09 acre of permanent impacts and 2.29 acres of temporary impacts
- Bush penstemon scrub: 0.96 acre of temporary impacts
- Holly leaf cherry—toyon—greenbark chaparral: 0.53 acre of temporary impacts
- Fremont cottonwood forest and woodland: 0.32 acre of temporary impacts
- Goodding's willow–red willow riparian woodland: 1.21 acres of temporary impacts
- Scale broom scrub: 0.18 acre of temporary impacts
- California sycamore woodland: 0.27 acre of shading impacts and 0.06 acre of temporary impacts

Indirect construction impacts on riparian and sensitive natural communities—including fire risks, litter, introduction of invasive species, habitat fragmentation, erosion and sedimentation, and introduction of hazardous materials—would be avoided and/or minimized through Avoidance and Minimization Measures **NC-2 (Natural Environment Study [NES] BIO-2)** through **NC-12 (NES BIO-12)**.

The anticipated impacts on sensitive natural communities by the Project would require compensatory mitigation. Under the MSHCP, compensation for these losses would be addressed through consistency with the MSHCP policies and regulations.

Generally, the Project BSA is in an already urbanized area; therefore, cumulative impacts on natural communities would be unlikely. Operation of the Build Alternative would not be expected to permanently affect wildlife movement or decrease the functionality of any wildlife crossings within the Project Area. The Project is identified in the MSHCP as a Planned Road and a Covered Activity (MSHCP Volume I, Section 7.3.5). Portions of the Project lie both inside and outside of Criteria Areas. Coverage under the MSHCP provides an expedited process for biological resource permitting and approvals, as well as compensatory mitigation under CEQA. For those MSHCP covered resources, no additional mitigation or requirements beyond those necessitated by the MSHCP would be applied to the Project. Also, the Project is required to compensate for

potential losses, and losses would be mitigated. As a result, the Build Alternative would not contribute to cumulative adverse effects under NEPA or significant cumulative impacts under CEQA related to natural communities.

Wetlands and Other Waters

The resource area is located within southwestern Riverside County and consists of a developed freeway corridor connecting the Cities of Riverside and Corona to Lake Elsinore and San Diego County. The Temescal Wash riparian stream corridor conveys flows from Lake Elsinore to the Santa Ana River and runs parallel to the resource area. Prior to the development of the area, drainages from the adjacent Santa Ana Mountains and Gavilan Hills drained into the Temescal Wash. With the increased agricultural, residential, and commercial development, these drainages were channelized for flood control purposes. Furthermore, as a result of the construction of I-15 and urban development within the resource area, most of the natural vegetation has been removed and the historically present drainage features have been modified.

As indicated in Figure 2.5-1, the majority of other planned projects occur within the Arroyo del Toro-Temescal Wash and Bedford Wash-Temescal Wash portion of the cumulative RSA for wetlands. Other planned projects occur with the Dawson Canyon-Temescal Wash and Lake Elsinore subwatersheds of the Santa Ana River Watershed portions of the RSA, but to a lesser extent. The projects listed Table 2.5-1 are primarily located within previously disturbed areas, and, as such, would not be anticipated to substantially contribute to the loss of wetlands and other waters. Similar to the Project, the listed projects are subject to comply with applicable local, State, and federal regulations and policies protecting wetlands and other waters, as applicable.

U.S. Army Corps of Engineers/Regional Water Quality Control Board Jurisdiction Summary

As shown in Table 2.5-4, the Project would result in impacts on federal jurisdictional non-wetlands, including the permanent removal of 0.02 acre, temporary impacts on 2.02 acres, and shading impacts on 0.47 acre. A total of 0.03 acre of temporary impacts would occur on federal jurisdictional existing wetlands. There is anticipated to be 0.01 acre of permanent impacts and 0.19 acre of temporary impacts on potentially non-jurisdictional, non-wetland (constructed in uplands) Regional Water Quality Control Board jurisdictional waters of the State.

Table 2.5-4. U.S. Army Corps of Engineers/Regional Water Quality Control Board Jurisdictional Impacts

Agency/Jurisdiction	Hydrology	Permanent Impact (acres)	Temporary Impacts (acres)	Shading Impacts (acres)
CWA Section 404/401 Non-Wetland	Ephemeral, intermittent, and perennial	0.02	2.02	0.47

Agency/Jurisdiction	Hydrology	Permanent Impact (acres)	Temporary Impacts (acres)	Shading Impacts (acres)
CWA Section 404/401 Wetland	Wetland	--	0.03	--
Grand Total CWA Section 404/401 Non-Wetland and Wetlands	**--**	**0.02**	**2.05**	**0.47**
Porter-Cologne Wetland	Wetland (isolated)	--	--	--
Potential Non-Jurisdictional Non-Wetland	Constructed in uplands	0.01	0.19	--
Grand Total Porter-Cologne Non-Wetland and Wetlands[1]	**--**	**0.01**	**0.19**	**--**

-- not applicable

[1] Totals include features identified as "constructed in uplands" that may not be considered Regional Water Quality Control Board jurisdictional.

California Department of Fish and Wildlife Jurisdiction Summary

The Project would result in the permanent removal of 0.10 acre, temporary impacts on 3.79 acres, and shading impacts on 1.00 acre of state streambeds. A total of 2.26 acres of California Department of Fish and Wildlife (CDFW) riparian would be affected by the Project (<0.01 acre permanent, 1.80 acre temporary, and 0.46-acre shading effects). The proposed impacts on CDFW streambeds and associated riparian vegetation are summarized in Table 2.5-5, with a discussion of temporary, permanent, and shading impacts following below.

Table 2.5-5. Summary of Proposed Impacts on California Department of Fish and Wildlife Streambeds and Associated Riparian Vegetation

CDFW Jurisdictional Resource	Permanent Impact (acres)	Temporary Impact (acres)	Shading Impacts (acres)[1]
CDFW Unvegetated Streambed	0.10	3.79	1.00
Potential Non-Jurisdictional Unvegetated Streambed – Constructed in Uplands	0.02	0.91	--
Total Streambed	0.12	4.70	1.00
CDFW Riparian	<0.01	1.80	0.46
Total Riparian	<0.01	1.80	0.46
Grand Total	**0.12**	**6.50**	**1.47**

[1] Total acreage values may be off by 0.01 acre due to rounding.

Direct and indirect impacts on U.S. Army Corps of Engineers/Regional Water Quality Control Board wetland and non-wetland waters of the U.S. and CDFW streambed and associated riparian habitat are to be avoided and minimized with Avoidance and Minimization Measures **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)**, and **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **WET-1 (NES BIO-22)** in Section 2.4.2, *Wetlands and Other Waters*.

Implementation of Mitigation Measure **NC-16 (NES BIO-16)** in Section 2.4.1, *Natural Communities*, coordinates the mitigation required for permitting for the CDFW 1602 Streambed Alteration Agreement and the CWA 401 and 404 permitting. Details of the compensation for riparian/riverine (streambed) resources are included in the Determination of Biologically Equivalent or Superior Preservation report (Mitigation Measure **NC-15** [NES BIO-15, DBESP] in Section 2.4.1, *Natural Communities*). Mitigation Measure **NC-17 (NES BIO-17)** (in Section 2.4.1, *Natural Communities*) describes the option for compensatory mitigation for CDFW 1602 and CWA 401 and 404 permitting, and it references Mitigation Measure **TE-3 (NES BIO-23)** (in Section 2.4.5, *Threatened and Endangered Species*) regarding least Bell's vireo compensatory mitigation (to avoid duplicative mitigation). With the limited impacts of the Project along with the application of mitigation measures and compliance with Fish and Game Code 1602, and CWA 401 and 404 permitting, the Project's incremental contribution to cumulative impacts within the RSA would not be cumulatively considerable.

Plant Species

For federally and/or State-listed endangered or threatened plants, suitable habitat is present for Munz's onion (*Allium munzii;* federally listed as endangered [FE], State-listed as threatened [ST], California Rare Plant Rank [CRPR] 1B.1), San Diego ambrosia (*Ambrosia pumila;* FE, CRPR 1B.1), thread-leaved brodiaea (*Brodiaea filifolia;* federally listed as threatened [FT], State-listed as endangered [SE], CRPR 1B.1), slender-horned spineflower (*Dodecahema leptoceras;* FE, SE, CRPR 1B.1), and is within the rare plant RSA. All five of the species are Covered Species under the MSHCP with additional survey requirements within specified survey areas. The Project occurs within the MSHCP Narrow Endemic Plant Species (NEPS) Survey Area 1. Of the above species, where suitable habitat was noted to be present, NEPS Survey Area 1 includes requirements for surveys for the listed plant species Munz's onion, San Diego ambrosia, and slender-horned spineflower. The Project also occurs in NEPS Survey Area 7, where, of the above species, surveys for San Diego ambrosia are required. The Project is within MSHCP Criteria Area Survey Area 1, where, of the above species, surveys for thread-leaved brodiaea are required. Surveys are required per the MSHCP for San Jacinto Valley crownscale within the required survey area (Section 6.3.2 of the MSHCP). However, the Project is not within the required survey area for this species; therefore, this is an MSHCP Covered Species within the Project area. Suitable habitat for other listed rare plants was not observed within the rare plant RSA.

During focused rare plant surveys, no listed rare plant species were observed within the rare plant RSA. All MSHCP-required rare plant surveys were conducted.

Non-listed Special-status MSHCP Plant Species

During rare plant focused surveys in 2020 and 2021, none of the Criteria Area Plant Species Survey Area 1 and NEPS Survey Area 1 species and seven non-listed special-status plant species were observed. Therefore, no impacts would occur. Long-spined spineflower was found; however, this species is fully covered under the MSHCP. No other Covered Species were detected; however, these could occur in the Project vicinity. No avoidance or minimization measures and no compensatory mitigation would be required for non-listed special-status plant species.

Non-Listed Special-Status Non-MSHCP Plant Species

During rare plant focused surveys in 2020 and 2021, no non-MSHCP non-listed special-status plant species were observed. These species are therefore considered absent from the BSA.

Although long-spined spineflower was found to be present within the rare plant RSA, the species is fully covered under the MSHCP. Implementation of Avoidance and Minimization Measures **NC-1 (NES BIO-1)** through **NC-12 (NES BIO-12)**, described in Section 2.4.1, *Natural Communities*, would reduce the potential for temporary indirect impacts on long-spined spineflower adjacent to the limits of disturbance (LOD). These measures would also protect adjacent native flora and fauna associated with long-spined spineflower in the BSA during construction.

Summary

With implementation of mitigation and compliance with the MSHCP, the Project would have a less-than-significant impact on candidate, sensitive, or special-status plant species. Therefore, the Project, in combination with other planned projects, would not result in substantial cumulative impacts on special-status plant species.

Animal Species

Thirty-four non-listed special-status animal species have suitable habitat within the BSA, as detailed in Section 2.4.4, *Animal Species*. Focused studies were performed for burrowing owl and bats due to presence of suitable habitat within the BSA and/or survey requirements under the MSHCP. No burrowing owls or special-status bats were observed. No other focused studies were performed for non-listed special-status animals or candidate species.

Of the 20 non-listed, MSHCP Covered Species that could occur in the BSA, three were detected during biological surveys: Belding's orange-throated whiptail, yellow warbler, and yellow-breasted chat. Belding's orange-throated whiptail is a year-round resident for this region, and yellow warbler and yellow-breasted chat are summer residents. Although there is suitable habitat in the BSA for the remaining 17 species, they were not detected during surveys.

The BSA contains 1,295.63 acres of suitable habitat for these non-listed MSHCP covered animal species in the form of grasslands, shrublands, forests and woodlands, riparian habitats, and agricultural areas. Potential suitability of the habitats ranges from

low quality to high quality, with areas within and directly adjacent to the LOD providing low quality and areas farther from the LOD providing higher quality.

There are 12 non-listed special-status species that are not covered under the MSHCP. Suitable habitat is present throughout the BSA within native vegetation communities and open areas. Although there is suitable habitat in the BSA for these species, none were detected during surveys; however, focused surveys were not performed.

Avoidance and minimization measures would reduce or avoid indirect impacts on non-listed special-status wildlife species for both those covered and not covered by the MSHCP. Those measures include **NC-2 (NES BIO-2)** through **NC-13 (NES BIO-13)** and **NC-18 (NES BIO-20)**, **NC-19 (NES BIO-24)** in Section 2.4.1, *Natural Communities*, and Avoidance and Minimization Measure **AS-1 (NES BIO-18)** in Section 2.4.4, *Animal Species*.

For non-MSHCP covered special-status wildlife species, the following Avoidance and Minimization Measures would apply to reduce and avoid potential impacts: Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-10 (NES BIO-10)**, **NC-12 (NES BIO-12)**, **NC-13 (NES BIO-13)** and **NC-18 (NES BIO-20**) in Section 2.4.1, *Natural Communities*, Avoidance and Minimization Measure**TE-2 (NES BIO-21)** in Section 2.4.5, *Threatened and Endangered Species*, and Avoidance and Minimization Measure **AS-5 (NES BIO-28**) in Section 2.4.4, *Animal Species***.**

In addition to the above measures for non-MSHCP covered special-status wildlife species, the following avoidance and minimization measures would reduce and avoid potential impacts on bats: **AS-3 (NES BIO-26)** and **AS-4 (NES BIO-27)**.

For MSHCP-covered special-status wildlife species, the following Avoidance and Minimization Measures would reduce or avoid impacts: Avoidance and Minimization Measures **NC-1 (NES BIO-1)**, **NC-10 (NES BIO-10)**, **NC-12 (NES BIO-12)**, **NC-13 (NES BIO-13)**, **NC-14 (NES BIO-14)**, **NC-18 (NES BIO-20)**, **TE-2 (NES BIO-21)**, and **AS-5 (NES BIO-28)**.

In addition to the above measures to reduce or avoid impacts on MSHCP-covered special-status wildlife species, a burrowing owl Avoidance and Minimization Measure would reduce or avoid potential impacts: Avoidance and Minimization Measure **AS-2 (NES BIO-25)**.

Development of the median into active traffic lanes may reduce the chance of an animal successfully reaching the other side when crossing the highway, although the number of animals this may directly affect is not known. However, the capacity for wildlife movement across I-15 is already poor, with roadkill frequently observed. Such capacity has also been degraded over past decades by the increasing width of the interstate, traffic flows, and noise. Although the Project would not improve this situation, it is not expected to substantially worsen current operational impacts on wildlife movement or connectivity or roadkill incidents.

Overall, the Project is not expected to substantially affect wildlife movement or linkage functions and values within the BSA because major wash crossings under I-15 bridges would be retained, including the priority linkages at Bedford Wash and Indian Wash.

With Project measures and implementation of mitigation and compliance with the MSHCP, the Project would have a less-than-significant impact on candidate, sensitive, or special-status wildlife and plant species. The Project has been designed to be consistent with the MSHCP and, as such, would receive "take" coverage for MSHCP Covered Species. In addition, the projects listed in Table 2.5-1 would also need to comply with local laws and regulations regarding special-status animal species. Therefore, the Project in combination with other planned projects would not result in substantial cumulative impacts under NEPA or significant cumulative impacts under CEQA related to special-status animal species.

Threatened and Endangered Species

There are 20 listed species that have potential to occur within the BSA and could be affected by the Project, with the exception of the San Diego fairy shrimp, monarch butterfly, and Crotch bumble bee, which are Covered Species under the MSHCP. As discussed in Section 2.4.5, *Threatened and Endangered Species*, no impacts are anticipated on monarch butterfly or Crotch bumble bee within the LOD. Permanent, temporary, and shading impacts on suitable habitat for nine listed species are summarized below in Table 2.5-6.

Table 2.5-6. Potential Impacts of the Build Alternative on Listed Species

Listed Species	Impact (acres)			
	Permanent	**Temporary**	**Shading**	**Total**
Listed plants	Not present			
Fairy shrimp	Not present			
Crotch bumble bee	No direct effects expected			
Monarch butterfly	No direct effected expected			
Quino checkerspot butterfly[1]	13.84	226.46	0.29	240.59
Arroyo toad[1]	0.00	2.65	0.22	2.87
Least Bell's vireo	0.00	2.76	0.19	2.95
Southwestern willow flycatcher	Not present			
Tricolored blackbird[1]	0.00	3.38	0.19	3.57
Coastal California gnatcatcher[1]	3.33	129.15	0.07	132.55
Stephens' kangaroo rat[1]	13.84	225.80	0.47	240.11
San Bernardino kangaroo rat	13.67	190.46	0.47	204.60
Mountain lion[1]	13.85	234.19	0.66	248.70

[1] MSHCP fully covered species

Temporary indirect effects during construction for these listed species, should the species be present, include impacts on habitat, construction-related disturbances (e.g., noise, night lighting, increased human and equipment presence, opportunistic predators, increase in dust and wildfire risk, and vibration), and individual breeding occurring adjacent to the LOD. However, with Avoidance and Minimization Measures **TE-1 (NES BIO-29)**, **TE-2 (NES BIO-21)**, and **TE-4** and Mitigation Measure **TE-3 (NES BIO-23)** described in Section 2.4.5, *Threatened and Endangered Species*, temporary indirect effects would be avoided or greatly minimized and temporary impacts would be compensated at no less than a 1:1 ratio.

Operation and maintenance associated with the Build Alternative is not expected to differ measurably from existing operating conditions along I-15. The potential direct and indirect effects associated with operation and maintenance of the Build Alternative include the introduction of invasive weeds, air pollution, noise, and risk of fire. These potential indirect effects would not be greater than effects from existing conditions. Permanent impacts for the potential removal of acres of potentially suitable habitat for the listed species in Table 2.5-6 could be biologically substantial and would trigger Federal Endangered Species Act and California Endangered Species Act considerations. However, as discussed in Section 2.4.5, because many of the species are fully covered under the MSHCP, and the Project has been designed to be consistent with the MSHCP, potential impacts from the Project would be minimized and avoided for listed species present in the BSA. Additionally, permanent impact compensation would occur at no less than a 2:1 ratio, resulting in a larger amount of habitat than what currently exists. Overall, the Project in combination with other planned projects would not result in substantial cumulative impacts under NEPA or significant cumulative impacts under CEQA related to threatened and endangered species.

Invasive Species

The Build Alternative would not substantially increase the potential for spread of invasive species. Compliance with invasive species control procedures (refer to Avoidance and Minimization Measures **NC-3 [NES BIO-3]**), to minimize the chance of human-caused wildfires, which can increase the prevalence of invasive plant species; **NC-6 (NES BIO-6)**, to avoid incidental disturbance of habitat outside of the LOD (supported by **NC-5 [NES BIO-5]**); **NC-9 (NES BIO-9)**, to avoid removing native vegetation and return temporarily affected areas to pre-existing contours and revegetating; **NC-7 (NES BIO-7)**, to properly dispose of exotic species removed during construction and avoid the use of invasive plant species adjacent to Riverside County MSHCP Conservation Areas; **NC-8 (NES BIO-8)**, where equipment will be cleaned of mud and debris that may contain invasive plants and/or seeds before mobilizing to the site; and **NC-10 (NES BIO-10)**, to revegetate any temporarily disturbed areas post-construction, which will prevent colonization by invasive plant species. These measures, as described in Section 2.4.1, Natural Communities, would address this impact. In addition, the other projects listed in Table 2.5-1, above, would also be subject to local laws and regulations regarding invasive species. Therefore, the Build Alternative would not contribute to cumulative adverse effects under NEPA or significant cumulative impacts under CEQA related to invasive species.

Chapter 3 California Environmental Quality Act (CEQA) Evaluation

The proposed Project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to State and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this Project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this Project and CEQA significance.

3.1 CEQA ENVIRONMENTAL CHECKLIST

This CEQA 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 projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. 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; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

3.1.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1.1 CEQA Significance Determinations for Aesthetics

The potential for the Build Alternative to result in adverse impacts on aesthetics was assessed in the *Interstate 15 (I-15) Express Lanes Project Southern Extension Visual Impact Assessment* (Caltrans 2024a) and Section 2.2.9, *Visual/Aesthetics*, in this Environmental Impact Report (EIR)/Environmental Assessment (EA). The following discussions are based on those analyses.

a) Have a substantial adverse effect on a scenic vista?

No Impact

The Project is on the mainline segment of Interstate (I-) 15 between post mile (PM) 21.2 in the City of Lake Elsinore and PM 38.1 in the City of Corona in Riverside County. The Project corridor also includes a portion of unincorporated Riverside County, including the Temescal Valley community. The Project area consists of both urban and rural areas along the I-15 transportation corridor. The landscape is characterized by local hillsides and distant mountains, with predominantly urban landcover and pockets of rural communities. The Project area consists of predominantly residential, commercial, and industrial development. Mountain ranges visible in the area include the Santa Ana Mountains to the west and the San Gabriel Mountains to the north, and the Gavilan Hills are east of the Project corridor. Riparian areas include Gavilan Wash, Temescal Wash, Horsethief Canyon Wash, Indian Wash, Mayhew Wash, Coldwater Wash, Brown Canyon Wash, and Bedford Wash, adjacent to I-15.

The Project would not result in adverse visual changes. Project components under the Build Alternative would be designed and implemented in a manner consistent with the existing visual character and quality of the area and would not diminish visual resources. Construction of Project components would occur within the existing Caltrans right of way, resulting in similar conditions to the existing I-15 corridor. The Project would connect to the existing regional network of express lane systems, which feature a similar design and scale. Viewsheds containing identified visual resources would not be affected by implementation of the Project. There would be no impact under the Build Alternative.

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

No Impact

The Project is not within a designated State Scenic Highway; as such, a scenic resource evaluation was not prepared for the Project. As the Project is in the median of an existing highway that is not a designated State Scenic Highway, there would be no impact on scenic resources associated with a State scenic highway.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact

During construction, travelers may experience minor short-term visual impacts from the presence of construction equipment. Viewsheds containing identified visual resources are not expected to be affected by implementation of the Project because the overall

visual character of the Project is considered low. The Build Alternative would not substantially change the existing views of or from I-15. Although potential visual impacts do not exceed the moderately low level, Avoidance and Minimization Measures **AES-1** through **AES-4** would further minimize or avoid visual impacts associated with the Build Alternative.

The visual analysis determined that, once operational, the Project would result in low or moderately low visual impacts within each Key View. Additionally, the design of the Build Alternative would be consistent with Caltrans highway landscape and design policies/BMPs. Impacts would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-than-Significant Impact

The Build Alternative is expected to require nighttime construction, in addition to night security lighting of staging areas, which would result in visual impacts for highway travelers from increased glare. In addition, multiple residential areas adjacent to the Project corridor may be affected by new sources of light or glare during construction. The impacts from construction of the Build Alternative would be temporary and would not affect visual resources long term. Lighting during construction would result in minimal impacts on the surrounding environment, as the Project would use downcast, cut-off type fixtures that would be shielded and direct the light only toward areas requiring illumination (Avoidance and Minimization Measure **AES-4**). Electronic toll collection gantries would result in the creation of new sources of light or glare. However, Avoidance and Minimization Measure **AES-4** ensures that highway lighting must conform to Caltrans design guidelines and be placed to illuminate only intended areas. Impacts would be less than significant.

3.1.2 Agriculture and Forest Resources

In determining whether impacts to 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 Dept. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	**Significant and Unavoidable Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
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?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

In determining whether impacts to 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 Dept. 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 the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.				
Would the project:	**Significant and Unavoidable Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

3.1.2.1 CEQA Significance Determinations for Agriculture and Forest Resources

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?

No Impact

No agricultural uses exist within the Project footprint or immediately adjacent to the Project. The Project footprint is defined as the limits of all disturbance and activity associated with the Project. Because the land within or adjacent to the Project footprint is not designated as farmland pursuant to the Farmland Mapping Monitoring Program of the California Resources Agency, the Build Alternative would not have the potential to result in the conversion of farmland to a non-agricultural use. Therefore, no impacts related to farmland conversion would occur.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

There are no parcels under a Williamson Act contract within the Project limits. No impact would occur.

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))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

There are no forest or timberlands within the Project limits. Therefore, the Project does not currently use land being managed or used for forest land or timberland. No impact would occur.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact

There are no farmlands or forest land within the Project limits. There are no changes anticipated to farmland or forest land. No impact would occur.

3.1.3 Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.				
Would the project:	**Significant and Unavoidable Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

3.1.3.1 CEQA Significance Determinations for Air Quality

This section was prepared using information from the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Air Quality Report* (Caltrans 2022a) and Section 2.3.6, *Air Quality*, of this EIR/EA. The following discussions are based on those analyses.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less-than-Significant Impact

The Project is in the South Coast Air Basin and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (ARB). SCAQMD is the primary agency responsible for writing the Air Quality Management Plan (AQMP) in cooperation with the Southern California Association of Governments (SCAG), local governments, and the private sector. The AQMP provides the blueprint for meeting State and federal ambient air quality standards. The Project is listed in the 2024–2050 financially constrained Connect SoCal 2024–2050 Regional

Transportation Plan (RTP)/Sustainable Communities Strategy (SCS), which was adopted by the SCAG Regional Council in April 2024; FHWA and the Federal Transit Administration made a regional conformity determination finding on May 10, 2024. The Project is also included in SCAG's financially constrained 2023 Federal Transportation Improvement Program (FTIP) (Amendment 23-16, Riverside County State Highway – Project Listing, Page 16 of 20), adopted by SCAG on October 6, 2022, and approved by FHWA and the Federal Transit Administration on December 16, 2022. The design concept and scope of the Project are consistent with the Project description in the 2024–2050 RTP/SCS, the 2023 FTIP, and the open-to-traffic assumptions of the most recent SCAG regional emissions analysis.

The Project is in a nonattainment area for the federal and State 8-hour ozone (O_3) standards, the State 1-hour O_3 standard, the federal and State particulate matter smaller than 2.5 micrometers in diameter ($PM_{2.5}$) standards, and the State particulate matter smaller than 10 micrometers in diameter (PM_{10}) standards. In addition, the Project is in a maintenance area for the federal PM_{10}, carbon monoxide (CO), and nitrogen dioxide (NO_2) standards. Conformity analyses demonstrate that the Project is not anticipated to cause or contribute to any new localized CO, NO_2, $PM_{2.5}$, and PM_{10} violations, or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis); refer to Section 2.3.6, *Air Quality*. Impacts would be less than significant. Therefore, the Project would not conflict with the AQMP, violate any air quality standards, result in a net increase of any criteria pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Significant and Unavoidable Impact

As discussed in Section 2.3.6, *Air Quality*, the Project has satisfactorily demonstrated the Project-level conformity requirements and is not anticipated to worsen existing PM_{10} and $PM_{2.5}$ violations and delay timely attainment of the standards. Therefore, the Project is not anticipated to cause or contribute to any new violation of the federal standards of the criteria pollutants.

The regional emission analysis presented in Table 2.3.6-10 indicates that operation of the Build Alternative under Opening Year (2030) and Design Year (2050) conditions is expected to increase PM_{10} and $PM_{2.5}$ emissions when compared to both the existing and no-build conditions. As it is located within a nonattainment area for the state PM_{10} and $PM_{2.5}$ ambient air quality standards, the Project-related increase would be cumulatively considerable. However, Mitigation Measure **VMT-1** would be implemented to reduce vehicle miles traveled (VMT) and the associated environmental impacts.

As part of Mitigation Measure **VMT-1**, Riverside County Transportation Commission (RCTC) is mitigating VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. As part of the Vehicle Miles Traveled Mitigation Program (VMTMP) RCTC is developing, RCTC will be launching the Riverside County Free Rail Pass Program. The approximately 2-year program would offer Metrolink passes to Riverside County residents starting in 2025 to increase the number of passenger rail riders within Riverside County. This program would help expand access to public transportation for disadvantaged and low-income populations and target travelers on the most congested corridors such as State Route (SR-) 91, SR-74, I-15, and I-215. The Metrolink passes will last for approximately 3–6 months each. These temporary free Metrolink passes would reduce the cost of using public transportation in order to attract new riders and encourage existing riders to take more trips. This program would help develop new lifelong commuting habits and contribute to VMT and GHG reduction. The program is designed to be in place for a minimum of 2 years, but could last up to 3 years depending on ticket distribution rates.

The program would allow riders to sign up through RCTC's existing Commuter Assistance website "IE Commuter" (https://www.iecommuter.org/rp2/Home/Home) and be issued free passes through Metrolink's Mobile Ticketing Application. For riders without access to mobile devices, the program would provide promotional codes to purchase the passes at ticket vending machines. This would help expand access to public transportation for disadvantaged and low-income populations and reduce the financial barriers to trying public transportation.

In addition to the discounted Metrolink Pass program, RCTC will work with Riverside Transit Agency (RTA) to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses would be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project. Increased use of RTA bus service would promote travel mode shift, help address competing passenger and commercial traffic in the County of Riverside, and contribute to VMT reduction and improvement in air quality. Even with implementation of **VMT-1**, impacts are considered to be significant and unavoidable.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact

The sensitive receptors within or adjacent to the Project limits are residential, educational, park, and church uses. The Project may result in temporary, short-term, construction-related increases in pollutant concentrations specifically associated with construction equipment emissions and fugitive dust. Implementation of the SCAQMD Rules and Caltrans Standard Construction Specifications—which are provided in Standard Project Measures **AQ-1** through **AQ-4** in Section 2.3.6, *Air Quality*, and are standard for all Caltrans projects—would avoid or minimize potential short-term air quality impacts on sensitive receptors.

Operation of the Build Alternative under Opening Year (2030) and Design Year (2050) conditions is expected to increase PM_{10} and $PM_{2.5}$ emissions compared with existing conditions and decrease reactive organic gas, nitrogen oxide, and CO emissions. As discussed in threshold (a), the Project is not anticipated to cause or contribute to any new localized CO, NO_2, $PM_{2.5}$, and PM_{10} violations. Therefore, the Project would not expose sensitive receptors to substantial pollutant concentrations. Impacts are considered less than significant.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less-than-Significant Impact

The Project may result in temporary, short-term, construction-related increases in objectionable odors. However, SCAQMD Rules and Standard Project Measure **AQ-4** described in Section 2.3.6, *Air Quality*, and are standard for all Caltrans projects—would minimize this potential short-term impact. Impacts are considered less than significant.

3.1.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

3.1.4.1 CEQA Significance Determinations for Biological Resources

The potential for the Build Alternative to result in adverse impacts on biological resources was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Natural Environment Study Including Focused Studies for Special-Status Species and a Delineation of Federal and State Jurisdictional Waters* (Caltrans 2023b) and in Sections 2.4.1 through 2.4.6 of this EIR/EA. The following discussions are based on those analyses.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?

Less than Significant with Mitigation Incorporated

As discussed in the following text, the Project has been designed to be consistent with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP); as such, it would receive "take"[1] coverage for MSHCP covered species. The database used to create the MSHCP did not have enough detail to map the extent of the presence or distribution of some species within the MSHCP Area. For these species, "Additional Survey Needs and Procedures" were developed within specifically mapped areas. Within these mapped areas, there is no "take" covered for these species. For instance, there is "take" for San Bernardino kangaroo rat (SBKR; *Dipodomys merriami*

[1] "Take" defined under the U.S. Fish and Wildlife Service Federal Endangered Species Act, Section 3 (19) as to harass, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in such conduct.

parvus) outside of the Additional Survey Needs and Procedures mapped areas; however, within the mapped areas additional studies—including a habitat assessment and, if habitat is present, a focused survey—are required. Within the Project area, SBKR is not within the Additional Survey Needs and Procedures mapped area, so the Project has "take" coverage for this species.

Federally and/or State-listed Endangered or Threatened Wildlife

Suitable habitat was determined to occur within the biological study area (BSA) for:

- Tricolored blackbird (*Agelaius tricolor*; State-listed as threatened [ST], MSHCP covered)
- Coastal California gnatcatcher (*Polioptila californica californica*; federally listed as threatened [FT], California species of special concern [CSC], MSHCP covered)
- Stephens' kangaroo rat (SKR; *Dipodomys stephensi*; FT, ST, MSHCP covered; SKR Habitat Conservation Plan [HCP])
- SBKR (federally listed as endangered [FE], State-listed as candidate endangered [CE], MSHCP Additional Survey Needs and Procedures [Section 6.3.2]; but outside of required survey area, MSHCP covered species)
- Quino checkerspot butterfly (*Euphydryas editha quino*; FE, MSHCP covered)
- Mountain lion *(Puma concolor;* candidate federally endangered [CFE], MSHCP covered)
- Arroyo toad (*Anaxyrus californicus*; FE, MSHCP Additional Survey Needs and Procedures [Section 6.3.2]; but outside of required survey area, MSHCP covered)
- Bald eagle (federally delisted, State-listed as endangered [SE], MSHCP covered)

Because all these species are covered under the MSHCP, compliance with the MSHCP would afford "take" coverage for all these species and no additional discussion related to these species is included.

Table 3-1. Federally and/or State-Listed Endangered or Threatened Wildlife Species Summary

Common Name	Species Name	Federal Status	State Status	MSHCP Status	Suitable Habitat Present	Avoidance Measures Required	Mitigation Required*
Tricolored blackbird	*Agelaius tricolor*	n/a	Threatened	Covered	Yes	Yes	No
Coastal California gnatcatcher	*Polioptila californica californica*	Threatened	Species of special concern	Covered	Yes	Yes	No
Stephens' kangaroo rat (SKR)	*Dipodomys stephensi*	Threatened	Threatened	Covered; SKR HCP	Yes	Yes	No
San Bernardino kangaroo rat (SBKR)	*Dipodomys merriami parvus*	Endangered	Candidate endangered	Section 6.3.2 of the MSHCP; additional surveys required (RCIP 2003)	Yes, but not within MSHCP required survey area; covered	Yes	No
Quino checkerspot butterfly	*Euphydryas editha quino*	Endangered	n/a	Covered	Yes	Yes	No
Mountain lion	*Puma concolor*	Candidate endangered	n/a	Covered	Yes	Yes	No
Arroyo toad	*Anaxyrus californicus*	Endangered	n/a	Section 6.3.2 of the MSHCP; additional surveys required	Yes, but not within MSHCP required survey area; covered	Yes	No

Common Name	Species Name	Federal Status	State Status	MSHCP Status	Suitable Habitat Present	Avoidance Measures Required	Mitigation Required*
Bald eagle	*Haliaeetus leucocephalus*	Delisted	Endangered	Covered	Yes, but no nesting habitat is present; foraging only	No	No
Riverside fairy shrimp	*Streptocephalus woottoni*	Endangered	n/a	Section 6.1.2 of the MSHCP, Protection of Species Associated with Riparian/ Riverine Areas, and Vernal Pools (RCIP 2003); additional surveys required	Yes, surveys conducted; not observed	No	No
San Diego fairy shrimp	*Branchinecta sandiegonensis*	Endangered	n/a	Not MSHCP covered	Yes, surveys conducted; not observed	No	No

Common Name	Species Name	Federal Status	State Status	MSHCP Status	Suitable Habitat Present	Avoidance Measures Required	Mitigation Required*
Vernal Pool Fairy Shrimp	*Branchinecta lynchi*	Threatened	n/a	Section 6.1.2 of the MSHCP; additional surveys required	Yes, surveys conducted; not observed	No	No
Least Bell's Vireo (LBV)	*Vireo bellii pusillus*	Endangered	Endangered	Section 6.1.2 of the MSHCP; additional surveys required	Yes, surveys conducted; 11 use areas observed; not within limits of disturbance	Yes	No, unless LBV territories enter Project area
Southwestern Willow Flycatcher (SWFL)	*Empidonax traillii extimus*	Endangered	Endangered	Section 6.1.2 of the MSHCP; additional surveys required	Yes, surveys conducted; not observed	No	No
Crotch Bumble Bee	*Bombus crotchii*	n/a	Candidate	Not MSHCP covered	Low potential to occur in limits of disturbance (LOD); surveys not conducted	Yes	No

Common Name	Species Name	Federal Status	State Status	MSHCP Status	Suitable Habitat Present	Avoidance Measures Required	Mitigation Required*
Monarch Butterfly**	*Danaus plexippus* pop. 1	Candidate	n/a	Not MSHCP covered	Low potential to occur in LOD, with no potential for roosting in LOD	Yes	No

* Impacts on MSHCP covered species are considered fully addressed through consistency with the MSHCP. This column refers to any additional mitigation requirements beyond MSHCP consistency.
** Discussed under Non-listed Special-status Wildlife Species
n/a = not applicable

Suitable habitat was present for Riverside fairy shrimp (*Streptocephalus woottoni;* FE), San Diego fairy shrimp (*Branchinecta sandiegonensis;* FE), and vernal pool fairy shrimp (*Branchinecta lynchi;* FT). Additional surveys where potential habitat is present are required for both Riverside fairy shrimp and vernal pool fairy shrimp to achieve consistency with the MSHCP. Surveys were conducted for these species and were negative; therefore, no Avoidance and Minimization Measures would be required for listed fairy shrimp species.

Suitable habitat is present for least Bell's vireo (LBV; *Vireo bellii pusillus*; FE, SE) and southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*; FE, SE), both of which are covered under the MSHCP but are not yet adequately conserved, with focused surveys required when suitable habitat is present that may be directly or indirectly affected (Section 6.1.2 of the MSHCP). Riparian bird surveys were conducted for LBV and SWFL. There are 88.43 acres of potentially suitable habitat for LBV within the riparian bird study area. Eleven LBV use areas were detected within the riparian bird survey area, with most use areas associated with Temescal Wash. However, none of the use areas occur within the limits of disturbance (LOD), so no direct effects on LBV are anticipated. There are 61.32 acres of potentially suitable habitat for SWFL in the riparian bird study area. SWFL was not observed during the focused surveys and is presumed absent; therefore, no direct effects are anticipated on this species.

The following Avoidance and Minimization Measures, which are required for all covered activities under the MSHCP, shall be implemented to ensure that indirect construction impacts on listed, MSHCP covered threatened and/or endangered wildlife species are avoided and/or minimized.

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-14 (NES BIO-14)
NC-18 (NES BIO-20)
NC-19 (NES BIO-24)
AS-1 (NES BIO-18)
TE-2 (NES BIO-21)

The following Avoidance and Minimization Measures, which are required for all covered activities under the MSHCP, shall be implemented to ensure that direct construction

impacts on listed, MSHCP covered threatened and/or endangered wildlife species are avoided and/or minimized.

NC-1 (NES BIO-1)
NC-10 (NES BIO-10)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-14 (NES BIO-14)
NC-18 (NES BIO-20)
TE-2 (NES BIO-21)
AS-5 (NES BIO-28)

The Project was redesigned to avoid LBV use areas, and, while not anticipated, LBV territories could fluctuate from season to season. Given the number of LBV use areas and the proximity of these use areas to the Project, it is possible that LBV use areas may conflict with the construction footprint due to changes in nesting territories prior to the initiation of construction. While no direct impacts on LBV are anticipated, as a precaution, if LBV use areas were to occur within the construction area, a measure has been included to address direct construction impacts on LBV if they were to occur as a part of the Project, with potentially significant impacts. If this were to happen, with the implementation of the Mitigation Measure below, significant direct construction impacts on LBV would be reduced to less-than-significant levels:

TE-3 (NES BIO-23)

Crotch bumble bee (*Bombus crotchii*), which is not a covered species under the MSHCP (CE), has a moderate potential to occur in the BSA but a low potential to occur in the LOD due to the high level of disturbance in the LOD and the lack of resources necessary for the natural life history of this species (food plant genera include *Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia*, and *Eriogonum*, which are found in scrub habitat and open grassland areas with low disturbance levels). The LOD is too disturbed to support the food plants for this species, and ongoing disturbance prevents the success of nests (nests in the ground in rodent burrows or above ground in logs etc.). Surveys were not conducted for this species because of the low potential for this species to occur within the LOD due to the high level of disturbance.

The following Avoidance and Minimization Measures shall be implemented to ensure that indirect and direct construction impacts on Crotch bumble bee are avoided and/or minimized.

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)

NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
TE-1 (NES BIO-29)

Federally and/or State-listed Endangered or Threatened Plants

Suitable habitat is present within the rare plant study area for the following federally and/or State-listed plants:

- Munz's onion (*Allium munzii;* FE, ST)
- San Diego ambrosia (*Ambrosia pumila*; FE)
- thread-leaved brodiaea (*Brodiaea filifolia;* FT, ST)
- slender-horned spineflower (*Dodecahema leptoceras;* FE, SE)
- San Jacinto Valley crown scale (*Atriplex coronata* var*. notatior;* FE)

All five of the species are covered species under the MSHCP, with additional survey requirements within specified survey areas. The Project occurs within the MSHCP Narrow Endemic Plant Species (NEPS) Survey Area 1. Of the above species, where suitable habitat was noted to be present, NEPS Survey Area 1 includes requirements for surveys for the following listed plant species: Munz's onion, San Diego ambrosia, and slender-horned spineflower. The Project also occurs in NEPS Survey Area 7, where, of the above species, surveys for San Diego ambrosia are required. The Project is within MSHCP Criteria Area Survey Area 1, where, of the above species, surveys for thread-leaved brodiaea are required.

In accordance with Section 6.3.2 of the MSHCP, surveys are required for San Jacinto Valley crownscale within the required survey area. However, the Project is not within the required survey area for this species; therefore, this is an MSHCP covered species within the Project area. Suitable habitat for other listed rare plants was not observed within the rare plant study area.

During focused rare plant surveys, no listed rare plant species were observed within the rare plant study area; therefore, impacts are not expected and no Avoidance and Minimization Measures would apply for listed plants. All MSHCP–required rare plant surveys were conducted.

Non-listed Special-status Wildlife Species

Thirty-four non-listed special-status species have suitable habitat within the BSA: one fish, 1 insect, two amphibians, eight reptiles, eleven birds, and eleven mammals. Focused studies were performed for burrowing owl (*Athene cunicularia*; CSC) and six bat species due to presence of suitable habitat within the BSA and/or survey requirement under the MSHCP. While focused studies are not required for the nine non-listed special-status animals not covered under the MSHCP, during other biological

surveys—including special-status plant surveys, LBV surveys, SWFL surveys, burrowing owl surveys, bat surveys and tree surveys—these species were noted to occur if observed. Surveys were not conducted for monarch butterfly (*Danaus plexippus* pop. 1, CFE); it has a moderate potential to occur in the BSA but a low potential to occur in the LOD due to the high level of disturbance.

Eighteen of these non-listed special-status species are fully covered under the MSHCP. These species, which do not require additional study at the species level, include arroyo chub (*Gila orcuttii*; CSC), coast range newt (*Taricha torosa torosa*; CSC), western spadefoot (*Scaphiopus hammondii*; CSC), Belding's orange-throated whiptail (*Aspidoscelis hyperythrus beldingi;* CSC), red-diamond rattlesnake (*Crotalus ruber*; CSC), San Diego coast horned lizard (*Phrynosoma coronatum blainvillii*; CSC), white-tailed kite (*Elanus leucurus*; California Fully Protected [CFP]), northern harrier (*Circus hudsonius*; CSC), golden eagle (*Aquila chrysaetos*; Bald and Golden Eagle Protection Act [BGEPA], CFP), American peregrine falcon (*Falco peregrinus anatum*; CFP), loggerhead shrike (*Lanius ludovicianus*; CSC), coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*; CSC), yellow warbler (*Setophaga petechia;* CSC), yellow-breasted chat (*Icteria virens;* CSC), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*; CSC), and San Diego desert woodrat (*Neotoma lepida intermedia*; CSC) (CDFW 2024). San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) and northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) are covered under the MSHCP but are no longer CSC (CDFW 2024). Although these species are covered under the MSHCP, the birds and their active nests are protected under the Migratory Bird Treaty Act, BGEPA, and California Fish and Game Code.

Three non-listed special-status animal species were detected in the BSA during field studies: Belding's orange-throated whiptail, yellow-breasted chat, and yellow warbler. All three of these non-listed special-status animals are MSHCP fully covered species, with no additional survey requirements. Although there is suitable habitat in the BSA for the remaining 15 species, they were not detected during all field surveys.

Focused studies were performed for burrowing owl and bats due to presence of suitable habitat within the BSA and/or survey requirements under the MSHCP. No burrowing owls or special-status bats were observed. No other focused studies were performed for non-listed special-status animals or candidate species. The BSA contains 1,295.63 acres of suitable habitat for these non-listed MSHCP covered animal species in the form of grasslands, shrublands, forests and woodlands, riparian habitats, and agricultural areas. Potential suitability of the habitats ranges from low quality to high quality, with areas within and directly adjacent to the LOD providing low quality and areas farther from the LOD providing higher quality.

The grasshopper sparrow is a CSC. Under the MSHCP, there are species-specific conservation objectives that need to be met before this is a fully covered species. These conservation objectives have not yet been met for the MSHCP. Therefore, this species is essentially treated in this report as not covered by the MSHCP. The BSA contains 387.67 acres of suitable habitat for grasshopper sparrow. It was not detected during any of the field studies for the Project, but there is a moderate likelihood that it is present.

There is a remainder of 15 non-listed special-status species that are not covered under the MSHCP, including six bat species: pallid bat (*Antrozous pallidus*; CSC), western mastiff bat (*Eumops perotis*; CSC), pocketed free-tailed bat (*Nyctinomops femorosaccus*; CSC), big free-tailed bat (*N. macrotis*; CSC), western red bat (*Lasiurus blossevillii*; CSC), and western yellow bat (*L. xanthinus*; CSC). The other nine species are Southern California legless lizard (*Anniella stebbinsi*; CSC), California glossy snake (*Arizona elegans occidentalis*; CSC), coastal whiptail (*Aspidoscelis tigris stejnegeri*; CSC), Coronado skink (*Eumeces skiltonianus interparietalis*; CSC), coast patch-nosed snake (*Salvadora hexalepis virgultea*; CSC), long-eared owl (*Asio otus*; CSC), Dulzura pocket mouse (*Chaetodipus californicus femoralis*; CSC), monarch butterfly (*Danaus plexippus* pop. 1, CFE), and American badger (*Taxidea taxus*; CSC). Suitable habitat is present throughout the BSA within native vegetation communities and open areas for most of the above-mentioned species. The BSA does not overlap with any known mapped overwintering groves for monarch butterfly, and no milkweed (*Asclepias* spp.), a required host plant for monarch caterpillars, was noted in the BSA. Focused surveys were performed for special-status bat species, and none were observed. Although there is suitable habitat in the BSA for the other species, none were detected during surveys; however, species-specific focused surveys were not performed, as these species were surveyed for incidentally during all other biological surveys.

The following Avoidance and Minimization Measures shall be implemented to ensure indirect impacts on non-listed special-status wildlife species, both those covered and not covered by the MSHCP, are avoided and/or minimized.

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-18 (NES BIO-20)
NC-19 (NES BIO-24)
AS-1 (NES BIO-18)

The following Avoidance and Minimization Measures shall be implemented to ensure direct impacts on non-MSHCP covered special-status wildlife species are avoided and/or minimized:

NC-1 (NES BIO-1)
NC-10 (NES BIO-10)
NC-12 (NES BIO-12)

NC-13 (NES BIO-13)
NC-18 (NES BIO-20)
TE-2 (NES BIO-21)
AS-5 (NES BIO-28)

In addition to the above measures for non-MSHCP covered special-status wildlife species, the following Avoidance and Minimization Measures would reduce or minimize potential impacts on bats:

AS-3 (NES BIO-26)
AS-4 (NES BIO-27)

In addition to the above measures for non-MSHCP covered special-status wildlife species, the following Avoidance and Minimization Measures would reduce or minimize potential impacts on monarch butterfly:

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-11 (NES BIO-11)
TE-1 (NES BIO-29)

For MSHCP covered special-status wildlife species, the following Avoidance and Minimization Measures shall be implemented:

NC-1 (NES BIO-1)
NC-10 (NES BIO-10)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-14 (NES BIO-14)
NC-18 (NES BIO-20)
TE-2 (NES BIO-21)
AS-5 (NES BIO-28)

In addition to the above measures for direct impacts on MSHCP covered special-status wildlife species, the following Avoidance and Minimization Measure would be required for burrowing owls:

AS-2 (BIO-25)

Non-listed Special-status MSHCP Covered Plant Species

During the rare plant focused surveys performed in 2020 and 2021, none of the Criteria Area Plant Species Survey Area 1 Species and NEPS Area 1 and 7 non-listed special-status plant species were observed. Therefore, no impacts would occur. Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), was found; however, this species is fully covered under the MSHCP. Long-spined spineflower is not a Criteria Area Plant Species or a NEPS. It is a fully covered species under the MSHCP, with no additional survey requirements. No other covered plant species were detected; however, these could potentially occur in the Project vicinity. No Avoidance and Minimization Measures and no mitigation would be required for non-listed special-status plant species.

Non-listed Special-status Non-MSHCP Covered Plant Species

During the rare plant focused surveys performed in 2020 and 2021, no non-MSHCP non-listed special-status plants species were observed during the 2020 or 2021 focused studies. These species are considered absent from the study area; therefore, no Avoidance and Minimization Measures are necessary.

The Project would implement Avoidance and Minimization Measures and would be in compliance with the MSHCP to avoid impacts on candidate, sensitive, or special-status wildlife and plant species.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less than Significant with Mitigation Incorporated

MSHCP riparian/riverine resources are present within the Project's study area and are proposed for removal. The Project is expected to result in impacts on 7.15 acres of riparian/riverine resources, with 2.26 acres of this being riparian vegetated acreage and the remaining 4.89 acres being riverine.

Impacts on MSHCP riparian/riverine resources from the Project would require compensatory mitigation to reduce impacts to less-than-significant levels under CEQA. Under the MSHCP, compensation for these losses shall be addressed through the following Mitigation Measures:

NC-15 (NES BIO-15])
NC-16 (NES BIO-16)
NC-17 (NES BIO-17)

Twenty-five vegetation communities and three land use types were identified in the BSA, and 11 of the vegetation communities are classified as sensitive natural communities by the California Department of Fish and Wildlife (CDFW) (CDFW 2024).

Of these 11 communities, impacts are expected to occur on seven of the communities, as shown in Table 3-2.

Table 3-2. Vegetation Communities

Vegetation Community	Impact (acre)		
	Permanent	Temporary	Shading
Clustered tarweed fields	0.09	2.29	0.00
Bush penstemon scrub	0.00	0.96	0.00
Holly leaf cherry—toyon—greenbark chaparral	0.00	0.53	0.00
Fremont cottonwood forest and woodland	0.00	0.32	0.00
Goodding's willow–red willow riparian woodland	0.00	1.21	0.00
Scale broom scrub	0.00	0.18	0.00
California sycamore woodland	0.00	0.06	0.27

The following Avoidance and Minimization Measures shall be implemented to ensure indirect construction impacts on riparian and sensitive natural communities are avoided and/or minimized.

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
NC-12 (NES BIO-12)

Impacts on sensitive natural communities from the Project would require compensatory mitigation. Under the MSHCP, compensation for these losses would also be addressed through consistency with the MSHCP. The execution of the MSHCP includes the requirement of creating an interconnected MSHCP Conservation Area in the MSHCP Plan Area. The Conservation Area would conserve habitats and associated plant and animal species.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant with Mitigation Incorporated

The Project would result in the permanent removal of 0.01 acre of federal jurisdictional non-wetlands, as well as the temporary disturbance of 2.51 acres of federal jurisdictional non-wetlands and 0.03 acre of federal jurisdictional wetlands. It would also result in 0.20 acre of temporary impacts on non-wetland Regional Water Quality Control Board (RWQCB) jurisdictional waters of the State, the permanent removal of 0.07 acre of State streambeds, the temporary disturbance of 3.82 acres of State streambeds, and shading impacts on 1.00 acre. A total of 2.26 acres of CDFW riparian would be affected by the Project (<0.01 acre permanent, 1.80 acres temporary, and 0.46 acre shading effects).

Authorization under Section 404 of the Clean Water Act (CWA) Nationwide Permit and Water Quality Certification under Section 401 of the CWA (and a Porter-Cologne Water Quality Control Act permit for impacts on State waters only) would be required, as would a CDFW 1602 Streambed Alteration Agreement.

The following Avoidance and Minimization Measures shall be implemented to ensure indirect construction impacts on State and federal wetlands are avoided and/or minimized.

NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
NC-12 (NES BIO-12)

The following Mitigation Measures shall be implemented to ensure direct impacts on federally and State protected wetlands would be less than significant.

NC-15 (NES BIO-15)
NC-16 (NES BIO-16)
NC-17 (NES BIO-17)

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?

Less-than-Significant Impact

Development of the median into active traffic lanes may reduce the chance of an animal successfully reaching the other side when crossing the highway, although the number of animals this may directly affect is not known. However, the capacity for wildlife movement across I-15 is already poor, with roadkill observed frequently. Such capacity has also been degraded over past decades by the increasing width of the interstate, traffic flows, and noise. Although the Project would not improve this situation, it is not expected to substantially worsen current operational impacts on wildlife movement or connectivity.

Overall, the Project is not expected to substantially affect wildlife movement or linkage functions and values within the BSA because major wash crossings under I-15 bridges within the limits of the Project would be retained, including the priority linkages at Bedford Wash and Indian Wash.

This Project is not expected to affect any migratory wildlife corridors or the movement of any native resident or migratory fish or wildlife species. This Project would not impede the use of native wildlife nursery sites.

To address potential edge impacts during construction and direct impacts from additional bridge infrastructure and closing of bridge gaps on MSHCP Proposed Linkage 1, Proposed Constrained Linkage 3, Proposed Constrained Linkage 5, Proposed Core 1, and Proposed Extension of Existing Core 2, the following Avoidance and Minimization Measures shall be implemented. This would ensure direct construction impacts on wildlife movement corridors are avoided and/or minimized.

NC-1 (NES BIO-1)
NC-2 (NES BIO-2)
NC-3 (NES BIO-3)
NC-4 (NES BIO-4)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-11 (NES BIO-11)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-14 (NES BIO-14)
NC-15 (NES BIO-15)

NC-16 (NES BIO-16)
NC-17 (NES BIO-17)
NC-20 (NES BIO-19)
AS-1 (NES BIO-18)
NC-18 (NES BIO-20)

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant with Mitigation Incorporated

Within the BSA, trees are protected by the Riverside County Oak Tree Management Guidelines, Open Space and Conservation Policy, Ordinance 12.08, Tree Removal Ordinance 12.24.010, and the California State Senate Concurrent Resolution No. 17, Oak Woodlands.

Protected trees in the BSA include oak trees within both mapped Coast Live Oak Woodland and Forest and any other vegetation community containing oak trees. Other protected trees include trees within the right of way of the county highway.

With implementation of the Mitigation Measure below, all potential direct and indirect impacts on protected trees would be reduced to less-than-significant levels:

NC-20 (NES BIO-19)

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?

Less than Significant with Mitigation Incorporated

The Project is within the boundaries of the MSHCP and is identified in the MSHCP as a Planned Road and a Covered Activity. Portions of the Project lie both inside and outside of MSHCP Criteria Area cells. Coverage under the MSHCP provides an expedited process for biological resource permitting and approvals, as well as compensatory mitigation under CEQA. For those MSHCP covered resources, no additional mitigation, or requirements beyond those necessitated by the MSHCP, are required for the Project.

MSHCP cores are located within the study area:

- Proposed Existing Core C (Lake Mathews/Estelle Mountain)
- Proposed Extension of Existing Core 2
- Proposed Core 1
- Proposed Linkage 1

- Proposed Linkage 2
- Proposed Constrained Linkage 3
- Proposed Constrained Linkage 5
- Proposed Constrained Linkage 6

The Project would not appreciably affect the ability of the cores and linkages to function as needed for the MSHCP due to the Project design.

In addition, the Project is consistent with Section 6.1.2 of the MSHCP, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools, and Section 6.3.2 of the MSHCP, Additional Surveys Required.

The Project is a Covered Activity and occurs within the Temescal Canyon and Elsinore Area Plans (refer to Chapter 2 for a summary of the MSHCP as it relates to the Project).

In compliance with the MSHCP, focused surveys were performed for Riverside fairy shrimp, vernal pool fairy shrimp, SWFL, and LBV to comply with MSHCP Section 6.1.2, Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools. In addition, focused surveys were performed for burrowing owl, Narrow Endemic plants, and Criteria Area plants to comply with MSHCP Section 6.3.2, Additional Surveys Required. In summary, the Project would potentially affect natural vegetation communities (i.e., nonnative grassland, coastal sage scrub, and riparian habitats), listed animals (i.e., Quino checkerspot butterfly, arroyo toad, coastal California gnatcatcher, SKR, SBKR, LBV, and mountain lion), and non-listed special-status plants and animals.

Under the MSHCP, a project needs to address potential indirect effects associated with locating development near MSHCP conservation areas through potential degradation of water quality by drainages, the introduction of toxins, night lighting, noise, and invasive species (Volume I, Section 6.1.4, Guidelines Pertaining to the Urban/Wildlands Interface). The necessary Avoidance and Minimization Measures for consistency with the MSHCP are included as a part of the Project.

The permittees (Caltrans and RCTC) have reviewed the Project and determined that the Project has met all of the requirements of the MSHCP (i.e., is consistent with the MSHCP). Because the Project is within MSHCP Criteria Cells, the permittees are required to submit a Joint Project Review (JPR) application with supporting documentation to the Regional Conservation Authority (RCA) for review. The Project analysis would include an MSHCP Consistency Analysis to be reviewed by the U.S. Fish and Wildlife Service and CDFW (the Wildlife Agencies), to be included as an appendix to the draft CEQA document. The JPR includes all required conditions of approval needed to ensure that the Project is consistent with the MSHCP. This includes items such as the Determination of Biologically Equivalent or Superior Preservation (DBESP) related to mitigation for impacts on riparian/riverine resources and preconstruction surveys for burrowing owls and nesting birds, among others.

Consistency with the MSHCP includes consistency with all MSHCP reserve assembly goals and all of the MSHCP plan requirements. This includes an analysis regarding whether the Project conflicts with reserve assembly goals for cores, linkages, and constrained linkages, among others, required for assembly of the MSHCP. The analysis must include an evaluation of not only the reserve assembly goals, but other MSHCP requirements, including Section 6.1.2, Riparian/Riverine and Vernal Pool Policies; Section 6.1.3, Narrow Endemic Plant Species Survey Requirements; Section 6.3.2, Criteria Area Species Survey Requirements; Section 7.5, Siting, Design and Construction and Wildlife Movement Guidelines (required if in Criteria Cells or public/quasi-public lands); and Section 6.1.4, Urban Wildlife Interface Guidelines. Sections 6.1.2, 6.1.3, 6.3.2, and 6.1.4 also apply to projects outside of MSHCP Criteria Areas.

The RCA reviews the JPR and supporting documentation, including the DBESP (if applicable), and issues Consistency Findings to the permittee and the Wildlife Agencies. The Wildlife Agencies then review the Consistency Findings and supporting documentation and either provide comments to be addressed prior to concurrence or concur with the findings of consistency with the MSHCP. The MSHCP Consistency Findings (that the Project is consistent with the MSHCP and the JPR process is completed) are included in the final environmental document. A JPR is currently in process, including the submission of a DBESP, and a consistency letter will be included in the final environmental document.

The following Avoidance and Minimizations Measures would ensure indirect impacts on the MSHCP are avoided and/or minimized:

NC-3 (NES BIO-3)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
NC-14 (NES BIO-14)

The following Mitigation Measures are required to reduce impacts to less-than-significant levels under CEQA and meet the requirements of the MSHCP:

NC-15 (NES BIO-15)
NC-16 (NES BIO-16)
NC-17 (NES BIO-17)

The Project is within the boundaries of the long-term SKR HCP. In 1996, a Section 10(a) Permit and California Fish and Game Code 2081 Management Authorization were issued to the Riverside County Habitat Conservation Agency for the SKR HCP. The

SKR HCP provides take authorization for SKR within the SKR HCP boundaries, and the MSHCP provides take authorization for SKR outside the boundaries of the SKR HCP, but within the MSHCP boundaries. The core reserves within the SKR HCP are managed as a part of the MSHCP consistent with the SKR HCP. Upon expiration of the initial 30-year term of the SKR HCP (2026), the RCA will process an amendment to the MSHCP to allow coverage for SKR throughout the MSHCP area. Under the SKR HCP, take authorization is streamlined, as projects do not require individual review and approval by the Wildlife Agencies. Individual projects within the SKR Plan Area are required to pay a SKR mitigation fee for land that is developed and removes SKR habitat. The fee is $500 per gross acre proposed for development.

The following Avoidance and Minimization Measures would ensure indirect impacts on the SKR HCP are avoided and/or minimized:

NC-3 (NES BIO-3)
NC-5 (NES BIO-5)
NC-6 (NES BIO-6)
NC-7 (NES BIO-7)
NC-8 (NES BIO-8)
NC-9 (NES BIO-9)
NC-10 (NES BIO-10)
NC-12 (NES BIO-12)
NC-13 (NES BIO-13)
TE-4

3.1.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

3.1.5.1 CEQA Significance Determinations for Cultural Resources

The potential for the Build Alternative to result in adverse impacts on cultural resources was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Historic Property Survey Report (HPSR)* (Caltrans 2023c), *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Archaeological Survey Report (ASR)* (Caltrans 2023d), *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Historical Resources Evaluation Report (HRER)* (Caltrans 2023e), and *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Finding of No Adverse Effect (FOE)* (Caltrans 2023f) and Section 2.2.10, *Cultural Resources*, in this EIR/EA. The following discussions are based on those analyses.

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less-than-Significant Impact

Properties listed in, or officially determined eligible for listing in, the National Register of Historic Places (NRHP) are automatically listed in the California Register of Historical Resources (CRHR). Therefore, for the purposes of this analysis, all NRHP assumed eligible properties are also resources under CEQA. As detailed in Section 2.2.10, *Cultural Resources*, the following archaeological sites within the Area of Potential Effects (APE) are considered eligible for inclusion in the NRHP for the purposes of this Project only because they would be protected in their entirety from any potential effects through the establishment of an Environmentally Sensitive Area (ESA), in accordance

with Section 106 Programmatic Agreement (PA) Stipulation VIII.C.4. Therefore, there are seven historic properties within or adjacent to the APE for the purposes of this Project.

Table 3-3. Historic Properties within or Adjacent to the APE

Name*	Community	OHP Status Code
Túu'uv TCP (TCP-1)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)
Qaxáalku Payómik TCP (TCP-2)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)
Qaxáalku Kwíimik TCP (TCP-3)	Corona, Perris, Riverside, CA	3S (for the purposes of this Project only)
P-33-000108/CA-LAN-108	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-000630/CA-RIV-630	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-001099/CA-RIV-1099	Temescal Valley, CA	3S (for the purposes of this Project only)
P-33-002992/CA-RIV-2992	Temescal Valley, CA	3S (for the purposes of this Project only)

* Not a State-owned resource.
3S: Appears eligible for NRHP individually through survey evaluation
OHP = Office of Historic Preservation; TCP = Traditional Cultural Property

Four of the seven of the historic properties are prehistoric archaeological sites that would be avoided and protected by using an ESA for each. Therefore, the Project has a No Adverse Effect with Standard Conditions finding for the four prehistoric historic properties. The other three resources are the Traditional Cultural Properties (TCPs). Based on the limited percentage of permanent impacts on the overall TCPs and the lack of impacts on potentially contributing archaeological sites, a Finding of No Adverse Effect on the TCPs is applicable (see Section 2.2.10, *Cultural Resources*).

Overall, the undertaking, as currently proposed, would have a finding of No Adverse Effect on the four archaeological sites or three TCPs. Caltrans District 8, in applying the Criteria of Adverse Effect, proposes that a Finding of No Adverse Effect is appropriate and the State Historic Preservation Officer's (SHPO's) supplied concurrence in the finding, pursuant to 36 Code of Federal Regulations (CFR) 800.5(c) and 106 PA Stipulation X.B.2 on May 26, 2023.

Although a low potential has been determined, in general, previously undocumented cultural materials or human remains could be unearthed during site preparation, grading, or excavation for the Build Alternative. Those potential effects would be avoided or minimized through Standard Project Measures **CR-1** through **CR-4** (see Section 2.2.10, *Cultural Resources*, for full measure text). Based on this analysis, less-than-significant impacts are anticipated related to cultural resources.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact

No human remains are known to exist within the APE. Therefore, construction of the Build Alternative would not result in impacts on known human remains. If human remains are exposed during construction, Standard Project Measure **CR-2** (as identified in Section 2.2.10, *Cultural Resources*) requires compliance with State Health and Safety Code Section 7050.5, which states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the Riverside County Coroner shall be contacted. Pursuant to California Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant. At the same time, the Caltrans District 8 Environmental Branch Chief or the District 8 Native American Coordinator will be contacted so they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. Further provisions of California Public Resources Code Section 5097.98 are to be followed as applicable along with Standard Project Measure **CR-2**. The impact related to the disturbance of human remains would be less than significant.

