

M e m o r a n d u m**To:** CHAIR AND COMMISSIONERS**CTC Meeting:** December 10, 2014**Reference No.:** 2.2b.
Action**From:** ANDRE BOUTROS
Executive Director**Subject:** **DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT (DEIR/EA) FOR THE STATE ROUTE (SR) 82 AT FLORIBUNDA AVENUE INTERSECTION SAFETY IMPROVEMENT PROJECT 04-SM-82, PM 13.69 (PPNO 0686)****ISSUE:**

Should the Commission, as a Responsible Agency, provide comments in response to the DEIR/EA for the SR 82 at Floribunda Avenue Intersection Safety Improvement Project in San Mateo County?

RECOMMENDATION:

Staff recommends that the Commission make no comments relative to the alternatives or environmental impacts addressed in the DEIR/EA. However, staff recommends that a letter be sent to the Department that states the following:

- The Commission has no comments with respect to the alternatives or environmental impacts addressed in the DEIR/EA.
- As this project is programmed in the 2014 State Highway Operation and Protection Program and actions under the purview of the Commission are anticipated, upon completion of the final environmental document, notification should be provided to the Commission as a Responsible Agency.

BACKGROUND:

The Department is the designated CEQA/NEPA Lead Agency responsible for the environmental review of the project. SR 82 at Floribunda Avenue Intersection Safety Improvement Project The Centennial Corridor Project will widen SR 82 at the Floribunda Avenue intersection Post Mile (PM) 13.39 between Oak Grove Avenue and Bellevue Avenue in the City of Burlingame to install left-turn pockets and left-turn signals in the northbound and southbound directions. This project is currently programmed for funding in the 2014 State Highway Operation and Protection Program. For additional project information and summaries of the build alternatives and environmental impacts identified in the DEIR/EIS, please see the Department's memorandum included as agenda item 2.2b

Memorandum

To: CHAIR AND COMMISSIONERS

CTC Meeting: December 10, 2014

Reference No.: 2.2b.
Action

From: ANDRE BOUTROS
Executive Director

Subject: **DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL IMPACT STATEMENT
(DEIR/EIS) FOR THE HIGH DESERT CORRIDOR PROJECT
07-LA-14, PM 57.8/64.1, 08-SBD-18, PM 84.3 (EA 2600U)**

ISSUE:

Should the Commission, as a Responsible Agency, provide comments in response to the DEIR/EIS for the High Desert Corridor Project in Los Angeles and San Bernardino Counties?

RECOMMENDATION:

Staff recommends that the Commission make no comments relative to the alternatives or environmental impacts addressed in the DEIR/EIS. However, staff recommends that a letter be sent to the Department that states the following:

- The Commission has no comments with respect to the alternatives or environmental impacts addressed in the DEIR/EIS.
- This project is not yet programmed or funded; however if funds or actions under the purview of the Commission are anticipated, upon completion of the final environmental document, notification should be provided to the Commission as a Responsible Agency.
- Since tolling is under consideration for this project, the Commission encourages Caltrans and its partners to ensure early communication and coordination with the Commission in