3.1.6 Energy

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

3.1.6.1 CEQA Significance Determinations for Energy

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

b) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less-than-Significant Impact

Energy consumption from construction activities would occur at different rates throughout the construction phases. Project construction is expected to use equipment such as crawler tractors, excavators, graders, rollers, rubber-tired loaders, scrapers, rough-terrain forklifts, and paving equipment. As described in Section 2.3.8, *Energy*, the direct energy required to build the Project would be approximately 66.6 billion British thermal units over the course of the approximately 3-year construction period. Although construction would result in a short-term increase in energy use, construction design features would help conserve energy. For example, recycled materials, including removed asphalt concrete pavement and cement concrete pavement, would be used where feasible, consistent with Standard Project Measure **EN-1**. Recycled products typically have lower energy costs for manufacturing and transportation because recycled products do not require raw materials, which must be mined and transported to a processing facility. If new materials must be used, a fly ash mix may be considered to lower the heat island effect, depending on what is allowable under Caltrans specifications. The energy conservation features would be consistent with State and

local policies to reduce energy consumption. Therefore, construction of the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy.

Operation of traffic lights, streetlights, sensors, and changeable message signs such as toll pricing signs consumes electricity. These features are required to manage traffic and provide safe driving conditions. Light-emitting diode (LED) fixtures would be used wherever traffic lights or streetlights are installed or replaced (Avoidance and Minimization Measure **EN-2**).

Long-term changes in energy use are due to the changes in volumes, speeds, and fuel economy of vehicles traveling in the region. As described in Section 2.3.8, *Energy*, there would be an increase in regional VMT under the Build Alternative as compared to the No-Build Alternative, resulting in increased energy consumption.

Over the long term, when compared to the Existing Conditions (2019), the Build Alternative is projected to increase the annual energy consumption by 17.8 percent in 2030 and by 5.7 percent in 2050. When compared to the Existing Conditions (2019), annual VMT is projected to increase by 62.0 percent in 2030 and by 67.4 percent by 2050. This disparity is attributed to fleet turnover, as older, less fuel-efficient vehicles are replaced by later-model, more fuel-efficient vehicles over time. These later-model replacement vehicles would also include hybrid and all-electric vehicles. This increase is not significant in the context of statewide consumption, as it would represent approximately 0.001 percent of statewide energy consumption. As such, Project operation would not result in a wasteful, inefficient, or unnecessary consumption of energy.

The Project improvements would require increased levels of periodic maintenance, which could increase indirect energy consumption. Indirect energy consumption would be from the energy needs of vehicles and equipment used for routine maintenance, such as vegetation management, sweeping, restriping, and pavement preservation activities.

The total indirect energy impacts would not be substantial at the regional level, and the total Project impact on regional energy supplies is expected to be minor. As such, the Project would not conflict with or obstruct a State or local renewable energy or energy efficiency plan, and impacts would be less than significant.

3.1.7 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

3.1.7.1 CEQA Significance Determinations for Geology and Soils

The potential for the Build Alternative to result in adverse impacts on geology and soils was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) District Preliminary Geotechnical Report* (Caltrans 2023g) and in Section 2.3.3, *Geology/Soils/Seismic/Topography*, in this EIR/EA. The following discussions are based on those analyses.

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

No Impact

The Project area is not in a State of California Special Studies (“Alquist-Priolo”) Zone for fault rupture, and no known active faults are mapped as crossing or projecting toward the site. The nearest active faults are the Elsinore fault (closest distance to Project is approximately 3 miles) and San Jacinto fault (closest distance to Project is approximately 30 miles). The Project is situated in a seismically active region. As is the case for most areas of Southern California, ground shaking resulting from earthquakes associated with nearby and more distant faults may occur at the Project site. During the life of the Project, seismic activity associated with active faults can be expected to generate moderate to strong ground shaking at the site. Compliance with the most current Caltrans procedures regarding seismic design, which is standard practice on all Caltrans projects, is anticipated to prevent any adverse effects related to seismic ground shaking. Seismic design would also meet County of Riverside requirements for near-source design parameters under the Uniform Building Code. Therefore, potential

for fault rupture is considered remote for both Project construction and operation and no impact is anticipated.

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

Less-than-Significant Impact

The Project is within a seismically active region subject to future moderate to strong seismic ground shaking from earthquakes occurring along regional and local faults. Direct and indirect impacts related to strong seismic shaking may include ground deformation, which includes fissures, settlement, displacement, and loss of bearing strength. Therefore, the Project may be subject to strong seismic ground shaking during both construction and operation.

Neither ground shaking nor fault rupture can be avoided in the design of roadways; however, placing the realigned roadway either at natural grade or in low cuts or on low embankments limits the potential for, and consequences of, failure in the cuts and fills. Accordingly, the currently proposed designs are generally favorable for accommodating future ground shaking or surface rupture. Compliance with Caltrans' procedures regarding seismic design, as detailed in Section 19, "Earthwork," of the Caltrans Standard Specifications Manual, is required for any project undertaken by Caltrans to minimize the potential for adverse effects related to seismic ground shaking. Seismic design also must meet County of Riverside requirements for near-source design parameters under the Uniform Building Code. Construction and operation of the Project would not cause strong seismic ground shaking, cause fault rupture, or result in seismic-related ground failure.

Liquefaction is a phenomenon whereby saturated granular soils lose their inherent shear strength due to increased pore water pressures, which may be induced by conditions such as an earthquake. According to the California Geological Survey California Seismic Hazards Program, the Project is not within a liquefaction zone.[2] The Project would not include features that would lead to impacts related to liquefaction.

There is a low risk level for landslides within the Project limits. Construction would be within the relatively flat I-15 median between existing northbound and southbound lanes. No new cut slopes are proposed, and research did not reveal any existing landslides along the Project alignment. In addition, the Project will include Standard Project Measure **GEO-1** to properly assess and minimize potential impacts on geotechnical sites as part of the Build Alternative. Impacts are considered less than significant.

[2] https://www.conservation.ca.gov/cgs/hazards/seismic-hazards-mapping-act

b) Result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact

Construction activities would require the temporary disturbance of soil within the Project limits, including excavation, grading, and other typical construction-related activities that could increase the potential of soil erosion during construction. The construction contractor would be required to adhere to requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which would include implementing erosion and sediment control BMPs specifically identified in the Project-specific Stormwater Pollution Prevention Plan (SWPPP) to prevent sediment from moving into receiving waters and affecting water quality. Additionally, Standard Project Measure **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*) and Avoidance and Minimization Measure **NC-12** (Section 2.4.1, *Natural Communities*) would implement erosion control measures during construction. Therefore, impacts related to soil erosion or loss of topsoil would be less than significant during Project construction.

During operation, the Project would not result in substantial soil erosion or loss of topsoil beyond what the Project area already experiences as an existing roadway. Therefore, there would be no impact during Project operation.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less-than-Significant Impact

Available site information and the site review performed in support of the Preliminary Geotechnical Design Report indicated low potential for landslides within the Project limits. However, erosion protection would be implemented in design of the Project, in accordance with Caltrans standards and special provisions, which is required for all Caltrans projects. No impacts are anticipated related to landslides, as the risk for landslides is low.

As previously discussed, according to the California Geological Survey California Seismic Hazards Program, the Project is not within an area that is subject to liquefaction. Furthermore, the lack of shallow groundwater along much of the Project limits further supports the low potential for liquefaction along the Project alignment; therefore, the potential for lateral spreading or liquefaction to affect the Project is low.

There is the potential for subsidence to occur, potentially leading to collapse, depending on the methods and type of equipment used during the construction period and the design that is implemented for the Project. The potential impact and hazards of consolidation settlement due to embankment loading and subsidence will be determined in the Plans, Specifications, and Estimates phase, which will include Standard Project Measure **GEO-1** to properly assess and minimize potential impacts on geotechnical sites. The Project would follow Caltrans' latest design requirements to minimize any

potential effects related to subsidence and settlement, as required for all Caltrans projects. Impacts would be less than significant.

d) Be located on expansive soil, creating substantial direct or indirect risks to life or property?

Less-than-Significant Impact

Expansive soils generally result from specific clay minerals that have the capacity to undergo substantial volume change (shrink or swell) based on changes in moisture content. As such, sandy soils are not generally classified as expansive soils. Much of the Project footprint consists of soils that are primarily silty sands with coarser young alluvium within the various washes. Clay is likely to be encountered in the Alberhill area in northern Lake Elsinore. Pavement design would be based on CTM 301 R-value test results, taking into account clay content of pavement subgrades. Clays would not be used for earth-retaining wall backfill. The impact from construction and operation of the Project would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact

The Project would not include septic tanks, sewer, or alternative wastewater disposal systems, or other facilities where such facilities would be required. There would be no impact.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact

The results of the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Paleontological Identification Report/Paleontological Evaluation Report* (Caltrans 2022b) indicate that the Project area is underlain, in part, by high paleontologically sensitive geologic units, which are known to contain scientifically important paleontological resources. These units consist of the following.

- Late to middle Pleistocene-age old alluvial fan deposits (Qof)
- Late to middle Pleistocene-age old axial channel deposits (Qoa)
- Late to middle Pleistocene-age old paralic deposits, undivided (Qop)
- Middle to early Pleistocene-age very old alluvial fan deposits (Qvof)
- Middle to early Pleistocene-age very old axial channel deposits (Qvoa)

- Paleocene-age Silverado Formation (Tsi)

In addition, although high-sensitivity early Miocene- to Oligocene-age Vaqueros and Sespe Formations, undivided (Tvs), were not observed directly along the survey corridor, these sediments were observed in nearby hill exposures immediately adjacent to the survey area.

Due to the potential for Project construction to affect these units and any resources harbored within, a paleontological monitoring program shall be prepared and implemented during ground-disturbing activities in order to avoid or minimize potential impacts on significant paleontological resources (Avoidance and Minimization Measure **PAL-1**). Impacts would be less than significant for paleontological resources.

3.1.8 Greenhouse Gas Emissions

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐

3.1.8.1 CEQA Significance Determinations for Greenhouse Gas Emissions

The potential for the Build Alternative to adversely affect greenhouse gas (GHG) emissions was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Air Quality Report* (Caltrans 2022a) and in Section 3.3, *Climate Change*, of this EIR/EA.

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Significant and Unavoidable Impact

Construction Emissions

Construction GHG emissions would be expected to result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase. Project construction would be expected to involve crawler tractors, excavators, graders, rollers, rubber-tired loaders, scrapers, rough-terrain forklifts, and paving equipment, among other types of construction equipment. Projected GHG construction emissions were calculated for the Project using the Sacramento Metropolitan Air Quality Management District Roadway Construction Emissions Model (RCEM)[3] and estimated to total approximately 5,444 metric tons of carbon dioxide equivalent (CO_2e) over the course of the approximately 3-year construction period. Mitigation Measures **GHG-1** through **GHG-4** and **GHG-11,** as well as Standard Project Measure **EN-1** and Standard Project

[3] The Sacramento Metropolitan Air Quality Management District RCEM is recommended by Caltrans for the quantification of expected construction-related GHG emissions related to the Project.

Measure **AQ-4**, are expected to reduce construction GHG emissions impacts from the Project.

Operations Emissions

The regional VMT data for the baseline/existing, No-Build, and Build Alternative conditions, along with the CT-EMFAC2021 emission rates, were used to calculate the expected CO_{2e} emissions for the Existing (2019), Opening Year (2030), and Horizon Year (2050) conditions. The results of the modeling are summarized in **Error! R eference source not found.** in Section 3.3, *Climate Change*. As shown in **Error! Reference source not found.**, when compared to the Existing (2019) baseline, in both the Opening Year (2030) and Design Year (2050), the No-Build and Build Alternatives would result in an increase in GHG emissions. When compared to the No-Build condition, the Build Alternative would result in an increase in emissions in both the Opening Year (2030) and Design Year (2050). Mitigation Measures **GHG-5** through **GHG-10** would reduce the GHG emissions impacts from operation and maintenance of the Project. In addition, Mitigation Measure **VMT-1** would reduce VMT and its associated GHG impacts. However, because operational GHG emissions under the Build Alternative would increase in the Design Year (2050) compared to existing conditions, the impact would be significant and unavoidable under CEQA.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Significant and Unavoidable Impact

The Project is identified in SCAG's 2024–2050 RTP/SCS under project number 3160001-RIV170901. The Build Alternative directly supports the 2024–2050 RTP/SCS mobility and accessibility performance outcome by reducing vehicle delay and increasing throughput. Reducing vehicle delay and increasing throughput is expected to help minimize idling GHG emissions, as well as lower the time traffic spends at a lower vehicle speed where GHG emissions are higher. Therefore, this strategy contributes to overall GHG reduction efforts regarding mobile sources within the SCAG region. However, as discussed in Section 3.3, *Climate Change*, because operational emissions are projected to increase under the Build Alternative in the Opening Year (2030) and Design Year (2050) when compared to the Existing (2019) condition and No-Build condition in the Opening and Design years, the Project would conflict with the goals included in the State's Assembly Bill (AB) 32 Climate Change Scoping Plan and other regulations adopted for the purpose of reducing the emissions of GHGs. Although Mitigation Measures **GHG-1** through **GHG-11** and **VMT-1** and Standard Project Measure **EN-1** and Standard Project Measure **AQ-4** (see full measure text in Sections 3.3.4.3 and 3.3.5.5) would be implemented to reduce Project GHG emissions, impacts would be considered significant and unavoidable.

3.1.9 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

3.1.9.1 CEQA Significance Determinations for Hazards and Hazardous Materials

The potential for the Build Alternative to adversely affect hazards and hazardous materials was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Initial Site Assessment* (Caltrans 2021a) and in Section 2.3.5, *Hazardous Waste/Materials*, of this EIR/EA.

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less-than-Significant Impact

Through excavation, demolition, and other construction activities, the Project has the potential to encounter aerially deposited lead (ADL), asbestos-containing materials (ACMs), lead-based paint (LBP), treated wood waste (TWW), lead chromate, and unexpected or unknown contaminants.

Typical hazardous materials anticipated to be used during construction of the Project (e.g., lubricants, such as grease and oils; petroleum fuels; cleaning solvents; paints) and hazardous wastes generated during construction would be handled in accordance with applicable local, State, and federal regulations and policies regarding the use, storage handling, disposal, and transport of these materials, which may include those of the Resource Conservation and Recovery Act, Clean Air Act, CWA, Department of Toxic Substances Control (DTSC) Environmental Health Standards for the Management of Hazardous Waste, provisions of the Riverside County Department of Environmental Health Hazardous Materials Branch, and U.S. Department of Transportation.

Routine maintenance activities during Project operation would also be required to follow applicable local, State, and federal regulations and policies with respect to the use, storage, handling, transport, and disposal of potentially hazardous waste or materials. Therefore, impacts related to hazardous waste or materials are considered less than significant.

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?

Less-than-Significant Impact

As discussed in Section 2.3.5, *Hazardous Waste/Materials*, no recognized environmental conditions (RECs), historical REC sites, or controlled REC sites were identified within the Project limits. However, the Project does have the potential to encounter unexpected or unknown contaminants during soil disturbance activities. Prior to construction, a Health and Safety Plan, Contaminated Media Management Plan, and Construction Contingency Plan would be prepared to outline specific procedures to follow if contaminants are encountered to ensure worker health and safety during construction, as identified in Avoidance and Minimization Measures **HW-5** and **HW-7** and Standard Project Measures **HW-1**, **HW-6**, and **HW-8**.

The Project may widen up to 15 bridges. ACMs are present in the gray felt pads along the northbound and southbound sides of the Brown Canyon Wash Bridge, the Weirick Road undercrossing, and the Bedford Wash Bridge inner guardrails. In addition, LBP is present in the light gray paint on the railing on the northbound side of the Temescal Wash Bridge and in the yellow lane marking on the northbound side of the Indian Wash Bridge. However, there is a potential for additional areas on all 15 bridges to contain ACM and LBP that have not been sampled. During final design, ACM and LBP content shall be sampled for all 15 bridges in areas that are expected to be affected by the Project and have not been sampled, as detailed in Standard Project Measure **HW-1**. The Project may require the removal of treated wooden guardrail posts. Treated wood objects removed from the Project corridor would be classified as TWW. The removal of any TWW shall be conducted in accordance with Chapter 34 of the Title 22 California Code of Regulations (CCR) Section 67386.1 through 67386.12, as identified in Standard Project Measure **HW-2**.

Paint used for traffic striping and pavement marking may contain lead chromate. During construction, sampling, analysis, removal, and disposal of any traffic striping and pavement materials shall be completed in accordance with Caltrans and DTSC requirements, as identified in Standard Project Measure **HW-3**.

Potential impacts from the use of hazardous substances (e.g., lubricants, petroleum fuels, cleaning solvents, paint) and the generation of hazardous waste shall be addressed through preparation of a SWPPP, as identified in Standard Project Measure **WQ-2** (Section 2.3.2, *Water Quality and Stormwater Runoff*). In addition, all hazardous waste generated during construction shall be handled, stored, and disposed of in accordance with Caltrans Standard Specifications, Section 7-107A of the Construction Manual, as identified in Standard Project Measure **HW-4**.

As discussed in Section 2.3.5, *Hazardous Waste/Materials*, the soil within the Project limits, including the median, shoulders, and ramps, do not represent a significant environmental or health hazard pertaining to ADL contamination. According to the

July 1, 2016 ADL agreement between Caltrans and DTSC, it can be classified as unregulated Type X soil, non-hazardous, and reused on site without restriction (DTSC 2016). However, per the soil reuse agreement, a Lead Compliance Plan (LCP) is required for worker safety.

In addition to lead in ADL soils, the Project has the potential to expose workers to lead in traffic striping and LBP in bridges. An LCP shall be prepared to protect workers from exposure to lead. A Certified Industrial Hygienist shall prepare the LCP in accordance with Title 8 CCR Section 1532.1, as identified in Standard Project Measure **HW-8**.

The Project would not 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. Standard Project Measures **HW-1** through **HW-4**, **HW-6**, **HW-8**, and **WQ-2** and Avoidance and Minimization Measures **HW-5** and **HW-7** shall be implemented, and applicable local, State, and federal regulations for the use, storage, handling, transport, and disposal of routine hazardous waste and materials shall be followed, as discussed in threshold (a) above. Impacts are considered less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less-than-Significant Impact

There are existing schools within 0.25 mile of the Project limits, including Ortega High School, Temescal Canyon High School, Temescal Valley Elementary, El Cerrito Middle School, Bellflower Montessori Academy, CEAC College Preparatory School, Morgan Academy, Olive Branch Christian School, Keith McCarthy Academy, Valley Adult School, and Jeannette Ellis Center for Child Development. No schools are known to be planned within 0.25 mile of the Project limits. As discussed in threshold (a) above, routine hazardous materials such as paint, solvents, and fuel are expected to be used, handled, stored, disposed of, and transported during construction and operation of the Project in accordance with applicable local, State, and federal regulations. Impacts are considered less than significant.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact

The Project improvements are not on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, also known as the Hazardous Waste and Substances Sites (Cortese) List. Therefore, no impacts are anticipated.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact

The closest public airport or public use airport is the Corona Municipal Airport (1900 Aviation Drive, Corona, CA), approximately 3.75 miles northwest of the Project limits. According to the City of Corona's General Plan, the Corona Municipal Airport occupies a 100-acre site. In 1978, the Corona Municipal Airport Master Plan was prepared to provide for the orderly growth and management of the municipal airport to safeguard the general welfare of the public and the inhabitants in the vicinity of the airport. The Corona Municipal Airport Master Plan was last updated in the 1990s. Originally, the municipal airport was proposed for expansion to encompass approximately 225 acres. However, it is in a federally protected wetlands with sensitive species, lies within the Prado Flood Control Basin, and is encompassed by the 100-year flood zone. Given these limiting site considerations, the airport is precluded from expansion. Because the Corona Municipal Airport is more than 2 miles from the Project and there are no future plans to expand it that would place it closer to the Project limits, no impacts are anticipated.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact

During Project construction, temporary impacts on vehicular flow and traffic may occur. The Project is not anticipated to require any full roadway closures; however, some ramps may require temporary 55-hour full closures to complete the ramp widening improvements. A list of the temporary ramp closures is provided in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities.* To ensure that construction of the Project would not physically interfere with emergency response plans adopted by the Cities of Lake Elsinore and Corona and Riverside County, Standard Project Measure **TR-1** (Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*) would be implemented. Standard Project Measure **TR-1** requires the preparation and implementation of a transportation management plan (TMP) and shall consider construction and alternative route strategies in the event that portions of roadways within the Project limits are restricted during certain construction activities. In addition, the Project shall comply with the City of Lake Elsinore, City of Corona, and Riverside County's Emergency Operations Plan, which addresses extraordinary emergency situations. All emergency procedures shall be consistent with local, State, and federal guidelines during Project construction and operation. Impacts are considered less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less-than-Significant Impact

According to California Department of Forestry and Fire Protection (CAL FIRE) State Responsibility Area (SRA) and Local Responsibility Areas (LRA) maps, the Project limits are within areas designated as moderate, high, and very high Fire Hazard Severity Zones (FHSZs). However, the Project is within the active I-15 transportation corridor, which predominantly consists of urban, developed, and disturbed environments. The Project would not alter the alignment of I-15 and would not run directly through areas with open space and natural vegetation.

Generally, transportation projects, particularly those on existing alignments, are considered unlikely to exacerbate wildfire risks or post-fire flooding/landslides. However, Avoidance and Minimization Measure **FIRE-1** would ensure that construction activities avoid or minimize the risk of fires. The Project shall also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including implementation of a fire prevention plan.

The Project is an express lanes project along the existing I-15 and is in a developed area composed primarily of commercial, industrial, and residential land use areas. The Project is anticipated to be constructed primarily within the existing State right of way and would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Impacts are considered less than significant.

3.1.10 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on or off site;	☐	☐	☒	☐
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;	☐	☐	☒	☐
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☒	☐
(iv) impede or redirect flood flows?	☐	☐	☒	☐

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

3.1.10.1 CEQA Significance Determinations for Hydrology and Water Quality

The potential for the Build Alternative to adversely impact water quality was assessed in the *Water Quality Assessment Report for Interstate 15 Express Lanes Project Southern Extension* (Caltrans 2021b) and Section 2.3.2, *Water Quality and Stormwater Runoff*, of this EIR/EA and is summarized below.

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less-than-Significant Impact

As discussed in Section 2.3.1, *Hydrology and Floodplain*, the Project limits from south to north cross over 11 channels: Wasson Canyon Wash, Arroyo del Toro, Stovepipe Canyon Wash, Gavilan Wash, Temescal Wash, Horsethief Canyon Wash, Indian Wash, Mayhew Wash, Coldwater Wash, Brown Canyon Wash, and Bedford Wash. Temescal Wash begins at the outlet from Lake Elsinore near the Seaport Boat Launch on West Lakeshore Drive. From the outlet, Temescal Wash generally flows northwest for approximately 23 miles before it confluences with Santa Ana River Reach 3 and Prado Dam near the Cities of Norco and Corona. The Santa Ana River flows southwest from Riverside County into Orange County toward the Pacific Ocean (Caltrans 2023h).

According to the Santa Ana RWQCB Basin Plan (California Water Board 2019), there are no beneficial uses designated for Wasson Canyon Wash, Arroyo del Toro Channel, Gavilan Wash, Horsethief Canyon Wash, Indian Wash, and Brown Canyon Wash. The beneficial uses for Stovepipe Canyon Wash, Temescal Wash, Mayhew Wash, Coldwater Wash, Bedford Wash, and Santa Ana River Reach 3 (Prado Dam to Mission Boulevard in Riverside) consist of groundwater recharge (GWR); contact water recreation (REC1); non-contact water recreation (REC2); water freshwater habitat (WARM); wildlife habitat (WILD); agricultural supply (AGR); industrial service supply (IND); rare, threatened, or endangered species (RARE); limited warm freshwater habitat (LWRM); municipal and domestic supply (MUN); or spawning, reproduction, and/or

early development (SPWN). In addition, none of the 11 channel crossings associated with the Project are listed on the 2020–2022 303(d)/305(b) Integrated List as impaired waterbodies. However, Temescal Wash confluences with Santa Ana River Reach 3, which is listed as an impaired waterbody, as discussed in Section 2.3.2, *Water Quality and Stormwater Runoff*.

During construction of the Project, excavated soil would be exposed and it is expected that there would be an increased potential for soil erosion compared to existing conditions. The total Disturbed Soil Area for the Project is estimated to be 844 acres. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), concrete-related waste, sanitary waste, and trash and debris may be spilled or leaked during construction with the potential for these pollutants to be transported via storm runoff into receiving waters. Standard Project Measures **WQ-1** through **WQ-3** (as identified in Section 2.3.2, *Water Quality and Stormwater Runoff*), require the design, implementation, and maintenance of construction BMPs and monitoring of water quality in compliance with the NPDES Construction General Permit that would address the potential effects of soil erosion and pollutants on receiving waters. Water quality impacts during construction of the Project are expected to be less than significant.

Additionally, dewatering activities would be required during construction of the Project. The Project shall be required to comply with the requirements of a Waste Discharge Requirement dewatering permit and implement dewatering BMPs, as described in Avoidance and Minimization Measure **WQ-5** (Section 2.3.2, *Water Quality and Stormwater Runoff*).

If a batch plant or crushing plant is needed to construct the Project and would be located off site or within State right of way, then coverage under the Industrial NPDES permit, Order No. 2014-0057-DWQ, CAS000001, would be required to address discharges from such manufacturing facilities (Standard Project Measure **WQ-4**, as identified in Section 2.3.2, *Water Quality and Stormwater Runoff*).

The Project also has the potential to result in permanent impacts on water quality due to an increase in impervious surface areas. Upon completion of construction, the Project is expected to result in approximately 125 acres of new impervious surface, which includes replacing approximately 43 acres of impervious surface and adding approximately 82 acres of new impervious surface. An increase in impervious surface area would be expected to increase surface runoff and pollutants from being discharged to receiving waters. However, the Project would include drainage improvements and permanent BMPs such as treatment, design pollution prevention, and maintenance BMPs (Standard Project Measures **WQ-6** through **WQ-8**, as identified in Section 2.3.2, *Water Quality and Stormwater Runoff*).

Treatment BMPs use treatment mechanisms to remove pollutants that have entered stormwater runoff, such as biofiltration strips and swale, trash capturing devices, and media filters. Design pollution prevention BMPs are features that focus on reducing or eliminating runoff and controlling sources of pollutants during operation of the Project, such as preserving existing vegetation and slope/surface protection systems.

Maintenance BMPs are water quality controls used to reduce pollutant discharges, such as stenciling messages at storm drain inlets accessible to pedestrian and bicycle traffic. Permanent BMPs (Standard Project Measures **WQ-6** through **WQ-8**), as required for all Caltrans projects, shall be implemented to avoid and/or minimize impacts on water quality from stormwater runoff during operation of the Project. Impacts are anticipated to be less than significant.

As discussed above, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Impacts would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact

The Project is within the Elsinore Groundwater Basin and Temescal Groundwater Basin. Within these groundwater basins, the Project is within the following groundwater subbasins: Elsinore-Elsinore Valley Subbasin, Elsinore-Bedford-Coldwater Subbasin, and Upper Santa Ana Valley-Temescal Subbasin. Within the Elsinore-Elsinore Valley Subbasin, the nearest groundwater well is approximately 1.6 miles south of the Project limits, and the depth to groundwater in November 2019 was approximately 299 feet (Caltrans 2021b). Within the Elsinore-Bedford-Coldwater Subbasin, the nearest groundwater well is approximately 0.3 mile east of the Project limits, and the depth to groundwater in April 2020 was approximately 32 feet (Caltrans 2021b). Within the Upper Santa Ana Valley Subbasin, the nearest groundwater well is approximately 3.5 miles north of the start of the Project limits, and the depth to groundwater in April 2020 was approximately 196 feet (Caltrans 2021b). The depth to groundwater within the Project limits is anticipated to be 5 feet below ground surface when seasonal flows are not present (Caltrans 2021b). However, groundwater levels along the Project limits are susceptible to fluctuation due to rainfall, seasonal variation, upstream flood control management, upstream development, nearby construction, irrigation, and numerous other artificial and natural influences.

As discussed in threshold (a) above, dewatering is expected to be required during Project construction; however, any groundwater dewatering is projected to be minimal. The Project would be required to obtain a dewatering permit, comply with all waste discharge requirements set by the Santa Ana RWQCB, and implement dewatering BMPs (Avoidance and Minimization Measure **WQ-5**, as identified in Section 2.3.2, *Water Quality and Stormwater Runoff*). The Project would not use groundwater during operation, because it is a transportation project and would not cause additional growth or need for additional groundwater supply. As a result, the Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project would impede substantial groundwater management of a basin. Impacts are considered less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

(i) result in substantial erosion or siltation on or off site;

(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;

(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or

(iv) impede or redirect flood flows?

Less-than-Significant Impact

The Project is within the Federal Emergency Management Agency (FEMA)-designated 1-percent annual chance (100-year) floodplains associated with Arroyo del Toro Channel, Stovepipe Canyon Wash, Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash. Based on the results of the hydraulic analyses conducted, the bridge widening at Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash would result in a change in a water surface elevation of less than 1 foot at each affected crossing, which is minimal and would be contained within the channels and meet freeboard requirements. In addition, bridge improvements would be structurally similar to the existing spans and alignments and would not alter the course of the water channels. The FEMA-designated 1-percent annual chance (100-year) floodplains for Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash would remain within the current respective channels with the proposed conditions, and the improvements are considered to be low risk, as discussed in Section 2.3.1, *Hydrology and Floodplain*.

The drainage structures for Arroyo del Toro Channel and Stovepipe Canyon Wash that cross underneath I-15 would not be altered by the Project. Therefore, the hydraulics of Arroyo del Toro Channel and Stovepipe Canyon Wash would remain the same. No hydraulic analyses were conducted for Arroyo del Toro Channel and Stovepipe Canyon Wash, and no floodplain impacts associated with these two channels would occur.

As discussed in threshold (a), the Project shall be required to comply with the NPDES Construction General Permit and develop a SWPPP to address potential sources of pollution, which may affect water quality including sediment erosion and siltation. The proposed drainage following construction would be similar to existing drainage patterns, with the exception of direction of flow with regard to the existing earthen median that would be removed to construct the tolled express lanes and shoulders, as well as the addition of retaining walls. These improvements and additions would require the removal of existing inlets and addition of new inlets along the new edge of shoulder to collect and convey stormwater throughout the Project limits. Additionally, new

longitudinal storm drain lines running parallel to I-15 would be constructed to connect the new inlets to the existing transversal storm drain lines.

Upon completion of construction, the Project is expected to result in approximately 125 acres of new impervious surface, which would include a permanent increase in new impervious surface of approximately 82 acres and a replacement of approximately 43 acres of existing impervious surface. Treatment BMPs consisting of biofiltration strips and swales are proposed to treat the area. It is anticipated the treatment BMPs would be able to accommodate and treat 100 percent of the additional runoff created by the new impervious area within the Project limits; this would be confirmed during the final design phase. The Project is not expected to result in the release of pollutants due to Project inundation. Impacts are considered less than significant.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less-than-Significant Impact

The Project is over 25 miles northeast of the Pacific Ocean. Therefore, the Project is not located in a tsunami hazard zone. Seiches are periodic oscillations of water in enclosed waterbodies, such as a lake or bay, and are typically caused by earthquakes. The closest enclosed waterbodies to the Project are Lake Elsinore (approximately 0.5 mile south of I-15), Lee Lake (approximately 800 feet east of I-15), and Lake Mathews (approximately 3.5 miles east of I-15). Although Lee Lake is in proximity to the Project limits, potential impacts on the Project from seiches are anticipated to be low because Lee Lake is lower in evaluation than I-15. In addition, I-15 is an existing freeway and implementation of the Project would not increase the risk level from inundation by seiche; the risk level would remain the same.

As previously discussed in threshold (c), the Project is within FEMA-designated 1-percent annual chance (100-year) floodplains associated with Arroyo del Toro Channel, Stovepipe Canyon Wash, Temescal Creek, Mayhew Wash, Coldwater Wash, and Bedford Wash. However, based on hydraulic analyses conducted for the proposed bridge widenings at Temescal Wash, Mayhew Wash, Coldwater Wash, and Bedford Wash, the improvements would result in a change in water surface elevation of less than 1 foot at each affected crossing, which is minimal and would be contained within the channels and meet freeboard requirements. In addition, bridge improvements would be structurally similar to the existing spans and alignments and would not alter the course of the water channels.

The drainage structures for Arroyo del Toro Channel and Stovepipe Canyon Wash that cross underneath I-15 would not be altered by the Project. Therefore, the hydraulics of Arroyo del Toro Chanel and Stovepipe Canyon Wash would remain the same. No hydraulic analyses were conducted for Arroyo del Toro Channel and Stovepipe Canyon Wash, and no floodplain impacts associated with these two channels would occur.

The Project would not result in any flood, tsunami, or seiche hazards that are substantially different from existing conditions. The Project does not include the permanent storage of any hazardous waste and materials within the Project limits and, therefore, risk of release of pollutants due to Project inundation from flood, tsunami, or seiche hazards is not applicable to the Project. Impacts are considered less than significant.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less-than-Significant Impact

As previously discussed in threshold (a), the Project would result in a Disturbed Soil Area of approximately 844 acres. In addition, construction of the Project would result in approximately 125 acres of new impervious area, which includes replacing approximately 43 acres of existing impervious surface and adding approximately 82 acres of new impervious surface. Project construction would require compliance with the Santa Ana RWQCB Basin Plan (California Water Board 2019) and the Caltrans NPDES Statewide Storm Water Permit and NPDES Construction General Permit (Standard Project Measure **WQ-1**), which requires compliance with State and federal water quality regulations regarding construction and operational water quality discharge; the Project would not conflict with or obstruct the implementation of any applicable water quality control plans or groundwater management plans. Impacts are considered less than significant.

3.1.11 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☒	☐	☐	☐

3.1.11.1 CEQA Significance Determinations for Land Use and Planning

The potential for the Build Alternative to result in adverse impacts related to land use and planning was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Community Impact Assessment* (Caltrans 2024b) and in Sections 2.2.1, *Existing and Future Land Use*, 2.2.3, *Growth*, and 2.2.4, *Community Character and Cohesion*. The following discussion is based on those analyses.

a) Physically divide an established community?

No Impact

The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and an outlying area. The Project would be expanding the already existing freeway with the addition of two tolled express lanes in both the northbound and southbound directions in the median of the existing I-15. Because all of the improvements associated with the Build Alternative would occur within existing Caltrans right of way, no property acquisitions or relocations would be required under the Build Alternative and the Project would not divide an existing neighborhood or fragment a cohesive community. No temporary construction easements (TCEs) are anticipated to be required for the Project. Although not expected, if a TCE is needed during construction, it is anticipated to be in Caltrans right of way. If it is outside Caltrans right of way, then the location would be environmentally cleared for the temporary duration. Regardless, no land use conversion would occur.

Therefore, the Build Alternative would not divide an existing neighborhood or create barriers between existing communities. There would be no impact.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Significant and Unavoidable Impact

The Build Alternative's consistency with State, regional, and local plans and programs is analyzed in detail in Section 2.2.1, *Existing and Future Land Use*, of this EIR/EA. The Build Alternative would not change existing land use patterns along I-15 because I-15 is an existing transportation facility in a highly developed area, and the Build Alternative would not require property acquisition. The Project is consistent with most of the adopted goals and policies of applicable State, regional, and local plans and programs, with the exception of California's AB 32 Climate Change Scoping Plan, SCAG 2024–2050 RTP/SCS, and County of Riverside General Plan (2021) identified in Section 2.2.1. This conflict is explained in more detail in Section 3.3, Climate Cha*nge*. Because operational emissions would increase, the Project would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Caltrans is firmly committed to implementing measures to help reduce GHG emissions. Mitigation Measures **GHG-1** through **GHG-4** and **GHG-11**, as well as Standard Project Measure **EN-1** and Standard Project Measure **AQ-4**, are expected to reduce construction GHG emissions. Mitigation Measures **GHG-5** through **GHG-11** and **VMT-1** would reduce the GHG emissions and potential climate change impacts from the operation and maintenance of the Project. However, the impacts would remain significant and unavoidable, as the Project is still inconsistent with the California AB 32 Climate Change Scoping Plan.

3.1.12 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☒	☐

3.1.12.1 CEQA Significance Determinations for Mineral Resources

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?

Less-than-Significant Impact

The mineral resources addressed in this section pertain to those resources that are classified under the State Mining and Reclamation Act of 1975. Riverside County has diverse mineral resources, including extensive deposits of clay, limestone, iron, sand, and important aggregates (i.e., crushed rock, sand, and gravel) that have been influential in the development of the area and serve as an important component of the county's economy. The history of the Project area includes mineral extraction; however, due to urbanization, much of the activity has been phased out over time and the areas have been converted to other land uses, such as residential and commercial uses (City of Lake Elsinore 2011). Classification of land within California takes place according to a priority list established by the State Mining and Geology Board (SMGB) in 1982, or when SMGB is petitioned to classify a specific area. SMGB established Mineral Resource Zones (MRZs) to designate lands that contain mineral deposits. MRZs are designated into four classes that indicate the potential for a specific area to contain significant mineral resources:

- **MRZ-1:** Areas where the available geologic information indicates there is little or no likelihood of significant mineral deposits
- **MRZ-2:** Areas underlain by mineral deposits where geological data indicate that significant measured or indicated resources are present or where adequate

information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists

- **MRZ-3:** Areas containing known mineral occurrences of undetermined mineral resources significance

- **MRZ-4:** Areas of known mineral occurrences where geological information does not rule out the presence or absence of significant mineral resources

The Project is primarily underlain by MRZ-3 lands. Portions along the Project, beginning in the City of Corona and throughout the unincorporated Riverside County area, are underlain by MRZ-2 lands, as described in the County of Riverside General Plan (County of Riverside 2015). Additionally, there are several active mines near the Project alignment including Nichols Canyon Mine (aggregate mining operation), which is east of I-15, and approximately 156 acres north of Nichols Canyon Road; and approximately 43 acres south of Nichols Canyon Road, in the northeastern portion of the City of Lake Elsinore (California Department of Conservation 2016). Although the Project overlays areas identified as potentially containing mineral deposits, construction and operation of the Project would be within the existing State right of way and mineral extraction is not allowed within the State right of way. Construction and operation of the Project would not cause a loss of availability of a known mineral resource that would be of value to the region and the residents of the state, and the Project would have a less-than-significant impact related to mineral resources.

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?

Less-than-Significant Impact

Significant clay resources are associated with the area just south of I-15 and west of Lake Street, known as the Pacific Clay Products deposits, which are within the approved Alberhill Specific Plan and pending Alberhill Villages Specific plan (City of Lake Elsinore 2011). However, the mining activity is being phased out in accordance with approved permits, and the continued use and ultimate reclamation of these lands has been or will be addressed in the specific plans prepared for these areas (City of Lake Elsinore 2011). Furthermore, the Project LOD has previously experienced substantial ground disturbance due to construction of the freeway and urban development surrounding much of the freeway alignment. Being that the Project lies primarily in the median of an established freeway and would consist primarily of grading and paving in that location, it is unlikely that any locally or regionally important mineral resource would be affected by Project construction. The Project would result in a less-than-significant impact on known mineral resources that are of value locally, for the region or state.

3.1.13 Noise

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.1.13.1 CEQA Significance Determinations for Noise

The potential for the Build Alternative to result in significant impacts related to Noise was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Noise Study Report* (Caltrans 2024c) and Section 2.3.7, *Noise*, in this EIR/EA. The following discussions are based on those analyses.

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant Impact

The primary factor considered by Caltrans in assessing the significance of noise impacts is the future increase in traffic noise. Significant impacts are assessed if noise-

sensitive receptors will be exposed to a *substantial* increase in traffic noise levels between the Existing and Design-Year Build conditions. If the character of the noise is unchanged, like in the case of varying traffic noise levels, sound level increases of 3 A-weighted decibels (dBA) are generally perceived as barely perceptible and 5 dBA as readily perceptible. For the purposes of assessing potential noise impacts, a traffic noise increase of 12 dBA between Existing and Design-Year Build conditions is considered to be a *substantial* increase. Noise-sensitive locations have been categorized by similar land use types and evaluated for significance; these categories include residential locations, recreational locations, and outdoor commercial locations. For the purpose of this noise analysis, the noise Project study area is divided into 20 separate Noise Analysis Areas that are based on major local intersections (see Section 2.3.7, *Noise*, for more information).

Residential Locations

The noise levels at residential locations in the Project study area would range from 40 dBA average hourly equivalent noise level (L_{eq}[h]) to 75 dBA L_{eq}(h) under the Existing condition. Noise levels under the Design-Year Build condition would range from 42 dBA L_{eq}(h) to 72 dBA L_{eq}(h). The changes during the Design-Year Build condition relative to the Existing condition would range from a -2 dBA decrease to a 3 dBA increase. Large reductions in predicted noise levels under the Design-Year condition relative to the Existing condition are due to the construction of the permitted projects discussed in Section 2.3.7.2 of this EIR/EA; some of these projects would be constructed between I-15 and existing land uses, creating new buildings and property line walls that would shield the existing land uses from freeway traffic noise. The largest increase in noise levels for the Design-Year condition relative to the Existing condition is 3 dBA, which is a barely perceptible difference in traffic noise levels and is well below the 12-dBA threshold of significance for CEQA. Therefore, traffic noise impacts at residential locations in the Project study area would be less than significant.

Recreational Locations

The noise levels at recreational locations in the Project study area would range from 56 dBA L_{eq}(h) to 74 dBA L_{eq}(h) under the Existing condition. Noise levels under the Design-Year Build condition would range from 56 dBA L_{eq}(h) to 76 dBA L_{eq}(h). The changes during the Design-Year Build condition relative to the existing condition would range from a 3 dBA decrease to a 2 dBA increase. The only exception is a trail node at the Serrano Single-Family Home Community, detailed in Section 2.3.7.2 of this EIR/EA. There is a projected increase of up to 9 dBA at this location. However, the community, including the trail node, was not yet constructed under the existing condition. Because the existing noise level and resulting estimated noise increase do not represent the finished trail node geometry, the community was excluded from the determination of significance for recreational locations. The largest increase in noise levels for the Design-Year condition relative to the existing condition is 2 dBA, which is less than a barely perceptible difference of 3 dBA and is well below the 12-dBA threshold of significance for CEQA. Therefore, traffic noise impacts at recreational locations in the Project study area would be less than significant.

Outdoor Commercial Locations

The noise levels at outdoor commercial locations in the Project study area would range from 45 dBA L_{eq}(h) to 75 dBA L_{eq}(h) under the Existing condition. Noise levels under the Design-Year Build condition would range from 47 dBA L_{eq}(h) to 77 dBA L_{eq}(h). The changes during the Design-Year Build condition relative to the existing condition would range from a -11 dBA decrease to a 3 dBA increase, which is a barely perceptible increase in traffic noise levels and well below the 12-dBA threshold of significance for CEQA. Therefore, the traffic noise impacts at outdoor commercial locations in the Project study area would be less than significant.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact

Any groundborne noise or vibration would be limited to the construction period and would be short in duration.

In general, literature on the subject shows that only blasting, pile driving, and pavement breaking have documented examples of potential damage to buildings (Caltrans 2020a). For pile driving and pavement breaking, the potential for damage from vibration is at locations in relatively close proximity to the activity. The worst-case groundborne vibration levels associated with the Project would be from pile driving. Pile driving is expected to occur at multiple bridge foundation locations along the Project alignment and at recommended noise barrier locations. Groundborne vibration levels in excess of 0.25 inch per second (in/sec) Peak Particle Velocity (PPV) are considered the threshold for potential damage to historic buildings and other old structures (Caltrans 2020a). This is conservatively used as the threshold for assessing potential impacts for the Project because newer buildings can withstand higher levels of groundborne vibration without being damaged.

Potential vibration impacts due to impact pile driving were estimated using the criteria for impact pile drivers provided in the Caltrans *Transportation and Construction Vibration Guidance Manual* (Caltrans 2020a). PPV is estimated to reduce at a rate of $PPV_{Ref} \times (25/D)^{n} \times (E_{equip}/E_{Ref})^{0.5}$, where:

- PPV_{Ref} = 0.65 in/sec at a reference distance of 25 feet
- D = distance from the pile driver to the receiver in feet
- n = 1.1 is the value related to attenuation of vibration throughout the ground
- E_{Ref} = 36,000 foot-pound (rated energy of reference pile driver)
- E_{equip} = rated energy of impact pile driver in foot-pounds (assumed same as reference)

An impact pile driver is estimated to produce a vibration level of 0.65 in/sec PPV at a reference distance of 25 feet (Caltrans 2020a); therefore, it is calculated that any structure within 60 feet of impact pile driving could experience vibration damage, depending on its age and condition. Cast-in-drilled-hole (CIDH) piles are planned to be used in place of impact pile driving in some locations, including for sound wall construction. Vibration levels from CIDH pile installation would be much lower than for impact pile driving and would primarily be produced while drilling the holes for the piles. The *Caltrans Transportation and Construction Vibration Guidance Manual* identifies that drills would produce 0.089 in/sec PPV at a distance of 25 feet, which would be below the damage threshold for historic and other old buildings (Caltrans 2020a).

The closest building to any possible pile-driving location would be approximately 75 feet away. This is outside the 60-foot range of potential impacts identified above and vibration levels would be on the order of 0.19 in/sec PPV, which is below the threshold of 0.25 in/sec PPV. This is also well outside the range of potential impacts for CIDH pile installation. As a result, groundborne vibration from Project construction would be below the 0.25 in/sec PPV damage potential threshold at all buildings in the study area. Therefore, groundborne vibration and noise effects would be less than significant.

The Project does not involve changes that would result in noticeable increases in groundborne vibration or groundborne noise levels from use or maintenance of the roadway when compared with the No Build Alternative. Once construction of the Project is complete, long-term increases in groundborne vibration or groundborne noise levels from use or maintenance of the roadway would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact

The Project would not create any new receptors or land uses that would be sensitive to aircraft noise. There are no airports or private airstrips in the vicinity (i.e., within 2 miles) of the Project site. The closest airport is Corona Municipal Airport, which is more than 5.6 miles to the northeast. At this distance, the Project site is not exposed to substantial noise levels from aircraft operations. In addition, the Project would not change the operations at any airport or airstrip, and would not alter the aircraft noise exposure at any existing sensitive land uses. As such, Project implementation would not expose people residing or working in the vicinity of the Project to excessive aircraft noise levels. Therefore, there would be no impact.

3.1.14 Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.1.14.1 CEQA Significance Determinations for Population and Housing

The potential for the Build Alternative to result in significant impacts related to population and housing was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Community Impact Assessment* (Caltrans 2024b) and Section 2.2.3, *Growth*, and Section 2.2.4, *Community Character and Cohesion*, in this EIR/EA. The following discussions are based on those analyses.

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less-than-Significant Impact

The potential of growth-related impacts resulting from the Build Alternative was considered in the context of the first-cut screening analysis approach, as demonstrated in Section 2.2.3, *Growth*. That analysis determined that the Build Alternative would generate additional short-term employment opportunities during construction, which would be filled by local residents. Long-term substantial population growth associated with Project construction is not anticipated. The Project also would not establish new homes or provide any new access into areas that previously had no access, which could prompt development. Even though the Project would improve mobility and transportation options, these changes have already been identified in the 2023 FTIP and SCAG's 2024–2050 RTP/SCS for Riverside County under project number 3160001-RIV170901. Operation of the Project would not result in additional substantial growth over the growth already identified in SCAG's 2024–2050 RTP/SCS.

While the Project would include the construction of additional transportation infrastructure (i.e., noise barriers, retaining walls, and bridge widening), the construction activity would be contained within Caltrans right of way as well as within the existing median of I-15.

Projected population growth would occur in the study area with or without the improvements associated with the Project. In addition, potential indirect growth has already been captured at the local and regional level through the inclusion of the Project in SCAG's 2024-2050 RTP/SCS list of projects. Therefore, construction or operation of the Build Alternative would not induce substantial unplanned population growth, either directly or indirectly. The impact is considered less than significant.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact

The Project area consists of an existing freeway with retaining walls, and other structural features. Existing land use types within 0.5 mile of the Project area are shown on Figure 2.2.1-1 in Section 2.2.1 of this EIR/EA and include commercial and services, general office, under construction, facilities, education, industrial, single-family residential, multifamily residential, mobile homes and trailer parks, mixed residential, rural residential, mixed commercial and industrial, agriculture, open space and recreation, water, transportation/communications/utilities, and others such as highways and roads. The improvements proposed under the Build Alternative would add additional express lanes to the already existing I-15. There would be no direct or indirect, permanent or temporary impacts on housing characteristics such as rent, housing prices, occupancy, housing type, or population projections requiring additional residential units, as a result of the Build Alternative. The Project would be improving existing transportation infrastructure. No displacements requiring relocation of residential uses or construction of housing would occur. Therefore, because the Build Alternative would not displace existing housing or people or require the acquisition of any residential units, there would be no impact.

3.1.15 Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

3.1.15.1 CEQA Significance Determinations for Public Services

The potential for the Build Alternative to adversely affect public services and facilities is assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Community Impact Assessment* (Caltrans 2024b) and Section 2.2.1, *Existing and Future Land Use*; Section 2.2.3, *Growth*; and Section 2.2.7, *Utilities and Emergency Services*, in this EIR/EA. The following discussions are based on those analyses.

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

Fire protection?

Less-than-Significant Impact

There is one fire station and no police stations within the community impact study area and several fire and police stations just outside the community impact study area. As described earlier in threshold (f) in Section 3.1.9, emergency services may experience direct temporary impacts as a result of construction activities that may affect traffic within the service area. Continuous access and connectivity would be maintained during construction with Standard Project Measure **TR-1**. The TMP would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. Therefore, the Build Alternative would not result in permanent or temporary substantial adverse impacts on emergency service response times within the community impact study area. Additionally, because the Project is within fire hazard zones, Avoidance and Minimization Measures **FIRE-1** and **NC-3 (NES BIO-1)** would ensure that construction activities avoid or minimize the risk of fires. The Project shall also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a fire prevention plan. The Project itself would not cause direct or indirect permanent or temporary impacts on emergency services, response times, or the demand of services, as the Project does not propose any new residential, commercial, or industrial developments that would encourage growth, as discussed in Section 2.2.3, *Growth*. Impacts are considered less than significant.

Police protection?

Less-than-Significant Impact

Construction of the Build Alternative would result in temporary impacts on traffic circulation including emergency services. Those impacts would be addressed by Standard Project Measure **TR-1** during construction. The TMP would specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. In the long term, the Project would improve the operation of the freeway facilities. These improvements in traffic flow are likely to improve emergency response times within the Project limits. The impacts of both construction and operation of the Project on the delivery of emergency services would be less than significant. Therefore, operation of the Build Alternative would not result in adverse effects on the delivery of emergency services in the long term.

Schools?

Less-than-Significant Impact

There are no planned schools within 0.5 mile of the Project limits. However, eight existing schools are within 0.5 mile of the Project limits (see Section 3.1.11, *Land Use and Planning*, and Appendix A, *Section 4(f)*, for more information on schools near the Project).

A TMP per Standard Project Measure **TR-1** would minimize direct temporary impacts on traffic and circulation within the study area and maintain continuous access and connectivity throughout construction activities. The potential impacts on schools as a result of the Build Alternative would be less than significant.

Parks?

Less-than-Significant Impact

Construction of the Project may result in a temporary increase in travel times for the public in accessing local parks and recreation facilities, but access would be maintained throughout the duration of construction via the transportation management strategies in the TMP (Standard Project Measure **TR-1**).

As previously discussed, no property acquisitions, relocations, or TCEs would be required under the Build Alternative. Therefore, the impacts of the Project on parks would be less than significant.

Other public facilities?

Less-than-Significant Impact

The Project would not result in the permanent conversion of land use or in temporary closures of any community facilities. The Build Alternative may result in temporary delays in travel time to and from community facilities but these would be minimized with Standard Project Measure **TR-1**. The Project would not result in permanent impacts on any community facilities. Therefore, impacts on other public facilities would be less than significant.

3.1.16 Recreation

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

3.1.16.1 CEQA Significance Determinations for Recreation

The potential for the Build Alternative to adversely affect recreational resources was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Community Impact Assessment* (Caltrans 2024b); Section 2.2.1, *Existing and Future Land Use*; and Appendix A, *Section 4(f)*, in this EIR/EA. The following discussions are based on the findings of that analysis.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less-than-Significant Impact

As discussed in Section 3.1.15 above, the Project would not influence growth beyond what is currently planned and, therefore, would not result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial deterioration of the facility would occur. No property acquisitions or relocations would be required under the Build Alternative. No TCEs would be required for the Project. If a TCE is needed during construction, it would not encroach on any existing or proposed recreational facilities. There are no construction activities proposed adjacent to or on parks or any other recreational facilities, with the exception of the El Cerrito Sports Park, which is adjacent to and shares a boundary with the Project LOD. However, the Project would not affect access to the facility. The Build Alternative would result in a less-than-significant impact under CEQA during construction. There would be

no operational impact on the physical deterioration of existing neighborhoods and regional parks or other recreational facilities.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact

The Project does not include the construction of new recreational facilities or require the expansion of existing recreational facilities. Therefore, the Project would have no impact related to constructing new or expanded recreation facilities.

3.1.17 Transportation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☒	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

3.1.17.1 CEQA Significance Determinations for Transportation

The potential for the Build Alternative to result in adverse traffic impacts was assessed in the *I-15 Express Lanes Project Southern Extension (ELPSE) Traffic Operations Analysis Report* (Caltrans 2022c), and in Section 2.2.8, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, in this EIR/EA. The following discussions are based on those analyses.

a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less-than-Significant Impact

Although not anticipated, the Project may temporarily affect existing pedestrian and bicycle facilities during the construction of bridge widenings. Potential construction-related traffic and circulation impacts, and impacts on pedestrian and bicycle facilities, including Americans with Disabilities Act facilities, would be minimized or avoided through Standard Project Measure **TR-1**. The Build Alternative would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian

facilities, or otherwise decrease the performance or safety of such facilities. Impacts are considered less than significant under CEQA.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Significant and Unavoidable Impact

As shown in Table 3-5 (see Section 3.3.3, *Project Analysis*), VMT is expected to increase between the Existing (2019) and the Opening Year (2030) and Design Year (2050) scenarios under the No-Build Alternative and Build Alternative. The expected increase in VMT across all alternatives, including the No-Build Alternative, is a result of land use growth and population growth assumed in the future year travel demand model.

VMT data were developed using the Travel Demand Model. VMT is expected to increase for the Build Alternative in comparison to the No-Build Alternative for Design Year (2050); therefore, the Project is expected to increase VMT when compared to the No-Build Alternative.

Mitigation Measure **VMT-1** would assist in the reduction of VMT. As part of Mitigation Measure **VMT-1**, RCTC is mitigating VMT and the associated environmental impacts by providing increased transit benefits, both regionally and along the I-15 corridor. As part of the VMTMP RCTC is developing, RCTC will be launching the Riverside County Free Rail Pass Program. The approximately 2-year program would offer Metrolink passes to Riverside County residents starting in 2025 to increase the number of passenger rail riders within Riverside County. This program would help expand access to public transportation for disadvantaged and low-income populations and target travelers on the most congested corridors such as SR-91, SR-74, I-15, and I-215. The Metrolink passes will last for approximately 3–6 months each. These temporary free Metrolink passes would reduce the cost of using public transportation in order to attract new riders and encourage existing riders to take more trips. This program would help develop new lifelong commuting habits and contribute to VMT and GHG reduction. The program is designed to be in place for a minimum of 2 years, but could last up to 3 years depending on ticket distribution rates.

The program would allow riders to sign up through RCTC's existing Commuter Assistance website "IE Commuter" (https://www.iecommuter.org/rp2/Home/Home) and be issued free passes through Metrolink's Mobile Ticketing Application. For riders without access to mobile devices, the program would provide promotional codes to purchase the passes at ticket vending machines. This would help expand access to public transportation for disadvantaged and low-income populations and reduce the financial barriers to trying public transportation.

In addition to the discounted Metrolink Pass program, RCTC will work with RTA to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA

buses would be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project. Increased use of RTA bus service would promote travel mode shift, help address competing passenger and commercial traffic in the County of Riverside, and contribute to VMT reduction and improvement in air quality. However, the impacts would remain significant and unavoidable under CEQA, as the Project is still expected to increase VMT for the Build Alternative in comparison to the No-Build Alternative for Design Year (2050).

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less-than-Significant Impact

The Project would be designed, constructed, and operated consistent with Caltrans' *Highway Design Manual* (Caltrans 2020b) and other applicable standards and specifications with exceptions to design standards to minimize environmental or right of way impacts and avoid added costs to the Project. Refer to Tables 1-6 and 1-7 in Chapter 1 for a full list of nondelegated boldface design features and underlined design features both requiring approval prior to construction for incorporation in the Project design. The design exceptions would not increase any hazards or hazardous situations and the Build Alternative would not include hazardous design features. Furthermore, pedestrians and bicyclists would continue to be prevented from entering and operating on the I-15 mainline and ramps. The Build Alternative, including design exceptions, is not anticipated to substantially increase hazards and impacts are considered less than significant under CEQA.

d) Result in inadequate emergency access?

Less-than-Significant Impact

As described earlier in thresholds (a) and (b) in Section 3.1.15, construction of the Project is expected to result in temporary impacts on traffic circulation, which could affect emergency service vehicles. Standard Project Measure **TR-1** would be implemented during construction to ensure that impacts are avoided and/or minimized. The TMP shall specifically address requirements for coordination with emergency service providers and accommodation of emergency travel routes and access to, through, and around active construction areas. In the long term, the Project is expected to improve the operation of the freeway facilities. These improvements in traffic flow are likely to improve emergency response times within the Project limits. The impacts of both construction and operation of the Build Alternative on the delivery of emergency services are considered less than significant under CEQA.

3.1.18 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:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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	☐	☐	☒	☐
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.	☐	☐	☒	☐

3.1.18.1 CEQA Significance Determinations for Tribal Cultural Resources

The potential for the Build Alternative to result in adverse impacts on tribal cultural resources was assessed in the *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Historic Property Survey Report (HPSR)* (Caltrans 2023c), *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Archaeological Survey Report (ASR)* (Caltrans 2023d), *Interstate 15 Express Lanes Project Southern Extension (ELPSE) Historical Resources Evaluation Report (HRER)* (Caltrans 2023e), and

Interstate 15 Express Lanes Project Southern Extension (ELPSE) Finding of No Adverse Effect (FOE) (Caltrans 2023f) and Section 2.2.10, *Cultural Resources*, in this EIR/EA. The following discussions are based on those analyses.

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

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.

Less-than-Significant Impact

Project archaeologists sent a letter to the Native American Heritage Commission on September 13, 2019, requesting a search of the Sacred Lands File and a list of potentially interested Native American groups and individuals. The Native American Heritage Commission responded on October 1, 2019, stating that a search of the Sacred Lands Files was positive for sacred lands or TCPs in proximity to the APE.

During consultation between Caltrans District 8, on behalf of FHWA, and the Pechanga Band of Luiseño Indians for another nearby project, the tribe identified three TCPs: *Túu'uv* (TCP-1), *Qaxáalku Payómik* (TCP-2), and *Qaxáalku Kwíimik* (TCP-3). The full extent and exact boundaries of each TCP are not currently defined by the tribe, but together these TCPs comprise a vast, undefined geographic area that overlaps with portions of the current Project's APE and APE vicinity. The TCPs are considered by the tribe to be eligible for the NRHP under all four evaluation criteria. Therefore, Caltrans assumes these three TCPs are eligible for the NRHP under Criteria A, B, C, and D for the purposes of this Project only. The Caltrans Cultural Studies Office approved the assumption of eligibility for the three TCPs on March 10, 2022. See Section 2.2.10, *Cultural Resources*, for a full summary of Native American consultation completed for this Project.

As detailed in Section 2.2.10, *Cultural Resources*, there are archaeological sites within the APE that are considered eligible for inclusion in the NRHP for the purposes of this Project only because they would be protected in their entirety from any potential effects through the establishment of an ESA, in accordance with Section 106 PA Stipulation VIII.C.4. There are seven historic properties within or adjacent to the APE for the purposes of this Project (Table 3-3 in Section 3.1.5, *Cultural Resources*).

Four of the seven historic properties are prehistoric archaeological sites that would be avoided and protected with an ESA for each and would follow Caltrans Standard Specifications 14-1, 14-2, and 16-2.03 (Caltrans 2023i). Therefore, the Project has a finding of "no adverse effect with standard conditions" (i.e., a Finding of No Adverse

Effect) for the four prehistoric historic properties. The other three resources are the identified TCPs. Based on the limited percentage of permanent impacts on the overall TCPs and the lack of impacts on potentially contributing archaeological sites, a Finding of No Adverse Effect on the TCPs also is applicable (see Sections 2.2.10, *Cultural Resources*, and 3.1.5, *Cultural Resources*, for more information).

Overall, the undertaking would have No Adverse Effect on the four archaeological sites and three TCPs. Caltrans District 8, in applying the Criteria of Adverse Effect, proposes that a Finding of No Adverse Effect is appropriate, and the SHPO supplied concurrence in the finding, pursuant to 36 CFR 800.5(c) and 106 PA Stipulation X.B.2 on May 26, 2023. Although a low potential has been determined, in general, it is possible that previously undocumented cultural materials or human remains may be unearthed during site preparation, grading, or excavation for the Build Alternative. Those potential effects would be avoided or minimized through Standard Project Measures **CR-1** through **CR-4** (see Section 2.2.10, *Cultural Resources*, for full measure text); therefore, less-than-significant impacts are anticipated related to tribal cultural resources.

3.1.19 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

3.1.19.1 CEQA Significance Determinations for Utilities and Service Systems

The potential for the Build Alternative to adversely affect utilities and service systems was assessed in the Section 2.2.7, *Utilities and Emergency Services*, in this EIR/EA. The following discussions are based on those analyses.

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact

The Build Alternative is expected to require conduit connections to existing power sources, which include private utility companies. As described in Section 2.2.7, *Utilities and Emergency Services*, 280 utilities are within the study area: 88 telecommunication, 67 electrical power, 33 natural gas, 63 water, 27 sewers, and three casing. All utilities would be protected in place. Therefore, the Project would have no impact on relocation or construction of utilities.

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less-than-Significant Impact

The use of water during construction would be limited to water trucked to the site for dust control. The amount of water used during construction would be minimal. Operation of the Build Alternative is not expected to result in an increased demand for water used for landscape irrigation. As a result, the Build Alternative would not require the water districts serving the Project to provide new or expanded facilities to meet the need for water during construction and operation of the Project. Therefore, the impact would be less than significant.

c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact

The Build Alternative would not generate wastewater or discharge wastewater to the area sewer system. As a result, the Project would not exceed wastewater treatment requirements, require or result in the construction of new wastewater treatment facilities, or result in the need for a determination by a wastewater treatment provider that it has adequate capacity to serve the Project area. Therefore, there would be no impact.

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less-than-Significant Impact

During construction, two types of waste materials would be collected: vegetation, other plant material, and excess soils; and solid waste such as concrete, asphalt, and wood. The waste collected during construction would be properly disposed of at an existing landfill or recycled. The amount of waste that would be generated during construction of the Build Alternative would be limited and would cease once construction is complete. That amount of waste would be only a very small amount of the total waste disposed of or recycled at area recycling facilities and landfills, on both a daily and annual basis. Therefore, the amount of waste generated during construction of the Project is anticipated to be accommodated by the existing recycling and landfill facilities in Riverside County.

Trash/waste removal would continue consistent with current maintenance activities during operation. There would be similar amounts of trash/waste collected during operation of the Project compared to existing conditions, because the Project would consist of roadway expansion within the State right of way. Therefore, the amount of waste generated during operation of the Build Alternative would be negligible and is considered less than significant.

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less-than-Significant Impact

Any hazardous waste generated during construction of the Build Alternative, collected during normal waste collection activities, or collected as a result of an accidental release on I-15 freeway or ramp facilities would be collected, handled, transported, and disposed of consistent with applicable federal, State, regional, and local regulations. Hazardous wastes would not be commingled with greenwaste non-hazardous trash and impacts are considered less than significant.

Waste materials generated during construction and operation of the Project would be disposed of in accordance with federal, State, and local regulations related to recycling, which would minimize the amount of waste material entering local landfills; as such, impacts are considered less than significant.

3.1.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

3.1.20.1 CEQA Significance Determinations for Wildfire

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact

The Project limits traverse the City of Lake Elsinore, the City of Corona, and portions of unincorporated Riverside County. Both cities and Riverside County have Emergency Operations Plans, which provide guidelines for emergency response planning,

preparation, training, and execution throughout their jurisdictions. I-15 would remain in operation throughout the duration of construction activities, and the TMP (Standard Project Measure **TR-1**) would minimize any construction-related delays, provide detours as needed, and require coordination with California Highway Patrol and local law enforcement agencies. The Project would not impair or physically interfere with implementation of applicable emergency response, from construction through long-term operations. No potential evacuation routes would be impeded or disrupted during Project construction and operation. The Project is not expected to cause a substantial increase in emergency response times during construction, especially with Standard Project Measure **TR-1**. Therefore, there would be a less-than-significant impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Less-than-Significant Impact

According to CAL FIRE, the Project is within the Riverside County SRA and the City of Corona and City of Lake Elsinore LRAs. According to the CAL FIRE SRA and LRA maps, the Project footprint is within areas designated as moderate, high, and very high FHSZs. However, the Project is within the active I-15 transportation corridor, which predominantly consists of urban, developed, and disturbed environments. The Project would not alter the alignment of I-15 and would not run directly through areas with open space.

Generally, transportation projects, particularly those on existing alignments, are considered unlikely to exacerbate wildfire risks or post-fire flooding/landslides. However, Avoidance and Minimization Measures **FIRE-1** and **NC-3 (NES BIO-1)** would ensure that construction activities avoid or minimize the risk of fires. The Project shall also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a fire prevention plan.

The Project would not exacerbate wildfire risks in or near an SRA, LRA, or elsewhere due to slope, prevailing winds, or other factors. Construction and operational activities would occur in areas of long-term commercial, industrial, and residential use. The Project is anticipated to be constructed entirely within the existing State right of way. Through proper site design and compliance with standard and emergency county access requirements, the Project would not exacerbate wildfire risk or expose the Project site to pollutant concentrations from a wildfire or uncontrolled spread of wildfire. There would be a less-than-significant impact.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Less-than-Significant Impact

The Project would construct two additional express lanes in both the northbound and southbound directions within the median from State Route (SR-) 74 (Central Avenue) through the Temescal Valley community, to El Cerrito Road in the City of Corona. Additional Project components include but are not limited to adding an auxiliary lane at two locations along I-15, installing advance signage, applying transition striping, widening up to 15 bridges within the Project limits, shifting the I-15 centerline 12 feet to the east between Cajalco Road and Weirick Road/Dos Lagos Drive, reconfiguring the southbound Weirick Off-Ramp, and installing roadside tolling equipment. No utilities would be relocated, and all utilities would be protected in place. The Project requires the installation and maintenance of tolling equipment that is similar in type and scope to express lanes existing along the I-15 transportation corridor. Construction of the median into express lanes would also extend the firebreak between the east and west sides of I-15, which is a benefit of the Project. Avoidance and Minimization Measures **FIRE-1** and **NC-3 (NES BIO-1)** would ensure that construction activities avoid or minimize the risk of fires. The Project would also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a fire prevention plan. The Project is not expected to exacerbate wildfire risks or expose Project personnel to pollutants from a wildfire or the uncontrolled spread of a wildfire.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Less-than-Significant Impact

Although I-15 is relatively flat, hills are directly north and east of the existing transportation corridor. Implementation of standard Caltrans practices for erosion control and other BMPs (Avoidance and Minimization Measure **NC-12** and Caltrans Standard Specification 13-1.01D(2)) would avoid or minimize the Project's potential to result in downslope or downstream flooding or landslides. Therefore, the Project would not expose the public to a risk of post-fire slope instability or drainage changes. Impacts would be less than significant.

3.1.21 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?	☐	☒	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☒	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

3.1.21.1 CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, 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?

Less than Significant with Mitigation Incorporated

The potential for the Build Alternative to result in significant impacts on biological resources is discussed in Sections 2.4.1, 2.4.2, 2.4.3, 2.4.5, and 2.4.6, and summarized below.

While no direct impacts on LBV are anticipated, as a precaution, if LBV use areas were to occur within construction areas, a measure has been included to address direct construction impacts on LBV if they were to occur as a part of the Project, with potentially significant impacts. If this were to happen, with implementation of the Mitigation Measure **TE-3 (NES BIO-23)**, significant direct construction impacts on LBV would be reduced to less-than-significant levels.

Impacts on MSHCP riparian/riverine resources from the Project would require compensatory mitigation to reduce impacts to less-than-significant levels under CEQA. Under the MSHCP, compensation for these losses shall be addressed through Mitigation Measures **NC-15 (NES BIO-15)**, **NC-16 (NES BIO-16)**, and **NC-17 (NES BIO-17)**.

Mitigation Measures **NC-15 (NES BIO-15)**, **NC-16 (NES BIO-16)**, and **NC-17 (NES BIO-17)** shall be implemented to ensure direct impacts on federally and State-protected wetlands would be less than significant.

Within the BSA, trees are protected by the Riverside County Oak Tree Management Guidelines, Open Space and Conservation Policy, Ordinance 12.08, Tree Removal Ordinance 12.24.010, and the California State Senate Concurrent Resolution No. 17, Oak Woodlands.

Protected trees in the BSA include oak trees within both mapped Coast Live Oak Woodland and Forest and any other vegetation community containing oak trees. Other protected trees include trees within the right of way of the county highway.

With implementation of Mitigation Measure **NC-20 (NES BIO-19)**, all potential direct and indirect impacts on protected trees would be reduced to less-than-significant levels.

The Project would not eliminate important examples of the major periods of California history or prehistory. Overall, the undertaking, as currently proposed, would have No

Adverse Effect on the four archaeological sites and three TCPs. Caltrans District 8, in applying the Criteria of Adverse Effect, proposes that a Finding of No Adverse Effect is appropriate and the SHPO supplied concurrence in the finding, pursuant to 36 CFR 800.5(c) and 106 PA Stipulation X.B.2 on May 26, 2023.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Significant and Unavoidable

An evaluation of the potential for the Project to have impacts that are individually limited but cumulatively considerable is included in Section 2.5, *Cumulative Impacts*, and Section 3.3, *Climate Change*. Although the Project is not expected to result in impacts that are individually limited but cumulatively considerable, the Project is projected to result in significant impacts related to GHG emissions that are considered significant and unavoidable and would therefore be expected to also contribute to significant cumulative adverse impacts. The analysis of GHG emissions provided in Section 3.3, *Climate Change*, is a cumulative analysis in that it considers the emissions of traffic generated by existing and future planned land uses and the effects of other future planned transportation improvements. As discussed in Section 3.3, because operational emissions are projected to increase under the Build Alternative in the Opening Year (2030) and Design Year (2050) when compared to the Existing (2019) condition and No-Build condition in the Opening and Design years, the Project would conflict with the goals included in the State's AB 32 Climate Change Scoping Plan and other regulations adopted for the purpose of reducing the emissions of GHGs. Mitigation Measures **GHG-1** through **GHG-4**, Standard Project Measure **EN-1**, and Standard Project Measure **AQ-4** are expected to reduce the Project's construction GHG emissions. Mitigation Measures **GHG-5** through **GHG-11** and **VMT-1** would reduce the GHG emissions and potential climate change impacts from operation and maintenance of the Project. However, the impacts would remain significant and unavoidable. Therefore, the Build Alternative would contribute to cumulative impacts related to climate change.

The Project's increases in air pollutant emissions are detailed in Section 3.1.3, *Air Quality*; the Project is located within a nonattainment area for the state PM_{10} and $PM_{2.5}$ ambient air quality standards. As such, the Project-related increase of PM_{10} and $PM_{2.5}$ would be cumulatively considerable. However, Mitigation Measure **VMT-1** would be implemented to reduce VMT and its associated environmental impacts. However, even with Mitigation Measure **VMT-1**, impacts are considered to be significant and unavoidable. In addition, given the existing and future cumulative conditions described in the 2024 RTP/SCS EIR, the Project's incremental increase in those emissions would be cumulatively considerable and would contribute to already-identified significant cumulative effects. Therefore, the Build Alternative would contribute to cumulative impacts related to air quality, even with Mitigation Measure **VMT-1**.

As discussed in Section 3.1.17, *Transportation*, the Build Alternative is not expected to result in substantial impacts relating to conflicts with the circulation system, roadway design hazards, and emergency access. However, VMT would increase under the Build Alternative as compared to the No-Build Alternative. However, Mitigation Measure **VMT-1** would be implemented to reduce VMT and its associated environmental impacts.

Other past, present, and reasonably foreseeable projects in the region would be required to meet standard requirements to provide transportation facilities that accommodate pedestrian, bicycle, and vehicle travel. Therefore, the Build Alternative, when considered with the projects, could result in a VMT increase resulting in worsened congestion in some localized areas that are cumulatively considerable under NEPA or significant cumulative impacts under CEQA. Therefore, the Build Alternative would contribute to cumulative impacts related to traffic.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Significant and Unavoidable

VMT is expected to increase under the Build Alternative between the Existing (2019) and Design Year (2050) scenarios under the No-Build Alternative and Build Alternative. The expected increase in VMT across all alternatives, including the No-Build Alternative, is a result of land use growth and population growth assumed in the future year travel demand model. Mitigation Measure **VMT-1** would assist in the reduction of VMT. However, the impacts would remain significant and unavoidable under CEQA, as the Project is still expected to increase VMT for the Build Alternative in comparison to the No-Build Alternative for the Design Year (2050). Although VMT in and of itself does not cause a substantial adverse impact on the human environment, it is a key contributor to GHG emissions, which are considered an adverse impact on the human environment.

The Project is projected to increase travel speeds and reduce travel times, but operational GHG emissions are still expected to increase over time compared to existing conditions and in the Opening Year (2030) and Future Year (2050) when comparing the Build Alternative to the No-Build Alternative. The impact is considered to be significant under CEQA and an adverse effect on human beings. Standard Project Measure **EN-1** and Standard Project Measure **AQ-4** would be implemented during construction activities to reduce impacts related to GHG emissions. Additionally, Mitigation Measures **GHG-1** through **GHG-4** are expected to reduce the Project's construction GHG emissions. Mitigation Measures **GHG-5** through **GHG-11** and **VMT-1** would reduce the GHG emissions and potential climate change impacts from operation and maintenance of the Project. However, because operational GHG emissions would increase over time compared to existing conditions, the impact is considered to be significant and unavoidable under CEQA. Because operational emissions would increase, the Project would conflict with the goals included in the State's AB 32 Climate Change Scoping Plan and other regulations adopted for the purpose of reducing the emissions of GHGs. The Scoping Plan provides a roadmap outlining key policies for

California to implement to achieve its climate goals while improving the health and welfare of Californians and addressing disparities in health outcomes to create a more equitable future. Therefore, the Build Alternative would contribute to environmental effects that would cause substantial adverse effects on human beings.

3.2 WILDFIRE

3.2.1 Regulatory Setting

Senate Bill 1241 required the Office of Planning and Research, the Natural Resources Agency, and the California Department of Forestry and Fire Protection to develop amendments to the "CEQA Checklist" for the inclusion of questions related to fire hazard impacts for projects located on lands classified as very high fire hazard severity zones. The 2018 updates to the CEQA Guidelines expanded this to include projects "near" these very high fire hazard severity zones.

3.2.2 Affected Environment

Wildfires can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects would vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

The Project is in the City of Corona, the City of Lake Elsinore, and unincorporated portions of Riverside County. Land uses along the Project limits include commercial, industrial, and residential use.

CAL FIRE's FHSZ mapping tool shows that the Project limits run through moderate, high, and very high fire hazard severity zones (VHFHSZs), and portions are next to VHFHSZs. According to CAL FIRE, the Project is within the Riverside County SRA and the City of Corona and City of Lake Elsinore LRAs. Most of the alignment is in a VHFHSZ in both the SRA and LRAs. The SRA, which is within the unincorporated portion of Riverside County, is in areas classified as moderate, high, and VHFHSZs. Portions of the Project in the City of Corona and the City of Lake Elsinore are in areas classified as VHFHSZs in their respective LRAs. The Caltrans District 8 Climate Change Vulnerability Assessment mapping of roadways exposed to wildfire risk shows that I-15, within the Project limits, traverses areas that would have a medium, high, and very high wildfire concern from the years 2025 to 2085. See Figure 3-1 for the currently adopted FHSZs in SRAs for Western Riverside County.

3.2.3 Environmental Consequences

3.2.3.1 Build Alternative

Temporary Impacts

The Project would include construction of new lanes along I-15, reconfiguration of one off-ramp within the Project limits, and implementation of electronic toll collection equipment and signage. The Project components are similar in type and scale to existing equipment along the I-15 transportation corridor. No utility relocations are

proposed. All Project construction would follow State and federal fire regulations during implementation of electronic toll collection equipment. The Project limits traverse the City of Lake Elsinore, the City of Corona, and unincorporated Riverside County. Both cities and the County have Emergency Operations Plans, which provide guidelines for emergency response planning, preparation, training, and execution throughout their jurisdictions. The Project would not impair implementation or physically interfere with the implementation of an emergency response, from construction through long-term operations. The Project is not expected to cause a substantial increase in emergency response times during construction, especially with implementation of Standard Project Measure **TR-1**.

Implementation of standard Caltrans practices for erosion control and other best management practices (Avoidance and Minimization Measure **NC-12** and Caltrans Standard Specification 13-1.01D(2)) would avoid or minimize the Project's potential to result in downslope or downstream flooding or landslides. Therefore, the Project would not expose the public to a risk of post-fire slope instability or drainage changes.

Generally, transportation projects, particularly those on existing alignments, are considered unlikely to exacerbate wildfire risks or post-fire flooding/landslides. However, Avoidance and Minimization Measures **FIRE-1** and **NC-3 (NES BIO-1)** will ensure that the construction activities avoid or minimize the risk of fires. The Project will also comply with Caltrans Standard Specifications Section 7-1.02M(2), which mandates fire prevention procedures during construction, including a Fire Prevention Plan.

Permanent Impacts

The Project is not expected to introduce any new structures or operations that would worsen the risk of wildfire. The Project would not alter the alignment of I-15 and would not run directly through areas with open space and natural vegetation. Construction of the median into express lanes would also extend the firebreak between the east and west sides of I-15, which is a benefit of the Project. In addition, with implementation of additional lanes on I-15, the Project would have the potential to improve travel time and decrease emergency response times during operation. Operation of the Build Alternative would not exacerbate the current wildfire risks in the Project corridor.

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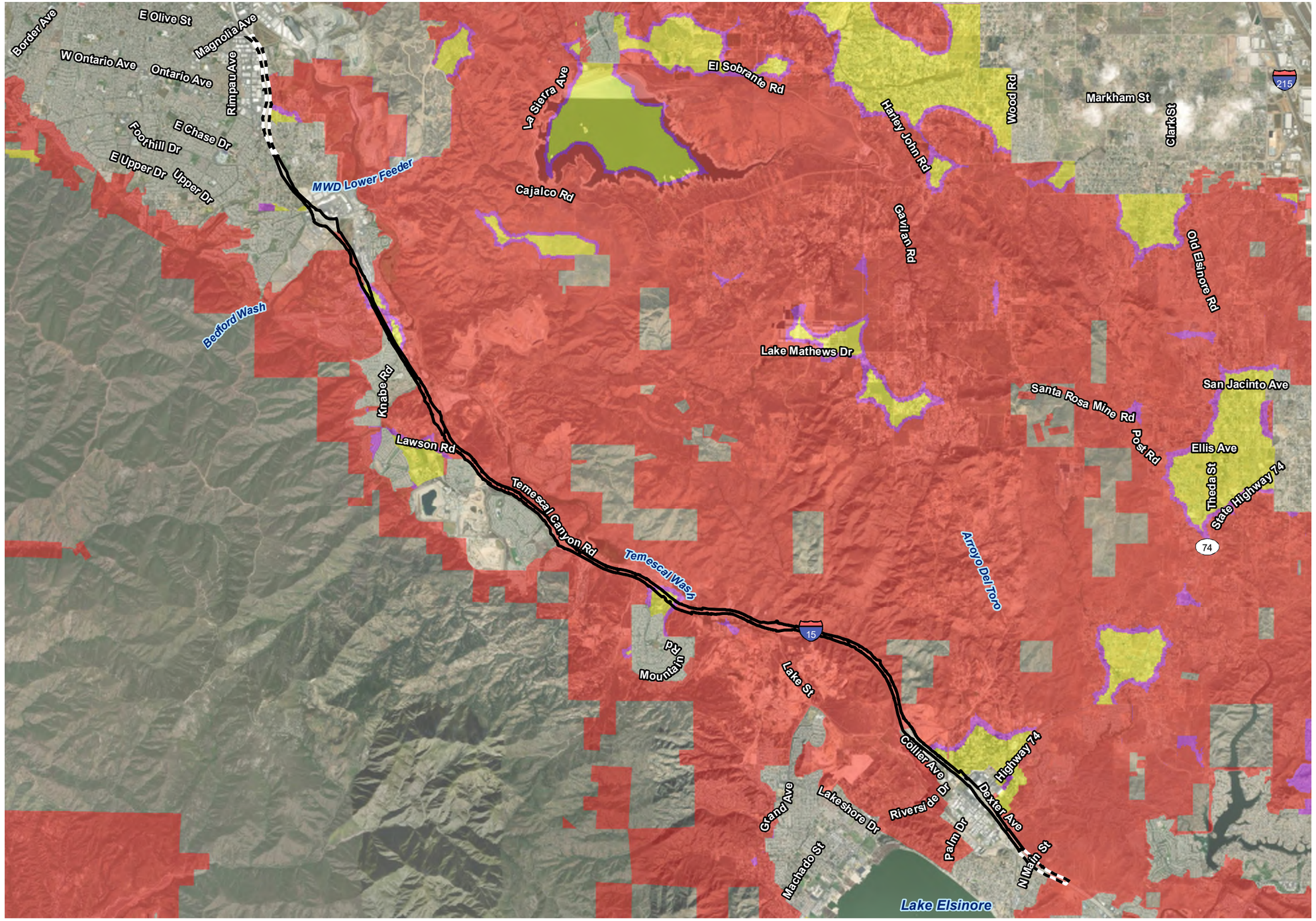

Legend

Project Limits

Advance Signage/Striping Areas (PM 20.3/40.1)

Limits of Disturbance (PM 21.2/38.1)

Fire Hazard Severity Zones

Very High

High

Moderate

Source: Calfire 2024
ESRI USA Imagery

N

0 1 2 Miles

1:100,000

Figure 3-1
Fire Hazard Severity Zones
Interstate 15 Express Lanes Project Southern Extension

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3.2.3.2 No-Build Alternative

No improvements to I-15 are proposed under the No-Build Alternative other than routine maintenance. The No-Build Alternative does not introduce new elements to the highway that would exacerbate the current wildfire risks in the Project corridor.

3.2.3.3 Avoidance, Minimization, and/or Mitigation Measures

The Project will comply with Avoidance and Minimization Measure **NC-3 (NES BIO-1)**, as described in Section 2.4.1, *Natural Communities*. In addition, the following avoidance and minimization measure applies to wildfire:

FIRE-1 To minimize risk of fires during construction activities, RCTC's resident engineer or designated contractor will ensure the implementation of the following minimization measures:

- Coordinate with CAL FIRE and local fire departments to identify and maintain defensible spaces around active construction areas.
- Coordinate with CAL FIRE and local fire departments to identify and maintain firefighting equipment (e.g., extinguishers, shovels, water tankers) in active construction areas.
- Post emergency services phone numbers (i.e., fire, emergency medical, police) in visible locations in all active construction areas.

3.3 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), and various hydrofluorocarbons (HFCs). CO_2 is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO_2 that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO_2.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, "mitigation" involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation Project.

3.3.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), please refer to Caltrans' Standard Environmental Reference (SER), Chapter 16, Climate Change.

3.3.1.1 Federal

To date, no nationwide numeric mobile-source GHG reduction targets have been established; however, federal agencies are mandated to consider the effects of climate change in their environmental reviews.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) is the basic national charter for protection of the environment which establishes policy, sets goals, and provides direction for carrying out the policy. NEPA requires

federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project. In May 2024, the White House Council on Environmental Quality (CEQ) issued the National Environmental Policy Act Implementing Regulations Revisions Phase 2 (89 Fed. Reg. 35442). The CEQ regulations do not establish numeric thresholds of significance, but mandate that federal agencies consider the effects of climate change in their environmental reviews, including direct, indirect, and cumulative impacts. The CEQ regulations further require that agencies quantify greenhouse gas emissions, where feasible, from the proposed action and alternatives. The regulations also direct agencies to identify reasonable alternatives that reduce climate change-related effects.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea level rise, 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 (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (FHWA n.d.). Program and project elements that foster 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.

Early efforts by the federal government to improve fuel economy and energy efficiency to address climate change and its associated effects include The Energy Policy and Conservation Act of 1975 (42 USC Section 6201); and Corporate Average Fuel Economy (CAFE) Standards. The U.S. Department of Transportation's National Highway Traffic and Safety Administration (NHTSA) sets and enforces corporate average fuel economy (CAFÉ) standards for on-road motor vehicles sold in the United States. The Environmental Protection Agency (U.S. EPA) calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards for vehicles under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation's energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014). These standards are periodically updated and published through the federal rulemaking process.

3.3.1.2 State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs).

In 2005, EO S-3-05 initially set a goal to reduce California's GHG emissions to 80 percent below year 1990 levels by 2050, with interim reduction targets. Later EOs and Assembly and Senate bills refined interim targets and codified the emissions reduction goals and strategies. The California Air Resources Board (ARB) was directed to create a climate change scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Ongoing GHG emissions reduction was also

mandated in Health and Safety Code (H&SC) Section 38551(b). In 2022, the California Climate Crisis Act was passed, establishing state policy to reduce statewide human-caused GHG emissions by 85 percent below 1990 levels, achieve net zero GHG emissions by 2045, and achieve and maintain negative emissions thereafter.

Beyond GHG reduction, the State maintains a climate adaptation strategy to address the full range of climate change stressors, and passed legislation requiring state agencies to consider protection and management of natural and working lands as an important strategy in meeting the state's GHG reduction goals.

3.3.2 Environmental Setting

The Project is on the mainline segment of I-15 in southwestern Riverside County starting in the City of Lake Elsinore, continuing through the unincorporated Riverside County community of Temescal Valley, and into the City of Corona. The Project runs between PM 21.2 and PM 38.1 along I-15 and is surrounded by both urban and rural areas throughout the route. The Project area includes residential, commercial, industrial, and recreational land uses, along with undeveloped land. The route in the Project area is heavily used during peak travel hours. SCAG serves as the metropolitan planning organization and the Regional Transportation Planning Agency for the Project area. SCAG's Connect SoCal 2024–2050 RTP/SCS guides transportation development in the Project area. The Riverside County General Plan Air Quality Element and County of Riverside Climate Action Plan address GHGs in the Project area.

3.3.2.1 GHG Inventories

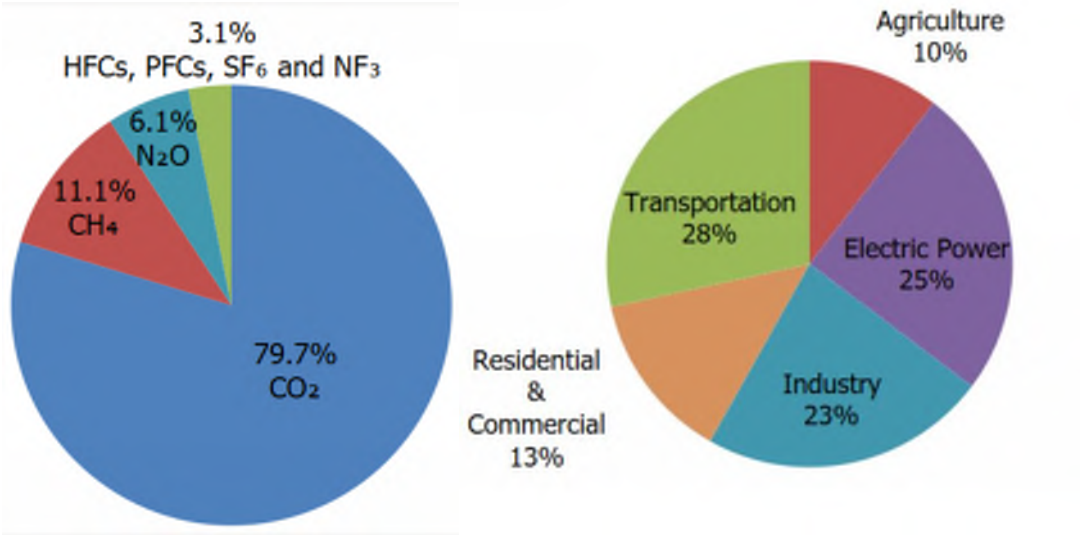
A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state of California, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total national GHG emissions from all sectors in 2022 were 5,489.0 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. (Land Use, Land Use Change, and Forestry provide a carbon sink equivalent to 15% of total U.S. emissions in 2022 [U.S. EPA 2024a].) While total GHG emissions in 2022 were 17% below 2005 levels, they increased by 1% over 2021 levels. Of these, 80% were CO_2, 11% were CH_4, and 6% were N_2O; the balance consisted of fluorinated gases. From 1990 to 2022, CO_2 emissions decreased by only 2% (U.S. EPA 2024a).

The transportation sector's share of total GHG emissions remained at 28% in 2022 and continues to be the largest contributing sector (Figure 3-2). Transportation activities accounted for 37% of U.S. CO_2 emissions from fossil fuel combustion in 2022. This is a decrease of 0.5% from 2021 (U.S. EPA 2024a, 2024b).

Figure 3-2. U.S. 2022 Greenhouse Gas Emissions

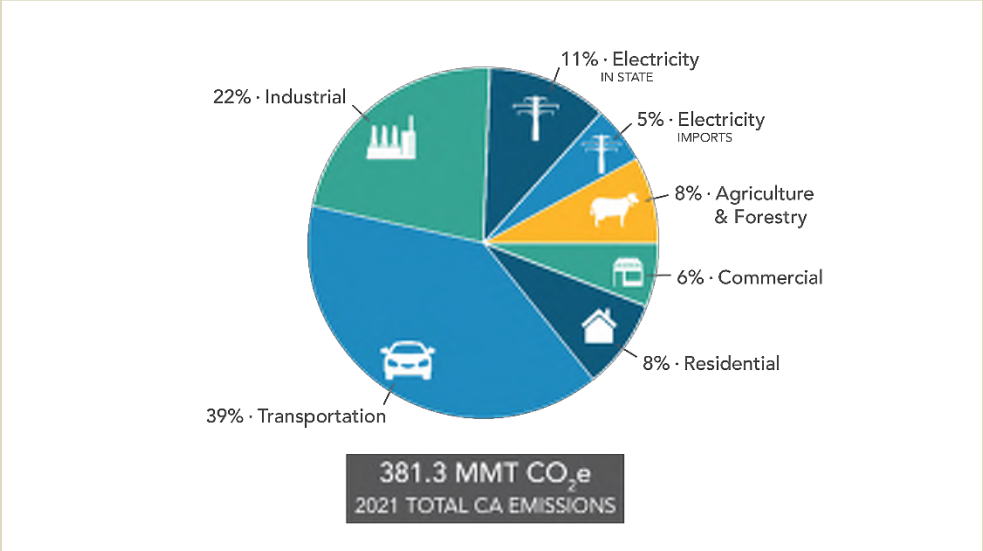


(Source: U.S. EPA 2024b)

State GHG Inventory

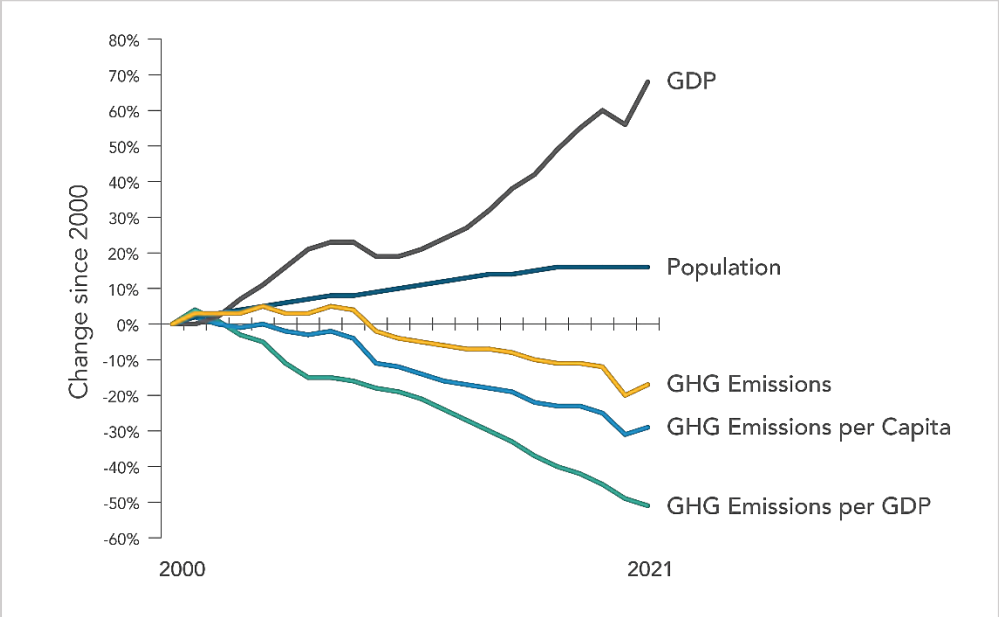
ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. Overall statewide GHG emissions declined from 2000 to 2021 despite growth in population and state economic output (Figure 3-4). Transportation emissions remain the largest contributor to GHG emissions in the state (Figure 3-3) (ARB 2023).

Figure 3-3. California 2021 Greenhouse Gas Emissions by Economic Sector



(Source: ARB 2023)

Figure 3-4. Change in California GDP, Population, and GHG Emissions since 2000



(Source: ARB 2023)

AB 32 required ARB 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, and to update it every 5 years. The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. ARB adopted the first scoping plan in 2008. 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 SB 32. The *2022 Scoping Plan for Achieving Carbon Neutrality,* adopted September 2022, assesses progress toward the statutory 2030 reduction goal and defines a path to reduce human-caused emissions to 85 percent below 1990 levels and achieve carbon neutrality no later than 2045, in accordance with AB 1279 (ARB 2022b).

3.3.2.2 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008*, ARB sets regional GHG reduction targets for California's 18 metropolitan planning organizations (MPOs) to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The Project is included in the RTP/SCS for SCAG's 2024–2050 RTP/SCS (SCAG 2024) under project number 3160001-RIV170901. The regional GHG reduction target for SCAG is 19 percent by 2035 (ARB 2021). (It should be noted that the SCAG planning region comprises Imperial, Orange, San Bernardino, and Ventura Counties in addition to Riverside County, and that targets apply in the region as a whole and to all GHG emission sources, not individual counties or transportation alone.) The *County of Riverside Climate Action Plan* (Riverside County Planning Department 2019) serves as a tool to implement the goals and policies of the various elements of the Riverside County General Plan related to GHG emissions. It provides a list of specific actions that will reduce countywide GHG emissions consistent with the reduction targets of AB 32 (Riverside County Planning Department 2019:Chapter 4). The regional plans and policies within the Project area are summarized in Table 3-4 below.

Table 3-4. Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
Southern California Association of Governments 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (adopted April 2024)	• System Preservation and Resilience • Complete Streets • Transit and Multimodal Integration • Transportation System Management • Transportation Demand Management • Technology Integration • Clean Transportation
Riverside County General Plan (adopted December 8, 2015; Land Use Element updated on September 28, 2021; Circulation Element updated on July 7, 2020)	**Land Use Element** • Policy LU 2.1: f. Site development to capitalize upon multi-modal transportation opportunities and promote compatible land use arrangements that reduce reliance on the automobile. • Policy LU 11.4: Provide options to the automobile in communities, such as transit,

Title	GHG Reduction Policies or Strategies
	bicycle and pedestrian trails, to help improve air quality. • Policy LU 13.4: Incorporate safe and direct multi-modal linkages in the design and development of projects, as appropriate. **Circulation Element** • Policy C 1.2: Support development of a variety of transportation options for major employment and activity centers including direct access to transit routes, primary arterial highways, bikeways, park-n-ride facilities, and pedestrian facilities. • Policy C 1.7: Encourage and support the development of projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle lanes and paths, and mixed-use community centers. • Policy C 5.2: Encourage the use of drought-tolerant native plants and the use of recycled water for roadway landscaping. • Policy C 20.14 (Previously C 20.12): Encourage the use of alternative non-motorized transportation and the use of non-polluting vehicles.
Riverside County General Plan Amendments (adopted July 17, 2018)	**Air Quality** • Policy AQ 20.1: Reduce VMT by requiring expanded multi-modal facilities and services that provide transportation alternatives, such as transit, bicycle and pedestrian modes. Improve connectivity of the multi-modal facilities by providing linkages between various uses in the developments. • Policy AQ 20.3: Reduce VMT and GHG emissions by improving circulation network efficiency.

Title	GHG Reduction Policies or Strategies
Riverside County Climate Action Plan (adopted and updated November 2019)	**Transportation** • R2-T1: Alternative Transportation Options • R2-T3: Ride-Sharing and Bike-to-Work Programs within Businesses **Energy Efficiency** • R2-EE10: Energy Efficiency Enhancement of Existing and New Infrastructure • Advanced Measures • R2-L2: Light Reflecting Surfaces for Energy Saving

3.3.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, CH_4, N_2O, and HFCs. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH_4 and N_2O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector. (GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO_2 is the most important GHG, so amounts of other gases are expressed relative to CO_2, using a metric called "carbon dioxide equivalent," or CO_2e. The global warming potential of CO_2 is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO_2.)

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself." (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) 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. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

3.3.3.1 Operational Emissions

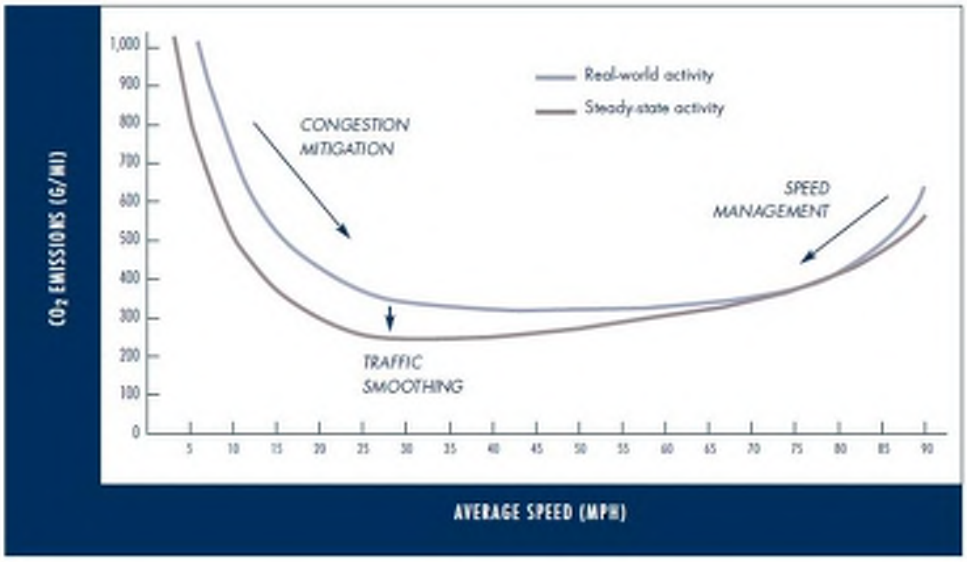
The National GHG Inventory for 2022 reported that 80 percent of all U.S. GHG emissions in 2022 consisted of CO_2, and fossil fuel combustion for transportation accounted for 35 percent of those CO_2 emissions. Most (37 percent) transportation-

related CO_2 was from operating light-duty trucks, 23 percent from medium- and heavy-duty trucks and buses, and 20 percent from passenger cars. The remainder of emissions came from other modes and off-road sources (U.S. EPA 2024a). Because CO_2 emissions represent the greatest percentage of GHG emissions, it has been selected as a proxy for the following analysis for potential climate change impacts.

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 3-5). To the extent that a project enhances operational efficiency and improves travel times in high-congestion travel corridors, GHG emissions, particularly CO_2, may be reduced, provided that improved travel times and throughput do not induce additional VMT.

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 and efficiency. To be most effective, all four strategies should be pursued concurrently.

Figure 3-5. Possible Use of Traffic Operation Strategies in Reducing On-road CO_2 Emissions



(Source: Barth and Boriboonsomsin 2010)

The Project is listed in the SCAG 2024–2050 RTP/SCS under project number 3160001-RIV170901. The 2024–2050 RTP was approved by FHWA on May 10, 2024. Implementation of the 2024–2050 RTP/SCS would result in a 19-percent reduction of GHG emissions per capita by 2035. This would meet or exceed the State's mandated reductions for the SCAG region, which is 19 percent per capita by 2035.

The purpose of the Project is to manage traffic operations, throughput, and travel times on the northbound and southbound mainline; provide an option for travel time reliability; and increase vehicular throughput within the Project limits with forecasted population growth. Existing traffic volumes often exceed current highway capacity along several segments of I-15 within the Project area. Due to forecasted population growth and continued development to support the projected growth in the region, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are projected to negatively affect traffic operations along the freeway mainline. Constructing new lanes, adding auxiliary lanes, and widening bridges are expected to provide more vehicle storage space to accommodate the projected traffic volumes. Auxiliary lanes would provide an opportunity for drivers to find gaps in the traffic flow before merging onto freeway lanes—and without causing unnecessary delay. The Project specifically involves the Transportation System Management strategy of constructing auxiliary lanes to increase throughput by improving the operational capacity and efficiency of I-15.

One additional alternative was considered as part of the Project Approval/Environmental Document development and design of the Build Alternative, which included adding a high-occupancy vehicle (HOV) lane in each direction along I-15 between SR-74 (Central Avenue) and Cajalco Road. However, the alternative was rejected due to the projected future traffic volumes within the I-15 corridor increasing so much that the addition of a single HOV lane in each direction would not have met the purpose and need of the Project based on the projected traffic demands. Based on a review of anticipated future funding for projects in Riverside County, it was determined that funding of an additional lane on I-15 from SR-74 (Central Avenue) to Cajalco Road could only be reasonably accomplished through the construction of a tolled facility along I-15. The cost for the HOV alternative was estimated to be approximately $330 million. Because the HOV alternative did not meet the Project's purpose and need and was not financially feasible, the HOV alternative was dropped from further consideration.

3.3.3.2 Quantitative Analysis

Table 3-5. Modeled Annual CO_2e Emissions and Vehicle Miles Traveled, by Alternative

Alternative	Modeled CO_2e Emissions (metric tons /year)	Difference Build vs. No Build (metric tons/year)	Change from Existing/Baseline + or - (metric tons/year)	Annual Vehicle Miles Traveled[a]
Existing/ Baseline 2019	1,414,268	–	–	3,319,554,680
Opening Year (2030)				
No Build	1,779,215	–	364,947	5,221,621,300
Build Alternative	1,828,332	49,117	414,064	5,377,597,800

Alternative	Modeled CO_2e Emissions (metric tons /year)	Difference Build vs. No Build (metric tons/year)	Change from Existing/Baseline + or - (metric tons/year)	Annual Vehicle Miles Traveled[a]
Design Year (2050)				
No Build	1,596,525	–	182,257	5,430,206,470
Build Alternative	1,627,345	30,820	213,077	5,556,004,380

Source: CT EMFAC (2021)
CO_2 = carbon dioxide
CO_2e = CO_2, N_2O, CH_4 [provide all GHGs included in the model's calculation of CO_2e]
[a] Annual vehicle miles traveled (VMT) values derived from Daily VMT values multiplied by 347, per ARB methodology (ARB 2008:I-19).

Operational emissions were modeled using the CT-EMFAC2021 model. Project-specific VMT distribution by speed provided in the approved *Interstate 15 Express Lanes Project – Southern Extension Traffic Operations Analysis Report* (Caltrans 2022c) prepared for Caltrans and Riverside County Transportation Commission was used for each condition. Truck percentage data provided in the Traffic Operations Analysis Report (Caltrans 2022c) were used for the VMT fraction for trucks and non-trucks. Table 3-5 summarizes the results of the modeling, showing that all the future No-Build and Build condition emissions would be higher than under the existing condition. When compared to the Existing (2019) baseline, in both the Opening Year (2030) and Design Year (2050), the No-Build and Build Alternatives would result in an increase in emissions. When compared to the No-Build conditions, the Build Alternative would result in an increase in emissions in the Opening Year (2030) and Design Year (2050). The Project would improve speed distribution and reduce vehicle delays.

ARB developed the EMission FACtors (EMFAC) model to facilitate preparation of statewide and regional mobile source emissions inventories. The model generates emissions rates that can be multiplied by vehicle activity data from all motor vehicles, from passenger cars to heavy-duty trucks, operating on highways, freeways, and local roads in California. EMFAC has a rigorous scientific foundation, has been approved by U.S. EPA, and has been vetted through multiple stakeholder reviews. Caltrans developed CT-EMFAC to apply project-specific factors to ARB's model.

EMFAC's GHG emission rates are based on tailpipe emissions test data and the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. GHG emissions quantified using CT-EMFAC are therefore estimates and may not reflect actual on-road emissions. The model does not, however, account for induced travel. Modeling GHG estimates with EMFAC or CT-EMFAC nevertheless remains the most precise means of estimating future greenhouse gas emissions. While CT-EMFAC is currently the best available tool for calculating GHG emissions from mobile sources, it is important to note that the GHG results are only useful for a comparison of alternatives.

3.3.3.3 Construction Emissions

Construction GHG emissions would result from material processing and transportation, 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. While construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

Construction emissions were estimated using the latest Sacramento Metropolitan Air Quality Management District’s RCEM, Version 9.0. Construction of the Project is expected to last approximately 36 months.

Overall total Project construction GHG emissions are estimated to be approximately 5,444 metric tons CO_2e over the approximately 36-month construction period.

All construction contracts include Caltrans Standard Specifications related to air quality. Sections 7-1.02A and 7-1.02C, Emissions Reduction, require contractors to comply with all laws applicable to the Project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

Mitigation Measures **GHG-1** through **GHG-4** and **GHG-11**, as well as Standard Project Measures **EN-1** and **AQ-4**, are expected to reduce construction GHG emissions from the Project. These measures would reduce construction GHG emissions by ensuring that construction equipment is in proper tune and working condition, that energy-efficient equipment and lighting are used, and that construction materials are properly reused or recycled.

3.3.3.4 CEQA Conclusion

The Project would increase travel speeds and reduce vehicle delays, but operational GHG emissions under the Build Alternative are projected to increase in the Design Year (2050) compared to existing conditions. This impact is considered significant under CEQA.

Because operational emissions would increase, the Project would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.3.4 Greenhouse Gas Reduction Strategies

3.3.4.1 Statewide Efforts

In response to Assembly Bill 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors to take California into a sustainable, cleaner, low-carbon future, while maintaining a robust economy (ARB 2022c).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor's Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) Increasing the share of renewable energy in the State's energy mix to at least 50 percent by 2030; (2) Reducing petroleum use by up to 50 percent by 2030; (3) Increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) Reducing emissions of short-lived climate pollutants; and (5) Stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled (VMT). Reducing today's petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency released

Natural and Working Lands Climate Smart Strategy (California Natural Resources Agency 2022).

3.3.4.2 Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB 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 SB 32 (2016), set an 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.

Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more efficient land use and development practices; and continued shifts to telework (Caltrans 2021c).

Caltrans Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021d).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) established a policy to ensure coordinated efforts to incorporate climate change into Caltrans decisions and activities. Other Director's policies promote energy efficiency, conservation, and climate change, and commit Caltrans to sustainability practices in all

planning, maintenance, and operations. *Caltrans Greenhouse Gas Emissions and Mitigation Report* (Caltrans 2020c) provides a comprehensive overview of Caltrans' emissions and current Caltrans procedures and activities that track and reduce GHG emissions. It identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Caltrans and State goals.

3.3.4.3 Project-Level GHG Reduction Strategies

The following Mitigation Measures will also be implemented in the Project to reduce GHG emissions from the Project.

GHG-1. The contractor must comply with SCAQMD's rules, ordinances, and regulations regarding air quality restrictions.

GHG-2. The Project will incorporate the use of energy-efficient lighting.

GHG-3. Bids will be solicited that include use of energy and fuel-efficient fleets in accordance with current practices.

GHG-4. The Project will maintain equipment in proper tune and working condition.

GHG-5. Use water-efficient technologies for landscaping.

GHG-6. Select Project features that minimize the need for irrigation and nonnative plants.

GHG-7. Install urban planting/vegetation, especially canopy trees, to reduce "heat island" effects.

GHG-8. Incorporate native plants and vegetation to the Project design. Replace more vegetation than was removed to increase carbon sequestration.

GHG-9. Avoid an ultimate (new trees at projected maturity) net loss of tree canopy within the Project limits through a combination of preservation and new planting.

GHG-10. Include landscaping components such as mulch and compost application to improve carbon sequestration rates in soils and reduce organic waste.

GHG-11. During final design, a Life Cycle Cost Analysis (LCCA) will be performed, which will ensure long-life pavement structures will be designed to withstand the projected increase in ambient temperatures and changes in precipitation in the Project area as much as feasible. Specifically, adjustments will be made to the pavement binder and mix design specifications to better match expected future environmental conditions. Additionally, stiffer asphalt grades and slower-aging binders will be utilized as needed to address increased temperatures and projected temperature change, along with adjustments to the pavement structural design to account for temperature and climatic

changes. Incorporation of design elements, like shorter joint spacing and others, will occur to reduce damage from high temperatures. Concrete pavements will be designed to limit moisture damage and shrinkage as much as feasible.

VMT-1. To reduce VMT and associated impacts, promote travel-mode shift, and reduce bus travel times, RCTC will develop a VMTMP prior to Express Lanes being open to travel that includes the establishment of the Riverside County Free Rail Pass Program and the expansion of RTA's CommuterLink Route 206.

The Riverside County Free Rail Pass Program will be an approximately 2-year program beginning in 2025 that will offer temporary free Metrolink passes to Riverside County residents to reduce the cost of using public transportation in order to encourage residents to use public transportation more often on a permanent basis. This program will include public outreach efforts that will maximize the participation of disadvantaged and low-income populations.

RCTC will work with RTA to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses will be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project.

Standard Project Measures **EN-1** and **AQ-4** will be implemented during construction activities to minimize and/or avoid impacts related to GHG emissions.

EN-1. The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)).

AQ-4. The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02) that specifically require compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

3.3.5 Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm

surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Furthermore, the combined effects of transportation projects and climate stressors can exacerbate the impacts of both on vulnerable communities in a project area. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

3.3.5.1 Federal Efforts

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The *Fifth National Climate Assessment*, published in 2023, presents the most recent science and "analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; [It] analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years … to support informed decision-making across the United States." Building on previous assessments, it continues to advance "an inclusive, diverse, and sustained process for assessing and communicating scientific knowledge on the impacts, risks, and vulnerabilities associated with a changing global climate" (U.S. Global Change Research Program 2023).

The U.S. Department of Transportation recognizes the transportation sector's major contribution of GHGs that cause climate change and has made climate action one of the department's top priorities (U.S. DOT 2023). FHWA's policy is to strive to identify the risks of climate change and extreme weather events to current and planned 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 (FHWA 2022).

The National Oceanic and Atmospheric Administration provides sea level rise projections for all U.S. coastal waters to help communities and decision makers assess their risk from sea level rise. Updated projections through 2150 were released in 2022 in a report and online tool (NOAA 2022).

3.3.5.2 State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) provides information to help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The Fourth Assessment reported that if no

measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience an up to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures; a two-thirds decline in water supply from snowpack resulting in water shortages; a 77% increase in average area burned by wildfire; and large-scale erosion of up to 67% of Southern California beaches due to sea level rise. These effects will have profound impacts on infrastructure, agriculture, energy demand, natural systems, communities, and public health (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

To help actors throughout the state address the findings of California's Fourth Climate Change Assessment, AB 2800's multidisciplinary Climate-Safe Infrastructure Working Group published *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California*. This report provides guidance on assessing risk in the face of inherent uncertainties still posed by the best available climate change science. It also examines how state agencies can use infrastructure planning, design, and implementation processes to respond to the observed and anticipated climate change impacts (Climate-Safe Infrastructure Working Group 2018).

EO S-13-08, issued in 2008, directed state agencies to consider sea level rise scenarios for 2050 and 2100 during planning to assess project vulnerabilities, reduce risks, and increase resilience to sea level rise. It gave rise to the 2009 *California Climate Adaptation Strategy*, the Safeguarding California Plan, and a series of technical reports on statewide sea level rise projections and risks, including the *State of California Sea-Level Rise Guidance Update* in 2018. The reports addressed the full range of climate change impacts and recommended adaptation strategies. The current *California Climate Adaptation Strategy* incorporates key elements of the latest sector-specific plans such as the *Natural and Working Lands Climate Smart Strategy*, *Wildfire and Forest Resilience Action Plan*, *Water Resilience Portfolio,* and the CAPTI (described above). Priorities in the 2023 *California Climate Adaptation Strategy* include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, implementing nature-based climate solutions, using best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2023).

EO B-30-15 recognizes that effects of climate change threaten California's infrastructure and requires state agencies to factor climate change into all planning and investment decisions. Under this EO, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies*, to encourage a uniform and systematic approach to building resilience.

SB 1 Coastal Resources: Sea Level Rise (Atkins 2021) established statewide goals to "anticipate, assess, plan for, and, to the extent feasible, avoid, minimize, and mitigate the adverse environmental and economic effects of sea level rise within the coastal zone." As the legislation directed, the Ocean Protection Council collaborated with 17 state planning and coastal management agencies to develop the *State Agency Sea-Level Rise Action Plan for California* in February 2022. This plan promotes coordinated actions by state agencies to enhance California's resilience to the impacts of sea level rise (California Ocean Protection Council 2022).

3.3.5.3 Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Caltrans Sustainability Programs

The Director's Office of Equity, Sustainability and Tribal Affairs supports implementation of sustainable practices at Caltrans. The *Sustainability Roadmap* is a periodic progress report and plan for meeting the Governor's sustainability goals related to EOs B-16-12, B-18-12, and B-30-15. The Roadmap includes designing new buildings for climate change resilience and zero-net energy, and replacing fleet vehicles with zero-emission vehicles (Caltrans 2023j).

3.3.5.4 Project Adaptation Analysis

Sea Level Rise

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

Precipitation and Flooding

Based on the FEMA Flood Insurance Rate Map (Map Numbers 06065C1370G, 06059C0225J, 06065C2006G, 06065C2026G, 06065C2028G, 06065C2029G, and 06065C2037G), the Project is primarily within Zone X (Area of Minimal Flood Hazard). A portion of the Project is in Zone A, Zone AO, and Zone AE near Lake Elsinore, which are areas designated as being within the 1-percent annual chance flood (i.e., 100-year flood) zone. Zone AE runs along portions of the Project area from Lake Elsinore to portions of unincorporated Riverside County. The Caltrans District 8 Climate Change Vulnerability Assessment maps projected changes in 100-year storm precipitation, a

metric used in highway design, under the business-as-usual climate change scenario. The change in the 100-year precipitation depth in the Project area is expected to be an increase of up to 5.3 percent by 2055, but only up to 4.5 percent by 2085 (Caltrans 2019). This indicates heavier rainfall during storm events. Drainage facilities would be modified as needed to accommodate additional runoff from the auxiliary lanes and express lanes. It is expected that the Project would be adapted to the anticipated changes in storm precipitation under climate change.

Wildfire

Based on the CAL FIRE FHSZ Map for the County of Riverside, portions of the Project alignment fall within FHSZs identified as moderate, high, and very high in an SRA. Most of the alignment is in a VHFHSZ in both the SRA and LRAs. The Caltrans District 8 Climate Change Vulnerability Assessment mapping of wildfire risk shows a portion of the Project area as exposed roadway in an area of moderate wildfire concern through 2085.

Portions of the Project fall within FHSZs identified as moderate, high, and very high. The Project improvements would include adaptation strategies such as fire-resistant landscaping and hardening to address increased wildfire risk in the area. Fire-resistant landscaping would be implemented, as it may prevent fire ignition and slow or stop the spread of an existing wildfire. In addition, according to Caltrans' Climate Adaptation Strategies for Transportation Infrastructure (2023a), hardening refers to the use of ember- and heat-resistant materials that may assist in preventing ignition and damage to the transportation infrastructure. The Project would incorporate hardening materials such as guardrail and signposts, which would include replacement of wooden guardrail posts and signposts with metal or other inert materials that are less likely to be affected by wildfire. Guardrail posts and signposts made from inert materials are more resistant to wildfire conditions and can be expected to maintain intended function both during and after wildfires take place. Therefore, the Project would be adapted and resilient to future wildfire. Furthermore, the Project would adhere to Caltrans Standard Specification Section 7-1.02M(2), which mandates fire prevention procedures, including a fire prevention plan, to avoid accidental fire starts during construction, and the Project would implement Avoidance and Minimization Measure **NC-3**.

Avoidance and Minimization Measure **FIRE-1** will ensure that the construction activities avoid or minimize the risk of fires.

Temperature

The Caltrans District 8 Climate Change Vulnerability Assessment Map (Caltrans 2019) indicates temperature changes during the Project's design life. Based on the Caltrans District 8 Climate Change Vulnerability Assessment Map (Caltrans 2019), the average minimum air temperature in the Project area is projected to increase by up to 2.5 degrees Fahrenheit (°F) by 2025, by up to 5.6 °F by 2055, and by up to 8.1 °F by 2085. The average maximum temperature over 7 consecutive days in the Project area is projected to increase by up to 3.5 °F by 2025, by up to 6.8 °F by 2055, and by up to

10.5 °F by 2085. Therefore, the overall minimum and maximum daily temperatures in the Project area are projected to continue to increase from 2022 to 2085.

Temperature can affect pavement performance, and changes in temperature can cause blowups, buckling, and rutting, affecting the pavement's roadway life. Pavements are designed based on the typical historical climatic conditions for the Project area. However, as weather changes occur due to climate change, historic climatic conditions may no longer be as indicative for future environmental conditions. To reduce future pavement damage and improve performance, Mitigation Measure **GHG-11** would be implemented. This measure would ensure that pavements are designed and installed to account for future temperature increases and climatic changes.

Temperature affects the choice of pavement materials, the design of foundations and retaining walls in terms of ground moisture conditions, and the need for expansion/ contraction of bridge joints. The changes in temperature in the Project area help determine the selection of the pavement binder grade and material. A binder would be selected that can maintain pavement integrity under both extreme cold and heat conditions. Based on the projected temperature increase in the Project area, the binder will need to allow the pavement to maintain integrity under high temperatures. The temperature increase would also be considered when determining the expansion and contraction allowances for bridge joints. Higher average temperatures can affect flexible pavement; increased maximum pavement temperatures increase the potential for rutting and shoving, requiring more rut-resistant asphalt mixtures. This may require raising high-temperature-asphalt binder grades, increasing the use of binder polymerization, or improving the aggregate structure in asphalt mixtures. Higher average temperatures can also increase the age hardening of the asphalt binder in flexible pavements. To mitigate this, binders that will age more slowly may be used or projects may expand the use of asphalt pavement-preservation techniques to reduce binder aging. During extreme heat waves, there is also an increased potential for asphalt rutting and shoving to flexible pavement. To mitigate this, the mitigation strategies listed earlier would be used, while considering that the historical basis for selecting binder grades may no longer be valid. Higher average temperatures can also affect rigid pavement, as higher temperatures increase the potential for concrete temperature-related curling and moisture warping. To address this, projects will need to factor in more consideration for the concrete coefficient of thermal expansion and drying shrinkage. Projects may need to incorporate design elements to reduce damage from thermal effects, such as through using shorter joint spacing, thicker slabs, less rigid support, and enhanced load transfer. Additionally, higher extreme maximum temperatures, such as during a heat wave, will increase the risk of concrete pavement blowups on rigid pavement, due to excessive slab expansion. To mitigate this, pavement design would use shorter joint spacing in the new design and keep joints clean. In extreme cases, projects would install expansion joints in existing pavements.

Based on the projected temperature increase, the Project will likely have to assess ground conditions, as less water can alter the design factors for foundations and retaining walls. The Project is in the Inland Valley Caltrans pavement region. If extreme high temperatures are also accompanied by drought, there is increased potential for

subgrade shrinkage, which would be considered for the pavement design. Any landscaping and vegetation will need to withstand higher temperatures. Additionally, extreme temperatures could cause pavement discontinuities and deformations, which could lead to more frequent maintenance. As there is a substantial projected temperature increase in the Project area, worker safety will be affected if employees spend extended time outside in high temperatures, such as during maintenance work. In order to ensure worker safety in higher extreme temperatures, more work may be required to be conducted at night, affecting construction and maintenance scheduling.

3.3.5.5 Project-Level Climate Change Adaptation and Mitigation Strategies

The following adaptation Mitigation Measure will be implemented to reduce the effects of climate change on the Project:

GHG-11. During final design, a Life Cycle Cost Analysis (LCCA) will be performed, which will ensure long-life pavement structures will be designed to withstand the projected increase in ambient temperatures and changes in precipitation in the Project area as much as feasible. Specifically, adjustments will be made to the pavement binder and mix design specifications to better match expected future environmental conditions. Additionally, stiffer asphalt grades and slower-aging binders will be utilized as needed to address increased temperatures and projected temperature change, along with adjustments to the pavement structural design to account for temperature and climatic changes. Incorporation of design elements, like shorter joint spacing and others, will occur to reduce damage from high temperatures. Concrete pavements will be designed to limit moisture damage and shrinkage as much as feasible.

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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, transportation departments, and transportation agencies 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, tribal consultation, and consultation with interested parties. This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve Project-related issues through early and continuing coordination.

4.1 NOTICE OF INITIATION OF STUDIES

An initial public scoping period was held for a 33-day period between October 21 and November 22, 2019. The purpose of the scoping period was to inform the public about the Project and provide the opportunity for public engagement and input through questions and written comments about the Project. The initial scoping period event was promoted through the following methods:

- Advertisements: Local newspapers covering the Interstate (I-) 15 corridor (English and Spanish) in print and online
- Business Chambers of Commerce: Corona Chamber of Commerce and Lake Elsinore Chamber of Commerce
- Certified mail: a compact disc of the complete scoping notification package mailed to agency contacts
- Digital platforms: Riverside County Transportation Commission (RCTC) Facebook, X (formerly Twitter), and Instagram
- Direct mail postcards: Scoping meeting notices mailed to property owners/tenants along the I-15 corridor within a radius between 0.5 and 2 miles around the alignment, depending on geographical contours and residential and commercial developments.
- Elected officials and select environmental organization mailing: Formal scoping notices (English and Spanish) mailed to elected officials representing constituents through the I-15 corridor at the city, county, state, and federal levels and select environmental interested party organizations

- Elected officials outreach: Riverside County Board of Supervisors, Corona City Council members, and Lake Elsinore City Council members

- E-blast announcements: Announcements of the scoping period and meetings sent to email contacts from the Project database

- Geofencing mobile ad campaign: Active in a 5-mile radius along the I-15 corridor (Geofencing advertising is a method in which global positioning system points are set to create a virtual geographic boundary. When a mobile device such as a cell phone or tablet enters the virtual geographic boundary, enabling software is triggered, causing an advertisement to appear on the device.)

- Media story placements: Print newspaper, radio, television, and online news outlets

- Newsletters: We are Temescal Valley, Supervisor Kevin Jeffries's "Jeffries Journal," RCTC's "The Point"

During the scoping period, RCTC conducted three in-person public scoping meetings held from 6 p.m. to 8 p.m. at the following dates and locations:

- November 12, 2019, at Temescal Valley Elementary School

- November 13, 2019, at Eagle Glen Golf Club

- November 14, 2019, at Ortega High School

These in-person meetings were easily accessible to the local communities, including low-income and minority residents and commuters. The in-person meetings were held in an open house format with stations that provided information exhibits on the following topics: Project History, Regional Express Lanes Network, Purpose of Project, Population Trends, Traffic Trends, Current and Proposed Conditions, Current 91 Lanes Express Use, How Do Express Lanes Work?, Environmental Process, Areas of Environmental Analyses, Right of Way, Noise and Potential Noise Barriers, Funding, Anticipated Schedule, Public Scoping Comments (Certified Court Reporter), and Stay Connected.

RCTC and California Department of Transportation (Caltrans) specialists in engineering, environmental, traffic, noise, and right of way were available to address concerns and answer questions. A total of 87 community members signed in at the in-person meetings but there were additional attendees who intentionally did not sign in and wished to remain anonymous. Attendees had the option to fill out comment cards or provide oral comments to a certified court reporter available at each of the three meetings.

In addition to the in-person meetings, RCTC hosted an online portal with 24-hour access for the full duration of the scoping period. The online meeting was compliant with the Americans with Disabilities Act and featured the same exhibits as the in-person

meetings with the option to submit comments and review informational videos outlining the Project and overall Project Approval and Environmental Document (PA&ED) delivery process.

A bilingual (English and Spanish), 8.5- by 11-inch, double-sided postcard was developed to inform the public of the start of the scoping period, invite them to attend one of the three in-person scoping meetings, and encourage public participation through the in-person meetings or online meeting option.

While a typical notification area is between 500 feet and 0.25 mile during the Environmental Impact Report/Environmental Assessment (EIR/EA) process, the PDT determined that it was important to reach a larger number of residents and businesses through a greater coverage area. As such, a radius between 0.5 mile and 2 miles was used throughout the corridor, depending on geographical contours and residential/ business developments.

A mail house service was contracted to ascertain property owner and tenant data for residents and businesses in the coverage area. This resulted in an October 18, 2019, mailing of 14,392 postcard scoping meeting notices.

In total, 151 comments were collected during the initial public scoping period from the in-person meetings, the online meeting, email to the Caltrans Project email (15expsouth@dot.ca.gov), email to RCTC's general information email, and through U.S. mail. Current environmental laws do not require that responses be provided to public comments made during the scoping period. Some of the key issues raised by agencies and the public included: the potential for air quality impacts; an assessment to include full biological habitat types within and adjacent to the Project; analysis of direct, indirect, and cumulative impacts on biological resources; discussion of a range of reasonable alternatives; the incorporation of mitigation measures for impacts on biological resources; analysis of Native American and Tribal Cultural Resources; local traffic in the Temescal Valley area; impacts on future development of the Temescal Valley area; noise impacts on area residences along I-15; consideration of reduced toll costs for senior citizens, disabled, and local area residents; transit service improvements for I-15 south and opportunities to link Lake Elsinore with Corona Metrolink facilities; and consistency with the Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Although no official responses were developed, the comments were reviewed and considered by the PDT as it conducted technical studies and advanced the development of the environmental document.

4.1.1 Notice of Preparation

The California Environmental Quality Act (CEQA) scoping process for the Project was initiated with the preparation and distribution of a Notice of Preparation (NOP) of an EIR/EA, via mail and posting at the State Clearinghouse and Riverside County Clerk. The NOP was posted to the State Clearinghouse on October 21, 2019, beginning the required 30-day review period under CEQA. The State Clearinghouse number assigned was 2019100381, which is referenced in subsequent CEQA filings. The NOP received

two comments, which are posted on the State Clearinghouse website and included at the end of this chapter. One was received from the California Department of Fish and Wildlife (CDFW) and one from the Native American Heritage Commission (NAHC). The NOP was filed with the Riverside County Clerk on October 21, 2019, with an e-file number of E-201901205. The NOP that was filed with the State Clearinghouse and County Clerk is included at the end of this chapter, as are the NOP letter and public notice.

4.2 INTERAGENCY COORDINATION AND CONSULTATION

The formulation of Project alternatives and mitigation has been carried out through a cooperative dialogue among representatives of the following agencies or organizations:

- Caltrans
- Cities of Riverside, Corona, and Lake Elsinore
- County of Riverside and Temescal Valley
- Native American tribal representatives
- Southern California Association of Governments
- California State Historic Preservation Officer (SHPO)
- Transportation Conformity Working Group
- Transportation Corridor Agencies
- U.S. Fish and Wildlife Service (USFWS)
- Historic Preservation Groups:
    - Corona Historic Preservation Society
    - Lake Elsinore Historical Society
    - Riverside County Mexican American Historical Society

The following sections summarize the results of the efforts of Caltrans District 8 to fully identify, address, and resolve Project-related issues through early and continuing coordination.

4.2.1 Cooperative Agreements

RCTC is the local Project Sponsor for funding and administering the Project development effort and has a cooperative agreement (Caltrans Agreement No. 08-1693) with Caltrans for the current PA&ED phase. California Senate Bill 617 was approved on October 4, 2023, authorizing the use of progressive design-build for local

agency transportation projects. It is expected that RCTC and Caltrans will enter into a cooperative agreement for the progressive design-build phase of this Project and that RCTC will request approval to Advertise, Award and Administer the progressive design-build contract(s).

4.2.2 Other Agreements

Numerous public agencies are involved in or affected by the Project. It is likely that interagency agreements or memoranda of understanding will be required between many of the agencies at a future stage in the Project. The most directly involved agencies, in addition to Caltrans District 8, include RCTC, City of Corona, City of Lake Elsinore, and County of Riverside. It is anticipated that RCTC and Caltrans will enter into a toll facility agreement for operation of the express lane facility.

4.2.3 Native American Consultation

Consultation with a number of Native American tribes (groups and individuals) was conducted in December 2022 in compliance with Section 106 of the National Historic Preservation Act and Assembly Bill 52.

A letter was sent to the NAHC on September 13, 2019, requesting a search of the Sacred Lands File and a list of potentially interested Native American groups and individuals. The NAHC responded on October 1, 2019, stating that a search of the Sacred Lands Files was positive for sacred lands or Traditional Cultural Properties (TCPs) in proximity to the area of potential effects (APE). The NAHC also recommended that the Pechanga Band of Luiseño Indians be contacted for further information. In addition, the NAHC provided a list of Native American contacts who might have knowledge of cultural resources in the Project area.

Using the NAHC list, the Caltrans District 8 District Native American Coordinator sent outreach letters and maps of the Project APE to six Native American groups on October 28, 2019, as follows:

- Andrew Salas, Gabrieleño Band of Mission Indians
- Travis Armstrong, Morongo Band of Mission Indians
- Shasta Gaughen, Pala Band of Mission Indians
- Gary Dubois, Pechanga Band of Luiseño Indians
- Cheryl Madrigal, Tribal Historic Preservation Officer, Pechanga Band of Luiseño Indians
- Joseph Ontiveros, Soboba Band of Luiseño Indians

The letters included a description of the Project and maps indicating the Project location. Table 4-1 includes a summary of consultation to date.

Table 4-1. Tribal Consultation

Native American Group/Individual	Date of First Contact Letter/Email	Date of Response	Date of Second Contact Letter/ Email	Date of Response	Summary of Conversations
Andrew Salas, Chairman, Gabrieleño Band of Mission Indians – Kizh Nation	October 28, 2019	No response	December 2, 2019	December 12, 2019	Phone call – no answer; left a voicemail on December 2, 2019. During phone call on December 12, 2019, Mr. Salas requested the consultation letter via email, which was provided.
Travis Armstrong, Tribal Historic Preservation Officer, Morongo Band of Mission Indians	October 28, 2019	November 13, 2019, and November 14, 2019	Not applicable	Not applicable	Requested a copy of the NAHC letter, and the Morongo will defer to the Pechanga for this Project.
Shasta Gaughen, Tribal Historic Preservation Officer, Pala Band of Mission Indians	October 28, 2019	December 4, 2019	Not applicable	Not applicable	Phone call – no answer; left a voicemail on December 2, 2019. On December 4, Ms. Gaughen responded that the Project is outside of the Pala's Traditional Use Area and defers to tribes that are in closer proximity.
Gary DuBois, Tribal Historic Preservation Officer via Tuba Ebru Ozdil (Cultural Analyst), Pechanga Band of Luiseño Indians	October 28, 2019	November 22, 2019	November 2, 2021	Not applicable	Formal request to begin Section 106 and AB 52 consultation and that the tribe exercises its right to be involved in the entire environmental review process. Second letter sent to inform Pechanga of APE changes and recognition of TCPs.
Cheryl Madrigal, Tribal Historic Preservation Officer, Rincon Band of Luiseño Indians	October 28, 2019	November 18, 2019	Not applicable	Not applicable	Request formal consultation for AB 52 and Section 106. The tribe requests copies of archaeological records searches and assessments.

Native American Group/Individual	Date of First Contact Letter/Email	Date of Response	Date of Second Contact Letter/ Email	Date of Response	Summary of Conversations
Joseph Ontiveros, Tribal Historic Preservation Officer, Soboba Band of Luiseño Indians	October 28, 2019	November 26, 2019	November 2, 2021	Not applicable	Formal request to initiate AB 52 consultation and government-to-government meetings to begin Section 106 Consultation. Second letter sent to inform Soboba of APE changes and recognition of TCPs.

AB = Assembly Bill

Follow-up communication, which included sending the Architectural Survey Report and Finding of Effect completed for the Project, was completed by Caltrans in June of 2023. The reports were sent to the Rincon Band of Luiseño Indians and to the Pechanga Band of Luiseño Indians. No further communication has been received to date other than confirmation of receipt of the reports.

4.2.4 State Historic Preservation Officer

As noted in Section 2.2.10, *Cultural Resources*, four archaeological sites (P-33-000108, -000630, -001099, and -002992) are assumed eligible for the purposes of the Project only (Stipulation VIII.C.4, Cultural Studies Office approval on January 27, 2023). Additionally, three TCPs (Túu'uv, Qaxáalku Payómik, and Qaxáalku Kwíimik) are considered National Register of Historic Places–eligible for the purposes of the Project only with Caltrans' Division of Environmental Analysis Cultural Studies Office approval dated March 10, 2022.

In addition, two properties were evaluated for the Project and were found ineligible: Temescal Canyon Road (P-33-024785/CA-RIV-12277; P-33-028199) and the residence at 18740 Collier Avenue.

Pursuant to Stipulation X.B.2.b of the Section 106 Programmatic Agreement, Caltrans has found that the proposed undertaking would have no adverse effect on historic properties and, given the above nonstandard conditions, sought SHPO comment on this finding. Following a review of the documentation submitted, SHPO concurred with the two ineligible properties and did not object to the finding for the Project on May 26, 2023. The letter from SHPO is included at the end of this chapter.

4.2.5 U.S. Fish and Wildlife Service

Official species lists were obtained from USFWS on December 4, 2020, and were updated on August 20, 2021; May 16, 2023; September 14, 2023; and September 17, 2024. The species lists provide information about the threatened, endangered, and proposed species; designated critical habitat; and candidate species that may occur in the Biological Study Area. The species lists provided by USFWS are included at the end of this chapter.

4.2.6 U.S. Army Corps of Engineers

A Preliminary Jurisdictional Delineation (October 2021) report was prepared as an appendix to the Natural Environment Study (Minimal Impacts) (October 2023) supporting this EIR/EA. Areas within the Jurisdictional Delineation Study Area have been identified as potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act. The Jurisdictional Delineation will be submitted to USACE for its review and concurrence.

4.2.7 Riverside Transit Agency

In early 2024, RCTC began coordinating with the Riverside Transit Agency (RTA) regarding the development of the Project to improve and potentially expand RTA's existing CommuterLink Route 206, which currently operates along I-15 between the Cities of Temecula and Corona. Once completed, the ELPSE will allow the RTA buses to utilize the Express Lanes, bypassing growing congestion along the corridor and improving on bus travel time performance. Increased use of RTA Route 206 would promote travel mode shift, help address competing passenger and commercial traffic along I-15, and contribute to a reduction in vehicle miles traveled (VMT) and improvement in air quality. A Project endorsement letter is included at the end of this chapter.

4.2.8 MSHCP Consistency Review

The Project is identified in the Western Riverside County MSHCP as a Planned Road and a Covered Activity (MSHCP Volume I, Section 7.3.5). Portions of the Project lie both inside and outside of Criteria Areas. Coverage under the MSHCP provides an expedited process for biological resource permitting and approvals, as well as mitigation requirements under the federal Endangered Species Act, the California Endangered Species Act, National Environmental Policy Act, CEQA, California Native Plant Protection Act, and other applicable laws and regulations related to biological and natural resources within the MSHCP area. For MSHCP covered resources, no additional mitigation or requirements beyond those necessitated by the MSHCP would be applied to the Project.

Prior to the circulation of the Final EIR/EA, an MSHCP Consistency Review will be completed with the Western Riverside County Regional Conservation Authority.

4.3 COMMUNITY OUTREACH AND PUBLIC INVOLVEMENT

4.3.1 Project Development Team

A Project kick-off meeting between the PDT and representatives from the Cities of Corona and Lake Elsinore and the County of Riverside occurred on Tuesday June 4, 2019, to discuss the intent to initiate the PA&ED studies to extend the I-15 express lanes to the south, from Cajalco Road to State Route 74 (Central Avenue). The Project overview, Project limits, purpose and need, funding, and schedule were presented at the meeting. Since then, PDT meetings have been held every month and all interested parties have been invited to attend to stay updated on the progress of the Project.

Several city representatives from Corona and Lake Elsinore, along with representatives from RCTC, Caltrans, HDR Project Team, County of Riverside, and other interested parties, participated in the regular PDT meetings conducted by Caltrans District 8 for the Project. These meetings were held via Webex on the dates listed below:

6/4/2019, 7/2/2019, 8/6/2019, 9/3/2019, 10/1/2019, 11/5/2019, 12/3/2019, 1/7/2020, 2/4/2020, 3/3/2020, 4/7/2020, 5/5/2020, 6/2/2020, 7/7/2020, 8/4/2020, 9/1/2020, 10/6/2020, 11/3/2020, 12/1/2020, 1/5/2021, 2/2/2021, 3/2/2021, 4/6/2021, 5/4/2021, 6/1/2021, 7/6/2021, 8/3/2021, 9/7/2021, 10/5/2021, 11/2/2021, 12/7/2021, 1/4/2022, 2/1/2022, 3/1/2022, 4/5/2022, 5/3/2022, 6/7/2022, 7/5/2022, 8/2/2022, 9/6/2022, 10/4/2022, 11/1/2022, 12/6/2022, 1/12/2023, 2/9/2023, 3/9/2023, 4/13/2023, 5/11/2023, 6/8/2023, 7/13/2023, 8/10/2023, 9/14/2023, 10/12/2023, 11/9/2023, 12/14/2023, 1/10/2024, 2/8/2024, 3/14/2024, 4/7/2024, 5/9/2024, 6/13/2024, 7/11/2024, 8/8/2024, and 9/12/2024.

The meetings are anticipated to continue on a monthly basis throughout the life of the Project.

4.3.2 Project Websites

RCTC's Project web page content was updated in advance of the scoping period. This included the Project overview, status, schedule, and history sections. The Project fact sheet was also updated in English and Spanish and posted to the website. The web page can be found at the following location: https://www.rctc.org/projects/i15-express-southern-extension/.

As previously discussed, an online meeting component was developed and integrated into the Project web page, which gave the public the opportunity to access scoping meeting information at the start of the scoping period on October 21, 2019. This included informational narrated videos that provided overviews of the Project and scoping meeting sections, as well as all the exhibits that were displayed at the three in-person scoping meetings on November 12, 13, and 14, 2019. The online meeting also included an online form through which the public could submit comments electronically.

At the end of the scoping period on November 22, 2019, the online meeting section was closed and the content was moved to the "Additional Resources" section of the Project web page so that the public could continue to access the information at any time.

A calendar of social media posts was developed to promote the scoping period and scoping meetings and to encourage the public to provide comments about the Project. Posts were developed for RCTC's Facebook, Instagram, and X (formerly Twitter) accounts.

4.3.2.1 Facebook

There were 10 organic (unpaid) Facebook posts in a 1-month period to create awareness of the scoping period and meetings as well as encourage the public to submit comments. Posts included tagging (engaging social media users) relevant audiences.

4.3.2.2 X

There also were 10 organic X posts. One post was posted as an advertisement. Posts included tagging relevant audiences.

4.3.2.3 Instagram

There were eight organic Instagram posts in a 1-month period. One post was posted as an advertisement. Posts included tagging relevant audiences.

4.3.3 Geofencing Mobile Advertising

In an additional effort to capture target audiences in the Project area, the PDT enlisted the services of Outfront Media to implement a 3-week geofencing mobile advertising campaign. Geofencing advertising is a method in which global positioning system points are set to create a virtual geographic boundary. When a mobile device such as a cell phone or tablet enters the virtual geographic boundary, enabling software is triggered, causing an advertisement to appear on the device.

For this campaign, points within a 5-mile radius were selected along the corridor, including In-N-Out at Ontario Avenue and I-15 in Corona to the north, Temescal Valley Elementary in Corona, Glen Eden Sun Club in Corona, Temescal Canyon High School in Lake Elsinore, and In-N-Out at Railroad Canyon Road to the south. When people on a mobile device entered this area, a digital banner for Project appeared. When clicked, the ad would direct users to the Project web page.

4.3.4 Media Coverage

RCTC developed a news release announcing the start of the scoping period and encouraging the public to participate in the process by visiting the online meeting; attending in-person scoping meetings in Corona, Temescal Valley, and Lake Elsinore; and submitting comments. The news release was distributed to local and regional media on October 16, 2019. The news media coverage garnered through these efforts was provided by MyNewsLA.com, KNX 1070 AM, *Lake Elsinore-Wildomar Patch*, and *The Press-Enterprise*.

4.3.5 Newsletter Coverage

Newsletter coverage for the Project scoping period and scoping meetings was provided by the following newsletters:

- “We Are Temescal Valley”
- RCTC’s “The Point”
- WTS International’s “Friends of WTS”

- Mobility 21's "Forward Motion"
- Supervisor Kevin Jeffries's "Jeffries Journal"

NOTICE OF PREPARATION TRANSMITTAL LETTER

Gavin Newsom
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Kate Gordon
Director

Notice of Preparation

October 21, 2019

To: Reviewing Agencies

Re: Interstate 15 Express Lanes Project Southern Extension
SCH# 2019100381

Attached for your review and comment is the Notice of Preparation (NOP) for the Interstate 15 Express Lanes Project Southern Extension draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Shawn Oriaz
Caltrans, District 8 - San Bernardino/Riverside
464 W. 4th Street, MS 827
San Bernardino, CA 92401-1400

with a copy to the State Clearinghouse in the Office of Planning and Research at state.clearinghouse@opr.ca.gov . Please refer to the SCH number noted above in all correspondence concerning this project on our website: https://ceqanet.opr.ca.gov/2019100381/2 .

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL 1-916-445-0613 state.clearinghouse@opr.ca.gov www.opr.ca.gov

NOTICE OF PREPARATION

SCH NO. _____

NOTICE OF PREPARATION

To: _____

From: California Dept. of Transportation, Dist. 8
464 W. 4th Street, MS-827
San Bernardino, CA 92401-1400

Subject: **Notice of Preparation of a Draft Environmental Impact Report**
Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Project Title: Interstate 15 Express Lanes Project Southern Extension

Project Location: Along Interstate 15 in the County of Riverside, from State Route 74 in the City of Lake Elsinore (Post Mile [PM] 22.3) to Cajalco Road in the City of Corona (PM 36.8).

Project Description: The proposed project would extend the I-15 Express Lanes currently under construction, an additional 14.5 miles. The proposed new segment would extend from State Route 74 (Central Avenue) (post mile [PM] 22.3) in Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to Cajalco Road (PM 36.8) in Corona. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median to accommodate increasing traffic volumes in southwestern Riverside County. Associated improvements, including advance signage and transition striping, would extend two miles from each end of the project limits to PM 20.3 in the south and PM 38.8 in the north.

This is to inform you that the California Department of Transportation will be the lead agency and will prepare an environmental impact report for the project described below. Your participation as a responsible agency is requested in the preparation and review of this document.

We need to know the views of your agency as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

A more detailed project description, location map, and the potential environmental effects are contained in the attached materials.

A copy of the Initial Study is not attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please direct your response to Shawn Oriaz, Senior Environmental Planner, California Department of Transportation, District 8 – Environmental Studies "C,"
Telephone (909) 388-7034, at the address shown above or e-mail: 15expsouth@dot.ca.gov
Please supply us with the name for a contact person in your agency.

Date 10/11/2019 Signature Shawn Oriaz
Title SENIOR ENVIRONMENTAL PLANNER

Attachment: Project Information

Introduction

The Riverside County Transportation Commission (RCTC) and the California Department of Transportation (Caltrans) District 8 propose to develop a tolled express lane network to meet existing and future travel demand, enhance mobility, and afford greater user flexibility on Interstate 15 (I-15) in Riverside County. The proposed project would extend the I-15 Express Lanes currently under construction, an additional 14.5 miles. The proposed new segment would extend from State Route 74 (Central Avenue) (post mile [PM] 22.3) in Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to Cajalco Road (PM 36.8) in Corona. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median to accommodate increasing traffic volumes in southwestern Riverside County. Associated improvements, including advance signage and transition striping, would extend two miles from each end of the project limits to PM 20.3 in the south and PM 38.8 in the north.

Project Location and Description

Local and Regional Setting

The lane improvements within Riverside County would run through the cities of Lake Elsinore and Corona, as well as the unincorporated Riverside County community of Temescal Valley (Figure 1, Project Location). All proposed improvements would be constructed within the existing Caltrans right of way, with the majority of the improvements occurring within the existing I-15 median.

The existing I-15 corridor within the project limits is a six-lane highway with three mixed flow lanes in each direction and paved shoulders. Recent improvements along State Route 91 (SR-91) constructed as part of the SR-91 Corridor Improvement Project (SR-91 CIP) within the City of Corona includes the easterly extension of the 91 Express Lanes from the Orange County Line to just east of I-15 and a direct connector between the eastbound 91 Express Lanes and southbound I-15, as well as a direct connector between northbound I-15 and the westbound 91 Express Lanes. RCTC is also currently constructing tolled express lanes along I-15 between State Route 60 (SR-60) and Cajalco Road, which will provide two tolled express lanes in each direction as part of the I-15 Express Lanes Project (I-15 ELP). Construction of that project began in 2018 and is expected to be completed in the second half of 2020. This proposed I-15 ELPSE would construct tolled express lanes from Corona to Lake Elsinore, which would extend the existing tolled express lane system from Corona south to Lake Elsinore.

The I-15 ELPSE is listed in the financially constrained Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which was approved by the Southern California Association of Governments (SCAG) on April 7, 2016, under RTP ID 3160001 The project is also included in the financially constrained 2019 Federal Transportation Improvement Program (FTIP) (Project ID: RIV170901, In Western Riverside County – I-15 Express Lanes Southern Extension (generally in the median) from Cajalco Road [PM 36.8] in the City of Corona to approximately SR-74 [PM 22.3] in the City of Lake Elsinore [PPNO 3009X]).

Physical Setting and Surrounding Land Uses

Within the project limits, from State Route 74 (SR-74) in the south to Cajalco Road in the north, the I-15 corridor traverses valleys and rolling terrain bounded by the Temescal Mountains to the east and the Santa Ana Mountains to the west. There are a number of drainages in the area, eight of which are within the proposed project limits. The elevation in the area of the project varies from approximately 1,320 feet at the southern limits of the project, near SR-74, to 900 feet at the northern limits of the project, near Cajalco Road.

Current land uses along the project limits vary greatly depending upon location along the corridor. Industrial, commercial, and residential developments abut the I-15 right of way through Lake Elsinore, the unincorporated Riverside County community of Temescal Valley, and Corona. Commercial developments tend to be concentrated along or near the on/off-ramp entrances and exits, while the residential developments tend to be located between the on/off-ramps. In addition to the developed areas, undeveloped commercial, industrial, and residential parcels, hills, and/or floodplains coexist within the developed areas. In some of the unincorporated parts of Riverside County, between the city boundaries, there are large open space areas with native habitat that exist alongside the I-15 corridor, within the project limits.

Project Purpose

The primary purpose of the proposed project is to improve traffic operations and travel time reliability, expand the region's tolled express lanes network, and provide a new transportation option for motorists in southwestern Riverside County as summarized below:

- Improve traffic operations and travel times.
- Expand travel choice through carpooling and transit with the addition of tolled express lanes.
- Increase travel time reliability and mobility options.
- Accommodate long-term congestion management.
- Provide a cost-effective mobility solution.
- Expand the tolled express lane network in the region.

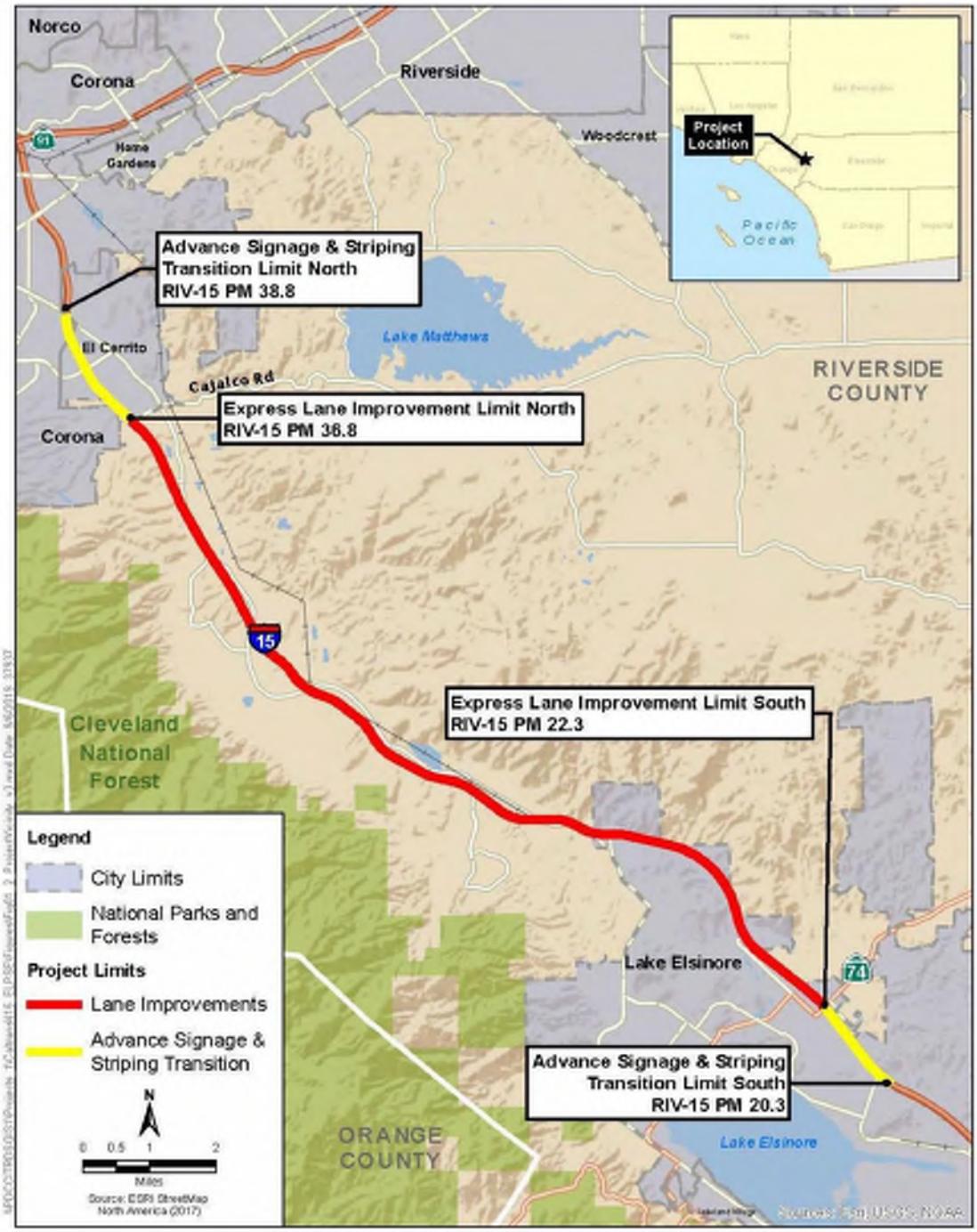

Figure 1
Project Location
Interstate 15 Express Lanes Project Southern Extension

I-15 Express Lanes Project Southern Extension 3 Notice of Preparation

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Project Need

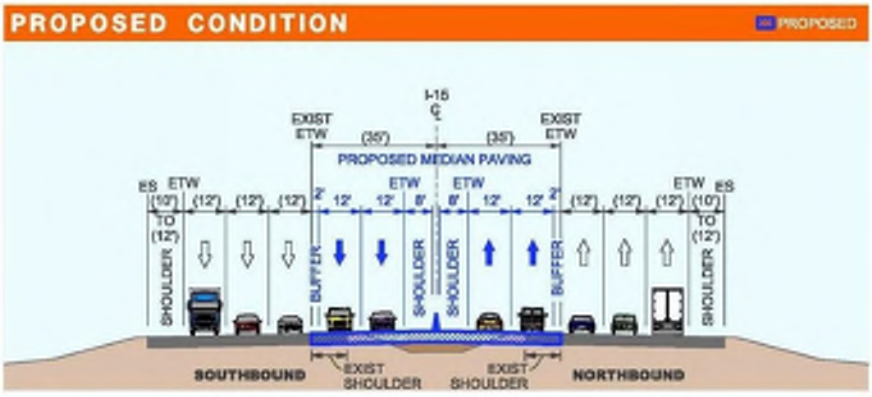
Existing traffic volumes exceed available highway capacity and travel forecasts indicate continued traffic volume growth on the I-15 corridor. Due to continued development in the area of the project limits, the I-15 corridor is expected to continue to experience increased congestion and longer commute times that are likely to further degrade the roadway capacity and traffic flow of the highway mainline.

The expected increase in congestion and deteriorating traffic conditions within the project limits are anticipated to reduce the overall function of the facility as a free-flow highway and would decrease overall local and regional mobility for the motoring public. Existing heavy peak hour congestion and traffic delays due to high traffic volume, along with weaving and merge/diverge movements, continue to reduce mobility along mainline I-15. Recurring daily congestion resulting from travel demand exceeding available highway capacity results in slower travel speeds and increased travel times.

Average travel times are increasing along I-15 within the project limits, as is the variability of time. Non-recurring congestion (non-recurring because it happens differently every day) increases travel variability in the corridor. Because of the unreliable travel times, people must allow extra time for travel during more congested conditions to be sure they will arrive at their destination on time.

Build Alternative

The proposed project includes construction of two tolled express lanes in each direction on I-15 in Riverside County between PM 22.3 and PM 36.8. The proposed project would be constructed within the existing right of way. The tolled express lanes would be used by vehicles for a toll and would also serve as high-occupancy vehicle (HOV) lanes for HOV 3+ users for a reduced toll. The toll rate would be adjusted based on congestion. These improvements would enhance regional mobility and offer greater user flexibility of the regional transportation system. Sign modifications and the installation of new signs would also be included to support the new tolled express lanes. Advanced signage is required to be posted a minimum of two miles prior to the start of the tolled express lanes. Signage will be located within the project limits between PM 20.3 and PM 38.8.



The proposed project does not intend to add new connections or improve existing ramps within the project limits.

Additional Project Features

In addition to the features described above, the proposed project includes additional components, such as retaining walls, noise barriers, stormwater runoff treatment devices, and bridge widening (Table 2), in order to accommodate the tolled express lanes. The proposed project is planned to be constructed within the existing Caltrans right of way.

Table 2. Proposed Bridge Improvements

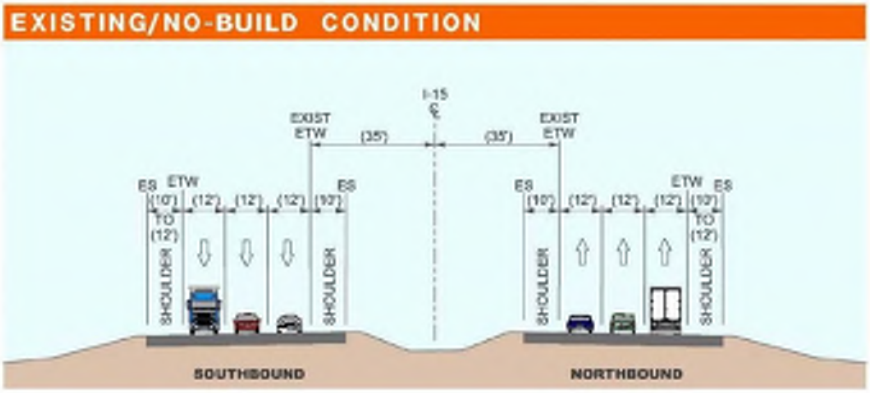
Existing Bridge Name	Proposed Improvement
Gavilan Wash	Inside widening between existing NB & SB decks
Lake Street Undercrossing	Inside widening between existing NB & SB decks
Temescal Canyon Road Overhead	Inside widening between existing NB & SB decks
Temescal Wash	Inside widening between existing NB & SB decks
Horsethief Canyon Road Undercrossing	Inside widening between existing NB & SB decks
Horsethief Canyon Wash	Inside widening between existing NB & SB decks
Indian Wash	Inside widening between existing NB & SB decks
Indian Truck Trail Undercrossing	Inside widening between existing NB & SB decks
Temescal Canyon Road Undercrossing	Inside widening between existing NB & SB decks
Mayhew Wash	Inside widening between existing NB & SB decks
Coldwater Wash	Inside widening
Temescal Canyon Road Undercrossing	Inside widening between existing NB & SB decks
Brown Canyon Wash	Inside widening (outside widening may be required)
Weirick Road Undercrossing	Inside widening (outside widening may be required)
Bedford Wash	Inside widening (outside widening may be required)

Ingress and Egress Locations

The project would include multiple entrance and exit points to access the tolled express lane facility. Access into the tolled express lanes would be separated from the general purpose lanes with delineators and would be restricted for a specific length. Locations where vehicles are permitted to enter the tolled express lanes are termed "ingress" locations; locations where vehicles may leave the tolled express lanes are referred to as "egress" locations.

No-Build Alternative

Under the No-Build Alternative, the I-15 ELPSE would not be constructed. This alternative does not meet the project purpose and need; however, it would not preclude the construction of future improvements or general maintenance activities. Even without construction of the proposed I-15 ELPSE, limited improvements on I-15 associated with the approved I-15 ELP are being constructed for opening in 2020. Describing and analyzing a No-Build Alternative helps both decision-makers and the public to compare the impacts of approving the proposed project with the consequences of not approving the proposed project.



Scoping Process

Per the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), agencies are required to analyze and document potential project impacts to environmental resources. Preparation of environmental studies and impact assessments are required. Circulation of these documents to other agencies and the public for comment is necessary before a decision is made regarding the approval and implementation of the proposed project. It has been determined that an Environmental Impact Report (EIR) and Environmental Assessment (EA) will be prepared for the proposed project to comply with CEQA/NEPA.

Probable Environmental Effects

The proposed project could result in environmental effects on the following resources, which will be fully evaluated in the EIR/EA:

- Aesthetics/Visual
- Air Quality
- Biological Resources
- Community Impacts
- Cultural Resources
- Energy Resources
- Geology and Soils
- Paleontological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services
- Recreation
- Traffic/Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire
- Cumulative Impacts

Permits and Approvals: Based on the probable effects anticipated as a result of the proposed project, the following federal and state permits and approvals could be required.

- Consistency Determination of the DBESP by USFWS and CDFW
- Section 401 Permit issued by the Santa Ana Regional Water Quality Control Board
- Section 404 Permit issued by the U.S. Army Corps of Engineers
- Lake and Streambed Alteration Agreement by CDFW
- Section 106 Finding of Effect by the California Office of Historic Preservation
- Section 4(f) De Minimis Finding, which is issued by the California Department of Transportation

Public Involvement during the Environmental Process

There are several ways to get involved with the environmental process. Opportunities for public involvement include:

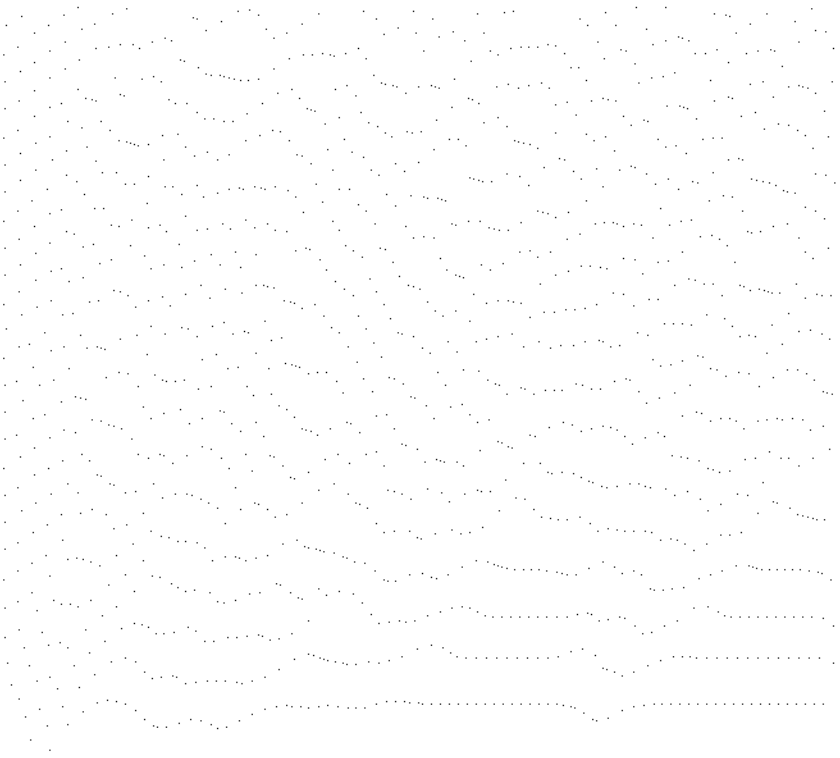
- Review and respond to the Notice of Preparation (NOP), which is available for review at the following public offices:
  - California Department of Transportation, District 8, 464 W, 4th Street, San Bernardino, CA 92401-1400
  - Riverside County Transportation Commission, 4080 Lemon Street, 3rd Floor, Riverside, CA 92501
  - Lake Elsinore City Hall, 130 South Main Street, Lake Elsinore, CA 92530
  - Corona City Hall, 400 S. Vicentia Avenue, Corona, CA 92882
  - Lake Elsinore Library, 600 W. Graham, Lake Elsinore, California 92530
  - El Cerrito Branch Library, 7581 Rudell Road, Corona, California 92881
- Attend scoping meetings. The following provides information on the meetings:
  - Temescal Valley Scoping Meeting: Tuesday, November 12, 2019 from 6 p.m. to 8 p.m. at Temescal Valley Elementary School, 22950 Claystone Avenue, Corona, CA 92883

- Corona Scoping Meeting: Wednesday, November 13, 2019 from 6 p.m. to 8 p.m. at Eagle Glen Golf Club, 1800 Eagle Glen Pkwy, Corona, CA 92883
- Lake Elsinore Scoping Meeting: Thursday, November 14, 2019 from 6 p.m. to 8 p.m. at Ortega High School, 520 Chaney Street, Lake Elsinore, CA, 92530

- Visit rctc.org/15expsouth for a public scoping "Online Meeting." The online meeting will feature the same exhibits as the in-person meetings and will offer an opportunity to submit comments throughout the public scoping period.
- Review and comment of the draft EIR/EA when circulated for public review.
- Attend public hearing(s)/meeting(s) regarding the draft EIR/EA
- Review responses to comments on the Final EIR/EA

Contact information about the proposed project and the EIR/EA:

Shawn Oriaz, Senior Environmental Planner
California Department of Transportation, District 8
Environmental Studies "C"
464 W. 4th Street, MS 827
San Bernardino, CA 92401-1400
(909) 388-7034



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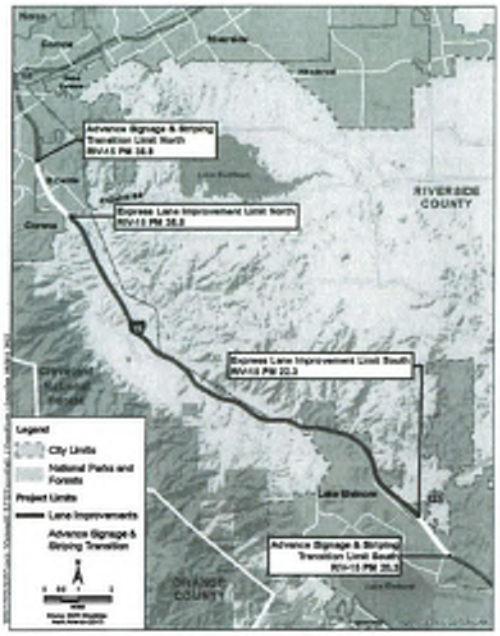
PUBLIC NOTICE

Public Notice

Interstate 15 (I-15) Express Lanes Project Southern Extension

Announcement of Public Scoping Meetings



WHAT IS BEING PLANNED?

The California Department of Transportation (Caltrans), in cooperation with the Riverside County Transportation Commission (RCTC), proposes to extend the I-15 Express Lanes currently under construction, an additional 14.5 miles. The proposed new segment would extend from State Route 74 (Central Avenue) in Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to Cajalco Road in Corona. The project proposes to increase capacity by adding two tolled express lanes in both directions within the I-15 median to accommodate increasing traffic volumes in southwestern Riverside County. Associated improvements, including advance signage and transition striping, would extend two miles from each end of the project limits. An Environmental Impact Report (EIR) and Environmental Assessment (EA), to comply with the California Environmental Quality Act (CEQA), and National Environmental Policy Act (NEPA), respectively, will be prepared to evaluate alternatives, as well as potential environmental impacts that could result from the proposed project.

WHY THIS NOTICE?

To inform you of the initiation of studies and give you the opportunity to comment on the proposed project. Three Public Scoping Meetings (listed below), will be held to provide an early exchange of information and ideas, with the opportunity for the public to ask questions or express concerns. Comments will become part of the public record, as part of the draft environmental document, and will be considered in defining the project scope and developing the EIR/EA.

WHEN AND WHERE?

Temescal Valley Meeting	Corona Meeting	Lake Elsinore Meeting
Date: Tues., November 12, 2019	**Date:** Wed., November 13, 2019	**Date:** Thurs, November 14, 2019
Time: 6 p.m.- 8 p.m.	**Time:** 6 p.m.- 8 p.m.	**Time:** 6 p.m.- 8 p.m.
Place: Temescal Valley Elementary School	**Place:** Eagle Glen Golf Club	**Place:** Ortega High School
Address: 22950 Claystone Ave, Corona, 92883	**Address:** 1800 Eagle Glen Pkwy, Corona, 92883	**Address:** 520 Chaney St., Lake Elsinore, 92530

WHAT IS AVAILABLE AT THE PUBLIC SCOPING MEETINGS?

The purpose and need for the project, preliminary alternative concepts, schedule and costs, and other exhibits will be available for viewing. Caltrans and RCTC specialists in engineering, planning, traffic, and environmental will be available to discuss your individual concerns and answer your questions. The meetings will be held in an open house format with no formal presentation. Public comments are encouraged in written format and via a court reporter. The content of the three meetings will be the same; please attend the meeting that is most convenient for you, any time between 6 p.m. and 8 p.m. In addition, an online meeting option is available by visiting rctc.org/15expsouth The online meeting will feature the same exhibits as the in-person meetings and will offer an opportunity to submit comments via the project website or e-mail (see below).

WHERE YOU COME IN

Comments about the project may be submitted in person at the Public Scoping Meetings on November 12, November, 13, and November 14, 2019, or via mail by November 22, 2019 to: Shawn Orias, California Department of Transportation, District 8 – Environmental Studies "C," 464 W. 4th Street, MS-827, San Bernardino, CA 92401-1400 or e-mail to 15expsouth@dot.ca.gov
For more information about this study, call Caltrans at (909) 388-7034
Comments may also be submitted online by November 22 2019 at the I-15 Express Lane Project Southern Extension website at: rctc.org/15expsouth

SPECIAL ACCOMMODATIONS

For individuals who require accommodations (American Sign Language or other lingual interpreter, accessible seating, documentation in alternate formats, etc.) contact Caltrans at (909) 383-2841 at least one week in advance. TDD users may contact the California Relay Service TDD line at 800-735-2929.

Notice of Completion and Environmental Document Transmittal Continuation Sheet

Interstate 15 Express Lanes Project Southern Extension

Corona South Quadrangle	Section 16 Township 4S Range 6W Section 17 Township 4S Range 6W Section 21 Township 4S Range 6W Section 28 Township 4S Range 6W
Lake Mathews Quadrangle	Section 27 Township 4S Range 6W Section 34 Township 4S Range 6W Section 2 Township 4S Range 6W Section 1 Township 4S Range 6W Section 12 Township 4S Range 6W
Alberhill Quadrangle	Section 7 Township 5S Range 5W Section 17 Township 5S Range 5W Section 16 Township 5S Range 5W Section 15 Township 5S Range 5W Section 14 Township 5S Range 5W
Lake Elsinore Quadrangle	Section 23 Township 5S Range 5W Section 24 Township 5S Range 5W Section 25 Township 5S Range 5W Section 31 Township 5S Range 4W

CDFW RESPONSE TO NOTICE OF PREPARATION

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

November 20, 2019
Sent via email

Mr/Ms. Shawn Oriaz
Senior Environmental Planner
California Department of Transportation, District 8 – San Bernardino/Riverside
464 W. 4th Street, MS 827
San Bernardino, CA 92401-1400
15expsouth@dot.ca.gov

Subject: Notice of Preparation of a Draft Environmental Impact Report
Interstate 15 Express Lanes Southern Extension Project
State Clearinghouse No. 2019100381

Dear Mr/Ms. Oriaz:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the California Department of Transportation (Caltrans) for the Interstate 15 Express Lanes Southern Extension Project (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during

1 CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.)

PROJECT DESCRIPTION SUMMARY

The proposed project would extend the Interstate 15 (I-15) Express Lanes currently under construction an additional 14.5 miles: from State Route 74 (SR-74)/Central Avenue in the City of Lake Elsinore, north through the unincorporated Riverside County community of Temescal Valley, to Cajalco Road in the City of Corona. The Project proposes to increase capacity by adding two tolled express lanes in both direction within the existing I-15 median to accommodate increasing traffic volumes. Associated improvements, including advance signage and transition striping, would extend two miles from each of the project end limits.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist Caltrans in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. The comments and recommendations are also offered to enable CDFW to adequately review and comment on the proposed Project with respect to the Project's consistency with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). CDFW recommends that the forthcoming DEIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the project, the DEIR should include a complete assessment of the flora and fauna within and adjacent to the project footprint, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

The CDFW recommends that the DEIR specifically include:

1. An assessment of the various habitat types located within the project footprint, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009).

Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected by the project. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code, in the vicinity of the proposed project.

   Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area of the project site.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species located within the project footprint and within offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code § 3511). Species to be addressed should include all those which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use of the project area and should not be limited to resident species. Focused species-specific/MSHCP surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects of the proposed project may warrant periodic updated surveys for certain sensitive taxa, particularly if the project is proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

4. A thorough, recent, floristic-based assessment of special status plants and natural communities, following CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (see https://www.wildlife.ca.gov/Conservation/Plants).

5. Information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis on resources that are rare or unique to the region (CEQA Guidelines § 15125[c]).

6. A full accounting of all mitigation/conservation lands within and adjacent to the Project.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

The DEIR should provide a thorough discussion of the direct, indirect, and cumulative impacts expected to adversely affect biological resources as a result of the project. To ensure that project impacts to biological resources are fully analyzed, the following information should be included in the DEIR:

1. A discussion of potential impacts from lighting, noise, human activity (e.g., recreation), defensible space, and wildlife-human interactions created by zoning of development projects or other project activities adjacent to natural areas, exotic and/or invasive species, and drainage. The latter subject should address project-related changes on drainage patterns and water quality within, upstream, and downstream of the project site, including: volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site.

2. A discussion of potential indirect Project impacts on biological resources, including resources in areas adjacent to the project footprint, such as nearby public lands (e.g. National Forests, State Parks, etc.), open space, adjacent natural habitats, riparian ecosystems, wildlife corridors, and any designated and/or proposed reserve or mitigation lands (e.g., preserved lands associated with a Natural Community Conservation Plan, or other conserved lands).

   Please note that the Project area supports significant biological resources and contains habitat connections, providing for wildlife movement across the broader landscape, sustaining both transitory and permanent wildlife populations. Regional Conservation Authority (RCA) conserved lands border the project site along a portion of its length. CDFW encourages project design that avoids and preserves onsite features that contribute to habitat connectivity. The DEIR should include a discussion of both direct and indirect impacts to wildlife movement and connectivity, including maintenance of wildlife corridor/movement areas to adjacent undisturbed habitats.

3. An evaluation of impacts to adjacent open space lands from both the construction of the Project and any long-term operational and maintenance needs.

4. A cumulative effects analysis developed as described under CEQA Guidelines section 15130. Please include all potential direct and indirect project related impacts to riparian areas, wetlands, vernal pools, alluvial fan habitats, wildlife corridors or wildlife movement areas, aquatic habitats, sensitive species and other sensitive habitats, open lands, open space, and adjacent natural habitats in the cumulative effects analysis. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant

communities and wildlife habitats.

Alternatives Analysis

Note that the DEIR must describe and analyze a range of reasonable alternatives to the project that are potentially feasible, would "feasibly attain most of the basic objectives of the project," and would avoid or substantially lessen any of the project's significant effects (CEQA Guidelines § 15126.6[a]).

Mitigation Measures for Project Impacts to Biological Resources

The DEIR should include appropriate and adequate avoidance, minimization, and/or mitigation measures for all direct, indirect, and cumulative impacts that are expected to occur as a result of the construction and long-term operation and maintenance of the project. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The DEIR should include measures to fully avoid and otherwise protect sensitive plant communities from project-related direct and indirect impacts.

2. *Mitigation*: CDFW considers adverse project-related impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the DEIR should include mitigation measures for adverse project-related impacts to these resources. Mitigation measures should emphasize avoidance and reduction of project impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement should be evaluated and discussed in detail.

   The DEIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If sensitive species and/or their habitat may be impacted from the Project, CDFW recommends the inclusion of specific mitigation in the DEIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645

struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after Project approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

CDFW recommends that the DEIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project. Furthermore, in order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions.

3. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the project area and nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in the near future in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

4. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

   CDFW recommends that the DEIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The DEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the DEIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

5. *Moving out of Harm's Way:* To avoid direct mortality, CDFW recommends that the lead agency condition the DEIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or

attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project; unless this Project is proposed to be a covered activity under the MSHCP. CESA ITPs are issued to conserve, protect, enhance, and restore State-listed CESA species and their habitats.

CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. The California Fish and Game Code requires that CDFW comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the DEIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.

Western Riverside County Multiple Species Habitat Conservation Plan

Within the Inland Deserts Region, CDFW issued Natural Community Conservation Plan Approval and Take Authorization for the Western Riverside County MSHCP per Section 2800, *et seq*., of the California Fish and Game Code on June 22, 2004. The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and provides for the incidental take of covered species in association with activities covered under the permit.

Compliance with approved habitat plans, such as the MSHCP, is discussed in CEQA. Specifically, Section 15125(d) of the CEQA Guidelines requires that the CEQA document discuss any inconsistencies between a proposed Project and applicable general plans and regional plans, including habitat conservation plans and natural community conservation plans. An assessment of the impacts to the MSHCP as a result of this Project is necessary to address CEQA requirements. To obtain additional information regarding the MSHCP please go to: http://rctlma.org/epd/WR-MSHCP.

The proposed Project occurs within the MSHCP area and is subject to the provisions and policies of the MSHCP. In order to be considered a covered activity, Permittees must demonstrate that proposed actions are consistent with the MSHCP and its associated Implementing Agreement. Caltrans is the Lead Agency and is signatory to the Implementing Agreement of the MSHCP. The Project is proposed to occur within multiple MSHCP Criteria Cells. The MSHCP policies and procedures that apply to the proposed project include the Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (MSHCP section 6.1.2), Protection of Narrow Endemic Plant Species (MSHCP section 6.1.3), Additional Survey Needs and Procedures for burrowing owl and Criteria Area Species (MSHCP section 6.3.2), and the Guidelines Pertaining to the Urban/Wildlands Interface (MSHCP section 6.1.4).

Regardless of whether take of threatened and/or endangered species is obtained through the MSHCP or through a CESA ITP, the DEIR needs to address how the proposed project will affect the policies and procedures of the MSHCP. Therefore, all surveys required by the MSHCP policies and procedures listed above to determine

consistency with the MSHCP should be conducted and results included in the DEIR so that CDFW can adequately assess whether the Project will impact the MSHCP.

Stephens' Kangaroo Rat Habitat Conservation Plan

The project occurs within the Stephens' kangaroo rat (*Dipodomys stephensi*) Habitat Conservation Plan (SKR HCP) fee area boundary. State and federal authorizations associated with the SKR HCP provides take authorization for Stephens' kangaroo rat within its boundaries, and the MSHCP provides take authorization for Stephens' kangaroo rat outside of the boundaries of the SKR HCP, but within the MSHCP area boundaries. The DEIR should identify if any portion of the project will occur on SKR HCP lands, or on Stephens' kangaroo rat habitat lands outside of the SKR HCP, but within the MSHCP. Note that the SKR HCP allows for encroachment into the Stephens' kangaroo rat Core Reserve for public projects, however, there are no provisions for encroachment into the Core Reserve for privately owned projects. If impacts to Stephens' kangaroo rat habitat will occur from the proposed project, the DEIR must specifically identify the total number of permanent impacts to Stephens' kangaroo rat core habitat and the appropriate mitigation to compensate for those impacts.

Lake and Streambed Alteration Program

Based on review of material submitted with the NOP and review of aerial photography, Caltrans will likely need to notify CDFW per Fish and Game Code section 1602. Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the DEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the

proposed project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to https://www.wildlife.ca.gov/Conservation/LSA/Forms.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a DEIR for the Interstate 15 Express Lanes Southern Extension Project (SCH No. 2019100381) and recommends that Caltrans address CDFW's comments and concerns in the forthcoming DEIR. If you should have any questions pertaining to the comments provided in this letter, please contact Joanna Gibson, Senior Environmental Scientist, Specialist, at (909) 987-7449 or at Joanna.gibson@wildlife.ca.gov.

Sincerely,

Scott Wilson

Scott Wilson
Environmental Program Manager

ec: Office of Planning and Research, State Clearinghouse, Sacramento

Notice of Preparation of a Draft Environmental Impact Report
Interstate 15 Express Lanes Southern Extension Project
SCH No. 2019100381
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REFERENCES

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evens. 2009. A manual of California Vegetation, 2nd ed. California Native Plant Society Press, Sacramento, California. http://vegetation.cnps.org/

NAHC RESPONSE TO NOTICE OF PREPARATION

STATE OF CALIFORNIA — GAVIN NEWSOM, Governor

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691 Phone: (916) 373-3710
Email: nahc@nahc.ca.gov
Website: http://www.nahc.ca.gov

November 1, 2019

Shawn Oriaz
Caltrans, District 8 – San Bernardino/Riverside
464 W. 4th Street, MS 827
San Bernardino, CA 92401-1400

RE: SCH# 2019100381, Interstate 15 Express Lanes Project Southern Extension Project, Riverside County

Dear Mr. Oriaz:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   - **a.** A brief description of the project.
   - **b.** The lead agency contact information.
   - **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
   - **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).
   - **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   - **a.** Alternatives to the project.
   - **b.** Recommended mitigation measures.
   - **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   - **a.** Type of environmental review necessary.
   - **b.** Significance of the tribal cultural resources.
   - **c.** Significance of the project's impacts on tribal cultural resources.
   - **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   - **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
   - **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
       i. Planning and construction to avoid the resources and protect the cultural and natural context.
       ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
       i. Protecting the cultural character and integrity of the resource.
       ii. Protecting the traditional use of the resource.
       iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. 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.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Staff Services Analyst

cc: State Clearinghouse

5

SHPO CONCURRENCE

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

May 26, 2023

VIA EMAIL

In reply refer to: CATRA_2023_0328_001
FHWA_2023_0328_001

Mr. Brian James
Acting Section 106 Coordinator
Cultural Studies Office
Caltrans Division of Environmental Analysis
1120 N Street, MS-27
Sacramento, CA 95814

Subject: Determination of Eligibility and Finding of No Adverse Effect for the Interstate 15 (I-15) Express Lanes Project (Southern Extension) in Riverside County, California.

Dear Mr. James:

The Office of Historic Preservation (OHP) received a letter dated March 28, 2023 from the California Department of Transportation (Caltrans) for the above referenced undertaking. Caltrans is consulting with the State Historic Preservation Officer (SHPO) in accordance with the January 1, 2014 *First Amended Programmatic Agreement Among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 PA). Caltrans is concurrently complying with the *Memorandum of Understanding Between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92, addended 2019* (5024 MOU). Pursuant to Stipulations VIII.C.6 and X.B.2.b of the Section 106 PA, Caltrans is seeking SHPO comment on a determination of eligibility and finding of no adverse effect without standard conditions. Enclosed with Caltrans' letter is a Historic Property Survey Report (HPSR) and attachments.

Caltrans District 8, in cooperation with the Riverside County Transportation Commission (RCTC), is proposing to construct new lanes along Interstate (I-) 15 between Post Mile (PM) 21.2 and PM 38.1 in Riverside County, California. The proposed lane additions and supporting infrastructure are expected to be constructed primarily within the existing state right of way (ROW). Further information regarding the undertaking and area of potential effects (APE) can be found on pages one and two of the HPSR.

Caltrans evaluated and determined that the following two built resources are ineligible according to the National Register of Historic Places (NRHP) criteria:

- Temescal Canyon Road (P-33-024785/ CA-RIV-12277; P-33-028199), unincorporated Riverside County, Corona, Lake Elsinore.
- Residence, 18740 Collier Avenue, Lake Elsinore.

Pursuant to Stipulation VIII.C.6 of the Section 106 PA, Caltrans is seeking SHPO's concurrence on the agency's determinations. **I concur** with Caltrans' determinations of ineligibility.

For the purposes of this undertaking only, Caltrans will consider the following archaeological resources eligible in accordance with Stipulation VIII.C.4 of the Section 106 PA, because they will be avoided in their entirety.

Túu'uv Traditional Cultural Property (TCP)-1	Identified by the Pechanga Band of Luiseño Mission Indians in consultation for undertaking.	Considered eligible under NRHP Criteria A, B, C and D.
Qaxáalku Payómik (TCP-2)	Identified by the Pechanga Band of Luiseño Mission Indians in consultation for undertaking.	Considered eligible under NRHP Criteria A, B, C and D.
Qaxáalku Kwiimik (TCP-3)	Identified by the Pechanga Band of Luiseño Mission Indians in consultation for undertaking.	Considered eligible under NRHP Criteria A, B, C and D.
P-33-000108/CA-RIV-108	1987 recording description: prehistoric lithics with potential subsurface deposit.	Considered eligible under NRHP Criterion D.
P-33-000630/CA-RIV-630	Prehistoric lithic site.	Considered eligible under NRHP Criterion D.
P-33-001099/CA-RIV-1099	Prehistoric seasonal or temporary habitation site.	Considered eligible under NRHP Criterion D.
P-33-002992/CA-RIV-2992	Prehistoric lithic site.	Considered eligible under NRHP Criterion D.

Caltrans has applied the Criteria of Adverse Effects pursuant to Stipulation X.A. of the Section 106 PA and has determined that the proposed undertaking will not have an adverse effect to the above listed historic properties. As described in Caltrans' Finding of Effect (an attachment to the HPSR), all ground disturbing activities will occur outside of CA-RIV-108, -630, -1099, and -2992 . The properties will be further protected from effects through the establishment of (Environmentally Sensitive Areas) ESAs and archaeological monitoring areas (AMAs). No ESAs or AMAs will be implemented at TCP-1, -2, and -3 because all affects will be avoided.

Mr. James
May 26, 2023
Page **3** of **3**

CATRA_2023_0328_001
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The ESAs and AMAs will be implemented and enforced through the February 2023 ESA/AMA Action Plan, and all post-review discoveries and unanticipated effects will be addressed under the February 2023 Post Review Discovery Plan (both attachment to Caltrans' Finding of Effect).

Pursuant to Stipulation X.B.2.b of the Section 106 PA, Caltrans has found that the proposed undertaking will have no adverse effect to historic properties given the above nonstandard conditions and is seeking SHPO comment on this finding. Following a review of the documentation submitted, **I do not object** to this finding. If you have any questions, please contact Associate State Archaeologist Alicia Perez at alicia.perez@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

USFWS SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901

In Reply Refer To:
Project Code: 2023-0129289
Project Name: I-15 ELPSE

09/17/2024 17:40:15 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A biological assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a biological assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a biological assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found at the Fish and Wildlife Service's Endangered Species Consultation website at:

https://www.fws.gov/service/esa-section-7-consultation

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
(760) 431-9440

PROJECT SUMMARY

Project Code: 2023-0129289
Project Name: I-15 ELPSE
Project Type: Road/Hwy - Maintenance/Modification
Project Description: The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans), is proposing to develop a tolled express lane network to meet existing and future travel demand, enhance mobility, and afford greater user flexibility on Interstate 15 (I−15) in Riverside County. The primary component of the Project would be the addition of two tolled express lanes in both the northbound (NB) and southbound (SB) directions within the median of I-15 from State Route (SR-) 74 (Central Avenue) (post mile [PM] 22.3) in the city of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley to El Cerrito Road (PM 38.1) in the city of Corona for a distance of approximately 15.8 miles. The Project would also add a SB auxiliary lane between both Main Street (PM 21.2) Off-Ramp and SR-74 (Central Avenue) On-Ramp (approximately 0.75 mile), and SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp (PM 23.9) (approximately one mile). Along with the lane additions, which extend from PM 21.2 to PM 38.1, the Project would include widening of up to 15 bridges; potential construction of noise barriers, retaining walls, and drainage systems; and implementation of electronic toll collection equipment and signs. In addition, due to the southbound express lanes access between the Cajalco Road and Weirick Road interchanges, the southbound I-15 Weirick Road off-ramp would be configured as a dual lane exit. Associated improvements, including advance signage and transition striping, would extend two miles from each end of the project limits to PM 20.3 in the south and PM 40.1 in the north. The proposed lane additions and supporting infrastructure are expected to be constructed primarily within the existing state right of way (ROW) with the majority of the improvements occurring within the existing I-15 median. The Project is intended to improve and manage traffic operations, congestion, and travel times along the corridor.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.77279825,-117.48358450755077,14z

Project code: 2023-0129289 09/17/2024 17:40:15 UTC

Counties: Riverside County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 24 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Project code: 2023-0129289 09/17/2024 17:40:15 UTC

MAMMALS

NAME	STATUS
San Bernardino Merriam's Kangaroo Rat *Dipodomys merriami parvus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2060	Endangered
Stephens' Kangaroo Rat *Dipodomys stephensi (incl. D. cascus)* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3495	Threatened

BIRDS

NAME	STATUS
California Spotted Owl *Strix occidentalis occidentalis* Population: Coastal-Southern California No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7266	Proposed Endangered
Coastal California Gnatcatcher *Polioptila californica californica* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8178	Threatened
Least Bell's Vireo *Vireo bellii pusillus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5945	Endangered
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Western Snowy Plover *Charadrius nivosus nivosus* Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8035	Threatened

REPTILES

NAME	STATUS
Southwestern Pond Turtle *Actinemys pallida* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4768	Proposed Threatened

AMPHIBIANS

NAME	STATUS
Arroyo (=arroyo Southwestern) Toad *Anaxyrus californicus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3762	Endangered

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NAME	STATUS
Western Spadefoot *Spea hammondii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5425	Proposed Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Quino Checkerspot Butterfly *Euphydryas editha quino (=E. e. wrighti)* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5900	Endangered

CRUSTACEANS

NAME	STATUS
Riverside Fairy Shrimp *Streptocephalus woottoni* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8148	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

FLOWERING PLANTS

NAME	STATUS
California Orcutt Grass *Orcuttia californica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4923	Endangered
Munz's Onion *Allium munzii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2951	Endangered
Nevin's Barberry *Berberis nevinii* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8025	Endangered
San Diego Ambrosia *Ambrosia pumila* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8287	Endangered
San Diego Button-celery *Eryngium aristulatum var. parishii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5937	Endangered
San Jacinto Valley Crownscale *Atriplex coronata var. notatior*	Endangered

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NAME	STATUS
There is **final** critical habitat for this species. However, no *actual* acres or miles were designated due to exemptions or exclusions. See Federal Register publication for details. Species profile: https://ecos.fws.gov/ecp/species/4353	
Santa Monica Mountains Dudleyea *Dudleya cymosa ssp. ovatifolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2538	Threatened
Slender-horned Spineflower *Dodecahema leptoceras* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4007	Endangered
Spreading Navarretia *Navarretia fossalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1334	Threatened
Thread-leaved Brodiaea *Brodiaea filifolia* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6087	Threatened

CRITICAL HABITATS

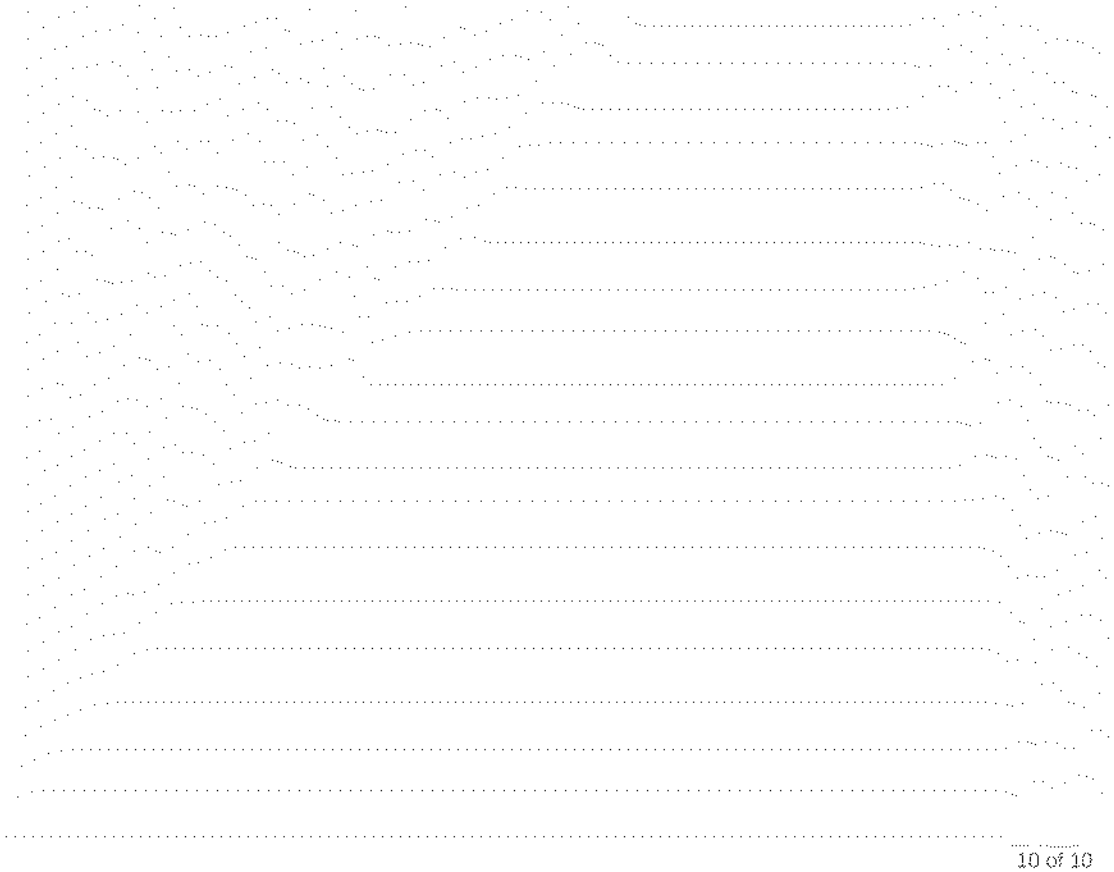
There are 2 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Coastal California Gnatcatcher *Polioptila californica californica* https://ecos.fws.gov/ecp/species/8178#crithab	Final
San Diego Ambrosia *Ambrosia pumila* https://ecos.fws.gov/ecp/species/8287#crithab	Final

Project code: 2023-0129289 09/17/2024 17:40:15 UTC

IPAC USER CONTACT INFORMATION

Agency: California Department of Transportation District 8
Name: Shelly Dayman
Address: 525 B Street, Suite 1700
City: San Diego
State: CA
Zip: 92101
Email shelly.dayman@icf.com
Phone: 6198200768



RIVERSIDE TRANSIT AGENCY ENDORSEMENT LETTER

DocuSign Envelope ID: 65DD0850-A1C7-4C0F-8CF1-7C83C57D109B

Riverside Transit Agency

1825 Third Street
P.O. Box 59968
Riverside, CA 92517-1968
Phone: (951) 565-5000
Fax: (951) 565-5001

March 19, 2024

Anne Mayer
Executive Director
Riverside County Transportation Commission (RCTC)
4080 Lemon Street, 3rd Floor
Riverside, CA 92501

SUBJECT: LETTER OF SUPPORT FOR RCTC's INTERSTATE 15 (I-15) EXPRESS LANES PROJECT SOUTHERN EXTENSION

Dear Ms. Anne Mayer,

The Riverside Transit Agency (RTA) strongly supports RCTC's I-15 Express Lanes Project Southern Extension (Project). The Project extends the existing I-15 Express Lanes an additional 14.5 miles from Cajalco Road in Corona to State Route 74 (Central Avenue) in Lake Elsinore, adding tolled express lanes in both directions and two auxiliary lanes at the south end of the project. Riverside County is the 10th largest in the nation by population and is rapidly growing due to the region's relative housing affordability and economic opportunities. The Project helps address competing passenger and commercial traffic congestion on I-15, bolstering mobility choices and supporting continued economic development. Once built, the Project will provide the following benefits:

- **Improve traffic operations and increase travel time reliability** – Providing new express lanes will enhance the flow of traffic and reduce congestion on I-15, particularly at Cajalco Road where the existing I-15 Express Lanes ends.
- **Expand travel choice** – Encouraging carpooling and use of express bus service, reducing the number of vehicles on the road and improving local air quality.
- **Promote safety** – Enabling additional passenger vehicles to travel in dedicated and protected lanes separated from trucks, which rely upon the I-15 corridor to deliver goods from the ports.

As the primary public transit provider in western Riverside County, RTA is responsible for coordinating transit services throughout the approximate 2,500 square mile service area, providing both local and regional services with 32 local fixed routes, three CommuterLink express routes, GoMicro microtransit, and Dial-A-Ride services. RTA's CommuterLink Route 206 travels along the I-15 project area and will benefit from these improvements. Once the Project is completed, RTA buses will be able to utilize the Express Lanes, bypassing growing congestion along the corridor. Any improvements made to improve travel time and mitigate traffic delays will improve on time performance and help increase transit ridership. This project will provide numerous benefits to the region including reduced congestion and sustainable growth for Riverside County.

RTA strongly supports RCTC's I-15 Express Lanes Project Southern Extension. If you need additional information or have questions for RTA regarding its support of this project, please contact Jennifer Nguyen, Director of Planning, at jnguyen@riversidetransit.com or at (951) 565-5132.

Sincerely,

DocuSigned by:

Kristin Warsinski
Chief Executive Officer

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City of Murrieta
1 Town Square
Murrieta, CA 92562

Hon. Ron Holliday, Council Member (District 2)
City of Murrieta
1 Town Square
Murrieta, CA 92562

Hon. Cindy Warren, Mayor Pro Tem (District 5), RCTC Commissioner
City of Murrieta
1 Town Square
Murrieta, CA 92562

Hon. Lisa DeForest, Council Member (District 3)
City of Murrieta
1 Town Square
Murrieta, CA 92562

Hon. Patricia Lock Dawson, Mayor
City of Riverside, CA

Hon. Brenden Kalfus, Mayor Pro Tem (District 3)
City of Temecula
41000 Main St
Temecula, CA 92590

Hon. James “Stew” Stewart, Mayor (District 4), RCTC Commissioner
City of Temecula
41000 Main St
Temecula, CA 92590

Hon. Jessica Alexander, Council Member (District 2)
City of Temecula
41000 Main St
Temecula, CA 92590

Council Member (District 1)[1]
City of Temecula
41000 Main St
Temecula, CA 92590

Hon. Zak Schwank, Council Member (District 5)
City of Temecula
41000 Main St
Temecula, CA 92590

Hon. Ashlee DePhillippo, Mayor Pro Tem (District 5)
City of Wildomar
23873 Clinton Keith Rd, Ste 201
Wildomar, CA 92595

Hon. Carlos Marquez, Council Member (District 1)
City of Wildomar
23873 Clinton Keith Rd, Ste 201
Wildomar, CA 92595

Hon. Dustin Nigg, Council Member (District 2)
City of Wildomar
23873 Clinton Keith Rd, Ste 201
Wildomar, CA 92595

Hon. Bridgette Moore, Mayor (District 4)
City of Wildomar
23873 Clinton Keith Rd, Ste 201
Wildomar, CA 92595

Hon. Joseph Morabito, Council Member (District 3), RCTC Commissioner
City of Wildomar
23873 Clinton Keith Rd, Ste 201
Wildomar, CA 92595

Hon. Sheri Flynn, RCTC Commissioner
City of Banning
99 East Ramsey Street
Banning, CA 92220

Hon. Lloyd White, RCTC Commissioner
City of Beaumont
550 East 6th Street
Beaumont, CA 92223

Hon. Joseph DeConinck, RCTC Commissioner
City of Blythe
235 N Broadway Street
Blythe, CA 92220

Hon. Jeremy Smith, RCTC Commissioner
City of Canyon Lake
31516 Railroad Canyon Road
Canyon Lake, CA 92587

Hon. Raymond Gregory, RCTC Commissioner
Cathedral City
68-700 Avenido Lalo Guerrero
Cathedral City, CA 92234

[1] Position vacant as of 8/6/24

Hon. Steven Hernandez, RCTC Commissioner
City of Coachella
1515 Sixth Street
Coachella, CA 92236

Hon. Scott Matas, RCTC Commissioner
City of Desert Hot Springs
65-950 Piersson Blvd
Desert Hot Springs, CA 92240

Hon. Clint Lorimore, RCTC Commissioner
City of Eastvale
12363 Limonite Avenue, Suite 910
Eastvale, CA 91752

Hon. Linda Krupa, RCTC Commissioner
City of Hemet
445 East Florida Avenue
Hemet, CA 92543

Hon. Dana Reed, RCTC Commissioner
City of Indian Wells
44-950 El Dorado Drive
Indian Wells, CA 92210

Hon. Waymond Fermon, RCTC Commissioner
City of Indio
100 Civic Center Mall
Indio, CA 92201

Hon. Brian Berkson, RCTC Commissioner
City of Jurupa Valley
8930 Limonite Avenue
Jurupa Valley, CA 92509

Hon. Kathleen Fitzpatrick, RCTC Commissioner
City of La Quinta
78-495 Calle Tampico
La Quinta, CA 92253

Hon. Ulises Cabrera, RCTC Commissioner
City of Moreno Valley
14177 Frederick Street
Moreno Valley, CA 92552

Hon. Berwin Hanna, RCTC Commissioner
City of Norco
2870 Clark Avenue
Norco, CA 92860

Hon. Jen Harnik, RCTC Commissioner
City of Palm Desert
73-510 Fred Waring Drive
Palm Desert, CA 92260

Hon. Lisa Middleton, RCTC Commissioner
City of Palm Springs
3200 Tahquitz Canyon Way
Palm Springs, CA 92263

Hon. Michael Vargas, RCTC Commissioner
City of Perris
101 North D Street
Perris, CA 92570

Hon. Meg Marker, RCTC Commissioner
City of Rancho Mirage
69-825 Highway 111
Rancho Mirage, CA 92270

Hon. Chuck Conder, RCTC Commissioner
City of Riverside
3900 Main Street, 7th Floor
Riverside, CA 92522

Hon. Alonso Ledezma, RCTC Commissioner
City of San Jacinto
595 S. San Jacinto Avenue
San Jacinto, CA 92583

Elizabeth Balistreri, District Director
Office of Richard Roth, District 31
45-125 Smurr St, Ste B
Indio, CA, 92201

Gilbert Martinez, Chief of Staff
Office of Richard Roth, District 31
45-125 Smurr St, Ste B
Indio, CA, 92201

Cheryl Medina, Office Manager
Office of Richard Roth, District 31
45-125 Smurr St, Ste B
Indio, CA, 92201

Jeff Greene, Chief of Staff
Office of Kevin Jeffries, District 1
4080 Lemon Street, 5th Floor
Riverside, CA 92501

Thomas Ketcham, Director of Land Use & Development
Office of Kevin Jeffries, District 1
4080 Lemon Street, 5th Floor
Riverside, CA 92501

Hashish Winstead, Legislative Analyst
Office of Kevin Jeffries, District 1
16275 Grand Ave
Lake Elsinore, CA 92530

Liliana Allin, Legislative Assistant
Office of Karen Spiegel, District 2
4080 Lemon Street - 5th Floor
Riverside, CA 92501

Robyn Brock, Chief of Staff
Office for Chuck Washington, District 3
4080 Lemon Street - 5th Floor
Riverside, California 92501

Phil Paule, Chief of Staff
Office of Karen Spiegel, District 2
4080 Lemon Street, 5th Floor
Riverside, CA 92502

6.3 INTERESTED GROUPS, ORGANIZATION, AND INDIVIDUALS

Bedford Master Association
4125 Hudson House Drive
Corona, CA 92883

California Native Plant Society,
Riverside San Bernardino Chapter
2707 K Street, Suite 1
Sacramento, CA 95816

Sierra Club
1414 K. Street, Suite 500
Sacramento, CA 95814

Bobby Spiegel
President and CEO
Corona Chamber of Commerce
904 E. Sixth Street
Corona, CA 92879

Deserie Ramirez
Vice President, Operations and Membership Development
Corona Chamber of Commerce
904 E. Sixth Street
Corona, CA 92879

Corona Regional Medical Center
800 S Main Street
Corona, CA 92882

Kim Joseph Cousins, President/CEO
Lake Elsinore Valley Chamber of Commerce
132 W. Graham Ave.
Lake Elsinore, CA 92530

Sam Itani, CEO
Corona Regional Medical Center
800 South Main
Corona, CA 92882

Trustee Elsinore Valley Cemetery District
18170 Collier Avenue
Lake Elsinore, CA 92530

Corona Municipal Airport
1900 Aviation Dr
Corona, CA 92878

Wolde-Ab Isaac, Ph.D., Chancellor
Riverside Community College District
3801 Market Street
Riverside, CA 92501

Dr. Sam Buenrostro, Superintendent
Corona-Norco Unified School District
2820 Clark Avenue
Norco, CA 92860

Heidi Calvert
Inland Deserts Regional Manager
California Department of Fish and Wildlife
787 North Main Street, Suite 220
Bishop, CA 93514

Keystone Pacific Property Management
3155-D Sedona Court, Suite 150
Ontario, CA 91764

Mary Ann Ruiz, Chair
Sierra Club - San Gorgonio Chapter
Elsinore Unified School District
PO Box 5425, Riverside, CA 92517

San Bernadino Valley Audubon Society
P.O. Box 88
Forest Falls, CA 92339

Dr. Doug Kimberly
Lake Elsinore Unified School District
545 Chaney Street
Lake Elsinore, CA

Marven Norman, Interim Executive Officer
Inland Empire Biking Alliance
1000 New York Street, Suite L
Redlands, CA 92375

Ana Gonzalez, Executive Director
The Center for Community Action and Environmental Justice
3840 Sunnyhill Drive
Jurupa Valley, CA 92509

Susan Gomez, M.A., CEO
Inland Empire Community Collaborative
1887 Business Center Dr, Ste 3
San Bernardino, CA 92408

Riverside University Health System – Public Health Department
4210 Riverwalk Pkwy Ste 300,
Riverside, CA 92505

6.4 PROPERTY OWNERS/OCCUPANTS/ABSENTEE LOCATED WITHIN A QUARTER-MILE RADIUS

OWNER – NAME REDACTED
4022 HISTORIC VIRGINIA CT
DUMFRIES, VA 22025

OWNER – NAME REDACTED
14825 CREEKBROOK PL
MIDLOTHIAN, VA 23113

OWNER – NAME REDACTED
17 HAMPTON KEY
WILLIAMSBURG, VA 23185

OWNER – NAME REDACTED
6203 BACK BAY LN
AUSTIN, TX 78739

OWNER – NAME REDACTED
4628 E 2ND ST
LOS ANGELES, CA 90022

OWNER – NAME REDACTED
9060 OTTO ST
DOWNEY, CA 90240

OWNER – NAME REDACTED
22704 MAPLE AVE APT 3
TORRANCE, CA 90505

OWNER – NAME REDACTED
5538 CAJON AVE
BUENA PARK, CA 90621

OWNER – NAME REDACTED
14327 PONTLAVOY AVE
NORWALK, CA 90650

OWNER – NAME REDACTED
17525 PARKVALLE PL
CERRITOS, CA 90703

OWNER – NAME REDACTED
212 S OLD RANCH RD
ARCADIA, CA 91007

OWNER – NAME REDACTED
28339 INFINITY CIR
SANTA CLARITA, CA 91390

OWNER – NAME REDACTED
16157 DORAL DR
CHINO HILLS, CA 91709

OWNER – NAME REDACTED
13051 ARLINGTON LN
CHINO, CA 91710

OWNER – NAME REDACTED
472 CONVERSE AVE
CLAREMONT, CA 91711

OWNER – NAME REDACTED
6772 DI CARLO PL
RANCHO CUCAMONGA, CA 91739

OWNER – NAME REDACTED
360 BANBRIDGE AVE
LA PUENTE, CA 91744

OWNER – NAME REDACTED
3610 OXFORD CT
ROWLAND HEIGHTS, CA 91748

OWNER – NAME REDACTED
6447 RED GARNET WAY
JURUPA VALLEY, CA 91752

OWNER – NAME REDACTED
1138 PEBBLEWOOD DR
DIAMOND BAR, CA 91765

OWNER – NAME REDACTED
9147 EMPEROR AVE
SAN GABRIEL, CA 91775

OWNER – NAME REDACTED
731 GARTEL DR
WALNUT, CA 91789

OWNER – NAME REDACTED
950 FALL CREEK CT
WALNUT, CA 91789

OWNER – NAME REDACTED
300 W GRAND AVE APT 21
ALHAMBRA, CA 91801

OWNER – NAME REDACTED
300 W GRAND AVE APT 21
ALHAMBRA, CA 91801

OWNER – NAME REDACTED
8543 SYLVAN DR
RIVERSIDE, CA 92503

OWNER – NAME REDACTED
3317 JULY DR
RIVERSIDE, CA 92503

OWNER – NAME REDACTED
5964 SYCAMORE CANYON BLVD APT 3046
RIVERSIDE, CA 92507

OWNER – NAME REDACTED
18031 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18058 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18098 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18055 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18081 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18080 EUCALYPTUS AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18034 HEIDI LISA LN
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18018 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18035 HEIDI LISA LN
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18010 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18015 HEIDI LISA LN
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18061 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18055 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18073 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18046 HEIDI LISA LN
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18080 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18010 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18035 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18078 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18041 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18045 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18075 DEXTER AVE
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18049 HEIDI LISA LN
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
18021 CARMELA CT
LAKE ELSINORE, CA 92532

OWNER – NAME REDACTED
2450 DAYBREAK ST
HEMET, CA 92545

OWNER – NAME REDACTED
22014 MIMOSA LN
MORENO VALLEY, CA 92553

OWNER – NAME REDACTED
27290 CEDAR CT
MORENO VALLEY, CA 92555

OWNER – NAME REDACTED
40037 CALLE REAL
MURRIETA, CA 92563

OWNER – NAME REDACTED
20050 GREELEY RD
PERRIS, CA 92570

OWNER – NAME REDACTED
20690 KNOB PL
PERRIS, CA 92570

OWNER – NAME REDACTED
28584 N PORT LN
MENIFEE, CA 92584

OWNER – NAME REDACTED
42143 ACACIA WAY
TEMECULA, CA 92591

OWNER – NAME REDACTED
2 SAROS
IRVINE, CA 92603

OWNER – NAME REDACTED
41 ICEBERG ROSE
IRVINE, CA 92620

OWNER – NAME REDACTED
24591 RIDGEWOOD CIR
LAKE FOREST, CA 92630

OWNER – NAME REDACTED
14402 WINDFALL LN
HUNTINGTON BEACH, CA 92647

OWNER – NAME REDACTED
14096 RANCHO RD
WESTMINSTER, CA 92683

OWNER – NAME REDACTED
14431 PURDY ST
WESTMINSTER, CA 92683

OWNER – NAME REDACTED
26615 SIERRA VISTA
MISSION VIEJO, CA 92692

OWNER – NAME REDACTED
10845 SKYLINE DR
SANTA ANA, CA 92705

OWNER – NAME REDACTED
9661 RINDGE CIR
FOUNTAIN VALLEY, CA 92708

OWNER – NAME REDACTED
16564 DAISY AVE
FOUNTAIN VALLEY, CA 92708

OWNER – NAME REDACTED
9525 SMOKE TREE AVE
FOUNTAIN VALLEY, CA 92708

OWNER – NAME REDACTED
10692 GILBERT ST
ANAHEIM, CA 92804

OWNER – NAME REDACTED
2501 E BELMONT CT
ANAHEIM, CA 92806

OWNER – NAME REDACTED
258 N CALLUM DR
ANAHEIM, CA 92807

OWNER – NAME REDACTED
8265 E BROOKDALE LN
ANAHEIM, CA 92807

OWNER – NAME REDACTED
115 S STATE COLLEGE BLVD UNIT 209
BREA, CA 92821

OWNER – NAME REDACTED
1616 BEECHWOOD AVE
FULLERTON, CA 92835

OWNER – NAME REDACTED
12602 ASPENWOOD LN
GARDEN GROVE, CA 92840

OWNER – NAME REDACTED
5381 SANTA MONICA AVE
GARDEN GROVE, CA 92845

OWNER – NAME REDACTED
PO BOX 79091
CORONA, CA 92877

OWNER – NAME REDACTED
PO BOX 77962
CORONA, CA 92877

OWNER – NAME REDACTED
PO BOX 77031
CORONA, CA 92877

OWNER – NAME REDACTED
PO BOX 77912
CORONA, CA 92877

OWNER – NAME REDACTED
531 MAGNOLIA AVE
CORONA, CA 92879

OWNER – NAME REDACTED
2825 BUCKINGHAM WAY
CORONA, CA 92879

OWNER – NAME REDACTED
1497 DEL NORTE DR
CORONA, CA 92879

OWNER – NAME REDACTED
6731 MORAB ST
CORONA, CA 92880

OWNER – NAME REDACTED
7267 LAZARE CT
EASTVALE, CA 92880

OWNER – NAME REDACTED
7435 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
7531 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
7473 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20045 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
20057 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19860 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7540 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
19800 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
20034 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7245 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20088 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7616 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
19771 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
7520 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
7635 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
19940 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
2140 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19801 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
20171 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
20350 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20286 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20259 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7201 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20085 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20100 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20070 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20171 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
3780 ADDICOTT CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7569 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20031 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
19350 HIGH WATER WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19890 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19820 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
7439 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19841 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
7405 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20137 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19821 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
7670 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20130 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7510 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
2024 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20179 ORANGE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19811 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
20127 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19837 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
19830 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
19834 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
7325 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
20113 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20275 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20285 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20170 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7220 WHISKEY CREEK CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7489 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
7580 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19850 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20131 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
19710 LONG BRANCH WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19915 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20330 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
20020 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19945 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20225 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7511 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20195 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20115 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
7574 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
19770 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
7375 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7322 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
2040 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19765 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20030 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20174 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20170 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
7562 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
20198 ORANGE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19124 STATE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7351 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
20229 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19833 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
20283 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20141 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
19150 STATE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20075 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20170 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19890 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20070 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
2060 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20153 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7291 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7549 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20163 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
20121 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
20080 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20075 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7650 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
19730 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
2075 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19921 WASHINGTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
2070 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19751 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19845 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
20042 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7365 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
20075 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
2549 FAIRGLEN PL
CORONA, CA 92881

OWNER – NAME REDACTED
7419 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20061 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19864 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20140 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19773 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
2080 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20171 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19990 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
2090 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
7609 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
7510 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
20065 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19845 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
7549 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
19721 LONG BRANCH WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20177 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
2100 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
2000 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20444 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
19950 WASHINGTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19850 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19232 STATE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20194 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7230 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
19740 LONG BRANCH WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7315 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
19807 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
20130 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20276 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
7279 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7361 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7386 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7500 MARILYN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20274 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19700 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7530 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
7415 BOBBITT AVE
CORONA, CA 92881

OWNER – NAME REDACTED
7221 WHISKEY CREEK CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7201 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20185 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20310 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20201 ORANGE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19820 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19899 WASHINGTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
7261 WHISKEY CREEK CIR
CORONA, CA 92881

OWNER – NAME REDACTED
19781 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19874 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7570 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20065 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20094 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19781 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
7212 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7636 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
19720 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7762 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20287 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20117 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
20050 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20020 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19870 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19787 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20152 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20210 ORANGE ST
CORONA, CA 92881

OWNER – NAME REDACTED
2089 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
7420 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20099 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20285 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
1662 LAUREL CANYON CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7630 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
7300 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20110 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7263 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7260 WHISKEY CREEK CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20011 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7400 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
2125 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20146 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7461 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
19831 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20315 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20048 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20050 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
3720 ADDICOTT CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20075 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
3750 ADDICOTT CIR
CORONA, CA 92881

OWNER – NAME REDACTED
3700 ADDICOTT CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20020 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20165 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20085 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
2940 GARRETSON AVE
CORONA, CA 92881

OWNER – NAME REDACTED
7490 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20195 ORANGE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20190 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19794 EVELYN ST
CORONA, CA 92881

OWNER – NAME REDACTED
7270 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20090 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19711 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
2180 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20214 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
19330 HIGH WATER WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19810 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
19318 HIGH WATER WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7429 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
19855 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
1601 NABIL CIR
CORONA, CA 92881

OWNER – NAME REDACTED
19930 WASHINGTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19875 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
20060 LAYTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20291 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19829 FRANCES ST
CORONA, CA 92881

OWNER – NAME REDACTED
19941 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
7201 WHISKEY CREEK CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20011 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
7275 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20131 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
19793 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
20290 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20225 BEDFORD CANYON RD
CORONA, CA 92881

OWNER – NAME REDACTED
2160 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
20104 KAYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20150 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
20241 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20023 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7601 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
7388 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
20193 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7239 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20260 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
19855 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
19791 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
19995 WASHINGTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20215 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20151 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
20080 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7205 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
19780 GRANDVIEW DR
CORONA, CA 92881

OWNER – NAME REDACTED
20183 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7329 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
3725 ADDICOTT CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7770 LIBERTY AVE
CORONA, CA 92881

OWNER – NAME REDACTED
20320 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
2948 SONRISA DR
CORONA, CA 92881

OWNER – NAME REDACTED
7303 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
7389 CALICO CIR
CORONA, CA 92881

OWNER – NAME REDACTED
20209 CASE ST
CORONA, CA 92881

OWNER – NAME REDACTED
7640 BOYD AVE
CORONA, CA 92881

OWNER – NAME REDACTED
19845 KATY WAY
CORONA, CA 92881

OWNER – NAME REDACTED
20025 NEWTON ST
CORONA, CA 92881

OWNER – NAME REDACTED
20141 CORONA ST
CORONA, CA 92881

OWNER – NAME REDACTED
7626 RUDELL RD
CORONA, CA 92881

OWNER – NAME REDACTED
7300 PIUTE CREEK DR
CORONA, CA 92881

OWNER – NAME REDACTED
2030 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
2008 GEORGETOWN DR
CORONA, CA 92881

OWNER – NAME REDACTED
7591 EL CERRITO RD
CORONA, CA 92881

OWNER – NAME REDACTED
20125 KLYNE ST
CORONA, CA 92881

OWNER – NAME REDACTED
2084 ADOBE AVE
CORONA, CA 92882

OWNER – NAME REDACTED
1174 SHADY MILL RD
CORONA, CA 92882

OWNER – NAME REDACTED
1155 HUMMINGBIRD LN
CORONA, CA 92882

OWNER – NAME REDACTED
697 HUNTLEY DR
CORONA, CA 92882

OWNER – NAME REDACTED
2649 HAWK CIR
CORONA, CA 92882

OWNER – NAME REDACTED
2623 SANTA FIORA DR
CORONA, CA 92882

OWNER – NAME REDACTED
2555 GLENBUSH CIR
CORONA, CA 92882

OWNER – NAME REDACTED
25114 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
22736 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
3952 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
26309 SANTIAGO CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
24561 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
8879 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
10194 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
24971 CORAL CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8964 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
8916 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9391 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8335 GLEN RD
CORONA, CA 92883

OWNER – NAME REDACTED
24810 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
25273 POPLAR CT
CORONA, CA 92883

OWNER – NAME REDACTED
11519 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11878 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
11006 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
25761 CHAMOMILE RD
CORONA, CA 92883

OWNER – NAME REDACTED
24812 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9383 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11114 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
22862 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25040 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22691 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
25241 POPLAR CT
CORONA, CA 92883

OWNER – NAME REDACTED
11044 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
24968 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11744 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11783 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9187 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
9067 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
22689 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
22806 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11328 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
9071 EVONVALE DR
CORONA, CA 92883

OWNER – NAME REDACTED
9112 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
3815 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9239 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11854 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
24967 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9056 PATINA CT
CORONA, CA 92883

OWNER – NAME REDACTED
10064 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
9056 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
24944 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22623 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11367 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
10196 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
24871 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
9280 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9338 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
10486 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22595 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
22611 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
8951 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
11046 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
10359 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
9410 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
9110 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
22586 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11124 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
25382 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
9060 LEROY RD
CORONA, CA 92883

OWNER – NAME REDACTED
8906 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
25079 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11502 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11228 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
8821 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
25131 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9205 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
9149 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11094 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
25370 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
9295 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9285 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
10321 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
25432 JACK RABBIT LN
CORONA, CA 92883

OWNER – NAME REDACTED
11780 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24822 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
9501 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11183 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
25268 POPLAR CT
CORONA, CA 92883

OWNER – NAME REDACTED
24293 BLACK CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9025 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
10474 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22696 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9500 PATS POINT DR
CORONA, CA 92883

OWNER – NAME REDACTED
9327 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11063 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
25181 SUMAC CT
CORONA, CA 92883

OWNER – NAME REDACTED
9300 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
24552 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
9418 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22716 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
2142 CRYSTAL DOWNS DR
CORONA, CA 92883

OWNER – NAME REDACTED
11360 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
25080 PEPPERTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9064 EVONVALE DR
CORONA, CA 92883

OWNER – NAME REDACTED
10429 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
11440 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
8991 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
22460 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
24800 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
22845 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11028 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
9335 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
9274 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11760 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9091 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
11448 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
25005 BOXELDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
11432 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
26333 SANTIAGO CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
24333 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
9070 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11344 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
11504 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
11735 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22435 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11034 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
24789 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24834 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
9051 EVONVALE DR
CORONA, CA 92883

OWNER – NAME REDACTED
11366 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
10369 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
3968 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10228 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22817 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11855 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22651 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
9139 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
10432 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24413 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
11260 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
10398 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
11373 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
24465 WILDHORSE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9193 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9014 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11010 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11050 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9371 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
11118 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
11416 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
11634 HOLLY HILL LN
CORONA, CA 92883

OWNER – NAME REDACTED
10386 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
8401 KILEY CT
CORONA, CA 92883

OWNER – NAME REDACTED
22658 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
11929 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
25086 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11768 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24887 PINE MOUNTAIN TER
CORONA, CA 92883

OWNER – NAME REDACTED
22793 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22756 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9311 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
10247 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9216 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25075 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9284 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
25133 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11407 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
9206 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9467 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25141 DOGWOOD CT
CORONA, CA 92883

OWNER – NAME REDACTED
24525 OVERLOOK DR
TEMESCAL VALLEY, CA 92883

OWNER – NAME REDACTED
24909 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
10180 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24933 ELMWOOD ST
CORONA, CA 92883

OWNER – NAME REDACTED
25034 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
9030 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
8931 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
22490 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
9345 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24307 BLACK CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11531 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
24824 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9322 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25072 PEPPERTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
24516 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
10393 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
9347 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
24801 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25442 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
9054 EVONVALE DR
CORONA, CA 92883

OWNER – NAME REDACTED
10274 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
22833 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9323 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
11811 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
22817 CRIMSON CT
CORONA, CA 92883

OWNER – NAME REDACTED
22507 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11119 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
22591 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11739 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9274 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9310 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
24869 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9454 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9510 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11376 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
21801 KNABE RD
CORONA, CA 92883

OWNER – NAME REDACTED
25773 CHAMOMILE RD
CORONA, CA 92883

OWNER – NAME REDACTED
9357 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11639 HOLLY HILL LN
CORONA, CA 92883

OWNER – NAME REDACTED
9088 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
10310 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
9231 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
10223 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11427 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
10798 ROSEMARY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
8988 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9202 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9264 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9299 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9485 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11300 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11763 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9320 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9535 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11295 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
10348 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11869 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
10301 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11307 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22626 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
22902 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
10252 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24835 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11748 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11236 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11844 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
22588 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
11540 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
9455 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25149 DOGWOOD CT
CORONA, CA 92883

OWNER – NAME REDACTED
10271 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9101 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24995 CORAL CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11331 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
24537 SUNSET VISTA DR
CORONA, CA 92883

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10127 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
22577 SILVER DOLLAR ST
CORONA, CA 92883

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24963 CORAL CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
25107 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9286 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24883 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11244 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11368 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
3899 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9322 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
11148 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
23280 LAWSON RD
CORONA, CA 92883

OWNER – NAME REDACTED
24846 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
11927 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10833 ROSEMARY WAY
CORONA, CA 92883

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22686 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9042 CAMPHOR TREE CT
CORONA, CA 92883

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10450 WHITECROWN CIR
CORONA, CA 92883

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9081 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11431 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
9156 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11405 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
24385 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
10410 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
22647 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
10244 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
11564 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
24280 KENOSHA CT
CORONA, CA 92883

OWNER – NAME REDACTED
11310 TESOTA LOOP ST
CORONA, CA 92883

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11864 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
8904 GENTLE WIND DR
CORONA, CA 92883

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22633 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
10136 GREENHORN CT
CORONA, CA 92883

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9121 LANTANA DR
CORONA, CA 92883

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22766 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
22567 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
24728 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9339 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
25121 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9133 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22446 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
8784 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
22467 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
24609 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
25111 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
25016 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10411 BALDY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9030 FOSTER RD
CORONA, CA 92883

OWNER – NAME REDACTED
11840 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
2106 CRYSTAL DOWNS DR
CORONA, CA 92883

OWNER – NAME REDACTED
9125 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11175 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
22450 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
9228 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24848 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24251 BLACK CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9058 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
10213 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
9077 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22515 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
10399 BALDY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9113 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24913 ASHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9319 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11555 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
24860 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11070 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
8808 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
10088 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
10343 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11132 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
9136 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
10994 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
25092 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
9209 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25133 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22646 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
BOOMINATHAN
24811 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
10249 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
25152 DOGWOOD CT
CORONA, CA 92883

OWNER – NAME REDACTED
22644 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
22457 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
25091 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9426 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
10462 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11424 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
11646 HOLLY HILL LN
CORONA, CA 92883

OWNER – NAME REDACTED
11020 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
11154 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
25146 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
24940 GREENBRIER CT
CORONA, CA 92883

OWNER – NAME REDACTED
10330 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9089 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24901 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9046 PATINA CT
CORONA, CA 92883

OWNER – NAME REDACTED
11814 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
24938 ELMWOOD ST
CORONA, CA 92883

OWNER – NAME REDACTED
22837 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11972 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22315 HAYWORTH CT
CORONA, CA 92883

OWNER – NAME REDACTED
24869 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
2113 SAWGRASS CREEK LN
CORONA, CA 92883

OWNER – NAME REDACTED
9367 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11259 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
11162 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
22295 HAYWORTH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11090 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11211 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
24996 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
22656 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
25010 BOXELDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
8600 GLEN RD
CORONA, CA 92883

OWNER – NAME REDACTED
22835 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24513 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
8967 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11241 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
25124 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9120 LEROY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9217 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
25035 PEPPERTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9174 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
24917 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9190 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
9575 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
9131 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
11490 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22892 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11103 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9538 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11651 HOLLY HILL LN
CORONA, CA 92883

OWNER – NAME REDACTED
24549 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
26321 SANTIAGO CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8691 BEDFORD MOTOR WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9142 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11915 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10441 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
24660 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
25454 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11268 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11772 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11914 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
10110 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
10394 BALDY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9059 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
9270 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11058 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11395 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
9032 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
10115 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24151 BRISON DR
CORONA, CA 92883

OWNER – NAME REDACTED
8943 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
3927 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
8640 GLEN RD
CORONA, CA 92883

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9351 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
10384 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24681 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
25463 JACK RABBIT LN
CORONA, CA 92883

OWNER – NAME REDACTED
9135 LANTANA DR
CORONA, CA 92883

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10434 MOJESKA SUMMIT RD
CORONA, CA 92883

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11756 BUNTING CIR
CORONA, CA 92883

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11047 EVERGREEN LOOP
CORONA, CA 92883

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11891 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11177 PINECONE ST
CORONA, CA 92883

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11414 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
25461 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
25425 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
11912 BUNTING CIR
CORONA, CA 92883

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10975 EVERGREEN LOOP
CORONA, CA 92883

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9414 LAPIS CT
CORONA, CA 92883

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3843 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11246 RIVEROAK ST
CORONA, CA 92883

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11127 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9114 PLUME GRASS ST
CORONA, CA 92883

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11514 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
25112 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24994 BOXELDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
9514 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10998 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
24265 BLACK CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22470 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
10854 ROSEMARY WAY
CORONA, CA 92883

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10333 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
22449 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
10846 ROSEMARY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
25490 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
24879 PINE MOUNTAIN TER
CORONA, CA 92883

OWNER – NAME REDACTED
11511 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
10983 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9128 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25078 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9031 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9144 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11579 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
24776 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24954 ELMWOOD ST
CORONA, CA 92883

OWNER – NAME REDACTED
10373 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11963 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9249 SCOTTY WAY
CORONA, CA 92883

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11478 ELDERBERRY LN
CORONA, CA 92883

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10198 WHITECROWN CIR
CORONA, CA 92883

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10291 ICEFIELD CT
CORONA, CA 92883

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11950 FLICKER CV
CORONA, CA 92883

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9115 DESERT ACACIA LN
CORONA, CA 92883

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11835 SILVER BIRCH RD
CORONA, CA 92883

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25437 HIBISCUS DR
CORONA, CA 92883

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24561 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
22823 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25173 SUMAC CT
CORONA, CA 92883

OWNER – NAME REDACTED
9235 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22761 HANNAH CT
CORONA, CA 92883

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10294 WHITECROWN CIR
CORONA, CA 92883

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9321 PALM CANYON DR
CORONA, CA 92883

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11146 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9360 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
25003 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25236 POPLAR CT
CORONA, CA 92883

OWNER – NAME REDACTED
9429 LAPIS CT
CORONA, CA 92883

OWNER – NAME REDACTED
10991 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
24908 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9192 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9126 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
25464 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
9088 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11250 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22563 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
8797 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
11012 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
22616 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
22675 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
22553 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
9502 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11939 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9028 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
24894 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
9212 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24882 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
9275 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
24812 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11004 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
23102 BURNING WOOD DR
CORONA, CA 92883

OWNER – NAME REDACTED
9100 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24932 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
8867 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
11905 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
8580 GLEN RD
CORONA, CA 92883

OWNER – NAME REDACTED
11464 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
25122 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
22797 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24308 KENOSHA CT
CORONA, CA 92883

OWNER – NAME REDACTED
8796 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
25094 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11792 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11095 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
24474 WILDHORSE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9424 LAPIS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11487 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
9366 STONE CANYON RD
CORONA, CA 92883

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8903 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
24847 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
22796 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
8928 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
24896 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11078 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
22865 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25071 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
9078 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
9198 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25110 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
10331 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22872 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22581 WHITE SAGE ST
CORONA, CA 92883

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25452 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
11333 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
11866 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
8927 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
22312 HAYWORTH CT
CORONA, CA 92883

OWNER – NAME REDACTED
24588 SUNSET VISTA DR
CORONA, CA 92883

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9481 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11504 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
9027 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11130 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9500 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
24898 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9163 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24882 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
9382 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11555 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
22853 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22827 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
3913 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
25119 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
8918 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9033 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
11111 EVERGREEN LOOP
CORONA, CA 92883

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22912 ROCKCRESS ST
CORONA, CA 92883

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9528 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8421 WEIRICK RD
CORONA, CA 92883

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11204 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11039 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11924 BUNTING CIR
CORONA, CA 92883

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11186 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11233 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11724 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9076 PATINA CT
TEMESCAL VALLEY, CA 92883

OWNER – NAME REDACTED
9502 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
24837 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25095 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
22605 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
10830 ROSEMARY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9403 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
9402 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
11948 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
25293 BIGLEAF CT
CORONA, CA 92883

OWNER – NAME REDACTED
11975 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9325 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
10195 MOJESKA SUMMIT RD
CORONA, CA 92883

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22852 ROCKCRESS ST
CORONA, CA 92883

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11106 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
10303 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
24856 CASSIA CT
CORONA, CA 92883

OWNER – NAME REDACTED
24729 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
9255 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9124 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10418 BALDY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9448 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9099 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
11202 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
3885 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9465 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
25165 SUMAC CT
CORONA, CA 92883

OWNER – NAME REDACTED
25090 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24309 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24285 KENOSHA CT
CORONA, CA 92883

OWNER – NAME REDACTED
11349 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
9407 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
25088 PEPPERTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
25466 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11574 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11463 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22790 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24488 WILDHORSE CT
CORONA, CA 92883

OWNER – NAME REDACTED
10279 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
10181 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
9174 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
9137 SYDNEY BLUE CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11274 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
24633 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
24777 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
8904 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
10309 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
9063 PLUME GRASS ST
CORONA, CA 92883

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8785 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
11496 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
2167 CRYSTAL DOWNS DR
CORONA, CA 92883

OWNER – NAME REDACTED
25109 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9406 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9375 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
25082 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
8808 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
24891 CORAL CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
10052 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24845 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
22781 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9275 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24669 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
9399 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
24881 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
8882 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9520 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9298 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24645 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
24864 CASSIA CT
CORONA, CA 92883

OWNER – NAME REDACTED
9175 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24345 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
10237 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
9186 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
22783 ASH ST
CORONA, CA 92883

OWNER – NAME REDACTED
8145 WEIRICK RD
CORONA, CA 92883

OWNER – NAME REDACTED
25102 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
22609 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
24420 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
9340 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9553 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8940 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
22500 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
25068 CATKIN ST
CORONA, CA 92883

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24999 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
9093 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9093 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
22843 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
11926 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
22275 HAYWORTH CT
CORONA, CA 92883

OWNER – NAME REDACTED
22574 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
25411 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
11951 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11439 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22714 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
22666 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9223 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
22847 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
8894 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
24542 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24849 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25289 SINGLELEAF ST
CORONA, CA 92883

OWNER – NAME REDACTED
11715 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9430 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
8952 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
25004 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
25430 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
4455 CABOT DR
CORONA, CA 92883

OWNER – NAME REDACTED
11732 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24399 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
22797 ASH ST
CORONA, CA 92883

OWNER – NAME REDACTED
10091 GREENHORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24753 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
9287 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
9110 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
24374 SUNSET VISTA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24893 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
24920 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
8820 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
22636 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11507 ELDERBERRY LN
CORONA, CA 92883

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22596 HANNAH CT
CORONA, CA 92883

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24821 ELISON CT
CORONA, CA 92883

OWNER – NAME REDACTED
8931 SUNSHINE VALLEY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11456 MAGNOLIA ST
CORONA, CA 92883

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9385 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
8880 HARMONY CT
CORONA, CA 92883

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9378 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
9066 PATINA CT
CORONA, CA 92883

OWNER – NAME REDACTED
11047 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
24434 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
24371 THUNDER CT
CORONA, CA 92883

OWNER – NAME REDACTED
11108 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
9455 NICKELLAUS CT
CORONA, CA 92883

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22850 MOUNTAIN ASH CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22925 ROCKCRESS ST
CORONA, CA 92883

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10264 WHITECROWN CIR
CORONA, CA 92883

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10128 MOJESKA SUMMIT RD
CORONA, CA 92883

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9358 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
22520 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
8930 SUNSHINE VALLEY WAY
CORONA, CA 92883

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9354 HOT SPRINGS RD
CORONA, CA 92883

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9490 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22842 ROCKCRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
25115 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
25358 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
8891 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9425 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
23090 BURNING WOOD DR
CORONA, CA 92883

OWNER – NAME REDACTED
9247 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9000 SUGARCANE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9314 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
10283 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
3829 BARTON CREEK CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9363 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
9107 BLUE FLAG ST
CORONA, CA 92883

OWNER – NAME REDACTED
24705 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22801 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
24871 PINE MOUNTAIN TER
CORONA, CA 92883

OWNER – NAME REDACTED
25172 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9346 PALM CANYON DR
CORONA, CA 92883

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9263 PALM CANYON DR
CORONA, CA 92883

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11188 PINECONE ST
CORONA, CA 92883

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CORONA, CA 92883

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8952 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
9074 LANTANA DR
CORONA, CA 92883

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11392 MAGNOLIA ST
CORONA, CA 92883

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11429 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
24696 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
10187 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24322 KENOSHA CT
CORONA, CA 92883

OWNER – NAME REDACTED
9334 PALM CANYON DR
CORONA, CA 92883

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24923 CORAL CANYON RD
CORONA, CA 92883

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CORONA, CA 92883

OWNER – NAME REDACTED
25485 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
9419 LAPIS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11586 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
8500 BEDFORD MOTOR WAY
CORONA, CA 92883

OWNER – NAME REDACTED
11194 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
9279 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
24794 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
24956 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10438 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
22863 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
10402 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11828 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9398 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
22440 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
24947 CORAL CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
9254 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
9443 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24515 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
11771 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11214 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
25160 DOGWOOD CT
CORONA, CA 92883

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11002 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
8856 HARMONY CT
CORONA, CA 92883

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11071 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
25084 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
10469 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9044 PLUME GRASS ST
CORONA, CA 92883

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9475 NICKELLAUS CT
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OWNER – NAME REDACTED
10505 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
11065 WHITEBARK LN
CORONA, CA 92883

OWNER – NAME REDACTED
11076 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
24800 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24813 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11516 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
11591 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
11122 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
11406 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
22676 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
9047 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
8928 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
11334 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
25145 CYPRESS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9262 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10175 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10286 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
11185 PINECONE ST
CORONA, CA 92883

OWNER – NAME REDACTED
10405 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
24765 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22425 QUIET BAY DR
CORONA, CA 92883

OWNER – NAME REDACTED
9250 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
24753 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10355 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10240 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24540 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
25451 JACK RABBIT LN
CORONA, CA 92883

OWNER – NAME REDACTED
22679 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
24507 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
22430 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
9505 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11598 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
25142 BIRCHTREE CT
CORONA, CA 92883

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9227 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24861 MULBERRY RD
CORONA, CA 92883

OWNER – NAME REDACTED
8892 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
25095 ACORN CT
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OWNER – NAME REDACTED
11284 PINECONE ST
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OWNER – NAME REDACTED
10259 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
9214 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11283 TESOTA LOOP ST
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OWNER – NAME REDACTED
25725 CHAMOMILE RD
CORONA, CA 92883

OWNER – NAME REDACTED
11751 CORIANDER WAY
CORONA, CA 92883

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24636 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
22560 SILVER DOLLAR ST
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OWNER – NAME REDACTED
25103 SAGEBUSH WAY
CORONA, CA 92883

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22482 WHITE SAGE ST
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OWNER – NAME REDACTED
9164 CAMPHOR TREE CT
CORONA, CA 92883

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10417 MOJESKA SUMMIT RD
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2119 CRYSTAL DOWNS DR
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11499 TESOTA LOOP ST
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25159 SAGEBUSH WAY
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10153 MOJESKA SUMMIT RD
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25249 POPLAR CT
CORONA, CA 92883

OWNER – NAME REDACTED
24824 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24943 GREENBRIER CT
CORONA, CA 92883

OWNER – NAME REDACTED
24279 SWIFT DEER TRL
CORONA, CA 92883

OWNER – NAME REDACTED
MAEFRANCES
11857 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
22893 MISSION BELLS ST
CORONA, CA 92883

OWNER – NAME REDACTED
10133 MOJESKA SUMMIT RD
CORONA, CA 92883

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8833 HARMONY CT
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9478 PALM CANYON DR
CORONA, CA 92883

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11526 ELDERBERRY LN
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24885 MULBERRY RD
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9187 DESERT ACACIA LN
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11086 WHITEBARK LN
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11759 BUNTING CIR
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10420 WHITECROWN CIR
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25701 CHAMOMILE RD
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11397 MAGNOLIA ST
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OWNER – NAME REDACTED
25076 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
9259 SCOTTY WAY
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8748 HARMONY CT
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24896 ROCKSTON DR
CORONA, CA 92883

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24825 ROCKSTON DR
CORONA, CA 92883

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8433 SUMMER HILL LN
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9046 LANTANA DR
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25749 CHAMOMILE RD
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9457 STONE CANYON RD
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9515 NICKELLAUS CT
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10435 BALDY CT
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11400 MAGNOLIA ST
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11478 TESOTA LOOP ST
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11156 PINECONE ST
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3857 BARTON CREEK CIR
CORONA, CA 92883

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22497 WHITE SAGE ST
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9350 NICKELLAUS CT
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11816 BUNTING CIR
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22459 WHITE SAGE ST
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24789 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
8956 SUNSHINE VALLEY WAY
CORONA, CA 92883

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10189 MOJESKA SUMMIT RD
CORONA, CA 92883

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22875 ROCKCRESS ST
CORONA, CA 92883

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9104 BLUE FLAG ST
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OWNER – NAME REDACTED
25473 TEMESCAL VALLEY LN
CORONA, CA 92883

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11030 WHITEBARK LN
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9084 CAMPHOR TREE CT
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25476 HIBISCUS DR
CORONA, CA 92883

OWNER – NAME REDACTED
24530 SUNSET VISTA DR
CORONA, CA 92883

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9370 PALM CANYON DR
CORONA, CA 92883

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9529 STONE CANYON RD
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22285 HAYWORTH CT
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9155 BLUE FLAG ST
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25420 JACK RABBIT LN
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11087 SWEETGUM ST
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10801 ROSEMARY WAY
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25346 TEMESCAL VALLEY LN
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9178 CAMPHOR TREE CT
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24848 CASSIA CT
CORONA, CA 92883

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9384 STONE CANYON RD
CORONA, CA 92883

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11591 ELDERBERRY LN
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11054 WHITEBARK LN
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25167 SAGEBUSH WAY
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9257 PLUME GRASS ST
CORONA, CA 92883

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CORONA, CA 92883

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26320 HORSETHIEF CANYON RD
CORONA, CA 92883

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8772 HARMONY CT
CORONA, CA 92883

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11036 SWEETGUM ST
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11052 SWEETGUM ST
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11015 EVERGREEN LOOP
CORONA, CA 92883

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22776 HANNAH CT
CORONA, CA 92883

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11832 SILVER BIRCH RD
CORONA, CA 92883

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3871 BARTON CREEK CIR
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25394 TEMESCAL VALLEY LN
CORONA, CA 92883

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9158 DESERT ACACIA LN
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24558 SUNSET VISTA DR
CORONA, CA 92883

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25277 SINGLELEAF ST
CORONA, CA 92883

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9237 CAMPHOR TREE CT
CORONA, CA 92883

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24895 PINE MOUNTAIN TER
CORONA, CA 92883

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9495 NICKELLAUS CT
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8809 HARMONY CT
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11454 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
8916 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
9037 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
23074 CLAYSTONE AVE
CORONA, CA 92883

OWNER – NAME REDACTED
8275 WEIRICK RD
CORONA, CA 92883

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10216 WHITECROWN CIR
CORONA, CA 92883

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24764 ROCKSTON DR
CORONA, CA 92883

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9105 PLUME GRASS ST
CORONA, CA 92883

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24788 ROCKSTON DR
CORONA, CA 92883

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3955 BARTON CREEK CIR
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24752 ROCKSTON DR
CORONA, CA 92883

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8964 HARMONY CT
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22504 WHITE SAGE ST
CORONA, CA 92883

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2121 SAWGRASS CREEK LN
CORONA, CA 92883

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8431 WEIRICK RD
CORONA, CA 92883

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11876 BUNTING CIR
CORONA, CA 92883

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11514 TESOTA LOOP ST
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11390 CHINABERRY ST
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9312 STONE CANYON RD
CORONA, CA 92883

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11419 CHINABERRY ST
CORONA, CA 92883

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24848 ROCKSTON DR
CORONA, CA 92883

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25456 JACK RABBIT LN
CORONA, CA 92883

OWNER – NAME REDACTED
25143 SAGEBUSH WAY
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OWNER – NAME REDACTED
24732 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
SPENCER
9404 LAPIS CT
CORONA, CA 92883

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9530 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11480 MAGNOLIA ST
CORONA, CA 92883

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22766 HANNAH CT
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OWNER – NAME REDACTED
11567 VALLEY OAK LN
CORONA, CA 92883

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8844 HARMONY CT
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OWNER – NAME REDACTED
8390 NOB HILL RD
CORONA, CA 92883

OWNER – NAME REDACTED
24365 THUNDER CT
CORONA, CA 92883

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24979 CORAL CANYON RD
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10237 ICEFIELD CT
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22501 SILVER DOLLAR ST
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24704 ROCKSTON DR
CORONA, CA 92883

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10235 WHITECROWN CIR
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11900 BUNTING CIR
CORONA, CA 92883

OWNER – NAME REDACTED
24851 CASSIA CT
CORONA, CA 92883

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10176 MOJESKA SUMMIT RD
CORONA, CA 92883

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24859 ACADIA DR
CORONA, CA 92883

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24716 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
10838 ROSEMARY WAY
CORONA, CA 92883

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11802 SILVER BIRCH RD
CORONA, CA 92883

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24884 ACADIA DR
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22443 WHITE SAGE ST
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24895 ACADIA DR
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11126 WHITEBARK LN
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25157 DOGWOOD CT
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24931 CORAL CANYON RD
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9226 PLUME GRASS ST
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9315 NICKELLAUS CT
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9161 PLUME GRASS ST
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25054 BIRCHTREE CT
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11172 PINECONE ST
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24872 ACADIA DR
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11603 VALLEY OAK LN
CORONA, CA 92883

OWNER – NAME REDACTED
24460 WILDHORSE CT
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9179 DESERT ACACIA LN
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22758 ASH ST
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11038 WHITEBARK LN
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9387 HOT SPRINGS RD
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11808 SILVER BIRCH RD
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22454 WHITE SAGE ST
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11235 TESOTA LOOP ST
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9083 DESERT ACACIA LN
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24557 OVERLOOK DR
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9072 PLUME GRASS ST
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24564 OVERLOOK DR
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8868 HARMONY CT
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11014 WHITEBARK LN
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9200 LANTANA DR
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25461 TEMESCAL VALLEY LN
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24899 CORAL CANYON RD
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8724 HARMONY CT
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24916 GREENBRIER CT
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10426 WHITECROWN CIR
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22661 SILVER DOLLAR ST
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2130 CRYSTAL DOWNS DR
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24997 BOXELDER CT
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9303 STONE CANYON RD
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9102 LANTANA DR
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9290 NICKELLAUS CT
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11178 EVERGREEN LOOP
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11941 FLICKER CV
CORONA, CA 92883

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10273 MOJESKA SUMMIT RD
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11341 MAGNOLIA ST
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11829 SILVER BIRCH RD
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11370 TESOTA LOOP ST
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11121 PINECONE ST
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25449 TEMESCAL VALLEY LN
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9123 BLUE FLAG ST
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24860 ROCKSTON DR
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24740 ROCKSTON DR
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9362 HOT SPRINGS RD
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25063 ACORN CT
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11402 CHINABERRY ST
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9409 PALM CANYON DR
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10040 GREENHORN CT
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22706 HANNAH CT
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9415 STONE CANYON RD
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24892 PINE MOUNTAIN TER
CORONA, CA 92883

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25018 BOXELDER CT
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24979 ROCKSTON DR
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22922 ROCKCRESS ST
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11140 PINECONE ST
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25040 PEPPERTREE CT
CORONA, CA 92883

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9234 CAMPHOR TREE CT
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OWNER – NAME REDACTED
11588 VALLEY OAK LN
CORONA, CA 92883

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9051 DESERT ACACIA LN
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OWNER – NAME REDACTED
24930 ELMWOOD ST
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OWNER – NAME REDACTED
22335 HAYWORTH CT
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25056 PEPPERTREE CT
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24992 ROCKSTON DR
CORONA, CA 92883

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25265 SINGLELEAF ST
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8915 HARMONY CT
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25013 BOXELDER CT
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22425 SILVER DOLLAR ST
CORONA, CA 92883

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24949 ELMWOOD ST
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11805 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
9107 LANTANA DR
CORONA, CA 92883

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22786 ASH ST
CORONA, CA 92883

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11095 EVERGREEN LOOP
CORONA, CA 92883

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9203 DESERT ACACIA LN
CORONA, CA 92883

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10319 WHITECROWN CIR
CORONA, CA 92883

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11180 PINECONE ST
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23082 CLAYSTONE AVE
CORONA, CA 92883

OWNER – NAME REDACTED
10232 ICEFIELD CT
CORONA, CA 92883

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24873 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
KITSUTANI
8451 WEIRICK RD
CORONA, CA 92883

OWNER – NAME REDACTED
11501 SUMMIT CT
CORONA, CA 92883

OWNER – NAME REDACTED
22630 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
9330 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
11938 FLICKER CV
CORONA, CA 92883

OWNER – NAME REDACTED
11550 ELDERBERRY LN
CORONA, CA 92883

OWNER – NAME REDACTED
9107 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
25139 BIRCHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
10208 ICEFIELD CT
CORONA, CA 92883

OWNER – NAME REDACTED
25130 SAGEBUSH WAY
CORONA, CA 92883

OWNER – NAME REDACTED
8939 HARMONY CT
CORONA, CA 92883

OWNER – NAME REDACTED
9062 DESERT ACACIA LN
CORONA, CA 92883

OWNER – NAME REDACTED
24708 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
9238 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
24493 WILDHORSE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9035 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
9116 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24294 KENOSHA CT
CORONA, CA 92883

OWNER – NAME REDACTED
9392 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
8143 WEIRICK RD
CORONA, CA 92883

OWNER – NAME REDACTED
9220 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
9405 NICKELLAUS CT
CORONA, CA 92883

OWNER – NAME REDACTED
9177 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
25050 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24988 CATKIN ST
CORONA, CA 92883

OWNER – NAME REDACTED
9411 HOT SPRINGS RD
CORONA, CA 92883

OWNER – NAME REDACTED
9086 PLUME GRASS ST
CORONA, CA 92883

OWNER – NAME REDACTED
24657 OVERLOOK DR
CORONA, CA 92883

OWNER – NAME REDACTED
11838 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
9219 LANTANA DR
CORONA, CA 92883

OWNER – NAME REDACTED
11426 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
9322 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
9374 STONE CANYON RD
CORONA, CA 92883

OWNER – NAME REDACTED
11079 EVERGREEN LOOP
CORONA, CA 92883

OWNER – NAME REDACTED
22637 WHITE SAGE ST
CORONA, CA 92883

OWNER – NAME REDACTED
11437 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
24941 ELMWOOD ST
CORONA, CA 92883

OWNER – NAME REDACTED
9214 PALM CANYON DR
CORONA, CA 92883

OWNER – NAME REDACTED
11342 CHINABERRY ST
CORONA, CA 92883

OWNER – NAME REDACTED
10211 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
25074 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
24991 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
2131 CRYSTAL DOWNS DR
CORONA, CA 92883

OWNER – NAME REDACTED
11389 MAGNOLIA ST
CORONA, CA 92883

OWNER – NAME REDACTED
9124 CAMPHOR TREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
10457 WHITECROWN CIR
CORONA, CA 92883

OWNER – NAME REDACTED
10169 MOJESKA SUMMIT RD
CORONA, CA 92883

OWNER – NAME REDACTED
10996 SWEETGUM ST
CORONA, CA 92883

OWNER – NAME REDACTED
24479 WILDHORSE CT
CORONA, CA 92883

OWNER – NAME REDACTED
11322 TESOTA LOOP ST
CORONA, CA 92883

OWNER – NAME REDACTED
8395 SUMMER HILL LN
CORONA, CA 92883

OWNER – NAME REDACTED
24908 ACADIA DR
CORONA, CA 92883

OWNER – NAME REDACTED
24910 ASHTREE CT
CORONA, CA 92883

OWNER – NAME REDACTED
25055 ACORN CT
CORONA, CA 92883

OWNER – NAME REDACTED
25406 TEMESCAL VALLEY LN
CORONA, CA 92883

OWNER – NAME REDACTED
11736 CORIANDER WAY
CORONA, CA 92883

OWNER – NAME REDACTED
22681 HANNAH CT
CORONA, CA 92883

OWNER – NAME REDACTED
11826 SILVER BIRCH RD
CORONA, CA 92883

OWNER – NAME REDACTED
8943 GENTLE WIND DR
CORONA, CA 92883

OWNER – NAME REDACTED
24885 ROCKSTON DR
CORONA, CA 92883

OWNER – NAME REDACTED
22686 SILVER DOLLAR ST
CORONA, CA 92883

OWNER – NAME REDACTED
24957 ELMWOOD ST
CORONA, CA 92883

OWNER – NAME REDACTED
9294 SCOTTY WAY
CORONA, CA 92883

OWNER – NAME REDACTED
18757 TURFWAY PARK
YORBA LINDA, CA 92886

OWNER – NAME REDACTED
20335 VIA TARRAGONA
YORBA LINDA, CA 92887

OWNER – NAME REDACTED
505 YERBA BUENA ST
MORRO BAY, CA 93442

OWNER – NAME REDACTED
2318 VERONA DR
BAY POINT, CA 94565

OWNER – NAME REDACTED
3604 200TH PL SW
LYNNWOOD, WA 98036

OWNER – NAME REDACTED
7403 ONYX DR SW
LAKEWOOD, WA 98498

RESIDENT
7187 CALICO CIR
CORONA, CA 92881

RESIDENT
7201 CALICO CIR
CORONA, CA 92881

RESIDENT
19721 LONG BRANCH WAY
CORONA, CA 92881

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19741 LONG BRANCH WAY
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7260 WHISKEY CREEK CIR
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7261 WHISKEY CREEK CIR
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RESIDENT
7211 SARSAPARILLA DR
CORONA, CA 92881

RESIDENT
7231 SARSAPARILLA DR
CORONA, CA 92881

RESIDENT
7251 SARSAPARILLA DR
CORONA, CA 92881

RESIDENT
7052 STARNE RD
CORONA, CA 92881

RESIDENT
7054 STARNE RD
CORONA, CA 92881

OCCUPANT
1957 FOOTHILL PKWY UNIT 101
CORONA, CA 92881

OCCUPANT
1957 FOOTHILL PKWY UNIT 102
CORONA, CA 92881

OCCUPANT
1957 FOOTHILL PKWY UNIT 103
CORONA, CA 92881

OCCUPANT
1905 FOOTHILL PKWY
CORONA, CA 92881

OCCUPANT
1935 FOOTHILL PKWY
CORONA, CA 92881

OCCUPANT
1961 FOOTHILL PKWY
CORONA, CA 92881

OCCUPANT
1987 FOOTHILL PKWY
CORONA, CA 92881

OCCUPANT
1999 FOOTHILL PKWY
CORONA, CA 92881

RESIDENT
1801 MARQUEZ WAY
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2999 VILLA CATALONIA CIR
CORONA, CA 92881

RESIDENT
21801 KNABE RD
CORONA, CA 92883

RESIDENT
21775 KNABE RD
CORONA, CA 92883

RESIDENT
21761 KNABE RD
CORONA, CA 92883

OCCUPANT
21937 KNABE RD
CORONA, CA 92883

RESIDENT
8500 BEDFORD MOTOR WAY
CORONA, CA 92883

RESIDENT
8530 BEDFORD MOTOR WAY
CORONA, CA 92883

RESIDENT
8580 BEDFORD MOTOR WAY
CORONA, CA 92883

RESIDENT
8681 BEDFORD MOTOR WAY
CORONA, CA 92883

RESIDENT
8691 BEDFORD MOTOR WAY
CORONA, CA 92883

OCCUPANT
22079 KNABE RD
CORONA, CA 92883

OCCUPANT
22099 KNABE RD
CORONA, CA 92883

OCCUPANT
22237 FOREST BOUNDARY RD
CORONA, CA 92883

RESIDENT
8421 WEIRICK RD
CORONA, CA 92883

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8431 WEIRICK RD
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8435 WEIRICK RD
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8451 WEIRICK RD
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8455 WEIRICK RD
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21582 WEIRICK RD
CORONA, CA 92883

RESIDENT
8808 GENTLE WIND DR
CORONA, CA 92883

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8967 GENTLE WIND DR
CORONA, CA 92883

RESIDENT
22574 SECRET WAY
CORONA, CA 92883

RESIDENT
22586 SECRET WAY
CORONA, CA 92883

OCCUPANT
21634 RETREAT PKWY
CORONA, CA 92883

RESIDENT
9074 EVONVALE DR
CORONA, CA 92883

RESIDENT
9064 EVONVALE DR
CORONA, CA 92883

RESIDENT
9054 EVONVALE DR
CORONA, CA 92883

RESIDENT
22322 HAYWORTH CT
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9051 EVONVALE DR
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22425 SILVER DOLLAR ST
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22525 SILVER DOLLAR ST
CORONA, CA 92883

RESIDENT
9089 SYDNEY BLUE CIR
CORONA, CA 92883

RESIDENT
9100 SYDNEY BLUE CIR
CORONA, CA 92883

RESIDENT
9101 SYDNEY BLUE CIR
CORONA, CA 92883

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9112 SYDNEY BLUE CIR
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9113 SYDNEY BLUE CIR
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RESIDENT
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22680 CANYON VIEW DR
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CORONA, CA 92883

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8900 SUGARCANE CT
CORONA, CA 92883

OCCUPANT
21501 TEMESCAL CANYON RD
CORONA, CA 92883

RESIDENT
21655 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
21657 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
21880 TEMESCAL CANYON RD
CORONA, CA 92883

RESIDENT
21653 TEMESCAL CANYON RD APT E
CORONA, CA 92883

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RESIDENT
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CORONA, CA 92883

OCCUPANT
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OCCUPANT
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OCCUPANT
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OCCUPANT
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RESIDENT
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CORONA, CA 92883

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21650 TEMESCAL CANYON RD SPC 78
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OCCUPANT
8765 DOS LAGOS DR
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OCCUPANT
9116 STELLAR CT
CORONA, CA 92883

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RESIDENT
9443 PALM CANYON DR
CORONA, CA 92883

RESIDENT
9455 PALM CANYON DR
CORONA, CA 92883

RESIDENT
9467 PALM CANYON DR
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9202 PALM CANYON DR
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OCCUPANT
22941 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
23107 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
23125 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
23143 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
23143 TEMESCAL CANYON RD STE B
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OCCUPANT
23143 TEMESCAL CANYON RD STE C
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23143 TEMESCAL CANYON RD STE D
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OCCUPANT
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CORONA, CA 92883

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OCCUPANT
23191 TEMESCAL CANYON RD
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23167 TEMESCAL CANYON RD
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OCCUPANT
22990 TEMESCAL CANYON RD
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OCCUPANT
22740 TEMESCAL CANYON RD
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RESIDENT
24550 BANDIT WAY
CORONA, CA 92883

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OCCUPANT
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11076 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11079 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11084 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11087 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11092 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11095 SWEETGUM ST
CORONA, CA 92883

RESIDENT
11042 BUTTONBUSH CT
CORONA, CA 92883

RESIDENT
11050 BUTTONBUSH CT
CORONA, CA 92883

RESIDENT
11066 BUTTONBUSH CT
CORONA, CA 92883

RESIDENT
11074 BUTTONBUSH CT
CORONA, CA 92883

RESIDENT
11082 BUTTONBUSH CT
CORONA, CA 92883

RESIDENT
25068 CATKIN ST
CORONA, CA 92883

RESIDENT
25076 CATKIN ST
CORONA, CA 92883

RESIDENT
25084 CATKIN ST
CORONA, CA 92883

RESIDENT
25092 CATKIN ST
CORONA, CA 92883

OCCUPANT
11762 DE PALMA RD STE A
CORONA, CA 92883

OCCUPANT
11762 DE PALMA RD STE B
CORONA, CA 92883

OCCUPANT
11762 DE PALMA RD STE C
CORONA, CA 92883

OCCUPANT
11762 DE PALMA RD STE D
CORONA, CA 92883

OCCUPANT
11762 DE PALMA RD STE E
CORONA, CA 92883

OCCUPANT
11800 DE PALMA RD
CORONA, CA 92883

OCCUPANT
11810 DE PALMA RD
CORONA, CA 92883

OCCUPANT
11950 DE PALMA RD
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE A
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE B
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE C
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE D
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE E
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE F1
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE F2
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE G
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE J
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE K
CORONA, CA 92883

OCCUPANT
11882 DE PALMA RD STE M
CORONA, CA 92883

RESIDENT
24705 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24708 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24717 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24720 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24729 OVERLOOK DR
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RESIDENT
24732 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24741 OVERLOOK DR
CORONA, CA 92883

RESIDENT
24753 OVERLOOK DR
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24777 OVERLOOK DR
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24531 OVERLOOK DR
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24597 OVERLOOK DR
CORONA, CA 92883

RESIDENT
25701 CHAMOMILE RD
CORONA, CA 92883

RESIDENT
25713 CHAMOMILE RD
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25761 CHAMOMILE RD
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RESIDENT
25773 CHAMOMILE RD
CORONA, CA 92883

RESIDENT
25782 DOVE ST
CORONA, CA 92883

RESIDENT
25794 DOVE ST
CORONA, CA 92883

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25806 DOVE ST
CORONA, CA 92883

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RESIDENT
25857 DOVE ST
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RESIDENT
25866 DOVE ST
CORONA, CA 92883

RESIDENT
11703 CORIANDER WAY
CORONA, CA 92883

RESIDENT
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RESIDENT
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RESIDENT
11751 CORIANDER WAY
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RESIDENT
11760 CORIANDER WAY
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RESIDENT
11763 CORIANDER WAY
CORONA, CA 92883

RESIDENT
11772 CORIANDER WAY
CORONA, CA 92883

RESIDENT
11732 BUNTING CIR
CORONA, CA 92883

RESIDENT
11735 BUNTING CIR
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RESIDENT
11744 BUNTING CIR
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RESIDENT
11756 BUNTING CIR
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RESIDENT
11852 BUNTING CIR
CORONA, CA 92883

RESIDENT
11766 SILVER BIRCH RD
CORONA, CA 92883

RESIDENT
11769 SILVER BIRCH RD
CORONA, CA 92883

RESIDENT
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RESIDENT
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CORONA, CA 92883

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11754 SILVER BIRCH RD
CORONA, CA 92883

RESIDENT
11757 SILVER BIRCH RD
CORONA, CA 92883

RESIDENT
11763 SILVER BIRCH RD
CORONA, CA 92883

RESIDENT
26309 SANTIAGO CANYON RD
CORONA, CA 92883

RESIDENT
26321 SANTIAGO CANYON RD
CORONA, CA 92883

RESIDENT
26333 SANTIAGO CANYON RD
CORONA, CA 92883

RESIDENT
11856 VIOLA CIR
CORONA, CA 92883

RESIDENT
11859 VIOLA CIR
CORONA, CA 92883

RESIDENT
11868 VIOLA CIR
CORONA, CA 92883

RESIDENT
11871 VIOLA CIR
CORONA, CA 92883

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11880 VIOLA CIR
CORONA, CA 92883

RESIDENT
11883 VIOLA CIR
CORONA, CA 92883

RESIDENT
11892 VIOLA CIR
CORONA, CA 92883

RESIDENT
11855 BUNTING CIR
CORONA, CA 92883

RESIDENT
11864 BUNTING CIR
CORONA, CA 92883

RESIDENT
11867 BUNTING CIR
CORONA, CA 92883

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11876 BUNTING CIR
CORONA, CA 92883

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CORONA, CA 92883

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CORONA, CA 92883

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11891 BUNTING CIR
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CORONA, CA 92883

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CORONA, CA 92883

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11951 BUNTING CIR
CORONA, CA 92883

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CORONA, CA 92883

RESIDENT
11963 BUNTING CIR
CORONA, CA 92883

RESIDENT
11972 BUNTING CIR
CORONA, CA 92883

RESIDENT
11975 BUNTING CIR
CORONA, CA 92883

RESIDENT
11854 FLICKER CV
CORONA, CA 92883

RESIDENT
11857 FLICKER CV
CORONA, CA 92883

RESIDENT
11866 FLICKER CV
CORONA, CA 92883

RESIDENT
11869 FLICKER CV
CORONA, CA 92883

RESIDENT
11878 FLICKER CV
CORONA, CA 92883

RESIDENT
11881 FLICKER CV
CORONA, CA 92883

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11890 FLICKER CV
CORONA, CA 92883

RESIDENT
11893 FLICKER CV
CORONA, CA 92883

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11905 FLICKER CV
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11914 FLICKER CV
CORONA, CA 92883

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11917 FLICKER CV
CORONA, CA 92883

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CORONA, CA 92883

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11929 FLICKER CV
CORONA, CA 92883

RESIDENT
11938 FLICKER CV
CORONA, CA 92883

RESIDENT
11941 FLICKER CV
CORONA, CA 92883

RESIDENT
11950 FLICKER CV
CORONA, CA 92883

OCCUPANT
12250 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
12781 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
12803 TEMESCAL CANYON RD STE B
CORONA, CA 92883

OCCUPANT
12803 TEMESCAL CANYON RD STE C
CORONA, CA 92883

OCCUPANT
12803 TEMESCAL CANYON RD STE D
CORONA, CA 92883

OCCUPANT
12803 TEMESCAL CANYON RD STE E
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE B
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE C
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE D
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE G
CORONA, CA 92883

OCCUPANT
12825 TEMESCAL CANYON RD STE H
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE B
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE C
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE D
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE E
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE F
CORONA, CA 92883

OCCUPANT
12847 TEMESCAL CANYON RD STE G
CORONA, CA 92883

OCCUPANT
12869 TEMESCAL CANYON RD STE A
CORONA, CA 92883

OCCUPANT
12869 TEMESCAL CANYON RD STE B
CORONA, CA 92883

OCCUPANT
13013 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
13071 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
12510 TEMESCAL CANYON RD
CORONA, CA 92883

RESIDENT
7311 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7325 PIUTE CREEK DR
CORONA, CA 92881

OCCUPANT
7345 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7351 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7365 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7383 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7385 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
19315 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19331 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19350 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19340 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19330 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19318 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
19306 HIGH WATER WAY
CORONA, CA 92881

RESIDENT
7388 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7366 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7344 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7322 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7300 PIUTE CREEK DR
CORONA, CA 92881

RESIDENT
7640 RUDELL RD
CORONA, CA 92881

RESIDENT
7636 RUDELL RD
CORONA, CA 92881

RESIDENT
7634 RUDELL RD
CORONA, CA 92881

RESIDENT
7630 RUDELL RD
CORONA, CA 92881

RESIDENT
7626 RUDELL RD
CORONA, CA 92881

RESIDENT
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CORONA, CA 92881

RESIDENT
7600 RUDELL RD
CORONA, CA 92881

RESIDENT
7588 RUDELL RD
CORONA, CA 92881

RESIDENT
7574 RUDELL RD
CORONA, CA 92881

RESIDENT
7562 RUDELL RD
CORONA, CA 92881

OCCUPANT
7550 RUDELL RD
CORONA, CA 92881

RESIDENT
7530 RUDELL RD
CORONA, CA 92881

RESIDENT
7520 RUDELL RD
CORONA, CA 92881

RESIDENT
7510 RUDELL RD
CORONA, CA 92881

OCCUPANT
7471 RUDELL RD
CORONA, CA 92881

OCCUPANT
7581 RUDELL RD
CORONA, CA 92881

OCCUPANT
13181 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
13341 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
13347 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
26340 LESTER CIR
CORONA, CA 92883

OCCUPANT
26330 LESTER CIR
CORONA, CA 92883

OCCUPANT
26320 LESTER CIR
CORONA, CA 92883

OCCUPANT
26365 EARTHMOVER CIR
CORONA, CA 92883

OCCUPANT
26385 EARTHMOVER CIR
CORONA, CA 92883

OCCUPANT
26362 EARTHMOVER CIR
CORONA, CA 92883

RESIDENT
14240 LOVE LN
CORONA, CA 92883

RESIDENT
14242 LOVE LN
CORONA, CA 92883

OCCUPANT
13540 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
13296 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
29135 RIVERSIDE DR
LAKE ELSINORE, CA 92530

OCCUPANT
29151 RIVERSIDE DR
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE OFC
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE A104
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE A105
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE A106
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE A107
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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17600 COLLIER AVE STE A111
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE D130
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE 137
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE E139A
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE E140
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE 142
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE E145
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE 147A
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE 147C
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE F147
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE G162
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE G163
LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE H172
LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
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LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE H180
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE H181
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE H182A
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE H184
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE J186
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE J189
LAKE ELSINORE, CA 92530

OCCUPANT
17600 COLLIER AVE STE J195
LAKE ELSINORE, CA 92530

OCCUPANT
19930 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17995 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17985 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17975 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17965 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17955 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17945 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17935 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17925 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17905 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
17999 COLLIER AVE
LAKE ELSINORE, CA 92530

RESIDENT
17575 BAKER ST
LAKE ELSINORE, CA 92530

RESIDENT
17401 BAKER ST
LAKE ELSINORE, CA 92530

RESIDENT
18014 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18015 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18034 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18035 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18046 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18049 HEIDI LISA LN
LAKE ELSINORE, CA 92532

RESIDENT
18010 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18035 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18045 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18055 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18065 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18075 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18080 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18085 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18095 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18009 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18010 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18026 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18031 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18044 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18055 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18062 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18067 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18070 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18073 KIMBERLY SUE CT
LAKE ELSINORE, CA 92532

RESIDENT
18018 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18021 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18038 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18041 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18058 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18061 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18078 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18081 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18098 CARMELA CT
LAKE ELSINORE, CA 92532

RESIDENT
18099 CARMELA CT
LAKE ELSINORE, CA 92532

OCCUPANT
28755 EL TORO RD
LAKE ELSINORE, CA 92532

RESIDENT
18159 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18169 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18187 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
18193 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
29055 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28970 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28997 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28913 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28955 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28805 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28840 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28859 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28891 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28810 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28985 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
28803 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
18160 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18165 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18195 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18100 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18105 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18130 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18135 HONEY LN
LAKE ELSINORE, CA 92532

RESIDENT
28864 11TH ST
LAKE ELSINORE, CA 92532

OCCUPANT
18300 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18310 COLLIER AVE STE 101
LAKE ELSINORE, CA 92530

OCCUPANT
18310 COLLIER AVE STE 102
LAKE ELSINORE, CA 92530

OCCUPANT
18320 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18330 COLLIER AVE STE 101
LAKE ELSINORE, CA 92530

OCCUPANT
18330 COLLIER AVE STE 102
LAKE ELSINORE, CA 92530

OCCUPANT
18408 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18418 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18428 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18438 COLLIER AVE STE 101
LAKE ELSINORE, CA 92530

RESIDENT
18450 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18282 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18286 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18288 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18290 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18292 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18294 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18296 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18298 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18248 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18302 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18284 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18284 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18123 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
29400 ENTERPRISE WAY STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18171 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18181 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18261 COLLIER AVE STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18261 COLLIER AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18261 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18261 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
29395 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29390 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29400 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29410 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29420 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
18215 PASADENA ST STE 100
LAKE ELSINORE, CA 92530

OCCUPANT
18215 PASADENA ST STE 101
LAKE ELSINORE, CA 92530

OCCUPANT
18215 PASADENA ST STE 103
LAKE ELSINORE, CA 92530

OCCUPANT
18267 PASADENA ST STE 100
LAKE ELSINORE, CA 92530

OCCUPANT
18267 PASADENA ST STE 101
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 100
LAKE ELSINORE, CA 92530

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18277 PASADENA ST STE 101
LAKE ELSINORE, CA 92530

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18277 PASADENA ST STE 102
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 103
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 104
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 105
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 106
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 108
LAKE ELSINORE, CA 92530

OCCUPANT
18277 PASADENA ST STE 109
LAKE ELSINORE, CA 92530

OCCUPANT
18283 PASADENA ST STE 100
LAKE ELSINORE, CA 92530

OCCUPANT
18283 PASADENA ST STE 101
LAKE ELSINORE, CA 92530

OCCUPANT
18283 PASADENA ST STE 102
LAKE ELSINORE, CA 92530

OCCUPANT
18283 PASADENA ST STE 103
LAKE ELSINORE, CA 92530

OCCUPANT
18309 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18315 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18321 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18327 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18333 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18339 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18345 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18351 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18357 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18363 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
29360 HUNCO WAY STE A
LAKE ELSINORE, CA 92530

OCCUPANT
29360 HUNCO WAY STE D
LAKE ELSINORE, CA 92530

OCCUPANT
29360 HUNCO WAY STE C
LAKE ELSINORE, CA 92530

OCCUPANT
29360 HUNCO WAY STE E
LAKE ELSINORE, CA 92530

OCCUPANT
29380 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29365 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29375 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29385 HUNCO WAY
LAKE ELSINORE, CA 92530

OCCUPANT
29370 HUNCO WAY STE A
LAKE ELSINORE, CA 92530

OCCUPANT
29370 HUNCO WAY STE B
LAKE ELSINORE, CA 92530

OCCUPANT
29370 HUNCO WAY STE C
LAKE ELSINORE, CA 92530

OCCUPANT
29370 HUNCO WAY STE D
LAKE ELSINORE, CA 92530

OCCUPANT
29370 HUNCO WAY STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18281 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18281 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18281 COLLIER AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18281 COLLIER AVE STE F
LAKE ELSINORE, CA 92530

OCCUPANT
29350 HUNCO WAY STE A
LAKE ELSINORE, CA 92530

OCCUPANT
29350 HUNCO WAY STE B
LAKE ELSINORE, CA 92530

OCCUPANT
29350 HUNCO WAY STE C
LAKE ELSINORE, CA 92530

OCCUPANT
29354 HUNCO WAY STE B
LAKE ELSINORE, CA 92530

OCCUPANT
29354 HUNCO WAY STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE F
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE G
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE H
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE J
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE K
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE L
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE M
LAKE ELSINORE, CA 92530

OCCUPANT
18285 COLLIER AVE STE N
LAKE ELSINORE, CA 92530

OCCUPANT
18283 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18287 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18291 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18301 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18301 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18301 COLLIER AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18301 COLLIER AVE STE D
LAKE ELSINORE, CA 92530

OCCUPANT
501 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
511 CENTRAL AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
511 CENTRAL AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
504 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
506 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
508 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18425 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18415 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18415 PASADENA ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18530 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18532 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18540 PASADENA ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18550 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18552 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18560 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18570 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18572 PASADENA ST
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE F
LAKE ELSINORE, CA 92530

OCCUPANT
18510 PASADENA ST STE G
LAKE ELSINORE, CA 92530

OCCUPANT
18520 PASADENA ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18520 PASADENA ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18520 PASADENA ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18520 PASADENA ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18520 PASADENA ST STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE F
LAKE ELSINORE, CA 92530

OCCUPANT
18500 PASADENA ST STE G
LAKE ELSINORE, CA 92530

OCCUPANT
510 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
510 CRANE ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
510 CRANE ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
510 CRANE ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
520 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
520 CRANE ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
520 CRANE ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
520 CRANE ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
530 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
530 CRANE ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
530 CRANE ST STE E
LAKE ELSINORE, CA 92530

OCCUPANT
530 CRANE ST STE F
LAKE ELSINORE, CA 92530

OCCUPANT
530 CRANE ST STE G
LAKE ELSINORE, CA 92530

OCCUPANT
540 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
590 CRANE ST
LAKE ELSINORE, CA 92530

OCCUPANT
592 CRANE ST
LAKE ELSINORE, CA 92530

OCCUPANT
596 CRANE ST
LAKE ELSINORE, CA 92530

OCCUPANT
598 CRANE ST
LAKE ELSINORE, CA 92530

OCCUPANT
600 CRANE ST
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18421 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE D
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE E
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE F
LAKE ELSINORE, CA 92530

OCCUPANT
18451 COLLIER AVE STE G
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE B
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE E
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE F
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE G
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE H
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE I-A
LAKE ELSINORE, CA 92530

OCCUPANT
571 CRANE ST STE J
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE D1
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE D2
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE F
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE G
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE H
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE I1
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE J1
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE J2
LAKE ELSINORE, CA 92530

OCCUPANT
570 CENTRAL AVE STE J3
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE A
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE B
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE C
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE D
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE E
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE F
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE G
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE G2
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H101
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H103
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H105
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H106
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H107
LAKE ELSINORE, CA 92530

OCCUPANT
600 CENTRAL AVE STE H108
LAKE ELSINORE, CA 92530

OCCUPANT
601 CRANE ST STE A
LAKE ELSINORE, CA 92530

OCCUPANT
601 CRANE ST STE C
LAKE ELSINORE, CA 92530

OCCUPANT
601 CRANE ST STE D
LAKE ELSINORE, CA 92530

OCCUPANT
530 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
550 CENTRAL AVE
LAKE ELSINORE, CA 92530

OCCUPANT
29190 RIVERSIDE DR
LAKE ELSINORE, CA 92530

OCCUPANT
29170 RIVERSIDE DR STE A
LAKE ELSINORE, CA 92530

OCCUPANT
29170 RIVERSIDE DR STE C
LAKE ELSINORE, CA 92530

OCCUPANT
18170 COLLIER AVE
LAKE ELSINORE, CA 92530

OCCUPANT
18550 DEXTER AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29260 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29270 CENTRAL AVE
LAKE ELSINORE, CA 92532

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29250 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29230 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29300 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE A
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE C
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE D
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE E
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE F
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE G
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE H
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE I
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE J
LAKE ELSINORE, CA 92532

OCCUPANT
29280 CENTRAL AVE STE K
LAKE ELSINORE, CA 92532

OCCUPANT
29355 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29233 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29255 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29261 CENTRAL AVE STE A
LAKE ELSINORE, CA 92532

OCCUPANT
29261 CENTRAL AVE STE C
LAKE ELSINORE, CA 92532

OCCUPANT
29263 CENTRAL AVE STE A
LAKE ELSINORE, CA 92532

OCCUPANT
29263 CENTRAL AVE STE C
LAKE ELSINORE, CA 92532

OCCUPANT
29263 CENTRAL AVE STE D
LAKE ELSINORE, CA 92532

OCCUPANT
29263 CENTRAL AVE STE E
LAKE ELSINORE, CA 92532

OCCUPANT
29263 CENTRAL AVE STE F
LAKE ELSINORE, CA 92532

OCCUPANT
29265 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29273 CENTRAL AVE STE A
LAKE ELSINORE, CA 92532

OCCUPANT
29273 CENTRAL AVE STE C
LAKE ELSINORE, CA 92532

OCCUPANT
29273 CENTRAL AVE STE D
LAKE ELSINORE, CA 92532

OCCUPANT
29273 CENTRAL AVE STE E
LAKE ELSINORE, CA 92532

OCCUPANT
29275 CENTRAL AVE
LAKE ELSINORE, CA 92532

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29285 CENTRAL AVE
LAKE ELSINORE, CA 92532

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29295 CENTRAL AVE
LAKE ELSINORE, CA 92532

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29315 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29225 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29227 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29229 CENTRAL AVE STE A
LAKE ELSINORE, CA 92532

OCCUPANT
29229 CENTRAL AVE STE C
LAKE ELSINORE, CA 92532

OCCUPANT
29229 CENTRAL AVE STE B
LAKE ELSINORE, CA 92532

OCCUPANT
29231 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
29335 CENTRAL AVE
LAKE ELSINORE, CA 92532

OCCUPANT
18611 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
29440 3RD ST
LAKE ELSINORE, CA 92532

RESIDENT
29489 3RD ST
LAKE ELSINORE, CA 92532

RESIDENT
29400 3RD ST
LAKE ELSINORE, CA 92532

RESIDENT
28963 RED GUM DR
LAKE ELSINORE, CA 92532

RESIDENT
28991 RED GUM DR
LAKE ELSINORE, CA 92532

RESIDENT
28970 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
18265 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
18285 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
28840 11TH ST
LAKE ELSINORE, CA 92532

RESIDENT
18253 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18254 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18258 GAFFEY LN
LAKE ELSINORE, CA 92532

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18260 GAFFEY LN
LAKE ELSINORE, CA 92532

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18273 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18280 GAFFEY LN
LAKE ELSINORE, CA 92532

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18281 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18311 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18314 GAFFEY LN
LAKE ELSINORE, CA 92532

RESIDENT
18254 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
18270 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
18275 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
18290 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
18250 DON JUAN ST
LAKE ELSINORE, CA 92532

RESIDENT
28864 11TH ST
LAKE ELSINORE, CA 92532

OCCUPANT
18451 DEXTER AVE
LAKE ELSINORE, CA 92532

OCCUPANT
18492 DEXTER AVE
LAKE ELSINORE, CA 92532

OCCUPANT
18601 DEXTER AVE
LAKE ELSINORE, CA 92532

OCCUPANT
18625 DEXTER AVE
LAKE ELSINORE, CA 92532

RESIDENT
2125 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2089 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2075 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2065 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2000 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2008 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2016 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2024 GEORGETOWN DR
CORONA, CA 92881

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2030 GEORGETOWN DR
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2100 GEORGETOWN DR
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2120 GEORGETOWN DR
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2140 GEORGETOWN DR
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RESIDENT
2160 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
2180 GEORGETOWN DR
CORONA, CA 92881

OCCUPANT
3777 BEDFORD CANYON RD
CORONA, CA 92883

OCCUPANT
2243 EAGLE GLEN PKWY
CORONA, CA 92883

OCCUPANT
3811 BEDFORD CANYON RD STE 101
CORONA, CA 92883

OCCUPANT
3811 BEDFORD CANYON RD STE 103
CORONA, CA 92883

OCCUPANT
3811 BEDFORD CANYON RD STE 104
CORONA, CA 92883

OCCUPANT
3811 BEDFORD CANYON RD STE 105
CORONA, CA 92883

OCCUPANT
3811 BEDFORD CANYON RD STE 108
CORONA, CA 92883

OCCUPANT
3833 BEDFORD CANYON RD STE 101
CORONA, CA 92883

OCCUPANT
3833 BEDFORD CANYON RD STE 102
CORONA, CA 92883

OCCUPANT
3833 BEDFORD CANYON RD STE 103
CORONA, CA 92883

OCCUPANT
2225 EAGLE GLEN PKWY STE 101
CORONA, CA 92883

OCCUPANT
3855 BEDFORD CANYON RD
CORONA, CA 92883

OCCUPANT
3877 BEDFORD CANYON RD
CORONA, CA 92883

OCCUPANT
2225 EAGLE GLEN PKWY STE 102
CORONA, CA 92883

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2225 EAGLE GLEN PKWY STE 103
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2225 EAGLE GLEN PKWY STE 104
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2225 EAGLE GLEN PKWY STE 105
CORONA, CA 92883

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2279 EAGLE GLEN PKWY STE 101
CORONA, CA 92883

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2279 EAGLE GLEN PKWY STE 102
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2279 EAGLE GLEN PKWY STE 109
CORONA, CA 92883

OCCUPANT
2279 EAGLE GLEN PKWY STE 112
CORONA, CA 92883

OCCUPANT
2261 EAGLE GLEN PKWY
CORONA, CA 92883

RESIDENT
2106 SAWGRASS CREEK LN
CORONA, CA 92883

RESIDENT
2114 SAWGRASS CREEK LN
CORONA, CA 92883

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2122 SAWGRASS CREEK LN
CORONA, CA 92883

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2121 SAWGRASS CREEK LN
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2113 SAWGRASS CREEK LN
CORONA, CA 92883

RESIDENT
2105 SAWGRASS CREEK LN
CORONA, CA 92883

RESIDENT
2106 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
2118 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
2130 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
2142 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
2154 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
3952 BARTON CREEK CIR
CORONA, CA 92883

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3968 BARTON CREEK CIR
CORONA, CA 92883

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3982 BARTON CREEK CIR
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2167 CRYSTAL DOWNS DR
CORONA, CA 92883

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2155 CRYSTAL DOWNS DR
CORONA, CA 92883

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2143 CRYSTAL DOWNS DR
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2131 CRYSTAL DOWNS DR
CORONA, CA 92883

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2119 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
2107 CRYSTAL DOWNS DR
CORONA, CA 92883

RESIDENT
7491 BOYD AVE
CORONA, CA 92881

RESIDENT
7400 BOYD AVE
CORONA, CA 92881

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7401 BOYD AVE
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7471 BOYD AVE
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7490 BOYD AVE
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20188 KLYNE ST
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RESIDENT
20206 KLYNE ST
CORONA, CA 92881

RESIDENT
7262 BOBBITT AVE
CORONA, CA 92881

RESIDENT
7263 BOBBITT AVE
CORONA, CA 92881

RESIDENT
7360 BOBBITT AVE
CORONA, CA 92881

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7363 BOBBITT AVE
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7385 BOBBITT AVE
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7465 BOBBITT AVE
CORONA, CA 92881

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7520 BOYD AVE
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CORONA, CA 92881

RESIDENT
7415 BOBBITT AVE
CORONA, CA 92881

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20011 CASE ST
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20020 NEWTON ST
CORONA, CA 92881

RESIDENT
20031 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
20045 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
20117 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
20121 CORONA ST
CORONA, CA 92881

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20131 CORONA ST
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20151 CORONA ST
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20179 ORANGE ST
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20195 ORANGE ST
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20201 ORANGE ST
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20210 ORANGE ST
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RESIDENT
20198 ORANGE ST
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RESIDENT
20225 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
20285 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
2089 GEORGETOWN DR
CORONA, CA 92881

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2075 GEORGETOWN DR
CORONA, CA 92881

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2065 GEORGETOWN DR
CORONA, CA 92881

RESIDENT
3725 ADDICOTT CIR
CORONA, CA 92881

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3700 ADDICOTT CIR
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RESIDENT
2900 VILLA CATALONIA CIR
CORONA, CA 92881

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2901 VILLA CATALONIA CIR
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2995 VILLA CATALONIA CIR
CORONA, CA 92881

RESIDENT
2998 VILLA CATALONIA CIR
CORONA, CA 92881

RESIDENT
2999 VILLA CATALONIA CIR
CORONA, CA 92881

RESIDENT
19850 LAYTON ST
CORONA, CA 92881

RESIDENT
19890 LAYTON ST
CORONA, CA 92881

RESIDENT
19915 LAYTON ST
CORONA, CA 92881

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19945 LAYTON ST
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19985 LAYTON ST
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19990 LAYTON ST
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RESIDENT
20075 LAYTON ST
CORONA, CA 92881

RESIDENT
7185 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7205 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7235 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7245 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7251 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7205 LIBERTY AVE
CORONA, CA 92881

RESIDENT
20010 KAYNE ST
CORONA, CA 92881

RESIDENT
20034 KAYNE ST
CORONA, CA 92881

RESIDENT
20035 KAYNE ST
CORONA, CA 92881

RESIDENT
20042 KAYNE ST
CORONA, CA 92881

RESIDENT
7275 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7191 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7201 LIBERTY AVE
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7239 LIBERTY AVE
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7270 LIBERTY AVE
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7291 LIBERTY AVE
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7300 LIBERTY AVE
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7330 LIBERTY AVE
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7370 LIBERTY AVE
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7401 LIBERTY AVE
CORONA, CA 92881

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7420 LIBERTY AVE
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RESIDENT
7430 LIBERTY AVE
CORONA, CA 92881

RESIDENT
19835 BEDFORD CANYON RD
CORONA, CA 92881

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19845 BEDFORD CANYON RD
CORONA, CA 92881

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19855 BEDFORD CANYON RD
CORONA, CA 92881

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19905 BEDFORD CANYON RD
CORONA, CA 92881

RESIDENT
20011 CASE ST
CORONA, CA 92881

RESIDENT
20023 CASE ST
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RESIDENT
20043 CASE ST
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20057 CASE ST
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RESIDENT
20075 CASE ST
CORONA, CA 92881

RESIDENT
20085 CASE ST
CORONA, CA 92881

RESIDENT
20095 CASE ST
CORONA, CA 92881

RESIDENT
7570 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7429 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7461 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7473 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7489 EL CERRITO RD
CORONA, CA 92881

RESIDENT
19781 EVELYN ST APT A
CORONA, CA 92881

RESIDENT
19781 EVELYN ST APT B
CORONA, CA 92881

RESIDENT
19789 EVELYN ST
CORONA, CA 92881

RESIDENT
19801 EVELYN ST
CORONA, CA 92881

RESIDENT
19794 EVELYN ST
CORONA, CA 92881

RESIDENT
19780 EVELYN ST
CORONA, CA 92881

RESIDENT
7511 EL CERRITO RD
CORONA, CA 92881

RESIDENT
7531 EL CERRITO RD
CORONA, CA 92881

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7549 EL CERRITO RD
CORONA, CA 92881

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7591 EL CERRITO RD
CORONA, CA 92881

RESIDENT
19711 KATY WAY
CORONA, CA 92881

RESIDENT
19700 KATY WAY
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19720 KATY WAY
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19872 KATY WAY
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19888 KATY WAY
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19962 KATY WAY
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RESIDENT
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CORONA, CA 92881

RESIDENT
19841 FRANCES ST
CORONA, CA 92881

RESIDENT
19835 FRANCES ST
CORONA, CA 92881

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19800 FRANCES ST
CORONA, CA 92881

RESIDENT
7573 MARILYN DR
CORONA, CA 92881

RESIDENT
7569 MARILYN DR
CORONA, CA 92881

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7559 MARILYN DR
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7549 MARILYN DR
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7500 MARILYN DR
CORONA, CA 92881

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CORONA, CA 92881

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CORONA, CA 92881

RESIDENT
7510 MARILYN DR
CORONA, CA 92881

RESIDENT
19834 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19810 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19780 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19770 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19760 GRANDVIEW DR APT A
CORONA, CA 92881

RESIDENT
19760 GRANDVIEW DR APT A
CORONA, CA 92881

RESIDENT
19760 GRANDVIEW DR APT B
CORONA, CA 92881

RESIDENT
19771 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19781 GRANDVIEW DR
CORONA, CA 92881

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19787 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19791 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19793 GRANDVIEW DR
CORONA, CA 92881

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RESIDENT
19833 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19837 GRANDVIEW DR
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RESIDENT
19845 GRANDVIEW DR
CORONA, CA 92881

RESIDENT
19899 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19911 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19921 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19995 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19997 WASHINGTON ST
CORONA, CA 92881

RESIDENT
7750 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7740 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7670 LIBERTY AVE
CORONA, CA 92881

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7630 LIBERTY AVE
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7770 LIBERTY AVE
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7762 LIBERTY AVE
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RESIDENT
7710 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7742 LIBERTY AVE
CORONA, CA 92881

RESIDENT
7540 LIBERTY AVE
CORONA, CA 92881

RESIDENT
19992 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19960 WASHINGTON ST
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RESIDENT
19950 WASHINGTON ST
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RESIDENT
19930 WASHINGTON ST
CORONA, CA 92881

RESIDENT
19900 WASHINGTON ST
CORONA, CA 92881

RESIDENT
7451 MARILYN DR
CORONA, CA 92881

RESIDENT
7439 MARILYN DR
CORONA, CA 92881

RESIDENT
7419 MARILYN DR
CORONA, CA 92881

RESIDENT
7405 MARILYN DR
CORONA, CA 92881

OCCUPANT
2415 TUSCANY ST STE 101
CORONA, CA 92881

OCCUPANT
2437 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2459 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2470 TUSCANY ST STE 101
CORONA, CA 92881

OCCUPANT
2489 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2519 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2415 TUSCANY ST STE 102
CORONA, CA 92881

OCCUPANT
2470 TUSCANY ST STE 102
CORONA, CA 92881

OCCUPANT
2470 TUSCANY ST STE 103
CORONA, CA 92881

OCCUPANT
2470 TUSCANY ST STE 104
CORONA, CA 92881

OCCUPANT
2520 TUSCANY ST
CORONA, CA 92881

OCCUPANT
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CORONA, CA 92881

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2563 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2585 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2615 TUSCANY ST
CORONA, CA 92881

OCCUPANT
3335 GRAND OAKS
CORONA, CA 92881

OCCUPANT
3347 GRAND OAKS
CORONA, CA 92881

OCCUPANT
3431 GRAND OAKS STE 102
CORONA, CA 92881

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3383 GRAND OAKS STE 101
CORONA, CA 92881

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3383 GRAND OAKS STE 102
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3383 GRAND OAKS STE 103
CORONA, CA 92881

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3383 GRAND OAKS STE 104
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CORONA, CA 92881

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3417 GRAND OAKS STE 102
CORONA, CA 92881

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CORONA, CA 92881

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CORONA, CA 92881

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3359 GRAND OAKS STE 101
CORONA, CA 92881

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3359 GRAND OAKS STE 102
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CORONA, CA 92881

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3555 GRAND OAKS
CORONA, CA 92881

OCCUPANT
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CORONA, CA 92881

OCCUPANT
2620 TUSCANY ST STE 103
CORONA, CA 92881

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2620 TUSCANY ST STE 105
CORONA, CA 92881

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2620 TUSCANY ST STE 106
CORONA, CA 92881

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2620 TUSCANY ST STE 107
CORONA, CA 92881

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2690 TUSCANY ST STE 101
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CORONA, CA 92881

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3580 GRAND OAKS STE 107
CORONA, CA 92881

OCCUPANT
3615 GRAND OAKS
CORONA, CA 92881

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CORONA, CA 92881

OCCUPANT
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CORONA, CA 92881

OCCUPANT
2540 TUSCANY ST STE 102
CORONA, CA 92881

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OCCUPANT
2530 TUSCANY ST
CORONA, CA 92881

OCCUPANT
2541 TUSCANY ST STE 101
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2541 TUSCANY ST STE 103
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CORONA, CA 92881

OCCUPANT
3643 GRAND OAKS STE 101
CORONA, CA 92881

OCCUPANT
3665 GRAND OAKS STE 101
CORONA, CA 92881

OCCUPANT
3665 GRAND OAKS STE 102
CORONA, CA 92881

OCCUPANT
3665 GRAND OAKS STE 103
CORONA, CA 92881

RESIDENT
1801 MARQUEZ WAY
CORONA, CA 92881

RESIDENT
1809 MARQUEZ WAY
CORONA, CA 92881

RESIDENT
1819 MARQUEZ WAY
CORONA, CA 92881

RESIDENT
1827 MARQUEZ WAY
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1835 MARQUEZ WAY
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1843 MARQUEZ WAY
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1851 MARQUEZ WAY
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1867 MARQUEZ WAY
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RESIDENT
1875 MARQUEZ WAY
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RESIDENT
1881 MARQUEZ WAY
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RESIDENT
1893 MARQUEZ WAY
CORONA, CA 92881

RESIDENT
2810 MENORCA CIR
CORONA, CA 92881

RESIDENT
2811 MENORCA CIR
CORONA, CA 92881

RESIDENT
2815 MENORCA CIR
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2891 MENORCA CIR
CORONA, CA 92881

RESIDENT
2895 MENORCA CIR
CORONA, CA 92881

RESIDENT
2899 MENORCA CIR
CORONA, CA 92881

RESIDENT
8180 WEIRICK RD
CORONA, CA 92883

RESIDENT
8411 NOB HILL RD
CORONA, CA 92883

RESIDENT
8455 WEIRICK RD
CORONA, CA 92883

RESIDENT
8456 WEIRICK RD
CORONA, CA 92883

RESIDENT
8395 SUMMER HILL LN
CORONA, CA 92883

RESIDENT
8433 SUMMER HILL LN
CORONA, CA 92883

RESIDENT
8483 SUMMER HILL LN
CORONA, CA 92883

OCCUPANT
8540 WEIRICK RD
CORONA, CA 92883

RESIDENT
8390 NOB HILL RD
CORONA, CA 92883

RESIDENT
8510 NOB HILL RD
CORONA, CA 92883

RESIDENT
8530 NOB HILL RD
CORONA, CA 92883

RESIDENT
8265 GAMBIER CT
CORONA, CA 92883

RESIDENT
8333 GAMBIER CT
CORONA, CA 92883

RESIDENT
8335 GLEN RD
CORONA, CA 92883

RESIDENT
8405 GLEN RD
CORONA, CA 92883

RESIDENT
8580 GLEN RD
CORONA, CA 92883

RESIDENT
8600 GLEN RD
CORONA, CA 92883

RESIDENT
8640 GLEN RD
CORONA, CA 92883

RESIDENT
8218 GREG ALAN CT
CORONA, CA 92883

RESIDENT
8220 GREG ALAN CT
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 101
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 102
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 103
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 104
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 105
CORONA, CA 92883

RESIDENT
2786 EVANS LN UNIT 106
CORONA, CA 92883

RESIDENT
2777 EVANS LN UNIT 101
CORONA, CA 92883

RESIDENT
2777 EVANS LN UNIT 102
CORONA, CA 92883

RESIDENT
2777 EVANS LN UNIT 105
CORONA, CA 92883

RESIDENT
2777 EVANS LN UNIT 106
CORONA, CA 92883

RESIDENT
2772 APOLLO WAY UNIT 101
CORONA, CA 92883

RESIDENT
2772 APOLLO WAY UNIT 102
CORONA, CA 92883

RESIDENT
2772 APOLLO WAY UNIT 103
CORONA, CA 92883

RESIDENT
2772 APOLLO WAY UNIT 104
CORONA, CA 92883

RESIDENT
2772 APOLLO WAY UNIT 105
CORONA, CA 92883

RESIDENT
4280 ODYSSEY DR UNIT 101
CORONA, CA 92883

RESIDENT
4280 ODYSSEY DR UNIT 102
CORONA, CA 92883

RESIDENT
4280 ODYSSEY DR UNIT 103
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RESIDENT
4280 ODYSSEY DR UNIT 106
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 101
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 102
CORONA, CA 92883

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4261 ODYSSEY DR UNIT 109
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4261 ODYSSEY DR UNIT 110
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 112
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 115
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 116
CORONA, CA 92883

RESIDENT
4261 ODYSSEY DR UNIT 117
CORONA, CA 92883

OCCUPANT
3940 TEMESCAL CANYON RD
CORONA, CA 92883

OCCUPANT
4140 TEMESCAL CANYON RD STE 101
CORONA, CA 92883

OCCUPANT
4140 TEMESCAL CANYON RD STE 110
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 109
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 102
CORONA, CA 92883

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4160 TEMESCAL CANYON RD STE 302
CORONA, CA 92883

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4160 TEMESCAL CANYON RD STE 408
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 507
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 309
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 307
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 311
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 306
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 402
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 314C
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 312
CORONA, CA 92883

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CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 406
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OCCUPANT
4160 TEMESCAL CANYON RD STE 414
CORONA, CA 92883

OCCUPANT
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CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 500A
CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 610
CORONA, CA 92883

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CORONA, CA 92883

OCCUPANT
4160 TEMESCAL CANYON RD STE 401
CORONA, CA 92883

OCCUPANT
2731 BLUE SPRINGS DR
CORONA, CA 92883

RESIDENT
2700 BLUE SPRINGS DR UNIT 101
CORONA, CA 92883

RESIDENT
2700 BLUE SPRINGS DR UNIT 201
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CORONA, CA 92883

OCCUPANT
2785 LAKESHORE DR
CORONA, CA 92883

OCCUPANT
2765 LAKESHORE DR
CORONA, CA 92883

OCCUPANT
2715 LAKESHORE DR
CORONA, CA 92883

OCCUPANT
2745 LAKESHORE DR
CORONA, CA 92883

OCCUPANT
2795 CABOT DR STE 101
CORONA, CA 92883

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OCCUPANT
2785 CABOT DR STE 175
CORONA, CA 92883

OCCUPANT
2710 LAKESHORE DR
CORONA, CA 92883

RESIDENT
4424 OWENS ST UNIT 101
CORONA, CA 92883

RESIDENT
4424 OWENS ST UNIT 102
CORONA, CA 92883

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4424 OWENS ST UNIT 103
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RESIDENT
4204 WINDSPRING ST
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4192 WINDSPRING ST
CORONA, CA 92883

OCCUPANT
3959 TEMESCAL CANYON RD
CORONA, CA 92883

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CORONA, CA 92883

OCCUPANT
4556 TEMESCAL CANYON RD
CORONA, CA 92883

RESIDENT
4501 TEMESCAL CANYON RD APT 101
CORONA, CA 92883

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OCCUPANT
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CORONA, CA 92883

OCCUPANT
2804 FASHION DR
CORONA, CA 92883

RESIDENT
2808 FASHION DR UNIT 101
CORONA, CA 92883

RESIDENT
2808 FASHION DR UNIT 102
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7.4 CHAPTER 4, COMMENTS AND COORDINATION

None cited.

Appendix A Section 4(f)

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Acronyms and Abbreviations

ACHP	Advisory Council on Historic Preservation
ADI	area of direct impact
APE	area of potential effects
Butterfield Trail	Butterfield Trail Stage Route Historic Alignment
Caltrans	California Department of Transportation
CFR	Code of Federal Regulations
CSO	Cultural Studies Office
DOI	Department of the Interior
FHWA	Federal Highway Administration
GIS	geographic information system
HPSR	Historic Property Survey Report
I-	Interstate
LOD	Limits of Disturbance
LWCF	Land and Water Conservation Fund
MSHCP	Multiple Species Habitat Conservation Plan
NPS	National Park Service
NRHP	National Register of Historic Places
PA	Programmatic Agreement
PM	post mile
PQP	public/quasi-public
Project	I-15 Express Lanes Project Southern Extension
RCA	Regional Conservation Authority
RCTC	Riverside County Transportation Commission
ROW	right of way
SHPO	State Historic Preservation Officer
SR	State Route
TCP	traditional cultural property
THPO	Tribal Historic Preservation Officer
USC	United States Code

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A.1 Introduction

The Riverside County Transportation Commission (RCTC), in cooperation with the California Department of Transportation (Caltrans), District 8, is proposing to construct new lanes along Interstate (I-) 15 between post mile (PM) 21.2 and PM 38.1 in Riverside County, California. The primary component of the I-15 Express Lanes Project Southern Extension (Project) would be the addition of two tolled express lanes in both the northbound and southbound directions within the median of Interstate I-15 from State Route (SR) 74 (Central Avenue) (PM 22.3) in the city of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the city of Corona, a distance of approximately 15.8 miles.

A.1.1 Section 4(f)

A.1.1.1 Section 4(f) of the Department of Transportation Act

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project… "requiring the use of publicly owned land of a public park, recreational area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, State, or local officials having jurisdiction over the park, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreational area, wildlife and waterfowl refuge, or historic site resulting from the use."

Section 4(f) further requires coordination with the Department of the Interior and, as appropriate, the involved offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer is also needed.

Responsibility for compliance with Section 4(f) has been assigned to the Department pursuant to 23 USC 326 and 327, including determinations and approval of Section 4(f) evaluations, as well as coordination with those agencies that have jurisdiction over a Section 4(f) resource that may be affected by a project action.

The Project is a transportation project that may receive federal funding and/or discretionary approvals through the U.S. Department of Transportation (i.e., Federal Highway Administration [FHWA]); therefore, documentation of compliance with Section 4(f) is required.

This Section 4(f) analysis provides documentation of compliance with Section 4(f) through an analysis of effects and a determination regarding use of public parks, recreational facilities, wildlife refuges, and historic properties as a result of the Project, along with the identification and evaluation of avoidance alternatives and measures to minimize harm, as applicable, in accordance with the requirements of Section 4(f).

To determine whether Section 4(f) applies to a federal transportation project, two prerequisites are considered: (1) the project must involve a resource that is protected under the provisions of Section 4(f) and (2) there must be a use of that resource. Resources subject to Section 4(f) consideration include publicly owned lands that are part of a public park or recreational areas of national, state, or local significance, whether publicly or privately owned.

A.1.1.2 Use of 4(f) Resources

As defined in 23 Code of Federal Regulations (CFR) 774.17, a “use” of a protected resource occurs when any of the following conditions are met:

- **Permanent Use:** Land is permanently incorporated into a transportation facility.
- **Temporary Use:** There is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose, as determined by the criteria in 23 CFR 774.13(d).
- **Constructive Use:** There is a constructive use of a Section 4(f) property, as determined by the criteria in 23 CFR 774.15.

Temporary Occupancy without Use

If the five conditions set forth in 23 CFR Section 774.13(d) can be satisfied, Section 4(f) does not apply.

1. The duration of the occupancy must be temporary (i.e., shorter than the period of construction) and not involve a change in ownership of the property.
2. The scope of the work must be minor, with only minimal changes to the protected resource.
3. There are no anticipated permanent adverse physical impacts on the protected resource and no temporary or permanent interference with the activities or purpose of the resource.
4. The land being used must be fully restored to a condition that at least equals the condition that existed prior to the project.

There must be documented agreement by the appropriate officials having jurisdiction over the Section 4(f) resource regarding the above conditions.

Section 4(f) and Planned and Programmed Projects

For planned and programmed projects, according to the Section 4(f) Policy Paper (FHWA 2012), for a project to be considered a Section 4(f) property, the public agency that owns the property must have formally designated the property and determined it to

be significant for park, recreational, or wildlife and waterfowl refuge purposes. Evidence of formal designation would be inclusion of the publicly owned land, as well as its function as a Section 4(f) property, in a city or county master plan. If a privately held property is formally designated into a master plan for future park development, Section 4(f) does not apply.

A.2 Section 4(f) Resources

This section identifies: (1) the steps taken to confirm Section 4(f) resources in the Project study area, which is defined as the Project footprint plus a 0.5-mile buffer; (2) confirms the resources that are either not subject to Section 4(f) protection or not in close enough proximity to Project activities to potentially result in a "use" as defined under Section 4(f); and (3) confirms the resources that would be subject to Section 4(f) protection, as discussed further in this analysis.

A.2.1 Determining Section 4(f) Resources

Two steps are considered in determining whether Section 4(f) applies to a project:

1. A project must involve a resource that is protected by the provisions of Section 4(f) and
2. There must be a "use" of that resource.

Protected resources include:

- Public parks and schools with publicly accessible recreational areas;
- Recreational areas of national, state, or local significance;
- Wildlife or waterfowl refuges; and
- Historic sites of national, state, or local significance.

In addition to the identification of properties within the Project study area that are subject to Section 4(f), this part of the document also discusses parks, recreational facilities, wildlife refuges, and historic properties found within or adjacent to the Limits of Disturbance (LOD) that do not trigger Section 4(f) protection because (1) they are not publicly owned, (2) they are not open to the public, (3) they are not eligible historic properties, or (4) the Project would not result in a use of the property or hinder preservation of the property.

As noted above, resources that are subject to Section 4(f) consideration include publicly owned lands such as public parks; recreational areas of national, state, or local significance; wildlife and waterfowl refuges; and historic sites of national, state, or local significance.

Resources in the Project study area were identified if they were:

- Existing publicly owned recreational and park resources, including local, regional, and state resources;
- Publicly owned wildlife and waterfowl refuges;
- Existing public bicycle, pedestrian, and equestrian trails; or
- Listed or eligible National Register of Historic Places (NRHP) historic sites.

A.2.2 Confirmed Section 4(f) Resources

Research was conducted to identify publicly owned parks, recreational areas, and wildlife and waterfowl refuges within or immediately adjacent to the Project footprint, along with historic sites within the Project area of potential effects (APE). According to the research, 34 properties within the Project study area qualify as Section 4(f) resources, including seven parks, three planned trails, 21 public/quasi-public (PQP)/conservation/mitigation lands under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and three historic properties. A summary of the resources identified in the study area is provided in Table A-1.

Table A-1. Summary of Properties Subject to Section 4(f) Consideration

Type of Property	Proximity to Project	Number of Properties Identified
Public Parks	Nearby	7
Public Schools with Recreational Areas[1]	N/A	0
Planned Trails	Within Project limits	3
Wildlife and Waterfowl Refuges	N/A	0
PQP and Conservation Lands	Nearby	21
NRHP-Eligible Archaeological Resources under Criterion A, B, or C	Within APE	3

Source: Geographic information system (GIS) and Historic Property Survey Report (Caltrans 2023a)
[1] Public schools are found within the 0.5-mile buffer; however, none of the recreational facilities at these schools are open to the public and are therefore not subject protection under Section 4(f).
N/A = Not available as property type not located within the Project study area; PQP= public/quasi-public; NRHP = National Register of Historic Places

Although not discussed in detail in this chapter, every Section 4(f) resource within the study area was analyzed for potential constructive use under all alternatives.

A.2.2.1 Public Parks and Recreational Facilities

A park qualifies for protection under Section 4(f) if (1) the property is publicly owned, (2) the park is open to the general public, (3) it is being used for outdoor recreation, and (4) it is considered significant by the authority with jurisdiction. The park must be publicly owned at the point at which the “use” occurs.

Figure A-1 provides a map of public parks, planned trails, and PQP/conservation and/or mitigation lands that are subject to Section 4(f). A list the three planned within the LOD can be found in Section A.3.

El Cerrito Sports Park is adjacent to and shares a boundary with the Project limits of disturbance. The western boundary of El Cerrito Sport Park that runs parallel to I-15 is bordered by vegetation and is not an access point to the park, as the primary park entrances are along the southern boundary of the park. The El Cerrito Sports Park

central parking lot is accessed via El Cerrito Road. A second parking lot can be found at the northern end of the sports park and is accessed via Rudell Road. Construction of the Project would occur within the existing right of way (ROW) and mainly in the median; therefore, access to El Cerrito Sports Park would not be inhibited or blocked off as a result of construction. No adverse effects on this resource are anticipated during construction; however, compliance with applicable local noise standards and Caltrans' Standard Specifications and Standard Project Measures would reduce construction-related impacts, if they were to occur, as they relate to noise and air quality. No proximity impacts that rise to the level of substantial impairment are anticipated for this resource. As there would be no use to this resource under Section 4(f), no additional analysis will be required for this resource.

Legend

1/2 Mile Buffer

Existing Right-of-Way (2008)

PQP Conseverd Lands

1 - Alberhill Creek

Parks

2 - Yarborough Park

Figure A-1, Sheet 1 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)

PQP Conseverd Lands

- 1 - Alberhill Creek

0 500 1,000 Feet

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Figure A-1, Sheet 2 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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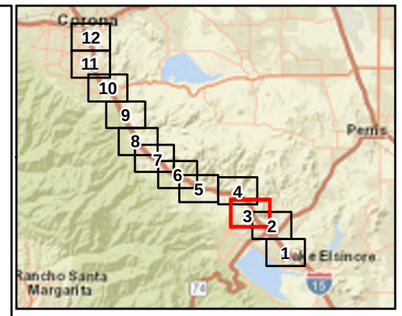

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)

RCA MSHCP Conserved Lands

- 3 - Northern Trust

N

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Figure A-1, Sheet 3 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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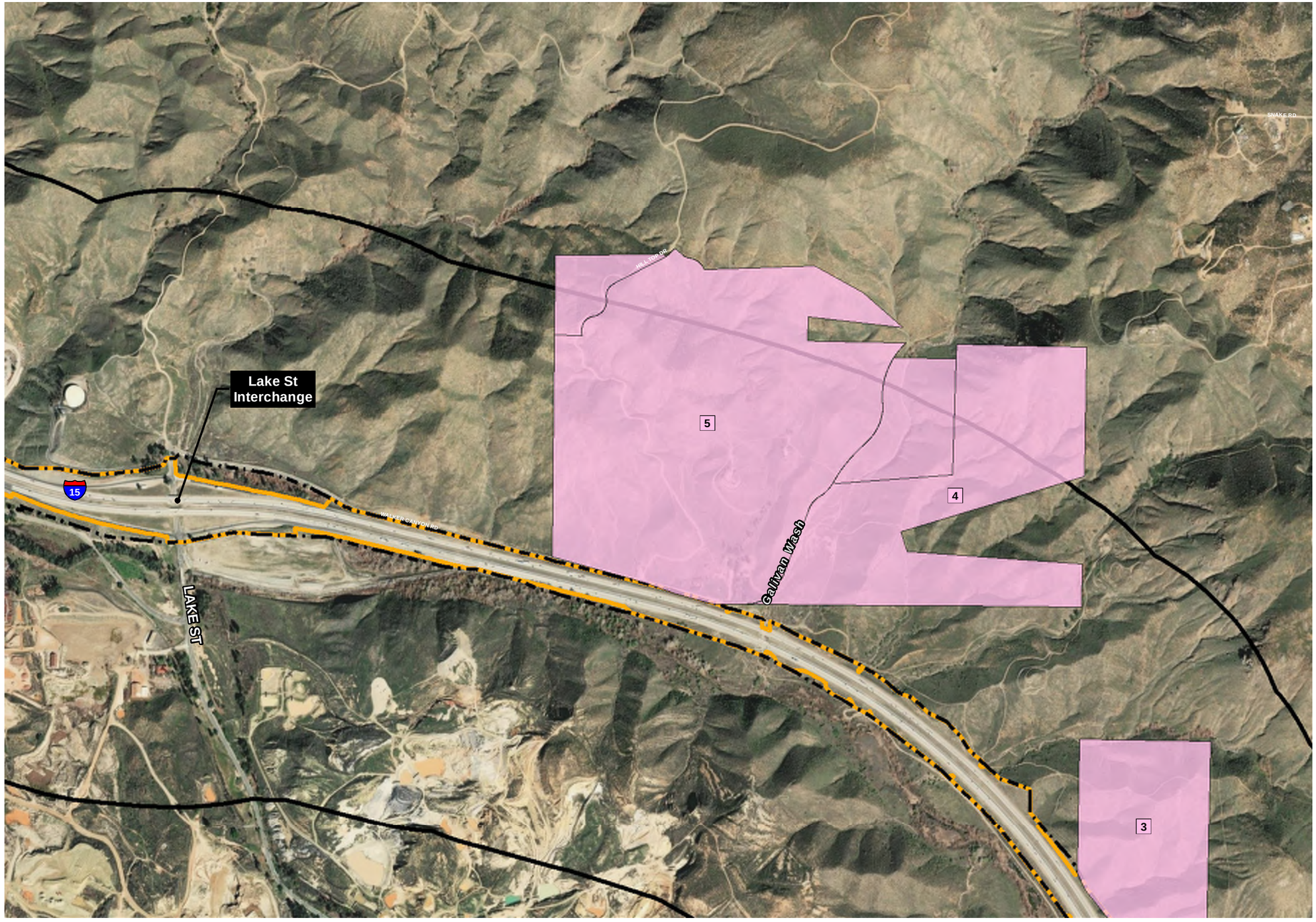

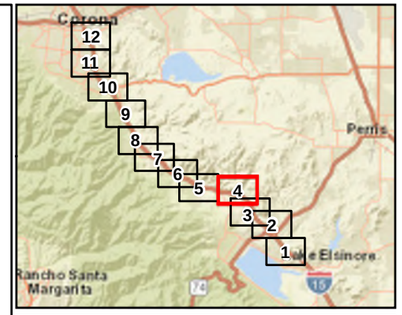

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)

RCA MSHCP Conserved Lands

- 3 - Northern Trust
- 4 - Reynolds Phase 1 (Smith & Reynolds)
- 5 - Reynolds Phase 2

N

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Figure A-1, Sheet 4 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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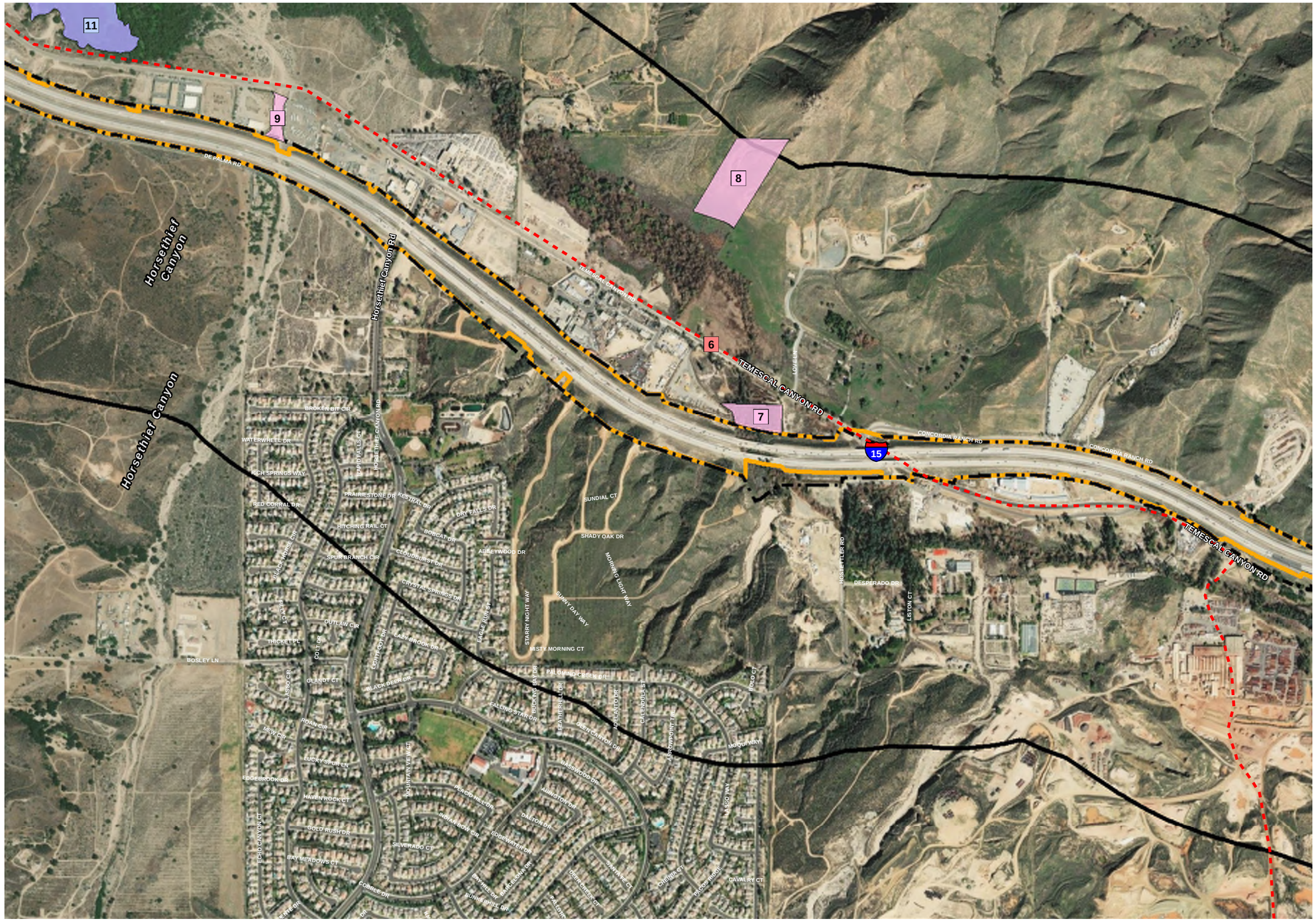

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

PQP Conseverd Lands

- 11 - Lake

RCA MSHCP Conserved Lands

- 7 - Bfw Corona
- 8 - Beador, David & Shannon
- 9 - Abdi

Planned Alignment Subject To Change

N

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Figure A-1, Sheet 5 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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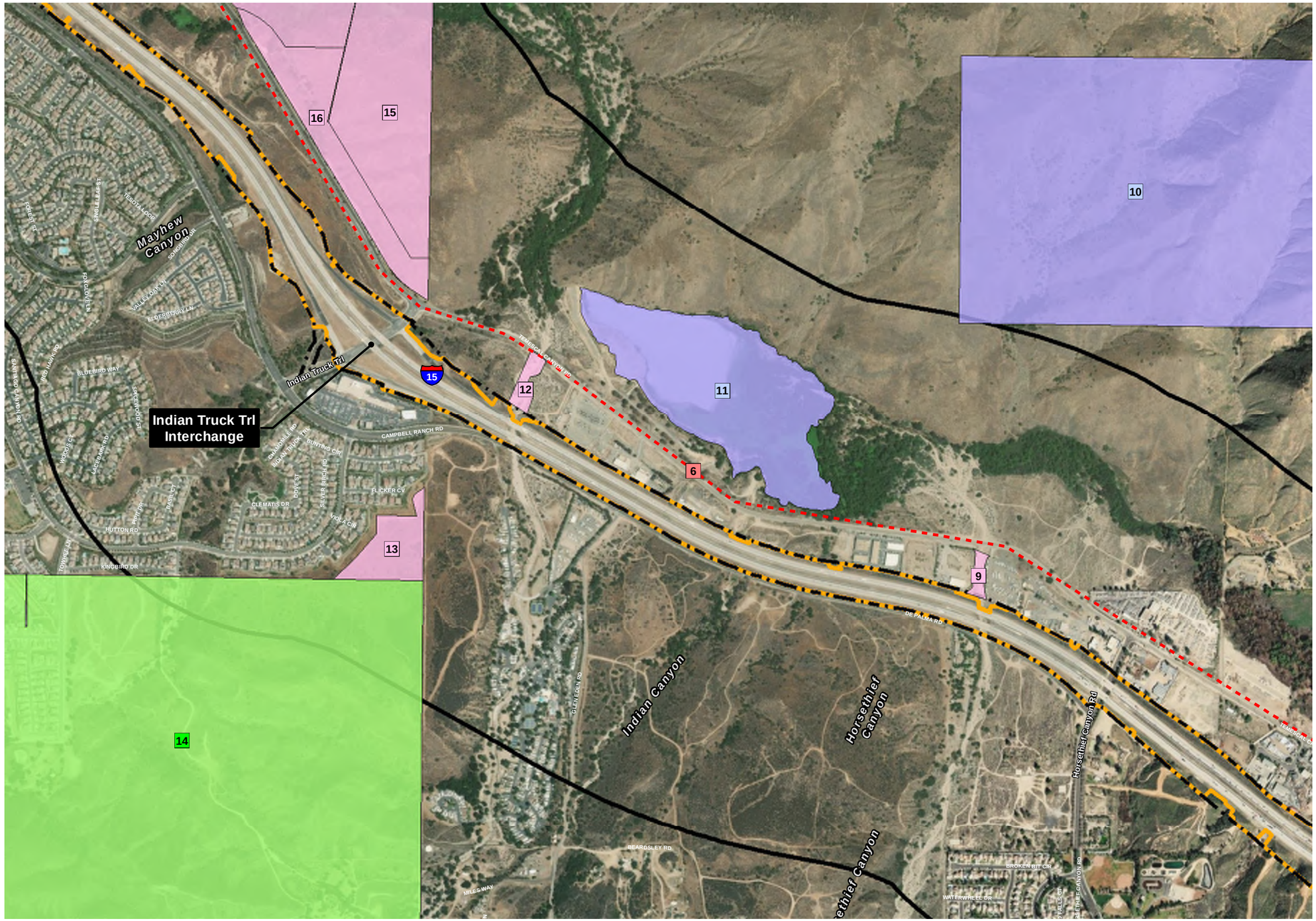

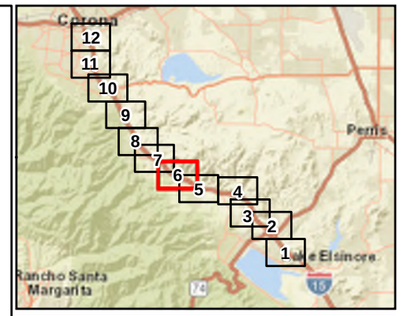

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

PQP Conseverd Lands

- 10 - Lake Mathews / Estelle Mountain Reserve
- 11 - Lake

Parks

- 14 - Cleveland National Forest

RCA MSHCP Conserved Lands

- 9 - Abdi
- 12 - Corona Canyon Donation Indian Wash
- 13 - Fieldstone Donation
- 15 - Morger, Janice Donation
- 16 - Toscana Donation Phase 1

Planned Alignment Subject To Change

N

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Figure A-1, Sheet 6 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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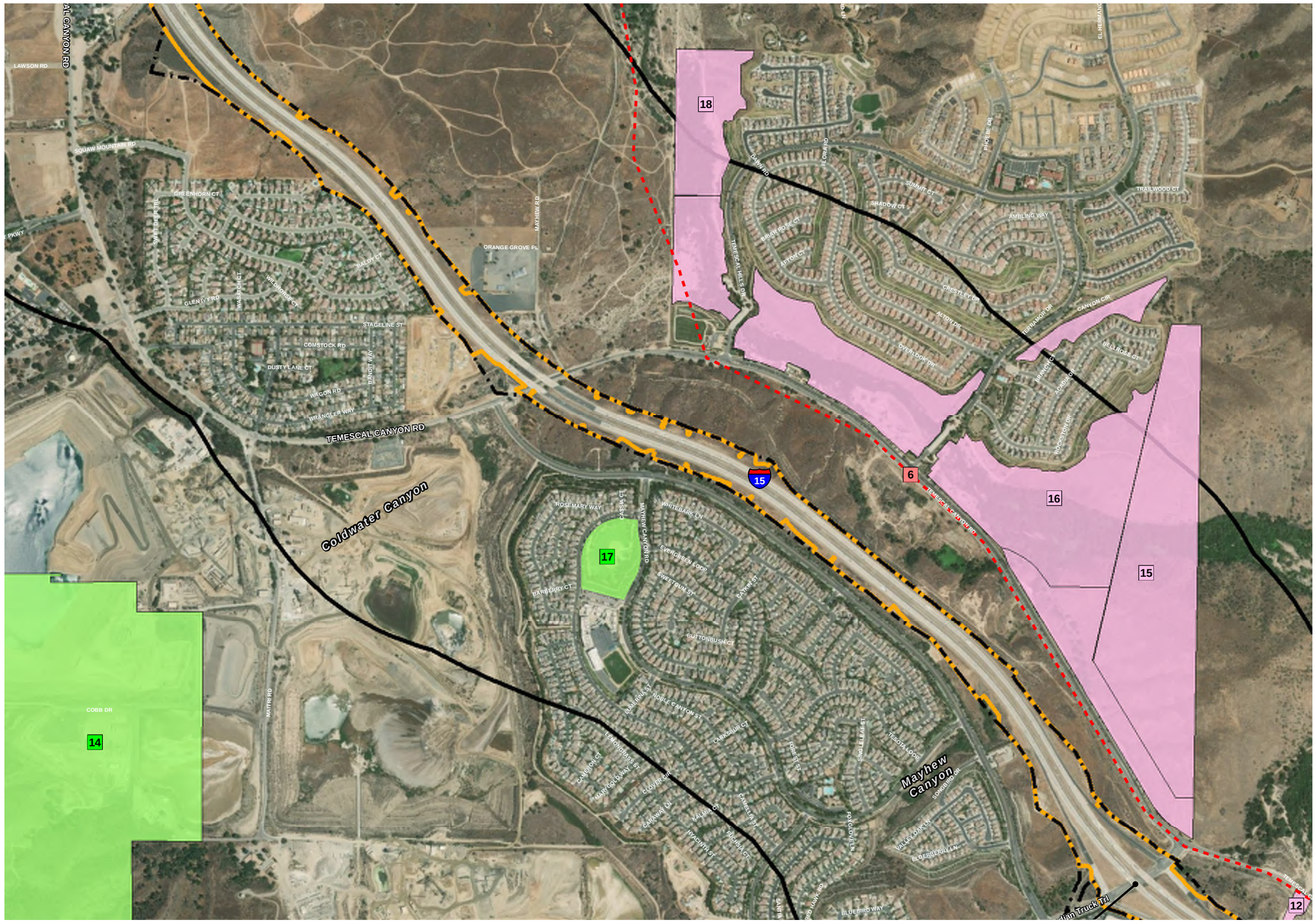

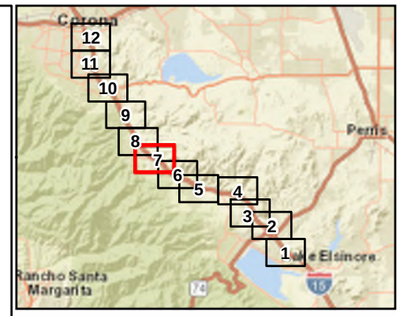

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

Parks

- 17 - Sycamore Creek Sports Park
- 14 - Cleveland National Forest

RCA MSHCP Conserved Lands

- 12 - Corona Canyon Donation Indian Wash
- 15 - Morger, Janice Donation
- 16 - Toscana Donation Phase 1
- 18 - Toscana Donation Phase 3

Planned Alignment Subject To Change

N

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Figure A-1, Sheet 7 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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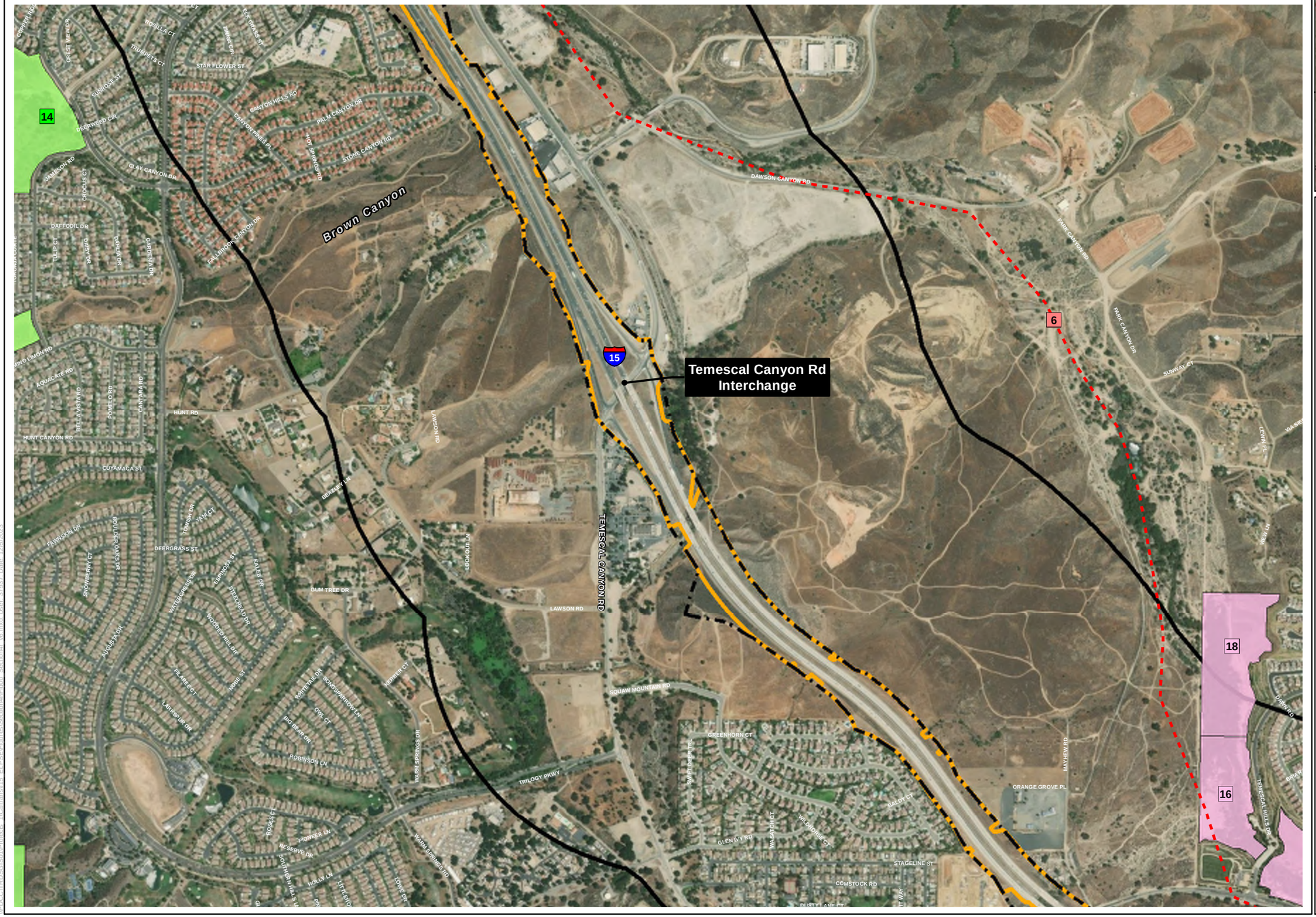

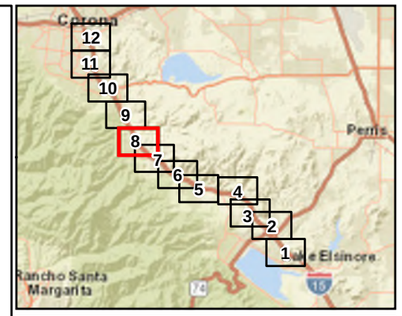

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

Parks

- 14 - Cleveland National Forest

RCA MSHCP Conserved Lands

- 16 - Toscana Donation Phase 1
- 18 - Toscana Donation Phase 3

Planned Alignment Subject To Change

N

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Figure A-1, Sheet 8 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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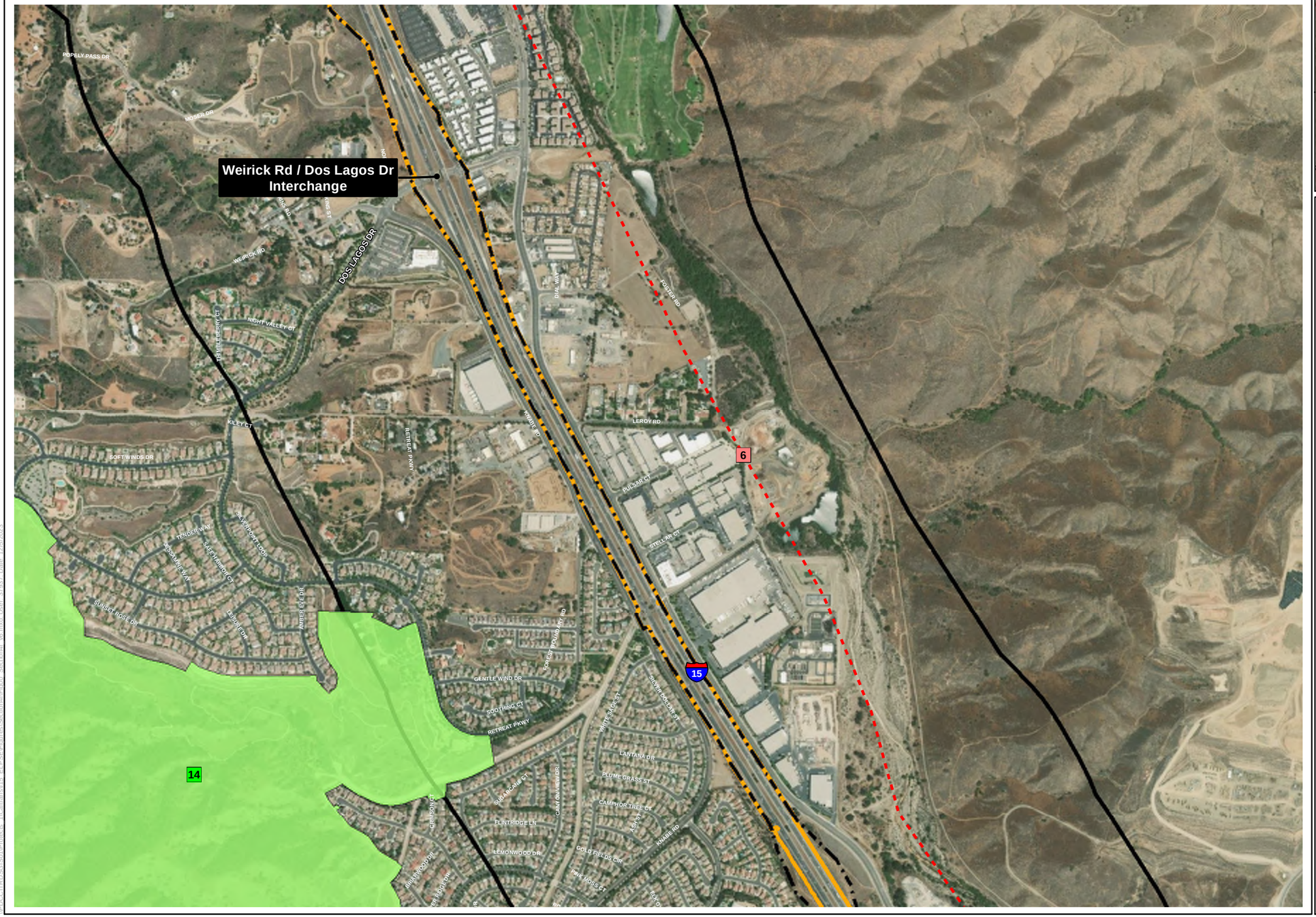

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

Parks

- 14 - Cleveland National Forest

Planned Alignment Subject To Change

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Figure A-1, Sheet 9 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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El Cerrito Rd Interchange
Cajalco Rd Interchange
22
6
21
20
19
15
EL CERRITO RD
Cajalco Rd
Eagle Glen Pkwy
LA GLORIA ST
SANTA RITA ST
EAGLE CANYON RD
GLEN RD
PARK LN
PRONIO CIR
PRONIO DR
BLUE SPRINGS DR
WILD SPRINGS LN
ECHO SPRING DR
LAKESHORE DR
GREG ALAN CT
BOBBITT AVE
BOBBITT ST
BOYD AVE
HAYDEN AVE
TURNER AVE
COURTNEY ST
KEITH AVE
GALLOWAY LN
HONORS LN
TAMARRON DR
SPYGLASS DR
FAIRWAY
HAVENRIDGE DR
OLYMPIA FIELDS DR
OLD WARSON CIR
RIVERSTONE ST
STARNE RD
TEDDY BEAR LN
LIBERTY AVE
PACKARD CIR
SARSAPRILLA DR
SMITH PATH
DELANCY LN
GEORGETOWN CIR
GEORGETOWN DR
ANNAPOLIS CIR
BEDFORD CANYON RD
CRYSTAL DOWNS DR
SAWGRASS CREEK LN
CASTLE PINES WAY
EL DORADO DR
COG HILL DR
LONG GOLF DR
BENNETT AVE
FOREST TRAIL LANDS CIR
GROOMED STEM LN
OLIVIA ST
HUDSON HOUSE DR
PALMER DR
CAMERON WAY
POWELL WAY
DES MOINES WAY
METTLE WAY
BETHANY WAY
VALLE DE NOVA WAY
NOVA WAY
COUPLES RD
FLOYD DR
WILLOWBURN DR
CARRIE WAY
CANYON DR
PALAZZO LN
CAPRI DR
METVO LN
OWENS ST
CANYON CREST DR
WINDSPRING ST
KATY WAY
FRANCES ST
PEPPER LN ST
MARILYN DR
LANDIER LN
GRANT ST
ARCADIA ST
FRANCISCA AVE
CARMELITA AVE
PERONITA ST
GLORIA AVE
GRAND OAKS
LAYTON ST
KAYE ST
GOSE ST
WINTON ST
ROCKWELL RD
ORANGE ST
SACKETT CT
CALIFORNIA ST
WAVERLY AVE
WARREN AVE
NELSON ST
KOWIS ST
WAYNE ST
SHANNON ST
MORALES CIR
MASTERS
BELAIRE CIR
CAMERON CIR
GRANVILLE DR
INVERNESS DR
NORMANDY LN
MARBLETOWN LN
SHOALCREEK DR
COMMANDO CT
RIVIERA DR
CRAWFORD LN
MARB WAY
SMITH PATH
WILD MARE CIR
MORALES WAY
MORALES CIR
CALICO CIR
WILDHORSE CIR
WILDHORSE WAY
WILDHORSE CIR
ARLETON CT
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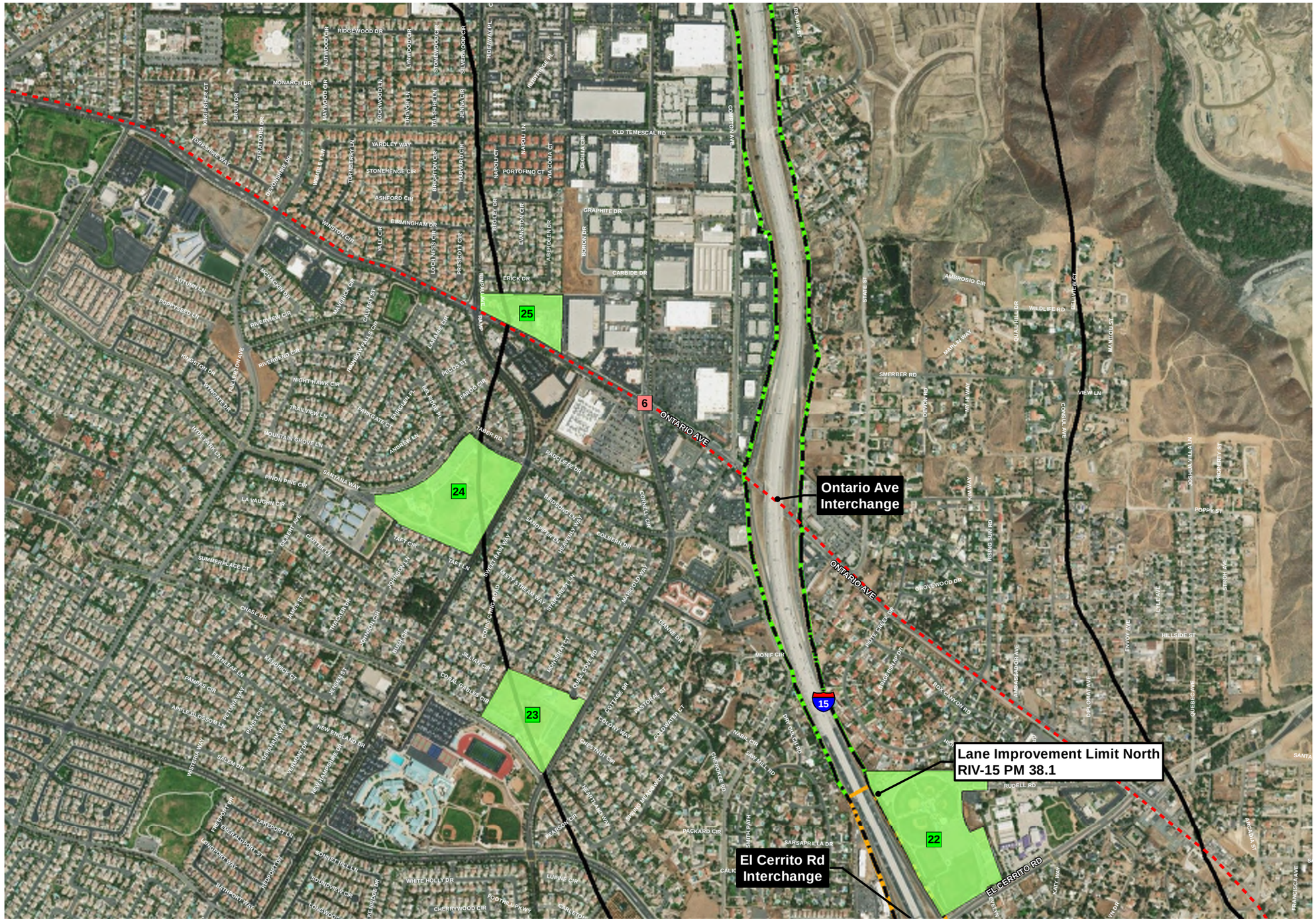

Legend

- 1/2 Mile Buffer
- Existing Right-of-Way (2008)
- 6 - Butterfield Trail Historic Alignment (Planned Trail)*

Parks

- 24 - Citrus Community Park
- 22 - El Cerrito Sports Park
- 25 - Rimpau Park
- 23 - Chase Park

**Planned Alignment Subject To Change*

N

0 500 1,000 Feet

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Figure A-1, Sheet 11 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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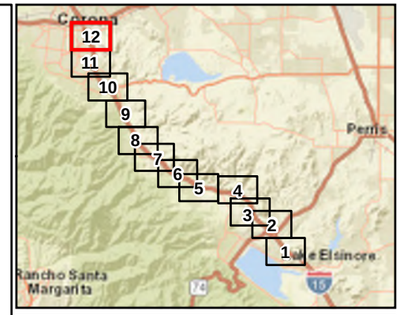

Legend

1/2 Mile Buffer

Existing Right-of-Way (2008)

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Figure A-1, Sheet 12 of 12
Section 4(f) Resources
Interstate 15 Express Lanes Project Southern Extension (I-15 ELPSE)

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A.2.2.2 Historic Sites

The determination of adverse effect under the Section 106 process (see 36 CFR 800.5) does not automatically mean that Section 4(f) will apply, nor does a determination of no adverse effect mean that Section 4(f) will not apply in some cases. When a project permanently incorporates land from a historic site, regardless of the Section 106 determination, Section 4(f) will apply. If a project does not permanently incorporate land from the historic property but results in an adverse effect, it will be necessary to further assess the proximity impacts of the project in terms of the potential for constructive use. This analysis is necessary to determine if the proximity impacts substantially impair the features or attributes that contribute to the NRHP eligibility of the historic site. If there is no substantial impairment, notwithstanding an adverse effect determination, there is no constructive use, and Section 4(f) does not apply. If there is substantial impairment, the determination is made by consulting with all identified officials with jurisdiction, including the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO) as well as the Advisory Council on Historic Preservation (ACHP), if participating, to identify the activities, features, and attributes of the property that qualify it for Section 4(f) protection and analyzing the proximity impacts of the project, including any mitigation, on those activities, features, and attributes (see 23 CFR 774.15[d][3]). The determination of Section 4(f) applicability is ultimately made by FHWA (Caltrans as assigned).

The study area for historic sites includes the Project APE, as established in accordance with the *First Amended Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as It Pertains to the Administration of the Federal-Aid Highway Program in California* (Section 106 Programmatic Agreement [PA]) Stipulation VIII.A. The APE includes the area of direct impact (ADI). The ADI, as determined from the Project footprint, includes those areas where permanent construction would occur and any needed temporary construction easements, along with an adequate buffer to allow heavy equipment to maneuver, and potential staging areas. In addition, the APE encompasses the full boundaries of previously recorded archaeological sites that intersect the ADI as well as entire parcels where proposed work would include construction of an auxiliary lane at the outer limits of the existing and proposed ROW and buildings on those parcels are within 150 feet of the existing and proposed ROW. The area defined by the ADI, as well as the previously identified archaeological sites, is referred to herein as the archaeological survey area.

Extensions of the APE for built-environment analysis were not surveyed by archaeologists in some areas because they are in locations where extensive disturbance from development-related construction, including grading and paving, has taken place. A map of the Project APE is included in the Historic Property Survey Report (HPSR) for the Cajalco Road Widening and Safety Enhancement Project as Attachment A, Figure 3 (Caltrans 2023a).

In applying the NRHP criteria for the evaluation of historic sites, the quality of significance in American history, architecture, archaeology, engineering, and culture present in districts, sites, buildings, structures, and objects that possess integrity of location, setting, materials, workmanship, feeling, and association is considered relative to one or more of the following:

(A) The resource is associated with events that have made a significant contribution to the broad patterns of our history; or

(B) The resource is associated with the lives of persons significant in our past; or

(C) The resource embodies distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction; or

(D) The resource has yielded, or may be likely to yield, information important in prehistory or history.

Section 4(f) applies to archaeological sites that are listed in or eligible for listing in the NRHP and that warrant preservation in place. Section 4(f) does not apply if FHWA (Caltrans, as assigned) determines that, after consultation with the SHPO/THPO, federally recognized Native American tribes (as appropriate), and the ACHP (if participating), the archaeological resource is important primarily because of what can be learned through data recovery, even if it is agreed that the resource will not be recovered, and it has minimal value for preservation in place. If after consultation the SHPO/THPO and ACHP (if participating) do not object to the determination that the resource is considered NRHP-eligible under Criterion D only, then Section 4(f) would not apply (see 23 CFR 774.13[b]).

The list below consists of the cultural resources within or adjacent to the APE identified in the records search, along with their status:

1. Prehistoric site P-33-000108/CA-RIV-108 (adjacent to APE; assumed eligible for the purposes of the Project only under Criterion D, with Cultural Studies Office (CSO) approval on January 27, 2023)
2. Prehistoric site P-33-000630/CA-RIV-630 (adjacent to the APE; assumed eligible for the purposes of the Project only under Criterion D, with CSO approval on January 27, 2023)
3. Prehistoric site P-33-000659/CA-RIV-659 (no longer extant in the APE)
4. Unknown site P-33-000703/CA-RIV-703 (no longer extant in the APE)
5. Prehistoric site P-33-001099/CA-RIV-1099 (adjacent to the APE; assumed eligible for the purposes of the Project only under Criterion D, with CSO approval on January 27, 2023)

6. Prehistoric site P-33-002992/CA-RIV-2992 (adjacent to the APE; assumed eligible for the purposes of the Project only under Criterion D, with CSO approval on January 27, 2023)
7. Southern California Railway/Atchison, Topeka & Santa Fe Railway in Temescal Canyon (P-33-003832/CA-RIV-3832) (previously determined ineligible for the NRHP, with SHPO concurrence dated February 10, 2021)
8. Historical period refuse scatter P-33-003858 (no longer extant in the APE; exempted from analysis per Section 106 PA Attachment 4)
9. Historical period debris site P-33-007919 (no longer extant in the APE; exempted from analysis per Section 106 PA Attachment 4)
10. Prehistoric isolate P-33-012660 (not identified during the survey; exempted from analysis per Section 106 PA Attachment 4)
11. Prehistoric isolate P-33-013691 (not identified during the survey; exempted from analysis per Section 106 PA Attachment 4)
12. Temescal Canyon Road (P-33-024785/CA-RIV-12277; P-33-028199) (previously determined not eligible for inclusion in the NRHP, with SHPO concurrence [those determinations remain valid])

During consultation between Caltrans District 8, on behalf of FHWA, and the Pechanga Band of Luiseño Mission Indians for another nearby project, three traditional cultural properties (TCPs) were identified: *Túu'uv* (TCP-1), *Qaxáalku Payómik* (TCP-2), and *Qaxáalku Kwíimik* (TCP-3). The tribe does not currently know the full extent and exact boundary of each TCP; however, together, they make up a vast, undefined geographic area that intersects portions of the current Project's APE and vicinity. The tribe considers the TCPs to be eligible for the NRHP under all four evaluation criteria; therefore, Caltrans District 8 assumes that these three TCPs are eligible for the NRHP under Criteria A, B, C, and D for the purposes of this Project only (March 10, 2022).

Table A-2 lists the historic sites within the study area and notes whether the historic site meets Section 4(f) criteria.

Table A-2. NRHP-Listed or -Eligible Historic Sites within the APE

Site Number/Name	Description	NRHP Status	Finding of Effect	Considered Section 4(f) Resource?[a]	Potential Use for the Build Alternative
Prehistoric site P-33-000108/CA-RIV-108	Lithic scatter	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-000630/CA-RIV-630	Lithic scatter	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-001099/CA-RIV-1099	Lithic scatter and milling site	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-002992/CA-RIV-2992	Habitation site	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Qaxáalku Kwíimik, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C, and D	No Adverse Effect	Yes	No
Qaxáalku Payómik, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C, and D	No Adverse Effect	Yes	No

Site Number/Name	Description	NRHP Status	Finding of Effect	Considered Section 4(f) Resource?[a]	Potential Use for the Build Alternative
Túu'uv, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C and D	No Adverse Effect	Yes	No

[a] If a resource is considered National Register of Historic Places-eligible under Criterion D only, then Section 4(f) would not apply (see 23 Code of Federal Regulations 774.13[b]). These resources were determined to not warrant preservation in place.
APE = area of potential effects; NRHP = National Register of Historic Places

A.3 Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination(s)

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 USC 303, declares that “it is the policy of the United States government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the Project area, which includes publicly owned lands within 0.5 mile of the Project LOD, that do not trigger Section 4(f) protection because (1) they are not publicly owned, (2) they are not open to the public, (3) they are not eligible historic properties, or (4) the Project would not permanently use the property and would not hinder preservation of the property.

Seven park and/or recreational areas are within the 0.5-mile buffer study area. The seven publicly owned properties are shown on Figure A-1 (note that only qualifying Section 4[f] properties are shown on Figure A-1). Six of the seven resources are public parks; the last resource is Cleveland National Forest. Table A-3 provides a summary of all properties by type that were reviewed to determine if Section 4(f) would apply (i.e., school, park, recreational resource), including information on location, ownership, and the facilities available at each property. The table also notes whether a property is subject to Section 4(f) protection.

Table A-3. Parks and Recreation Facilities within the Study Area

Park	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance from Build Alternative Footprint
Yarborough Park	419 N. Poe Street, Lake Elsinore, California 92530	City of Lake Elsinore	Park features, playground, and splash pad, along with picnic tables, restrooms, and green spaces	Yes	Within 0.50 mile
Elsinore Elementary	512 W. Sumner Avenue, Lake Elsinore, California 92530	Lake Elsinore Unified School District	Basketball courts, large multi-use area, and multi-use turf area	No	Within 0.50 mile
Ortega High School	520 Chaney Street, Lake Elsinore, California 92530	Lake Elsinore Unified School District	Field area	No	Within 0.25 mile
Temescal Canyon High School	28755 El Toro Road, Lake Elsinore, California 92532	Lake Elsinore Unified School District	Two baseball fields, track field, six tennis courts, outdoor pool, and two empty fields	No	Adjacent
Dr. Bernice Jameson Todd Elementary	25105 Mayhew Canyon Road, Corona, California 92883	Corona-Norco Unified School District	Large empty field	No	Within 0.50 mile
Temescal Valley Elementary	22950 Claystone Avenue, Corona, California 92883	Corona-Norco Unified School District	Large field area	No	Within 0.10 mile
El Cerrito Middle School	7610 El Cerrito Road, Corona, California 92881	Corona-Norco Unified School District	Large field	No	Within 0.15 mile

Park	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance from Build Alternative Footprint
El Cerrito Sports Park	7500 El Cerrito Road, Corona, California 92881	City of Corona	Multiple large fields, four baseball fields, two tennis/basketball courts, and a playground area	Yes	Adjacent
Coral Canyon Park	24880 Coral Canyon Road, Corona, California 92883	N/A (most likely City of Corona but not confirmed)	Park features a barbecue area, picnic benches, drinking fountains, two baseball fields, and appealing playgrounds with separate play areas for ages 2–5 and 5–12	Yes	Within 0.10 mile
Rimpau Park	1156 East Ontario Avenue, Corona, California 92881	City of Corona	Park includes barbecue areas, covered shelter, picnic area, playground, and tot lot	Yes	Within 0.50 mile
Citrus Community Park	1250 Santana Way, Corona, California 92881	City of Corona	Park includes public green space with two playgrounds, a splash pad, picnic tables, and grassy areas for sports	Yes	Within 0.50 mile
Chase Park	1415 E. Chase Drive, Corona, California 92881	City of Corona	Large field	Yes	Within 0.50 mile

Park	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance from Build Alternative Footprint
Centennial High School	1820 Rimpau Avenue, Corona, California 92881	Corona-Norco Unified School District	Large field, outdoor swimming pool, football/track and field, six tennis courts, and two baseball fields	No	Within 0.50 mile
Belltower Montessori Academy	1187 Magnolia Avenue, Corona, California 92879	N/A	Playground area	No	Within 0.10 mile
CEAC College Preparatory School	1101 California Avenue, Corona, California 92881	N/A	Playground area	No	Within 0.06 mile
Morgan Academy	25118 Birchtree Court, Temescal Valley, California 92883	N/A	Home (front yard/backyard)	No	Within 0.04 mile
Olive Branch Christian School	7702 El Cerrito Road, Corona, California 92881	N/A	Playground area	No	Within 0.10 mile
Keith McCarthy Academy	1405 Education Way, Lake Elsinore, California 92530	Lake Elsinore Unified School District	None	No	Within 0.07 mile
Valley Adult School	21330 Lemon Street, Wildomar, California 92595	N/A	Basketball courts and playground area	No	Within 0.07 mile
Jeannette Ellis Center for Child Development	411 W. Heald Avenue, Lake Elsinore, California 92530	Lake Elsinore Unified School District	Playground area	No	Within 0.15 mile

Park	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance from Build Alternative Footprint
Cleveland National Forest	Riverside County	U.S. Department of Agriculture, Forest Service	National forest	Yes	Within 0.50 mile

Source: GIS

The resources that are not protected under Section 4(f) are either not publicly owned or not open to the public. This specifically applies to all of the schools and educational facilities within the Project study area, as none of the recreational uses at these institutions are open to the general public. Because of distance and/or the proposed activities in the vicinity of the facilities listed in Table A-3, none of the facilities would be subject to permanent, temporary, or constructive use under the Build Alternative.

Within the Project study area, the only trails that were identified through research were three planned trails. Table A-4, below, lists the names of the planned trails and their status. These are also shown on Figure A-1. Analysis of each resource is found below.

Table A-4. Planned Resources

Planned Trails	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance from Build Alternative Footprint
Bedford Wash Planned Trail	N/A	N/A	Trail	Yes	Within
Planned Butterfield Trail	N/A	N/A	Trail	Yes	Within
Potential Trail	N/A	N/A	Trail	Yes	Within

A.3.1 Bedford Canyon Wash Trail (Planned Trail)

Located within the study area in the city of Corona, the planned Bedford Canyon Wash Trail would be a multi-use trail that would run northeast/southwest generally along Bedford Wash in the Arantine Hills. As of March 2023, Riverside County Parks has not initiated a formal plan for development of the trail, and the trail does not currently exist.

The land that is currently projected for the potential planned trail is not publicly owned property planned for park or recreation area, and it does not presently function as such. There is no evidence of formal designation for the Bedford Canyon Wash Trail, as it does not appear in a city or county master plan. Because a formal plan for development of the Bedford Canyon Wash Trail has not been proposed, the County of Riverside is not expected to begin development on this planned facility prior to construction of the Project. Based on current preliminary design plans, a small portion of the area that is expected to eventually be part of the planned trail would be affected by the Project. However, no adverse effects on this resource are anticipated, as the Project would not preclude the future development of the trail. In addition, once constructed, the Project would operate within the existing State ROW, with the majority of improvements occurring within the existing I-15 median. The planned trail is expected to cross under an existing overpass. As such, the Project would not impede intended future use of the planned trail or result in impacts. Therefore, the Project would not result in a use of the planned Bedford Canyon Wash Trail, as defined under Section 4(f).

A.3.2 Potential Trail Connection (Conceptual Only)

The Potential Trail Connection along Cajalco Road and I-15 was identified in a 2015 Riverside County Regional Park and Open Space District planning document, *Butterfield Overland Trail Project Temescal Valley Alignment Analysis.* Located within the study area in the city of Corona, the Potential Trail Connection would be a multi-use trail that would run along I-15 from Cajalco Road to Bedford Canyon Wash. It is expected that this trail connection would link several community trails and the planned Class II bike lanes to the Bedford Canyon Wash Trail. As of March 2023, Riverside County Parks has not initiated a formal plan for development of the trail, and the trail connection does not currently exist. The land that is currently projected for the potential planned trail is not publicly owned property planned for a park or recreation area, and it does not presently function as such. There is no evidence of formal designation for this conceptual trail, as it does not appear in a city or county master plan.

Because the plan for this trail connection remains in the conceptual phase, as of March 2023, the County of Riverside is not expected to begin development on this planned facility prior to the construction of the Project. No adverse effects on this resource are anticipated, and the Project would not preclude future development of the trail. As such, the Project would not impede intended future use of the planned trail or result in impacts. Therefore, the Project would not result in a use of the Potential Trail Connection, as defined under Section 4(f).

A.3.3 Butterfield Trail Stage Route Historic Alignment (Planned Trail)

The Butterfield Trail Stage Route Historic Alignment (Butterfield Trail) runs through the Temescal Valley. With cooperation from various local agencies, the Butterfield Trail project would create a recreational trail through the use of a public ROW, joint use agreements, easements, and other cooperative measures for development. As described in the 2015 Riverside County Regional Park and Open Space District planning document titled *Butterfield Overland Trail Project Temescal Valley Alignment Analysis*, the Butterfield Trail would be a multi-use recreational trail with a variety of trail types, depending on the location, including decomposed granite walking trails, unpaved natural-surface trails, rubberized asphalt trails, and Class II bike lanes. The Butterfield Trail crosses the city of Corona along current-day Temescal Canyon Road. Within the Section 4(f) study area, the *Butterfield Overland Trail Project Temescal Valley Alignment Analysis* includes a proposal for a Class II bike lane along the historic alignment (current-day Temescal Canyon Road), which stops at Tom Barnes Street.

The Class II bike lane associated with the Butterfield Trail would run parallel to the Project alignment, approximately 0.4 mile to the east. The Riverside County Regional Park and Open Space District does not currently have a plan to implement the Butterfield Trail, and the Project would be expected to be completed prior to development of the Butterfield Trail. Because the alignment for the proposed Butterfield Trail would be 0.4 mile from areas that would be temporarily and permanently affected by the Project, Project-related construction, which would occur within the State ROW, would not obstruct access to the Butterfield Trail should it be developed first. No

adverse effects on this resource are anticipated, and the Project would not preclude future development of the Butterfield Trail. As such, the Project would not impede intended future use of the Butterfield Trail or result in impacts. Therefore, the Project would not result in a use of this planned recreational resource.

A.3.3.1 MSHCP Lands

Table A-5 provides a summary of the 21 conservation areas within the study area, including information regarding location, ownership, the facilities available at each property, and whether the property is subject to Section 4(f) protection. PQP lands are properties within western Riverside County that are owned, managed, or maintained by public agencies for the purposes of conservation.

Table A-5. Conservation Properties within 0.5-Mile Radius

Resource Name	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance Build Alternative Footprint
Alberhill Creek	Riverside County	Riverside County Flood Control District	Conserved Land	Yes	Within 0.50 mile
Trivalley	Riverside County	County of Riverside	Conserved Land	Yes	Adjacent
Northern Trust	Riverside County	RCA	Conserved Land	Yes	Adjacent
Long Beach Equities	Riverside County	County of Riverside	Conserved Land	Yes	Adjacent
RCRCD	Riverside County	N/A	Conserved Land	Yes	Adjacent
Reynolds Phase 2	Riverside County	RCA	Conserved Land	Yes	Adjacent
Reynolds Phase 1 (Smith and Reynolds)	Riverside County	RCA	Conserved Land	Yes	Within 0.50 mile
Beador, David, and Shannon (RCA conserved lands)	Riverside County	RCA	Conserved Land	Yes	Within 0.25 mile
BRW Corona	Riverside County	RCA	Conserved Land	Yes	Adjacent
ABDI	Riverside County	RCA	Conserved Land	Yes	Adjacent

Resource Name	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance Build Alternative Footprint
Lake Mathews/Estelle Mountain Reserve	Cajalco Canyon, in the foothills of the Temescal Mountains	Multi-ownership, consortium management by: • California Department of Fish and Wildlife • Metropolitan Water District of Southern California • Riverside County Habitat Conservation Agency • U.S. Fish and Wildlife Service	Trail (no public access)	Yes	Within 0.50 mile
Corona Canyon Donation Indian Wash	Riverside County	RCA	Conserved Land	Yes	Adjacent
Fieldstone Donation	Riverside County	Fieldstone Donation	Conserved Land	Yes	Within 0.20 mile
Morger	Riverside County	RCA	Conserved Land	Yes	Within 0.15 mile
Toscana Donation Phase 1	Riverside County	RCA	Conserved Land	Yes	Within 0.25 mile
RCRCD/Lee Lake	Riverside County	RCRCD	Lake	Yes	Within 0.25 mile
RCRCD MOU	Riverside County	RCRCD	Conserved Land	Yes	Within 0.50 mile
RCRCD Bedford	Riverside County	RCRCD	Conserved	Yes	Within 0.50 mile

Resource Name	Location	Current Ownership	Facilities	Trigger Section 4(f) Protection?	Distance Build Alternative Footprint
Lake	Riverside County	Public-Quasi Public	Conserved Land	Yes	Within 0.10 mile
Toscana Donation Phase 3	Riverside County	RCA	Conserved Land	Yes	Within 0.40 mile
Circle K Donation	Riverside County	Alimentation Couche-Tard	Conserved Land	Yes	Within 0.50 mile

MOU = Memorandum of Understanding; RCA = Western Riverside County Regional Conservation Authority; RCRCD = Riverside-Corona Resource Conservation District

The 21 conservation areas would not be affected by the Build Alternative because none are within the Project LOD. They qualify as Section 4(f) protected resources because they are designated wildlife preserves/refuges for the conservation and management of resources, including wildlife.

The Lake Mathews – Estelle Mountain Reserve, which is jointly owned and managed by the Metropolitan Water District and Riverside County Habitat Conservation Agency, is a bird resting and feeding location (RCA 2023).

Alberhill Creek is owned by the Riverside County Flood Control District, which provides services such as watershed protection and floodplain management (City of Lake Elsinore 2016). The Riverside-Corona Resource Conservation District is grantee to a conservation easement that covers approximately 7.5 acres of city and county lands (RCRCD 2023). The easement is centered on Tequesquite Creek, from just downstream of the Riverside County Flood Control District channel to the stream's confluence with the Santa Ana River (RCA 2001).

The San Jacinto Wildlife Area has approximately 900 acres of restored wetlands. It is the first State wildlife area to utilize reclaimed water to enhance its wetlands and is a waterfowl refuge. The primary purpose of Western Riverside County Regional Conservation Authority (RCA) conserved lands under the MSHCP (RCA conservation areas) is to promote the biological viability of western Riverside County's ecosystems, habitats, and species, along with their recovery. The goal is to reduce the need to list additional species in the future (RCA 2023).

Table A-6 lists historic properties found within or next to the Project limits. It also notes whether a property is subject to Section 4(f) protection.

Table A-6. Historic Properties within the Project Area

Site Number/Name	Description	NRHP Status	Finding of Effect	Considered Section 4(f) Resource?[1]	Potential Use for the Build Alternative
Prehistoric site P-33-000108/CA-RIV-108	Lithic scatter	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-000630/CA-RIV-630	Lithic scatter	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-001099/CA-RIV-1099	Lithic scatter and milling site	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Prehistoric site P-33-002992/CA-RIV-2992	Habitation site	Assumed NRHP eligible under Criterion D for the purposes of this Project only	No Adverse Effect	No	No
Qaxáalku Kwíimik, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C, and D	No Adverse Effect	Yes	No
Qaxáalku Payómik, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C, and D	No Adverse Effect	Yes	No
Túu'uv, traditional cultural property	Prehistoric traditional cultural property, encompassing vast geographical area	Assumed NRHP eligible under Criteria A, B, C, and D	No Adverse Effect	Yes	No

[1] If a resource is considered National Register of Historic Places-eligible under Criterion D only, then Section 4(f) would not apply (see 23 Code of Federal Regulations 774.13[b]).

Four of the seven resources listed above (P-33-000108, P-33-000630, P-33-001099, and P-33-002992) are assumed eligible for the purposes of the Project only under Criterion D, with CSO approval on January 27, 2023. In addition, the three TCPs (*Túu'uv, Qaxáalku Payómik*, and *Qaxáalku Kwíimik*) are assumed NRHP eligible, with CSO approval dated March 10, 2022, under all four criteria. Although seven historic properties are assumed eligible in the Project APE, only three qualify for protection under Section 4(f) because the Project would not permanently use a property and would not hinder preservation of a property; therefore, Section 4(f) does not apply to these resources. In addition, Section 4(f) does not apply to archaeological sites that are important chiefly for their information value and have minimal value for preservation in place. This principle applies regardless of whether data recovery is undertaken. If an archaeological site is eligible for values beyond its information, Caltrans will consider whether 4(f) applies on a case-by-case basis. As stated earlier, Section 4(f) does not apply for these resources.

A finding of no adverse effect was prepared for the Project and approved in March 2023 (Caltrans 2023b). It concluded that, based on the analysis of the criteria of adverse effect presented in the report, the Project would not result in any adverse effects on historic properties within or adjacent to the APE. There are no physical manifestations of these TCPs within the Project limits that the Project could affect. No proximity impacts that rise to the level of substantial impairment are anticipate for these TCPs. There would be no use under Section 4(f) for any of these historic properties.

A.3.3.2 Summary

In summary, Table A-3 through Table A-6 list all properties that were evaluated relative to the requirements of Section 4(f). The tables identify those properties that would not trigger Section 4(f) protection because (1) they are not publicly owned, (2) they are not open to the public, (3) they are not eligible historic properties, or (4) the Project would not permanently use the properties and would not hinder preservation of the properties. Please see the table entries for specifics by property.

A.4 Section 6(f)

The Land and Water Conservation Fund (LWCF) Act was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. The LWCF program provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. Section 6(f) of this Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of Interior's (DOI) National Park Service (NPS).

The purpose of the LWCF is to assist in preserving, developing, and ensuring accessibility to outdoor recreational resources and strengthen the health and vitality of the citizens of the United States by funding, planning, acquiring, and developing such facilities. Recreational facilities awarded such funds are subject to the provisions of the act. The LWCF's most important tool for ensuring long-term stewardship is its "conversion protection" requirement. Section 6(f)(3) strongly discourages conversions of state and local park and recreational facilities to other uses.

Section 6(f)(3) of the LWCF Act states that no property acquired or developed with LWCF assistance will be converted to uses other than public outdoor recreational uses without the approval of the secretary of the DOI (NPS is a service of the DOI) and only if the secretary finds it to be in accord with the Statewide Comprehensive Outdoor Recreation Plan and only under such conditions the secretary deems necessary to ensure the substitution of other recreational properties of at least equal fair market value and reasonably equivalent usefulness and location (36 CFR Part 59).

Prerequisites for conversion approval, as provided in 36 CFR Part 59.3, are outlined below.

- All practical alternatives to the proposed conversion have been evaluated.
- The fair market value of the property to be converted has been established, and the property proposed for substitution is of at least equal fair market value, as established by an approved appraisal.
- The property proposed for replacement is of reasonably equivalent usefulness and location as that being converted.
- The property proposed for substitution meets the eligibility requirements for LWCF-assisted acquisition.
- In the case of assisted sites that are partially rather than wholly converted, the impact of the converted portion on the remainder will be considered. If such a conversion is approved, the unconverted area must remain recreationally viable or must also be replaced.
- All necessary coordination with other federal agencies has been satisfactorily accomplished.

The guidelines for environmental evaluation were satisfactorily considered by NPS during its review of the proposed Section 6(f)(3) action.

In cases where proposed conversion arises from another federal action, final review of a proposal will not occur until the NPS regional office is assured that all environmental review requirements related to the other action have been met, state intergovernmental clearinghouse review procedures have been adhered to if the proposed conversion and substitution constitute significant changes to the original LWCF project, and the proposed conversion and substitution are in accord with the Statewide Comprehensive Outdoor Recreation Plan or equivalent recreation plans.

Section 6(f) conversion requires additional coordination with the agency of jurisdiction and California State Parks, which oversees the LWCF program for NPS, regarding project effects, conversion areas, and replacement properties.

One Section 6(f) resource, Cleveland National Forest, has been identified within the Project study area (see evaluation below).

Cleveland National Forest is the southernmost national forest in California. The forest is divided into three different Ranger Districts (Descanso, Palomar, and Trabuco) within three different counties (San Diego, Riverside, and Orange). The forest covers 465,000 acres, extending from Orange County and Riverside County to an area 5 miles from the border with Mexico. The U.S. Forest Service, a government agency within the U.S. Department of Agriculture, owns and operates Cleveland National Forest. The forest contains trails and lakes that create opportunities for fishing, hiking, camping, climbing, biking, picnicking, and other outdoor activities.

Cleveland National Forest has received LWCF funding multiple times throughout its history. The reasons for this funding can be found on the LWCF website: https://www.parks.ca.gov/?page_id=21360 (California Department of Parks and Recreation 2023).

Although the forest is within the Project study area, according to the LWCF website, it is approximately 0.3 mile from the Project footprint. Given the distance of the resource to the Project, the Project would have no impact on the resource. Therefore, there would be no effects on Section 6(f) resources.

A.5 References

California Department of Parks and Recreation. 2023. Land and Water Conservation Fund. Available: https://www.parks.ca.gov/?page_id=21360. Accessed: July 7, 2023.

California Department of Transportation. 2023a. *Historic Property Survey Report (HPSR) for the Cajalco Road Widening and Safety Enhancement Project.*

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City of Lake Elsinore. 2016. *Alberhill Villages Specific Plan*. Available: http://www.lake-elsinore.org/city-hall/city-departments/community-development/planning/ceqa-documents-available-for-public-review/alberhill-villages-specific-plan. Accessed: July 6, 2023.

County of Riverside. 2023. Riverside County Mapping and Spatial Data Portal. Available: https://gisopendata-countyofriverside.opendata.arcgis.com/search?tags=public%2Fquasi-public. Accessed: July 3, 2023.

Federal Highway Administration. 2012. *Section 4(f) Policy Paper*. Office of Planning, Environment, and Realty Project Development and Environmental Review. July 20. Washington, D.C.

Riverside-Corona Resource Conservation District (RCRCD). 2023. About Us. Available: https://www.rcrcd.org/about-us. Accessed: July 6, 2023.

Western Riverside County Regional Conservation Authority (RCA). 2023. Existing Reserves. Available: https://www.wrc-rca.org/habitat-conservation/reserves. Accessed: July 3, 2023.

Appendix B Title VI Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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September 2023

NON-DISCRIMINATION POLICY STATEMENT

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Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

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For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 639-6392 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

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 Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

TONY TAVARES
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment"

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Appendix C Avoidance and Minimization and/or Mitigation Summary

In order to be sure 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] that 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 that some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.

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Environmental Commitments Record (ECR)

DIST-CO-RTE: 08-RIV-15 **PM/PM:** 20.3/40.1 **EA/Project ID.:** EA 08-0J0820/PN 0818000063
Project Description: The Project would construct two tolled express lanes in both the northbound and southbound directions along Interstate (I-) 15 in Riverside County, California from State Route (SR-) 74 (Central Avenue) (post mile [PM] 22.3) in the City of Lake Elsinore, through the unincorporated Riverside County community of Temescal Valley, to El Cerrito Road (PM 38.1) in the City of Corona, for a distance of approximately 15.8 miles. The proposed Project would also add a southbound auxiliary lane between both the Main Street Off-Ramp and SR-74 (Central Avenue) On-Ramp, and the SR-74 (Central Avenue) Off-Ramp and Nichols Road On-Ramp. In addition, due to the SB express lanes access between the Cajalco Road Interchange and Weirick Road Interchange, the SB I-15 Weirick Road Off-Ramp would be configured as a dual lane exit. Associated improvements for the express lanes, including advance signage and transition striping, would extend approximately two miles from each end of the express lane limits to PM 20.3 in the south and PM 40.1 in the north.
Date (Last modification): October 01, 2024
Environmental Planner: Natasha Walton **Phone No.:** (909) 260-4891
Construction Liaison: **Phone No.:**
Resident Engineer: **Phone No.:**

PERMITS

Permit	Agency	Application Submitted	Permit Received	Permit Expiration	Permit Requirement Completed by:	Permit Requirement Completed on:	Comments
Federal Endangered Species Act Section 7 consultation	U.S. Fish and Wildlife Service (USFWS)						Section 7 consultation to be addressed through the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Determination process (see below status). Completion and results of consultation to be documented in Final Environmental Documentation.
Section 404 Nationwide Permit	U.S. Army Corps of Engineers (USACE)						Application to be submitted after approval/adoption of Project Report and Final Environmental Document, and permit to be obtained prior to construction.
1602 Agreement for Streambed Alteration	California Department of Fish and Wildlife (CDFW)						Application to be submitted after approval/adoption of Project Report and Final Environmental Document, and permit to be obtained prior to construction.
Joint Project Review (JPR) for MSHCP consistency	CDFW and USFWS						MSHCP Consistency Analysis to be submitted to CDFW and USFWS for concurrence. Concurrence shall be obtained and documented in the Final Environmental Document.
Air quality conformity determination	Federal Highway Administration (FHWA)						To be obtained prior to adoption of Final Environmental Document.
Porter-Cologne Act and Clean Water Act Section 401 Water Quality Certification	Regional Water Quality Control Board (RWQCB)						Application to be submitted after approval/adoption of Project Report and Final Environmental Document, and certification to be obtained prior to construction.
JPR for MSHCP consistency	Regional Conservation Authority (RCA)						MSHCP consistency determination to be obtained prior to documentation in Final Environmental Document.
Clean Water Act Section 402— A stormwater pollution prevention plan (SWPPP) required by the General National Pollution Discharge Elimination System (NPDES) Construction Permit	State Water Resources Control Board (SWRCB)						SWPPP shall be submitted to Storm Water Multiple Application and Report Tracking System 30 days prior to construction.
Encroachment Permit	Riverside County Flood Control and Water Conservation District						Process to be initiated after approval/adoption of Project Report and Final Environmental Document, and permit to be obtained prior to construction.
Authorization obtained via the process prescribed under California Public Utilities Commission (CPUC) General Order 88-B	California Public Utility Commission (CPUC)						Authorization to be requested after approval/adoption of Project Report and Final Environmental Document and obtained prior to construction.

ENVIRONMENTAL COMMITMENTS

PA&ED

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**NC-15 (NES BIO-15) Determination of Biologically Equivalent or Superior Preservation (DBESP).** A DBESP report that provides analysis of direct and indirect impacts, avoidance, minimization, and compensatory mitigation, along with the functions and values of the resources being affected as related to MSHCP covered species, will be prepared and submitted to RCA, USFWS, and CDFW for review. After approval, the DBESP will be implemented.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC (Preparation), Resident Engineer and Contractor (Implementation)						Yes

PS&E/BEFORE RTL

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Other	**TR-1 Transportation Management Plan** During the Plans, Specifications, and Estimates (PS&E) phase, a detailed Transportation Management Plan (TMP) will be developed for implementation prior to and during construction. Some of the key elements recommended in the TMP include the following: • Public information/public awareness campaign • Motorist information strategies • Incident management • Construction strategies • Demand management • Alternate Route Strategies	Sections 2.2.7 and 2.2.8, EIR/EA	Yes	RCTC (Preparation), Resident Engineer and Contractor (Implementation)	2023 SS Section: 12-4					No
Visual Resources	**AES-1 Project Aesthetics and Landscape Master Plan –** During final design, a decision regarding construction of noise barriers would be determined. A Project Aesthetics and Landscape Master Plan (PALM) must be developed to identify the aesthetic treatments to be utilized for each wall structure, including noise barriers and retaining walls, to be constructed.	Section 2.2.9, EIR/EA	Yes	RCTC (preparation), Caltrans District 8 Landscape Architect, Resident Engineer, Contractor (implementation)						No
Visual Resources	**AES-2 Noise Barriers and Retaining Walls** – The design of noise barriers, retaining walls, and other wall structures must comply with Caltrans standards for noise attenuation, safety requirements, and other features. Aesthetic features must be reviewed by the Caltrans District Landscape Architect (DLA). Architectural details, such as texture and color, must be considered carefully in effort to minimize the appearance of the noise barrier and retaining wall surfaces. The noise barriers and retaining walls must also be designed to comply visually	Section 2.2.9, EIR/EA	Yes	RCTC, Caltrans District 8 Landscape Architect, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	with the surrounding community character, following the guidelines of the City of Corona, City of Lake Elsinore, and County of Riverside aesthetic recommendations consistent with the PALM developed in the final design phase.									
Visual Resources	**AES-3 Landscaping** – Landscaping design for replacement planting where established landscaping occurs must follow Caltrans standards for aesthetic treatments and must be designed and implemented under the direction of the Caltrans DLA. All soil area disturbed during construction of the Project must be treated with a native hydroseed mix that includes native wildflowers. The loss of the vegetation from the disturbed soil areas must be replaced by plantings of native shrubs and ground cover in addition to hydro seeding, where appropriate, after construction. Replacement of highway landscaping where required will be consistent with the existing character of its respective community and use drought resistant, regional native plants when applicable to the greatest extent possible. These replacement regional native plant materials, where deemed necessary, must also be chosen in respect to the air quality of the implementation area. A District Biologist must be consulted throughout the design and implementation process.	Section 2.2.9, EIR/EA	Yes	RCTC, Caltrans District 8 Landscape Architect, Caltrans District 8 Biologist, Resident Engineer, Contractor						No
Visual Resources	**AES-4 Lighting and Signage** – Changeable message signs and other signs consisting of illuminating and/or moving features must be placed to avoid viewsheds to the greatest extent possible, along with the consultation of the DLA. Specifically, the placement of signs will intentionally avoid obstructing views of identified visual resources, particularly the seasonal California poppy bloom near Walker Canyon. Highway lighting must conform to Caltrans design guidelines and be placed to illuminate only intended areas. Light shielding with non-glare hoods will be incorporated into project designs to limit dispersion of light beyond the Project right of way (ROW) during all night work, including for construction staging areas. Lighting will incorporate yellow-white or amber-white light emitting fixtures of 3000K or less.	Section 2.2.9, EIR/EA	Yes	RCTC, Caltrans District 8 Landscape Architect, Resident Engineer, Contractor						No
Water Quality	**WQ-2 Prepare a Storm Water Pollution Prevention Plan.** During final design, Riverside County Transportation Commission (RCTC) will ensure that a SWPPP will be prepared and implemented to address all construction-related activities, equipment, and materials with the potential to have an impact on water quality. The SWPPP will identify the sources of pollutants that may affect the quality of stormwater and include the construction site best management practices (BMPs) to control pollutants such as sediment control, catch basin inlet protection, construction materials management, and non-stormwater BMPs. Additional BMP reference material is contained within the Project Planning and Design Guide (Caltrans 2019) and Construction Manual (Caltrans 2020). These BMPs include, but are not limited to, temporary sediment control, temporary soil stabilization, scheduling,	Section 2.3.2, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Contractor (Implementation)	2023 SS Section: 13-3.01C(2)					No

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	waste management, materials handling, and other non-stormwater BMPs.									
Other	**GEO-1 Geotechnical Investigation.** Under this measure during the PS&E phase, a detailed geotechnical investigation will be conducted by qualified geotechnical personnel to assess the geotechnical conditions at the Project area. The geotechnical investigation will include exploratory borings to investigate site-specific soils and conditions and to collect samples of subsurface soils for laboratory testing. Those soil samples will be tested to evaluate liquefaction potential, collapsibility potential, stability, and corrosion potential. The review and approval findings and recommendations of the geotechnical investigation will be summarized in a Structure Foundation Report and a Geotechnical Design Report to be submitted to Caltrans for review and approval. Those findings and recommendations will be incorporated in the final design of the Build Alternative.	Section 2.3.3, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Paleontology	**PAL-1 Paleontological Mitigation Plan.** During final design, RCTC will ensure that a Paleontological Mitigation Plan (PMP) is prepared, and that the requirements included are implemented during construction. The PMP shall include all elements identified as being required in this document on the Caltrans Standard Environmental Reference (SER), including. a. Required and recommended monitoring locations. b. A description of, and requirement for all construction personnel to attend, a worker training program, including documentation of completion of the training. c. A signed curation agreement with the Western Science Center or another accredited repository. d. Detailed procedures for monitoring, fossil recovery, laboratory analysis, and museum curation and notification procedures in the event of a fossil discovery by a paleontological monitor or other project personnel.	Section 2.3.4, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Contractor Implementation)	2023 SSP Section: 14-7.04					No
Hazardous Waste	**HW-1 Asbestos-Containing Materials and Lead-Based Paint.** The Project would include the widening of 15 bridges. Asbestos containing materials (ACM) are present in the gray felt pad along the southbound and northbound Brown Canyon Wash Bridge and Weirick Road Undercrossing Bridge inner guard rails. In addition, lead-based paint (LBP) is present in the light gray paint on the railing of northbound Temescal Wash Bridge and in the yellow lane surface paint at northbound Indian Wash Bridge. ACM and LBP associated with these bridges may be impacted by the Project. In addition, there is a potential for all 15 bridges to contain ACMs and LBP in areas that have not been sampled. RCTC resident engineer or designated contractor will ensure that bridge features with a likelihood to contain ACM and LBP will be sampled for all areas of the 14 affected bridges that will be disturbed by the Project during the PS&E phase, prior to any demolition or disturbance activities. RCTC's resident engineer or designated contractor	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-11.16					No

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	will ensure that the survey will be conducted in conformance with the United States Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants 40 Code of Federal Regulations (CFR), South Coast Air Quality Management District Rule 1403, and in accordance with Caltrans Standard Specifications, Section 14- 11.13, Disturbance of Existing Paint Systems on Bridges, and Section 14-11.16, Asbestos-Containing Construction Materials in Bridges.									
Hazardous Waste	**HW-8 Lead Compliance Plan.** Soil within the Caltrans ROW of the Project limits, including the median, shoulders and ramps, were sampled for aerially deposited lead (ADL). The ADL survey classified the soil in these areas as unregulated Type X soil, which is non-hazardous and suitable for reuse on site without restriction, under the July 1, 2016, ADL Agreement between Caltrans and the DTSC. This ADL Agreement allows such soils to be safely reused within the Project limits, as long as all requirements of the ADL Agreement are met. Per the soil reuse agreement, a Lead Compliance Plan (LCP) is required for worker safety. Prior to construction, RCTC's resident engineer or designated contractor will ensure that a Lead Compliance Plan (LCP) is developed by a Certified Industrial Hygienist to protect workers from exposure to lead associated with aerially deposited lead (ADL), lead-based paint (LBP), and traffic stripe and pavement makings. The LCP will include procedures for the handling, management, sampling, and disposal of material containing lead. ADL and LBP investigations and traffic striping removal are separate tasks usually conducted by separate contractors, which each require a separate LCP.	Section 2.3.5, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Contractor (Implementation)	2023 SS Section: 7-1.02K(6)(j)(iii)					No
Biology	**NC-12 (NES BIO-12) Water Pollution and Erosion Control Plans.** Plans for water pollution and erosion control will be prepared. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and Caltrans prior to construction (MSHCP Volume I, Sections 6.1.4 and 7.5.3). The following measures will be provided: • Water pollution and erosion control plans will be developed and implemented in accordance with Regional Water Quality Control Board (RWQCB) requirements (MSHCP Volume I, Appendix C) and will ensure that no fluids or sediment from construction will enter into the Environmentally Sensitive Area (ESA) fenced areas. • Measures, including measures required through the National Pollutant Discharge Elimination System requirements, will be required for work in proximity to MSHCP Conservation Areas to ensure that the quantity and quality of runoff discharged into the MSHCP Conservation Area are not altered in an adverse way when compared to existing	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Project Biologist, Contractor (Implementation)						No

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	conditions. In particular, stormwater systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area. • New surface flows will be treated prior to reaching waterways. • Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized (MSHCP Volume I, Section 7.5.3). • No erodible materials will be deposited into watercourses or areas demarcated with ESA fencing. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). • Projects that cannot be conducted without placing equipment or personnel in riparian vegetation areas should be timed to avoid the breeding season of riparian/associated species identified in MSHCP Global Species Objective No. 7 (MSHCP Volume I, Appendix C). The breeding season as defined by the MSHCP is March 1 through June 30. • If stream flows must be diverted, the diversions will be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment-trapping materials will be installed at the downstream end of construction activity to minimize the transport of sediments off site. Settling ponds where sediment is collected will be cleaned out in a manner that prevents the sediment from reentering the stream. Care will be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream (MSHCP Volume I, Section 7.5.3, MSHCP Volume I, Appendix C). Short-term diversions will consider effects on wildlife (MSHCP Volume I, Section 7.5.3). • Equipment storage, fueling, and staging areas will be located on non-sensitive upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). These designated areas will be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate entities including, but not limited to, the applicable jurisdictional city, USFWS, CDFW, and RWQCB, and will be cleaned up immediately and contaminated soils removed to approved disposal areas (MSHCP Volume I, Appendix C). • All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur only in									

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	designated areas within the proposed grading limits of the Project site. These designated areas will be clearly marked and located in such a manner as to contain runoff (MSHCP Volume I, Section 7.5.3). This will ensure that there will be no discharge into MSHCP Conservation Areas adjacent to the limits of disturbance (LOD) (MSHCP Volume I, Section 6.1.4).									
Biology	**NC-17 (NES BIO-17). Aquatic Resource Compensatory Mitigation.** Mitigation for permanent impacts, including permanent shading, on aquatic resources (i.e., U.S. Army Corps of Engineers [USACE]/Regional Water Quality Control Board [RWQCB] wetland and non-wetland Waters of the U.S./State, and CDFW streambed and associated riparian habitat[1]) will occur through permittee-responsible mitigation, purchase of mitigation bank credits through an agency-approved mitigation bank, in-lieu fee program, or other approved mitigation provider. A 3:1 mitigation ratio is proposed for USACE/RWQCB jurisdictional wetlands and CDFW riparian vegetation. A ratio of 2:1 for permanent impacts and permanent shading impacts on USACE/RWQCB jurisdictional non-wetlands and CDFW unvegetated streambeds is proposed. The temporary impacts on USACE/RWQCB wetlands and non-wetlands, CDFW unvegetated streambed, and associated CDFW riparian habitat may be replaced through restoration of the temporarily affected area to pre-Project conditions, at a ratio of 1.25:1 and through permittee-responsible mitigation or another approved mitigation program. All temporary impacts would be replaced, where feasible, at their current locations following preparation of an Habitat Mitigation and Monitoring Plan (HMMP).	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC						Yes
Biology	**NC-20 (NES BIO-19) Oak Tree Management.** Compliance with the Riverside County Oak Tree Management Guidelines will be required. An accurate depiction of all oak trees that are 2 inches diameter at breast height or larger within the Project site will be identified by a biologist and mapped. Impacts on all oak trees will be identified and quantified. If impacts on oak trees and their protected zones cannot be avoided, then a design that least impacts oak trees will be prepared. If oak trees are to be lost, the loss of oak trees will require mitigation, and an oak tree mitigation plan will be required to be prepared. At a minimum, the plan will include mitigation methods and options, requirements for replacement trees, and locations of mitigation sites.	Sections 2.4.1 and 2.4.4, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Project Biologist, Contractor (Implementation)						Yes

[1] MSHCP riparian/riverine resources have the same limits as CDFW features, with the exception that riparian/riverine resources also include adjacent buffer/upland areas that would not be considered CDFW jurisdiction.

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Biology	**AS-2 (NES BIO-25). Burrowing Owl Management Plan.** A Burrowing Owl Management Plan will be prepared by a qualified biologist and will include: a) Focused Survey for Burrowing Owl: Include within the plan the results of the MSHCP protocol survey conducted. b) Preconstruction Survey for Burrowing Owl: Surveys by a qualified biologist shall be conducted in areas containing burrows and/or suitable habitat for burrowing owl within 14 days prior to ground disturbance. The Biological Study Area (BSA) shall be the LOD and a 500-foot BSA. c) Protocol for Presence: Take steps necessary for handling the presence of burrowing owl (if found during either of the two surveys), which may include full avoidance, if feasible, or passive relocation by a qualified biologist. d) Agency Approval: The plan will need approval USFWS and CDFW. Additional approval of the plan will be required by RCA if RCA-owned lands are involved.	Section 2.4.4, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Project Biologist, Contractor (Implementation)						No
Biology	**AS-3 (BIO-26) Bat Management Plan.** A Bat Management Plan (Plan) will be prepared by a qualified biologist. Because bat exclusion activities require specific timing, it is recommended to begin bat pre-Project emergence surveys and planning in late spring/summer prior to construction. Both the hibernation season and the maternity season have restrictions, which introduce timing restrictions for bat exclusion activities, should these be required. These are briefly described below. • The hibernation season begins in November (November 1 through November 30), where exclusion is dependent upon weather conditions and is at the bat biologist's discretion. If the low temperatures on the evening of exclusion and the subsequent four evenings are not forecasted to drop below 45°F, then the exclusion may occur. If the forecasted low temperatures are anticipated to be 45°F or less, then no exclusion will be performed. • During the hibernation season (December 1 through February 14), no exclusions will be performed. During the maternity season (April 1 through August 31), no bat exclusions will be performed to avoid "take" of flightless young. • From February 15 through March 31 and September 1 through October 31, bat exclusion generally has no timing constraints. The Plan will include the following requirements: a. A qualified bat biologist will conduct bat pre-Project emergence surveys at all bridges, culverts, or other significant features (within at least 150 feet of the Project) that show any potential for bat roosts if any disruptive construction work is expected to come within the suggested protective bat buffer distances for potential bat roosts at these sites. These buffer distances can be found in Table 7-1 of the 2019 Caltrans Bat Mitigation guide (H.T. Harvey 2019). Such locations include, but are not limited to, the	Section 2.4.4, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Project Biologist, Contractor (Implementation)						No

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	potential bat roost structures identified in Figure 2.4.4-3. The field review will determine the level of survey needed to assess presence/absence of bats at each structure and will be performed in late spring/summer prior to construction. b. A qualified bat biologist will evaluate all mature trees, palm trees and fronds, and snags to be removed for their potential to support roosting bats. If potential bat roost sites are identified in trees to be removed, the removal will be conducted over a two-day period (two-step removal process). On day 1, the qualified biologist will identify branches and limbs without crevices or cavities to be removed using hand tools or chainsaws. On day 2, the remainder of the tree may be removed. • From February 15 through March 31 and September 1 through October 31, tree removal follows the 2-day process with no other constraints. • During the start of the hibernation season (November 1 through November 30), tree removal is dependent upon weather conditions and will be at the bat biologist's discretion. If the low temperatures on the evening of removal and the subsequent four evenings are not forecast to drop below 45°F, then the contractor may remove trees following the two-step removal process. If the forecasted low temperatures are anticipated to be 45°F or less, then no tree removal will be performed. • During the hibernation season (December 1 through February 14), no tree removal will be performed. • During the maternity season (April 1 through August 31), tree removal should be avoided to prevent "take" of flightless young. Tree removal can only be performed if a qualified bat biologist surveys all of the trees containing suitable bat roosting habitat to be removed and no roosting bats are found. These surveys will consist of acoustic detectors placed near each tree for 1 to 2 evenings (with data retrieved and analyzed), and emergence surveys will be conducted at trees where bat acoustic activity was recorded during the emergence period. If roosting bats are found, the tree cannot be removed until the end of the maternity season. c. Night lighting associated with construction will be directed away from bridges, palm trees, and other significant features determined by the qualified bat biologist to have potential for bats. In addition, night lighting will be directed away from areas of natural vegetation adjacent to the western side of southbound I-15 in the vicinity of the Cajalco Road Bridge, the Bedford Wash Bridges, the Weirick Road undercrossing, and the palm grove between these bridges. d. To minimize impacts on roosting bats, the Plan will require that no staging or storage of equipment or vehicles will occur under or on top of bridges with potential for bats. This									

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	will include, but is not limited to the Cajalco Road Bridge, Bedford Wash Bridges, and Weirick Road undercrossing. e. Preconstruction bat emergence surveys will be completed 14 days prior to construction by a qualified bat biologist, in coordination with the Caltrans biologists, within the Project area at all bridges, culverts, or other significant features that show any potential for bat roosts if any disruptive construction work is expected to come within the recommended disturbance buffer zones for potential bat roosts per Table 7-1 of the 2019 Caltrans Bat Mitigation guide (H.T. Harvey 2019) at these sites. Such locations include, but are not limited to, the Weirick Road undercrossing, the Cajalco Road OC bridges, the three Bedford Wash bridges, and the palm grove near Bedford Wash. If bats are detected, the qualified bat biologist will coordinate with the Caltrans biologist to determine if additional avoidance and minimization measures are needed. f. For bridges, culverts, or other significant features confirmed to be potentially suitable for bat roosting/nursery, exit counts and acoustic surveys will be performed to determine whether a structure supports a nursery or roost and by which species. This survey work will occur in the late spring/summer in the year prior to construction and potentially again in the fall in the year prior to construction, depending on the results of the summer work. This would be determined by the bat biologist. Where the timing for these surveys is not possible for every potential bat roost, the implementation of BIO-26, section “e” will be performed in lieu of these surveys if conditions (e.g., temperature) permit the feasibility of surveys at these sites at least 14 days prior to construction. g. For each location confirmed to be occupied by bats, the Plan will provide details both in text and graphically where exclusion devices will need to be placed, the timing for exclusion work, and the timeline and methodology needed to exclude the bats. h. Monitoring activities and schedule will be included in the Plan, including frequency of monitoring, which structures would need to be monitored, and reporting requirements. i. Details on placement of human-made roosting habitat panels, including design, placement location, and timing of placement will be included in the Plan. These panels must be placed at least 9 months prior to the exclusion of the bats. j. The draft Plan will be reviewed and approved by CDFW.									
Biology	**AS-5 (BIO-28) Nesting Bird Management Plan.** Due to the complexity of the Project at the Temescal Wash, as well as the presence of many bridges and mature trees along the Caltrans ROW, a Nesting Bird Management Plan (Plan) will be drafted to provide a comprehensive approach to handling nesting birds	Sections 2.4.4 and 2.4.5, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Contractor (Implementation)	2023 SS Section: 14-6.03B					No

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	well prior to the commencement of construction. It will include, at a minimum, the following items: a. A qualified biologist will perform a detailed field review and document the location of raptor and/or corvid nests along with sign of colonial nesting birds within the LOD and adjacent lands. The colonial nesting bird review should be performed in conjunction with measure AS-3 (NES BIO-26). This field review should occur in late spring/early summer to provide the best results. b. Results of the field review will be used to draft approaches and survey methodologies for addressing potential nesting species. A single approach and methodology will not suffice for all species with potential to nest. This Plan should be coordinated with USFWS and CDFW with final approval being provided by both agencies. Below is a basic nesting bird survey method that can be incorporated into the document. At the very least, the Plan must provide assurance that birds protected under the Migratory Bird Treaty Act (MBTA) and similar protections under the California Fish and Game Code will not be harmed. Within 7 days prior to the commencement of construction activities (if between January 15 and September 1), a qualified biologist will perform a nesting bird and raptor survey that will consist of at least two site visits to each area with potential nesting habitat to determine whether there are active nests within 200 feet of the LOD. This survey will also identify the species, and to the degree feasible, nesting stage (e.g., incubation of young, feeding of young, near fledging). Nests will be mapped (not by using GPS as close encroachment may cause nest abandonment). If active nests are found, construction will not occur within 200 feet of the nest, or as directed by a qualified biologist, until the nesting attempt has been completed and/or abandoned because of non-project related reasons.									
Other	**GHG-2** The Project will incorporate the use of energy-efficient lighting.	Section 3.3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-3** Bids will be solicited that include use of energy and fuel-efficient fleets in accordance with current practices.	Section 3.3.4, EIR/EA	Yes	RCTC						Yes
Other	**GHG-6** Select Project features that minimize the need for irrigation and nonnative plants.	Section 3.3.4, EIR/EA	Yes	RCTC						Yes
Other	**GHG-7** Install urban planting/vegetation, especially canopy trees, to reduce “heat island” effects.	Section 3.3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-8** Incorporate native plants and vegetation to the Project design. Replace more vegetation than was removed to increase carbon sequestration.	Section 3.3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-9** Avoid an ultimate (new trees at projected maturity) net loss of tree canopy within the Project limits through a combination of preservation and new planting.	Section 3.3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes

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Other	**GHG-10** Include landscaping components such as mulch and compost application to improve carbon sequestration rates in soils and reduce organic waste.	Section 3.3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-11** During final design, a Life Cycle Cost Analysis (LCCA) will be performed, which will ensure long-life pavement structures will be designed to withstand the projected increase in ambient temperatures and changes in precipitation in the Project area as much as feasible. Specifically, adjustments will be made to the pavement binder and mix design specifications to better match expected future environmental conditions. Additionally, stiffer asphalt grades and slower-aging binders will be utilized as needed to address increased temperatures and projected temperature change, along with adjustments to the pavement structural design to account for temperature and climatic changes. Incorporation of design elements, like shorter joint spacing and others, will occur to reduce damage from high temperatures. Concrete pavements will be designed to limit moisture damage and shrinkage as much as feasible.	Section 3.3.4, EIR/EA	Yes	RCTC (Preparation), Resident Engineer, Contractor (Implementation)						Yes
Other	**VMT-1** To reduce VMT and associated impacts, promote travel-mode shift, and reduce bus travel times, RCTC will develop a Vehicle Miles Traveled Mitigation Program (VMTMP) prior to Express Lanes being open to travel that includes the establishment of the Riverside County Free Rail Pass Program and the expansion of the Riverside Transit Agency's (RTA's) CommuterLink Route 206. The Riverside County Free Rail Pass Program will be an approximately 2-year program beginning in 2025 that will offer temporary free Metrolink passes to Riverside County residents to reduce the cost of using public transportation in order to encourage residents to use public transportation more often on a permanent basis. This program will include public outreach efforts that will maximize the participation of disadvantaged and low-income populations. RCTC will work with RTA to improve and potentially expand RTA's existing CommuterLink bus service, which currently operates along I-15 between Temecula and Corona. At a minimum, RTA buses will be permitted to utilize the Express Lanes at no cost within the Project limits upon the opening of the Project.	Sections 2.2.5, 2.2.6, 3.1.3, 3.1.8, 3.1.11, 3.1.17, 3.1.21, and 3.3.3, EIR/EA	Yes	RCTC						Yes

ROW/PURCHASING

No avoidance, minimization, or mitigation measures would be implemented during the Right of Way/Purchasing phase of the Project.

PRE-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Utilities	**UT-2** Prior to grading activities, RCTC's resident engineer or designated contractor will require the designated contractor to notify Underground Service Alert (USA), at least 2 days prior to excavation, by calling 811 to require that all utility owners within the Project disturbance limit identify the locations of underground transmission lines and other utility facilities.	Section 2.2.7, EIR/EA	Yes	RCTC, Resident Engineer						No
Cultural Resources	**CR-3 Environmentally Sensitive Areas** The establishment of ESAs and barriers within and adjacent to archaeological sites P 33 000108, P-33-000630, P-33-001099, and P-33-002992 shall protect elements of these resources in place for the duration of the Project. The ESAs will be marked on plans and delineated in the field by a Caltrans archaeologist. No excavation or subsurface ground disturbance will occur within the delineated ESA. In addition, construction personnel will be informed of historic preservation laws that protect archaeological sites against any disturbance or removal of artifacts.	Section 2.2.10, EIR/EA	Yes	RCTC, Caltrans District 8 Archaeologist, Resident Engineer, Contractor	2023 SS Section: 14-1.02, 16-2.03					No
Water Quality	**WQ-4 Batch Plant.** If a batch plant or crushing plant is needed for this Project and will be located off site or within the state right-of-way, then RCTC will obtain coverage under the Industrial NPDES permit, Order No. 2014-0057-DWQ, CAS000001, to address discharges from these manufacturing facilities.	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 13-1.01D(2)					No
Hazardous Waste	**HW-5 Construction Health and Safety Plan.** Prior to construction, RCTC's resident engineer or designated contractor will ensure the development of a Health and Safety Plan (HASP) to be implemented during construction activities. A Certified Industrial Hygienist will review this plan, based on evaluations of proposed construction activities, the potential hazards identified in this report, and any future assessment prepared for the Project. This plan will contain specific procedures for encountering expected and unexpected contaminants, including silica sand associated with the Coronita Ranch Sand Deposit site. It will prescribe safe work practices, contaminant monitoring, personal protective equipment, emergency response procedures, and safety training requirements to protect construction workers and third parties. The plan will meet the requirements of 29 Code of Federal Regulations 1910 and 1926, and all other applicable federal, state, and local regulations and requirements. The designated contractor will be responsible for preparing the HASP before the start of construction.	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Hazardous Waste	**HW-6 Contaminated Media Management Plan.** Prior to construction, RCTC's resident engineer or designated	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-11, 14-11.13					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	contractor will ensure the preparation of a Contaminated Media Management Plan (CMMP). This plan will include procedures for contaminant monitoring and identification, temporary storage, handling, treatment, and disposal of waste and materials (including soil), in accordance with applicable federal, state, and local regulations and requirements. The designated contractor will be responsible for preparing the CMMP before the start of construction.									
Hazardous Waste	**HW-7 Construction Contingency Plan.** Prior to construction, RCTC's resident engineer will ensure the preparation of a Construction Contingency Plan (CCP), in accordance with the guidance provided in Chapter 7-107 of the Caltrans Construction Manual for handling and dealing with unknown hazards (see Figure 7-1.1 of the Caltrans Construction Manual for Caltrans Unknown Hazards Procedure). This plan will include provisions for responding to events such as the discovery of unidentified underground storage tanks (UST), hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes during construction. This plan will address UST decommissioning, field screening, and material testing methods; mitigation and contaminant management requirements; and health and safety requirements for construction workers. If an unexpected release of hazardous substances is found in reportable quantities, the National Response Center must be notified by calling 1-800-424-8802, and cleanup must be coordinated with environmental agencies. The designated contractor will be responsible for preparing the CCP before the start of construction.	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Biology	**NC-1 (NES BIO-1) Vegetation Clearing Restrictions.** Clearing of natural vegetation (including sage scrub) will be performed outside of the active breeding season for birds, as defined in the MSHCP (March 1 through June 30) (MSHCP Volume I, Section 7.5.3), except for Riversidian Sage Scrub (RSS) (including disturbed) judged to be potentially suitable habitat for (and/or occupied by) coastal California gnatcatcher and within MSHCP Criteria Areas. For these areas, the habitat removal restriction is extended from June 30 to August 15. In addition, for riparian/riverine vegetation occupied by least Bell's vireo (LBV), vegetation removal cannot occur through September 15. Table 2.4.1 5 summarizes the locations of (1) natural vegetation communities within the LOD that have the March 1 through June 30 restriction, (2) sage scrub with the June 30 and the August 15 clearing restriction, and (3) riparian/riverine vegetation with a clearing restriction through September 15 (refer to Figure 2.4.1 2 for an illustration of these vegetation communities).	Sections 2.4.1, 2.4.2, 2.4.3, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor	2023 SS Section: 14-6.03B					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**NC-13 (NES BIO-13) LODs and ESAs.** The LODs, including the upstream, downstream, and lateral extents on either side of any stream adjacent to the Project's LOD, will be clearly defined and marked in the field. Biological monitors will review the LODs prior to initiation of construction activities (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C). ESA fencing will be installed during construction to ensure avoidance of jurisdictional areas and riparian habitat.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Other	**Caltrans Standard Specifications Section: 7-1.02M(2) Fire Prevention** The contractor shall comply with all requirements stated in Caltrans Standard Specifications Section 7-1.02M(2). The contractor shall ensure that emergency contact information for the California Department of Forestry and Fire Protection unit headquarters, the U.S. Forest Service ranger district office, and the Bureau of Land Management field office are obtained, distributed, and posted throughout the job site as required. The contractor shall ensure that Hydrocarbon-fueled engines, both stationary and mobile, are equipped with spark arresters per Public Resources Code Section 4442, excluding exempted vehicles stated in Caltrans Standard Specification 7-1.02M(2). The contractor shall follow requirements regarding ashtrays, flammable materials, and clear and grub activities. The contractor shall have all fire equipment listed in Caltrans Standard Specification 7-1.02M(2) readily available on the job site. The contractor must furnish a pickup truck and driver that would be available for fire control during working hours. The pickup truck and operator must patrol the construction area for at least a half-hour after job site activities have ended. In addition to being available, the truck and operator must patrol the area of construction from noon until at least a half-hour after job site activities have ended. If the fire danger rating is "very high" or "extreme" per the California Department of Forestry and Fire Protection, the U.S. Forest Service, and the Bureau of Land Management class ratings, or if a "fire weather watch" or "red flag warning" is issued, the truck and operator must patrol the construction area while work is being done and for at least a half-hour after job site activities have ended. The contractor shall follow the protocol outlined in Caltrans Standard Specifications Section: 7-1.02M(2) when the fire danger rating is "very high" or "extreme." The engineer may suspend work wholly or in part due to hazardous fire conditions. The days during this suspension would be non-working days. If field and weather conditions become such that the work is suspended, Caltrans Standard Specifications Section 7-	Section 3.3, Wildfire EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 7-1.02M(2)					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	1.02M(2) would not be enforced for the period of the suspension.									

CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Other	**FIRE-1** To minimize risk of fires during construction activities, RCTC's resident engineer or designated contractor will ensure the will implement of the following minimization measures: a. Coordinate with CALFIRE and local fire departments to identify and maintain defensible spaces around active construction areas. b. Coordinate with CALFIRE and local fire departments to identify and maintain firefighting equipment (e.g., extinguishers, shovels, water tankers) in active construction areas. c. Post emergency services phone numbers (i.e., fire, emergency medical, police) in visible locations in all active construction areas.	Section 2.2.7, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Other	**UT-1** During construction, RCTC's resident engineer or designated contractor will ensure that all public utility lines, pipes, and cables within the Project limits continue to meet the needs of residents and businesses in the community. In addition, arrangements must be made to avoid disruption of utility services. If interruption in service is unavoidable, notice must be given and proper arrangements will be made with residents and businesses.	Section 2.2.7, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Cultural Resources	**CR-1 Unanticipated Discoveries** If cultural materials are discovered during construction, all earthmoving activity within 60 feet of the discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	Section 2.2.10, EIR/EA	Yes	RCTC, Project Archaeologist, Resident Engineer, Contractor	2023 SS Section: 14-1.02, 14-2.03A					No
Cultural Resources	**CR-2 Human Remains** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the county coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact the District 8	Section 2.2.10, EIR/EA	Yes	RCTC, Project Archaeologist, Caltrans Native American Coordinator, Resident Engineer, Contractor	2023 SS Section: 14-2.03A					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	Native American Coordinator Gary Jones at (909) 261-8157 so that he may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable.									
Cultural Resources	**CR-4 The Establishment of Archaeological Monitoring Areas** Archaeological monitor(s) as assigned by Caltrans shall monitor all ground-disturbing construction-related activities within AMAs that have been established within or adjacent to archaeological sites P-33-000108, P-33-000630, P-33-001099, and P-33-00292. The Resident Engineer will notify Caltrans' Professionally Qualified Staff (PQS) Principal Investigator or equivalent PQS consultant Principal Investigator (archaeological monitor) at least two weeks in advance of construction to ensure that they will be available to monitor and review the ESA boundary protection. A construction schedule will be provided. The engineer and the archaeological monitor will conduct a field review at least 5 business days before the start of job-site activities. The archaeological monitor will monitor ground-disturbing activities within the AMA; a Native American monitor may also be present. If the ESA is breached, the archaeological monitor will have the authority to immediately: 1. Stop all work within 60 feet of the ESA boundary. 2. Secure the area. 3. Notify the engineer. Upon completion of construction, the Caltrans PQS archaeologist or equivalent PQS consultant archaeologist will remove the fencing and fill any post holes with soil removed during the installation of clean fill. An Archaeological Monitoring Report will be completed detailing the results of the monitoring efforts when the monitoring effort has been terminated.	Section 2.2.10, EIR/EA	Yes	RCTC, Caltrans Archaeologist, Project Archaeologist, Resident Engineer, Contractor	2023 SS Section: 14-2.03B, 16-2.03					No
Water Quality	**WQ-1 Comply with Construction General Permit.** During construction, the Riverside County Transportation Commission (RCTC) will ensure that the Project is in compliance with the requirements prescribed in the Caltrans NPDES Statewide Stormwater Permit (Order 2022-0033-DWQ, NPDES No. CAS000003, adopted September 22, 2022 and effective January 1, 2023), the NPDES General Permit for Stormwater Discharges of Stormwater Runoff Associated with Construction Activities (Order WQ 2022-0057-DWQ, adopted September 8, 2022 and effective September 1, 2023), and any subsequent permit in effect at the time of construction.	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 13-1.01D(2)					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Water Quality	**WQ-3 Water Quality Monitoring During Construction.** As a requirement of a Risk Level 2, RCTC will ensure that water quality will be monitored by including a Stormwater Annual Report and a Sampling and Analysis Plan as directed by the Construction General Permit.	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 13-3.01C(2)(b) and 13-3.01C(2)(b)(ii)					No
Water Quality	**WQ-5 Dewatering.** During construction, RCTC will ensure that construction site dewatering will comply with the General Waste Discharge Requirements for Discharges to Surface Waters That Pose an Insignificant (de minimis) Threat to Water Quality (Order No. R8-2015-0004, NPDES No. CAG998001) and any subsequent updates to the permit at the time of construction. This permit addresses temporary dewatering operations during construction. Dewatering BMPs will be used to control sediment and pollutants, and the discharges will comply with the WDRs issued by the SARWQCB.	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Water Quality	**WQ-6 Treatment Prevention BMPs.** Post-construction, RCTC will ensure that Caltrans approved treatment BMPs will be implemented and will operate as designed, consistent with the requirements of NPDES Permit and WDRs for Caltrans Order No. 2022-0033-DWQ, NPDES No. CAS000003, (adopted September 22, 2022 and effective January 1, 2023), and any subsequent permits in effect at the time of construction. Treatment BMPs may include, but are not limited to, design pollution prevention infiltration areas, biofiltration strips and swales, trash capturing devices, media filters, and pervious pavement.	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Water Quality	**WQ-7 Design Pollution Prevention BMPs.** Post-construction, RCTC will ensure that design pollution prevention BMPs are implemented. These BMPs will include, but are not limited to, preserving existing vegetation and slope/surface protection systems (benching/terracing, slope rounding, and reducing gradients [incorporate 4:1 slopes or flatter]).	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Water Quality	**WQ-8 Maintenance BMPs.** Post-construction, RCTC will ensure that maintenance BMPs will be implemented. These BMPs will include, but are not limited to, drain inlet stenciling, treatment BMP marker panels, and any others identified by the Caltrans Maintenance Department and consistent with those shown in the Project Planning and Design Guide (Caltrans 2019) and Maintenance Manual (Caltrans 2017).	Section 2.3.2, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Hazardous Waste	**HW-2 Treated Wood Waste.** Wooden guardrail posts may contain creosote and pentachlorophenol. During construction, RCTC's resident engineer or designated contractor will ensure that treated wood objects are handled as treated wood waste and managed per Chapter 34, Title 22 California Code of Regulations Sections 67386.1 through 67386.12, "Alternative Management Standards for Treated Wood Waste," and in	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-11.14					No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	accordance with Caltrans Standard Specifications, Section 14-11.14 Treated Wood Waste. All treated wood waste (TWW) should be properly disposed at a landfill permitted to accept TWW.									
Hazardous Waste	**HW-3 Paint and Thermoplastic Striping.** Paint used for traffic striping and pavement marking may contain lead chromate. During construction, RCTC's resident engineer or designated contractor will ensure that sampling, analysis, removal, and disposal of any traffic striping and pavement materials will be completed in accordance with Construction Program Procedure Bulletin 99 2, and Caltrans Standard Specifications, Section 14-11.12. Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue and Section 36-4 Residue Containing Lead from Paint and Thermoplastic (2018) and be consistent with the requirements within Caltrans Construction Manual, Chapter 7-107E Removing Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue (2019). Before disposal, the contractor is required to sample the removed material for proper waste classification. Yellow traffic stripe and pavement marking that is characterized as hazardous waste requires disposal to a Department of Toxic Substances Control permitted Class I disposal facility.	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-11.12, 36-4					No
Hazardous Waste	**HW-4 Construction Generated Hazardous Waste.** Construction of the proposed Project may generate hazardous waste. Hazardous wastes generated during construction of the proposed Project would require disposal and could include used oil (not hazardous), sediment from vehicle washing, petroleum materials, cleaning solvents, and paint. RCTC's resident engineer or designated contractor will ensure that all hazardous waste generated during construction will be handled, stored, and disposed of in accordance with Caltrans Standard Specifications, Section 7-107A of the Construction Manual.	Section 2.3.5, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-11, 14-11.13					No
Air Quality	**AQ-1** During clearing, grading, earthmoving, or excavation operations, fugitive dust emissions be controlled by regular watering or other dust preventive measures using the following procedures, as specified in South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The areas disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be	Section 2.3.6, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.									
Air Quality	**AQ-2** Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturers' specifications.	Section 2.3.6, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Air Quality	**AQ-3** All trucks that are to haul excavated or graded material on site will 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.	Section 2.3.6, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Air Quality	**AQ-4** The contractor will adhere to Caltrans Standard Specifications for Construction (Section 14-9.02) that specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.	Section 2.3.6, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-9.02					No
Noise	**N-1** The contractor will implement appropriate noise reduction measures to minimize temporary noise impacts, including changing the location of stationary construction equipment, turning off idling equipment during construction activities, rescheduling construction activities as necessary to be in conformance with applicable requirements, notifying adjacent residents in advance of construction work, and installing acoustic barriers around stationary construction noise sources as necessary in conformance with applicable requirements. To further minimize construction noise impacts on adjacent sensitive land uses, the contractor will ensure that noise levels from contractor operations, between the hours of 9:00 p.m. and 6:00 a.m., do not exceed 86 dBA Lmax at a distance of 50 feet from the job site, in accordance with Caltrans Standard Specifications Section 14-8.02 and Standard Special Provision 14-8.02.	Section 2.3.7, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-8.02					No
Other	**EN-1** The contractor will adhere to Caltrans Standard Specifications for Solid Waste Disposal and Recycling (Section 14-10) and Disposal Documentation (Section 14-11.13B(6)).	Sections 2.2.1, 2.3.8, EIR/EA	Yes	RCTC, Resident Engineer, Contractor	2023 SS Section: 14-10, 14-11.13B(6)					No
Other	**EN-2** Light fixtures and traffic signals will be replaced or installed with highly efficient light-emitting diodes (LEDs), including toll pricing signs.	Section2.3.8, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						No
Biology	**NC-2 (NES BIO-2) Dust Control**. Active construction areas will be watered regularly to control dust and thus minimize impacts on adjacent vegetation (MSHCP Volume I, Section 7.5.3).	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**NC-3 (NES BIO-3) Fire Suppression.** When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to RSS (Figure 2.4.1 2), appropriate firefighting equipment (e.g., extinguishers, shovels, water tankers) will be available on the Project site during all phases of Project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods will be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires will advise contractors regarding fire risk from all construction-related activities (MSHCP Volume I, Section 7.5.3).	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, 2.4.6, and 3.2, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-4 (NES BIO-4) Biological Training.** A qualified biologist will conduct a training session for Project and construction personnel (MSHCP Volume I, Section 7.5.3) prior to grading. The training will include a description of the species of concern and their habitats, the general provisions of the Endangered Species Acts (FESA and CESA) and the MSHCP, the need to adhere to the provisions of the acts and the MSHCP, the penalties associated with violating the provisions of the acts, the general measures that are being implemented to conserve the species of concern as they relate to the Project, and the access routes to and Project site boundaries within which the Project activities must be accomplished (MSHCP Volume I, Appendix C). All sensitive areas will be fenced as presented in Avoidance and Minimization Measure NC-6 (NES BIO-6), Construction and Project Limits, below.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-5 (NES BIO-5) Biological Monitoring.** The qualified Project Biologist will monitor construction activities for the duration of the Project to ensure that practicable measures are being employed and avoid incidental disturbance of habitat and species of concern outside the LOD (MSHCP Volume I, Section 7.5.3). Special attention will be provided to ensure that the environmentally sensitive area (ESA) fencing required in Avoidance and Minimization Measure NC-6 (NES BIO-6), Construction and Project Limits, is maintained daily. Additionally, ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of BMPs. This will be done in concert with Avoidance and Minimization Measure NC-6 (NES BIO-6), Construction and Project Limits, below, which includes the fencing of sensitive areas.	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-6 (NES BIO-6) Construction and Project Limits.** Construction personnel will strictly limit their activities, vehicles, equipment, and construction materials to the proposed LOD and designated staging areas and routes of travel. The construction area(s) will be the minimal area	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	necessary to complete the Project and will be specified in the construction plans. Construction limits adjacent to sensitive resource areas will be demarcated using ESA fencing (e.g., orange snow screen). ESA fencing will be installed where sensitive biological resources have been identified by a qualified biologist. ESA fencing will be reviewed at least weekly by the biological monitor (as indicated in Avoidance and Minimization Measure NC-5 [NES BIO-5], Biological Monitoring) until the completion of all construction activities. Employees will be instructed that their activities are restricted to the construction areas (MSHCP Volume I, Appendix C). Access to sites will be from pre-existing access routes to the greatest extent possible (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C).									
Biology	**NC-7 (NES BIO-7) Exotic Species.** Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth (MSHCP Volume I, Section 7.5.3). Exotic wildlife species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible (MSHCP Volume I, Appendix C). Development adjacent to the MSHCP Conservation Area will not use the plant species listed in Table 6-2 of the MSHCP, Volume I. The applicability of this list will consider the proximity of the planting area to the MSHCP Conservation Areas, species considered in the planting plans, resources to be protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-8 (NES BIO-8) Equipment Cleaning.** Construction equipment will be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds before mobilizing to the site and before leaving the site during the course of construction. The cleaning of equipment will occur off site.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-9 (NES BIO-9) Minimizing Disturbance.** The removal of native vegetation will be avoided and minimized to the maximum extent practicable. Temporary impacts will be returned to pre-existing contours and revegetated with appropriate native species (MSHCP Volume I, Appendix C). Vegetation will be covered while being carried on trucks, and vegetation materials removed from the site will be disposed of in accordance with applicable laws and regulations.	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-11 (NES BIO-11) Access.** The permittee (in this case, Caltrans and Riverside County Transportation Commission) will have the right to access and inspect any	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	sites of approved projects for compliance with Project approval conditions, including BMPs (MSHCP Volume I, Appendix C).									
Biology	**NC-14 (NES BIO-14) MSHCP Covered Species Avoidance.** During construction, the placement of equipment within a stream or on adjacent banks or adjacent upland habitats occupied by MSHCP covered species that are outside of the Project's LOD will be avoided (MSHCP Volume I, Section 7.5.3, and MSHCP Volume I, Appendix C).	Section 2.4.1, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**NC-16 (NES BIO-16). Riparian/Riverine Compensation.** Compensation for permanent impacts on riparian/riverine resources (including permanent shading) will occur as a combination of re-establishment and/or establishment, and potentially a component of rehabilitation, all of which will be at an equivalent or superior value at a ratio that achieves no net loss of riparian/riverine resources and wetlands.[2] Compensation can occur through permittee-responsible mitigation and/or other approved mitigation provider (measure **NC-17 [NES BIO-17]**) having equivalent or superior riparian/riverine resources and located in the vicinity of the Project. A mitigation ratio of up to 3:1 is proposed for permanent impacts on riparian resources, and 2:1 is proposed for permanent impacts on riverine resources, with a ratio of a minimum of 1:1 of the 3:1(or 2:1 as appropriate) as re-establishment or establishment. These ratios will ensure no net loss of these habitats. Mitigation for all riparian/riverine resources will be biologically superior or equivalent to resources that are to be lost on site. The temporary impacts on riparian/riverine resources may be replaced through restoration of the temporarily affected area to pre-Project conditions, at a ratio of 1.25:1 and through permittee-responsible mitigation or other approved mitigation program. All temporary impacts would be replaced in kind at their current locations following preparation of both a Restoration Plan and an HMMP that would be reviewed and approved by the RCA and wildlife agencies prior to Project implementation. During establishment/re-establishment of riparian/riverine resources, no plant species listed in Table 6-2 of MSHCP Volume I will be planted within or adjacent to these resources. Details of the compensation for riparian/riverine resources will be provided in the DBESP (measure **NC-13 [NES BIO-13]**). Once the mitigation location has been identified, a functions and values assessment will be performed to evaluate the equivalency of the resources to ensure that	Sections 2.4.1, 2.4.2, and 2.4.4 EIR/EA	Yes	RCTC						Yes

[2] Mitigation ratios may differ based on the location of riparian/riverine resources within the LOD. For example, riparian habitat within Temescal Wash may be mitigated at a higher ratio due to the quality of functions and values for wildlife movement, "live-in" habitat for sensitive species (i.e., LBV), and water quality functions.

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	the requirement of biologically equivalent or superior preservation is met. The equivalency analysis will include addressing how mitigation will replace permanently lost functions and values, potential lost connectivity to downstream MSHCP resources, temporal losses, and onsite restoration. The equivalency analysis will be reviewed and approved by RCA and the wildlife agencies prior to construction. In addition, refer to measure **TE-3 (NES BIO-23)** below for more details on LBV compensatory mitigation.									
Biology	**NC-18 (NES BIO-20). Wildlife Undercrossings.** In portions of the MSHCP Conservation Area that are assembled to provide for wildlife movement or where there is known wildlife movement, the permittee is required to maintain functionality of wildlife crossings to comply with Section 7.5.3 of the MSHCP. The following crossings were identified as described in the MSHCP to be included in the MSHCP Conservation Area to provide wildlife movement and where direct impacts from the Project are anticipated: • Indian Truck Trail (PM 30.41): MSHCP Proposed Constrained Linkage 3 • Indian Wash, Jurisdictional Feature 30.0-1 (PM 30.09): MSHCP Proposed Linkage 1 • Horsethief Canyon Wash, Jurisdictional Feature 29.1-1 (PM 29.13): MSHCP Proposed Constrained Linkage 5 • Horsethief Canyon Road (PM 28.88): MSHCP Proposed Constrained Linkage 5 • Temescal Wash (south crossing), Jurisdictional Feature 28.1-1 (PM 28.04): Proposed Constrained Linkage 6 • Lake Street (PM 26.69): Proposed Core 1 (linking north and south I-15) • Gavilan Wash/Alberhill Creek, Jurisdictional Feature 25.5-1 (PM 25.54): Proposed Core 1 (linking east and west of I-15) • Jurisdictional Features 25.3-3/25.3-4 (PM 25.38); Proposed Core 1 (linking east and west of I-15) • Jurisdictional Features 25.3-1/25.3-2 (PM 25.32): Proposed Core 1 (linking east and west of I-15) To maintain functionality at these wildlife crossings, the following will apply: Prior to construction, a Wildlife Crossing Plan to address potential modifications in wildlife movement at the above-identified wildlife crossings during construction will be prepared by a qualified biologist. The Wildlife Crossing Plan will be based on the information provided in the MSHCP Consistency Analysis (consistent with Section	Sections 2.4.1, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?

	6.6.2 (E [2]) of the MSHCP). The plan will evaluate and provide requirements that may be considered, such as:
	• Construction work windows (seasonal and daily) (consistent with **BIO-1**, Vegetation Clearing Restrictions)
	• Construction fencing requirements to provide movement through the wildlife crossing outside of work areas (generally single-span underpasses will maintain one large, open passage area and bridges with multiple spans will have multiple open passage areas during construction)
	• Size of the opening(s):
	  ○ A minimum width of 10 feet of crossing opening will be maintained at all times at Indian Truck Trail and Horsethief Canyon Wash, and Horsethief Canyon Road.
	• Restricted work areas (consistent with **BIO-6**, Construction and Project Limits, and **BIO-9**, Minimizing Disturbance)
	• Noise and light requirements (consistent with **BIO-18,** Lighting and Signage, **AES-4,** Lighting and Signage**, BIO-21,** Temescal Wash – Nesting Season Noise Requirements, **BIO-22,** Temescal Wash – Biological Monitoring, and **Caltrans Standard Specification Section: 14-8.02 Noise Control**)
	  ○ A qualified biologist will confirm that night lighting is not entering the MSHCP Conservation Areas
	• Noise abatement during construction, maintaining noise levels within the crossing area below 100 dBA during sensitive crossing periods and/or in sensitive crossing areas, at the discretion of the qualified biologist
	• Treatment of edge effects (toxics, runoff [consistent with **BIO-12**, Water Pollution and Erosion Plans], invasive species avoidance [consistent with **BIO-7**, Exotic Species, and **BIO-8**, Equipment Cleaning], night lighting [consistent with **BIO-18**, Night Lighting Management])
	• If it is determined that the natural dry ledges are insufficient during periods of inundation for wildlife movement, then this will be re-evaluated and artificial ledges may be required
	The biological monitor (**BIO-5,** Biological Monitoring) will ensure that the requirements in the Wildlife Crossing Plan are implemented during construction.
	Wherever temporary disturbances occur to riparian/riverine areas, onsite restoration is proposed per **BIO-16,** Riparian/Riverine Compensation and **BIO-17,** Aquatic Resource Compensatory Mitigation). Temporary									

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	impacts are anticipated at all of the above aquatic crossings. A qualified biologist will review the Habitat Mitigation and Monitoring Plan (HMMP) required to be prepared (**BIO-16** and **BIO-17**) for the above-identified wildlife crossings in drainages and will assist in designing revegetation efforts relative to existing conditions, with designs such as using tree and shrubs around crossing entrances, compliant with jurisdiction design requirements, to support the wildlife in the crossing by efforts that may be considered, such as: • Installing vegetation to guide wildlife to the crossings • Providing protection for small mammals and cover for predatory species, such as mountain lion or bobcat, leading up to crossings • Ensuring revegetation mimics the surrounding natural wildlife crossing area using native species • Providing vegetation buffers to reduce noise effects on wildlife approaching the crossing • No artificial lighting will be added to wildlife crossing structures. • Treatment and management of edge effects such as lighting (consistent with **BIO-18**, Night Lighting Management), runoff, toxics (consistent with **BIO-12**, Water Pollution and Erosion Plans, **WQ-2**, Prepare a Storm Water Pollution Prevention Plan, **WQ-3**, Water Quality Monitoring During Construction, **WQ-6**, Treatment Prevention BMPs and **WQ-7**, Design Pollution Prevention BMPs and **WQ-8**, Maintenance BMPs), and invasive species (consistent with **BIO-7**, Exotic Species, and **BIO-8**, Equipment Cleaning), as described in the Avoidance and Minimization Measures, will apply to wildlife crossings. Shading is anticipated to be increased at several of the wildlife crossings through the widening of the dual bridges to fill the existing gaps between the bridges to support the new lanes of road. Modifying the length of the crossing by increasing the length decreases the openness ratio. During bridge modifications, the openness ratio of any of the above-identified modified wildlife crossings will not be reduced to less than 0.6. In crossings not identified above, wherever possible, open areas will be maintained for wildlife to cross during construction to serve as alternate crossings. Wildlife fencing, if determined to be required by the qualified biologist preparing the Wildlife Crossing Plan, would be designed to encourage animals to use the crossing and prevent access to the road. Wildlife jump outs (to allow wildlife to exit the road if wildlife becomes trapped in the roadway) may be preferrable to one-way access gates for wildlife due to maintenance issues. If									

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	fencing is to be installed, it would require a fine mesh at the bottom to direct small animals into the crossing and prevent wildlife from entering I-15.									
Biology	**NC-19 (NES BIO-24) Waste Management.** To avoid attracting predators of special-status species, the Project site will be kept as clean of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site(s) (MSHCP Volume I, Appendix C). Waste, dirt, rubble, or trash will not be deposited in the Conservation Area or on native habitat (MSHCP Volume I, Section 7.5.3).	Sections 2.4.1, 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**WET-1 (BIO-22) Temescal Wash – Biological Monitoring.** A qualified monitor will be present during all construction phase work occurring in or within surface waters that are within 300 feet of Temescal Wash and its tributaries.	Sections 2.4.2, 2.4.4, and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**AS-1 (NES BIO-18) Night Lighting Management.** Night lighting will be directed away from natural lands within potential MSHCP conservation areas in order to support potential linkage and core functions during construction. This is intended to protect species within potential MSHCP conservation areas from direct night lighting during construction if activities occur at night. The MSHCP requires that shielding be incorporated in project designs to ensure ambient lighting in MSHCP conservation areas is not increased (MSHCP Volume I, Section 6.1.4). For this Project, there are no proposed modifications to existing signals or proposed new signals.	Sections 2.4.4 and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**TE-1 (NES BIO-29) Insect Measures.** The planting of milkweed (for monarch) and nectar sources (for monarch and Crotch bumble bee) is not recommended within the LOD, as this may attract these species to an area where the potential for collision with vehicles is high. To protect monarch, Crotch bumble bee, and other pollinators, the following measures are to be implemented: • Avoid the planting of milkweed (for monarch) and nectar sources (for Crotch bumble bee). • Avoid the use of pesticides (i.e., insecticides and herbicides) wherever possible. If pesticides are to be used, conduct applications between March 16 and September 14, when possible. • Screen pesticides for pollinator risk to avoid harmful applications. Bee precaution pesticide ratings can be found here: https://www2.ipm.ucanr.edu/beeprecaution/. • Avoid the use of neonicotinoids or other systematic insecticides, including coated seeds, at any time of year, due to their toxic nature. • Avoid the use of soil fumigants.	Section 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	• Use non-chemical weed control techniques when possible (https://www.cal-ipc.org/resources/library/publications/non-chem/) (Cal-IPC 2020). • If possible, avoid the use of herbicide on blooming flowers. Herbicide use should be conducted on young plant phases, when plants are more responsive to treatment, and when pollinators are less likely to be nectaring on plants. • Use a targeted herbicide approach whenever possible, not large-scale broadcast application. Also, use precautions to limit herbicide drift from wind and discharge from surface water flows. • Do not plant nonnative tropical milkweed *Asclepias curassavica*. This plant species contributes to the spread of the monarch pathogen *Ophryocystis elektroscirrha*, which can be debilitating and/or lethal to monarchs. Remove any detected *Asclepias curassavica*.									
Biology	**TE-2 (NES BIO-21) Temescal Wash – Nesting Season Noise Requirements**. Between March 15 and September 15, all heavy equipment will install and maintain mufflers or other noise-reducing features when working within 300 feet of Temescal Wash. A biological monitor will monitor and log sound levels at the edge of the LOD with the riparian area to ensure noise levels do not result in a disruption to nesting birds (typically over 60 decibels). If construction noise is negatively affecting nesting birds, work will cease (unless authorized by the wildlife agencies) until adequate sound barriers can be constructed to reduce noise levels at the edge of the riparian corridor. It may be most effective to construct noise barriers well prior to March 15 to ensure construction delays do not occur. All noise barriers would need to be constructed within the LOD.	Sections 2.4.4 and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Biology	**TE-3 (NES BIO-23). LBV Habitat Compensation.** Because the federally and State-listed as endangered LBV occupies the riparian/riverine areas at Temescal Wash and associated tributaries proposed for impact, compensation for both riparian/riverine and LBV will be integrated and approval of the equivalency analysis by RCA and wildlife agencies shall occur to ensure any occupied LBV lands affected by construction are replaced with equivalent lands (i.e., mitigation lands are occupied or restored to occupation). Final mitigation ratios will be determined after consultation with RCA and wildlife agencies; however, at least 1:1 mitigation consisting of establishment or re-establishment of occupied, or potentially occupied, lands will occur to ensure no net loss of occupied habitat. Final approval will occur prior to the	Sections 2.4.2 and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						Yes

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	start of Project construction, including any ground disturbance work and/or vegetation clearing.									
Biology	**TE-4 Stephens' Kangaroo Rat.** To avoid and minimize effects on Stephens' kangaroo rat (*Dipodomys stephensi*; SKR) and associated habitat, RCTC will implement the following: • Payment of the SKR HCP fee. • Monitor and report on compliance with the established take threshold for all SKR habitat associated with the Project. A biological monitor will track and identify SKR habitat that is subject to disturbance. Once the biological monitor has determined that permanent and temporary impacts on SKR habitat has reached 80 percent of the anticipated disturbance (192.1 acres), the biological monitor will map all potential SKR habitat disturbed with a sub-meter global positioning system weekly. • Reports, including geographic information system files, will be submitted to USFWS at the end of every week until ground disturbance has occurred in all planned areas.	Sections 2.4.2 and 2.4.5, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No
Other	**GHG-1:** The contractor must comply with SCAQMD's rules, ordinances, and regulations regarding air quality restrictions.	Section 3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-4:** The Project will maintain equipment in proper tune and working condition.	Section 3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes
Other	**GHG-5:** Use water-efficient technologies for landscaping.	Section 3.4, EIR/EA	Yes	RCTC, Resident Engineer, Contractor						Yes

POST-CONSTRUCTION

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
Biology	**NC-10 (NES BIO-10) Revegetation.** Post-construction, any temporarily disturbed areas remaining as bare ground will be hydro-seeded with a Caltrans-approved seed mix. This measure will comply with Avoidance and Minimization Measure NC-7 (NES BIO-7), Exotic Species.	Sections 2.4.1, 2.4.2, 2.4.4, 2.4.5, and 2.4.6, EIR/EA	Yes	RCTC, Project Biologist, Caltrans District 8 Landscape Architect, Caltrans District 8 Biologist, Resident Engineer, Contractor						No
Biology	**AS-4 (NES BIO-27) Bat Roosting Habitat.** All structures on bridges and/or culverts supporting bat roosting habitat will be returned to original or better condition at the completion of construction, where feasible. Where this is not feasible, permanent loss of such habitat will be mitigated through creation of suitable roosting habitat at no less than a 1:1 ratio. This shall be coordinated with	Section 2.4.4, EIR/EA	Yes	RCTC, Project Biologist, Resident Engineer, Contractor						No

Category	Task and Brief Description	Source	Included in PS&E package	Responsible Branch/Staff	Action to Comply	Due Date	Task Completed by	Task Completed on	Remarks	Mitigation for significant impacts under CEQA?
	CDFW. If trees with the potential to provide roost sites for solitary bats are removed as determined by the qualified bat biologist (i.e., fan palms, riparian trees), trees will be replaced with equivalent or better at the completion of construction.									

Appendix D Acronyms and Abbreviations

Acronym/Abbreviation	Definition
°F	degrees Fahrenheit
2020–2045 RTP/SCS	Connect SoCal
AADT	annual average daily traffic
AB	Assembly Bill
ACHP	Advisory Council on Historic Preservation
ACM	asbestos-containing material
ACS	American Community Survey
ADA	Americans with Disabilities Act
ADI	Area of Direct Impact
ADL	aerially deposited lead
ADT	average daily traffic
AGR	agricultural supply
AMA	Archaeological Monitoring Area
amsl	above mean sea level
APE	Area of Potential Effects
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
ASR	Archaeological Survey Report
ASTM	American Society for Testing and Materials
Basin	South Coast Air Basin
BGEPA	Bald and Golden Eagle Protection Act
bgs	below ground surface
BIOS	Biogeographic Information and Observation System
BMP	best management practice
BSA	biological study area
BTU	British thermal unit
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CAPTI	The California Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCP	Construction Contingency Plan
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDP	Census-Designated Place
CE	State-listed as candidate endangered
CEQ	Council on Environmental Quality

Acronym/Abbreviation	Definition
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CETAP	Community and Environmental Transportation Acceptability Process
CFE	candidate federally endangered
CFG Code	California Fish and Game Code
CFP	California Fully Protected
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH_4	methane
CHP	California Highway Patrol
CIA	Community Impact Assessment
CIDH	cast-in-drilled-hole
CIP	Corridor Improvement Project
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO Protocol	California Project-Level Carbon Monoxide Protocol
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COP	I-15 Corridor Operations Project
County	Riverside County
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSC	California Species of Special Concern
CSO	Cultural Studies Office
CTC	California Transportation Commission
CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DBESP	Determination of Biologically Equivalent or Superior Preservation
Department	California Department of Transportation
DHHS	Department of Health and Human Services
DPM	diesel particulate matter
DPR	Draft Project Report
DSA	Disturbed Soil Area
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EB	eastbound
ECR	Environmental Commitments Record

Acronym/Abbreviation	Definition
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EIR/EA	Environmental Impact Report/Environmental Assessment
EJ	environmental justice
ELP	Express Lanes Project
ELPSE	Express Lanes Project Southern Extension
EMFAC	EMission FACtors
EO	Executive Order
ESA	Environmentally Sensitive Area
ESU	evolutionarily significant unit
EVMWD	Elsinore Valley Municipal Water District
FCAA	Federal Clean Air Act
FE	federally listed as endangered
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIRM	FEMA Flood Insurance Rate Map
FNAE	Finding of No Adverse Effect
FOE	Finding of No Adverse Effect
FONSI	Finding of No Significant Impact
FT	federally listed as threatened
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Program
GHG	greenhouse gas
GIS	geographic information system
Guidelines	Section 404 (b)(1) Guidelines
H&SC	Health and Safety Code
H_2S	hydrogen sulfide
HASP	Health and Safety Plan
HCM	Highway Capacity Manual
HCP	habitat conservation plan
HDM	Highway Design Manual
HFCs	hydrofluorocarbons
HMMP	Habitat Mitigation and Monitoring Plan
HOV	high-occupancy vehicle
HPSR	Historic Property Survey Report
HRER	Historical Resources Evaluation Report
HUC	Hydrologic Unit Code
I-	Interstate
ICOP	I-15 Interim Corridor Operations Project
in/sec	inch per second
IND	industrial service supply
ISA	Initial Site Assessment

Acronym/Abbreviation	Definition
JD	Jurisdictional Delineation Report
JPR	Joint Project Review
JSA	jurisdictional study area
KV	key view
LBP	lead-based paint
LBV	least Bell's vireo
LCP	Lead Compliance Plan
LED	light-emitting diode
LEDPA	least environmentally damaging practicable alternative
Leq[h]	average hourly equivalent noise level
LGBTQ+	lesbian, gay, bisexual, transgender, and queer
LLWD	Lee Lake Water District
L_{max}	maximum noise level
LOD	limits of disturbance
LOS	level of service
LRA	Local Responsibility Areas
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MMT	million metric tons
mph	miles per hour
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS_4	Municipal Separate Storm Sewer Systems
MS_4s	municipal separate storm sewer systems
MSAT	mobile-source air toxic
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
MUN	municipal and domestic supply
MWD	Metropolitan Water District
N_2O	nitrous oxide
NAA	Noise Analysis Area
NAAQS	National Ambient Air Quality Standards
NAC	noise abatement criteria
NADR	Noise Abatement Decision Report
NAHC	Native American Heritage Commission
NAL	numeric action levels
NB	northbound
NCP	noise control plan
NEPA	National Environmental Policy Act
NEPA Assignment MOU	Memorandum of Understanding pursuant to 23 USC 327
NEPS	Narrow Endemic Plant Species
NES	Natural Environment Study
NHPA	National Historic Preservation Act

Acronym/Abbreviation	Definition
NHTSA	U.S. Department of Transportation's National Highway Traffic and Safety Administration
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOAA Fisheries	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NOP	Notice of Preparation
NO_X	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSR	Noise Study Report
O_3	ozone
OEHHA	California Office of Environmental Health Hazards Assessment
OHWM	ordinary high-water mark
PA	Programmatic Agreement
PA&ED	Project Approval and Environmental Document
PALM	Project Aesthetics and Landscape Master Plan
Pb	lead
pc/mi/ln	per mile per lane
PCTA	post-construction treatment area
PDB	Progressive Design Builder
PDT	Project Development Team
PEC	potentially exceeding capacity
Pechanga Tribe	Pechanga Band of Luiseño Indians
Pilot Program	Surface Transportation Project Delivery Pilot Program
PIR/PER	Paleontological Identification Report/Paleontological Evaluation Report
PM	post mile
PM	particulate matter
PM_{10}	particles of 10 micrometers or smaller
$PM_{2.5}$	particles of 2.5 micrometers and smaller
PMP	Paleontological Mitigation Plan
Porter-Cologne Act	State Water Code
ppm	parts per million
PPV	Peak Particle Velocity
PQP	public/quasi-public
PQS	Professionally Qualified Staff
PRC	Public Resources Code
PRIMP	paleontological resource impact mitigation program
PROC	industrial process supply
Project	I-15 Express Lanes Project Southern Extension Project
Protocol	*Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*

Acronym/Abbreviation	Definition
PS&E	Plans, Specifications, and Estimates
PSR-PDS	Project Study Report-Project Development Support
PTS	paint and thermoplastic striping
RCA	Western Riverside County Regional Conservation Authority
RCB	reinforced concrete box
RCEM	Roadway Construction Emissions Model
RCGP	Riverside County General Plan
RCRA	Resource Conservation and Recovery Act
RCTC	Riverside County Transportation Commission
REC	recognized environmental condition
ROG	reactive organic gas
ROW	right of way
RSA	Resource Study Area
RSS	Riversidian sage scrub
RTA	Riverside Transit Agency
RTP	Regional Transportation Plan
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SARWQCB	Santa Ana Regional Water Quality Control Board
SB	southbound
SB	Senate Bill
SBKR	San Bernardino kangaroo rat
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SCG	Southern California Gas Company
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SE	state-listed as endangered
SER	Standard Environmental Reference
SF_6	sulfur hexafluoride
SFHA	special flood-hazard area
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SKR	Stephens' kangaroo rat
SKR HCP	SKR long-term habitat conservation plan
SMGB	State Mining and Geology Board
SO_2	sulfur dioxide
SR-	State Route
SRA	State Responsibility Area
SS	Standard Specification
SSD	Stopping Sight Distance

Acronym/Abbreviation	Definition
SSP	Standard Special Provision
ST	state-listed threatened
STGA	Significant Trash Generating Area
SVP	Society of Vertebrate Paleontology
SWFL	southwestern willow flycatcher
SWMP	Statewide Storm Water Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TASAS	Traffic Accident Surveillance and Analysis System
TCE	temporary construction easement
TCP	Traditional Cultural Property
TCP	Traditional Cultural Property
TCR	tribal cultural resource
TMDL	Total Maximum Daily Load
TMP	Transportation Management Plan
TNM	Traffic Noise Model
TOAR	Traffic Operations Analysis Report
TSM	Transportation System Management
TWW	treated wood waste
U.S.	United States
U.S. EPA	U.S. Environmental Protection Agency's
U.S.C	United States Code
US-	U.S. Route
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service
V/C	volume-to-capacity
VAU	visual assessment unit
VE	Value Engineering
VHFHSZ	very high fire hazard severity zone
VIA	Visual Impact Assessment
VMT	vehicle miles traveled
VMTMP	Vehicle Miles Traveled Mitigation Program
VOC	volatile organic compound
WB	westbound
WDR	Waste Discharge Requirement
Wildlife Agencies	U.S. Fish and Wildlife Service and California Department of Fish and Wildlife
WL	Watch List
WoS	waters of the State
WoUS	waters of the U.S.
WPCP	Water Pollution Control Program

Acronym/Abbreviation	Definition
WRCRCA	Western Riverside County Regional Conservation Authority
WSE	water surface elevation

Appendix E List of Technical Studies

The technical studies listed below were used in preparation of this Environmental Impact Report/Environmental Assessment.

- Aerially Deposited Lead Analysis (January 2020)
- Air Quality Assessment Report (August 2022)
- Archaeological Survey Report (March 2023)
- Community Impact Assessment (July 2024)
- Determination of Biologically or Equivalent Superior Preservation Report (2024)
- District Preliminary Geologic Study (February 2023)
- Errata for Value Engineering Revisions for the I-15 Express Lanes Project – Southern Extension (December 2022)
- Finding of Effect (March 2023)
- Historic Property Survey Report (March 2023)
- Historical Resources Evaluation Report (March 2023)
- Phase I Initial Site Assessment (December 2021)
- Jurisdictional Delineation (September 2021)
- Limited Asbestos and Lead Chip Assessment (May 2020)
- Location Hydraulic Study (January 2023)
- Natural Environment Study (October 2023)
- Noise Abatement Decision Report (June 2024)
- Noise Study Report (May 2024)
- Paleontological Identification Report and Paleontological Evaluation Report (January 2022)
- Preliminary Drainage Report (August 2021)
- Project Report (October 2024)

- Traffic Operations Analysis Report (April 2022)
- Vehicle Miles Traveled (VMT) Analysis Memorandum (February 2021)
- Visual Impact Assessment (May 2024)
- Water Quality Assessment Report (December 2021)
- Rapid Assessment of Stream Crossings (January 2022)

Appendix F Traffic Operations Policy Directive (TOPD) 23-01 Memorandum

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FEHR PEERS

Memorandum

Date: October 2, 2024

To: HDR Engineering, Inc.
Riverside County Transportation Commission (RCTC)
Caltrans District 8

From: Jason D. Pack, P.E.

Subject: Traffic Operations Policy Directive (TOPD) 23-01 Discussion for the I-15 Express Lanes Project Southern Extension (ELPSE) PA&ED (EA 0J0820)

The traffic analysis for the I-15 ELPSE project began in the fall of 2019. Since that time, a variety of forecasting has occurred for the project in support of the environmental analysis. Traffic counts were collected in the fall of 2019, right before the COVID-19 Pandemic occurred and affected travel patterns in the state. In 2020, Caltrans released TOPD 20-04 which validated use of pre-pandemic counts in technical analysis on the state highway system. The Traffic Operations Analysis Report (TOAR) was approved in February of 2021, but several subsequent updates occurred for the following year as the Geometric Approval Drawings (GADs) were refined and modifications were made to the project. The final TOAR was stamped by me in April of 2022.

Since that time, Caltrans has released TOPD 23-01 which supersedes TOPD 20-04. This memorandum documents how the Project assessment is consistent with that directive.

Background

The transportation Methodologies and Assumptions Memorandum was approved by Caltrans on October 29, 2019, which allowed travel demand forecasting to begin in support of the Volumes Report and the subsequent TOAR. The Volumes Report was approved by Caltrans on April 30, 2020, and the first TOAR was approved on February 22, 2021. It should be noted that several subsequent revisions to the TOAR occurred between over the next year as small geometric revisions were investigated as the GADs were being finalized.

The Table below from the TOAR documents key dates related to the TOAR submittals and approvals by Caltrans.

Deliverables Reference and Tracking:

Deliverable	Revisions	Date
Previous Caltrans – Approved Submittals		
Final Methodologies and Assumptions Report	-	September 25, 2019
Methodologies and Assumptions Report – Approved by Caltrans	-	October 29, 2019
Final Volumes Report	-	March 18, 2020
Volumes Report – Approved by Caltrans	-	April 30, 2020
Traffic Operations Analysis Report (TOAR) – Approved by Caltrans	-	February 22, 2021
Traffic Operations Analysis Report (TOAR) Submittals		
Draft TOAR	-	August 19, 2020
Draft TOAR	Responding to Caltrans comments on August TOAR	October 14, 2020
Draft TOAR	Adding additional access variations tested in Chapter 4	December 10, 2020
Draft TOAR	Revisions to the northbound Dos Lagos/Weirick Road & Cajalco Road express lane access design	January 7, 2021

Deliverables Reference and Tracking:

Deliverable	Revisions	Date
Final TOAR- Approved by Caltrans February 22, 2021	Revision to the lane widths at the northbound Dos Lagos/Weirick Road & Cajalco Road express lane access	February 10, 2021
TOAR Update to incorporate I-15 Corridor Operations Project (COP) Programming (EA 0J0830) Memorandum	Revision to include I-15 COP in the ELPSE No-Build Alternative. Revisions to the Build Alternative southbound I-15 Cajalco Road/Weirick Road express lane weave zone access to meet TOPD design requirements related to spacing needed to negotiate weaving maneuvers on the freeway.	March 15, 2021
Comments for the TOAR Update Memorandum were received.	Both the No-Build and the Build Alternative scenarios required updates. The project team decided that the changes should be reflected in the TOAR (not a separate memorandum). This would ensure that the approved I-15 ELPSE TOAR would be a complete standalone document containing the Build Alternative moving forward.	April 14, 2021

Deliverables Reference and Tracking:

Deliverable	Revisions	Date
Draft TOAR	Southbound I-15 Interim Corridor Operations Project (ICOP) auxiliary lane and I-15 Corridor Operations Project (COP) trap lane between the Cajalco Road Loop On-Ramp and Weirick Road Off-Ramp in Opening Year and Design Year No-Build scenarios	November 12, 2021
	Dual Lane exit at the Weirick Road Off-Ramp under the Build scenarios	
	Update geometrics of southbound express lane access between Cajalco Road and Weirick Road to meet design requirements.	
Comments on the TOAR were received	Request for clarification on why the No-Build and Build Alternatives are being updated.	December 10, 2021
Draft TOAR	Added History for I-15 ELPSE Traffic Operations Analysis Report	January 18, 2022
Draft TOAR – Approved April 07, 2022	Minor text edits Remove highlighted text.	February 17, 2022
Final TOAR	Stamped	April 11, 2022

Traffic counts for the ELPSE project were collected in the Fall of 2019 around the same time the Methodologies and Assumptions Memo was approved and when the Volumes Report was being prepared. It should be noted that California Environmental Quality Act (CEQA) typically set the environmental baseline for a project as when technical studies begin or when the Notice of Preparation (NOP) was issued. The NOP for the project is dated October 11, 2019, and the environmental baseline is consistent with when traffic counts were collected for the project.

While the TOAR was being completed, Caltrans released TOPD 20-04 which provided guidance related to data collection during the COVID pandemic when traffic patterns significantly changed. Specifically, new counts during this time were not desirable and TOPD 20-04 suggested that new counts should not be collected while traffic patterns were affected by the pandemic.

TOPD 23.01 Discussion

TOPD 23-01 provides a variety of guidance in how Caltrans data collection should occur during the COVID pandemic and during the recovery phase from the pandemic. Key excerpts are noted below:

- ***Due to the potential abnormal traffic patterns created by the COVID-19 pandemic, traffic analyses conducted for all projects on the State Highway System (SHS) shall not use traffic data collected between March 13th, 2020 and January 31st, 2022.*** *For areas with lasting pandemic impacts, historical data may continue to be used. Traffic analysis and data usage should be subject to sound traffic engineering judgement and justification with source documentation of historical traffic data….Traffic data older than three (3) years may be refreshed by forecasting methods such as the regional travel demand model.*

- *All projects that conducted traffic analysis, not using traffic count data prior to March 13, 2020, including projects submitted by others through the LD-IGR program are affected. To provide valid traffic analysis during this time, traffic count data should be less than three years old. Pre-COVID-19 traffic data collected prior to March 2020 should be used as the baseline during the short-term interim (e.g., next two years). Historical traffic data gathered from past projects and partner agencies may be used to supplement and/or replace "existing" COVID-19 pandemic period traffic counts, subject to sound engineering justification and source documentation of historical traffic data.*

- *For the use of any traffic data that is older than three (3) years, it is recommended to use Regional Travel Demand Model to forecast the traffic data to the current year with some adjustment factors based on observed traffic patterns using PeMS and current land use. If counts at the needed location are not available, current counts should be gathered from the needed location and from a representative location where prior counts are available. The current counts from the needed location can then be adjusted to more accurately reflect*

assumed post-COVID conditions. Traffic consultants and local agencies should also follow these recommendations for Capital Oversight and LD-IGR program projects.

The I-15 ELPSE Project is consistent with this TOPD guidance. Specifically:

- Counts were collected prior to the COVID pandemic.
- The PA&ED circulation is occurring within the "two-year" window Caltrans identifies above (second bullet) which would allow the pre-Covid traffic counts to be utilized through 2025.
- The regional travel demand model has been used to forecast the Opening Year (2030) and Design Year (2050) traffic volumes and ***those horizons have not changed*** during the process.

Given the above information, new traffic counts are not needed, appropriate, or required to inform technical studies needed for the environmental document.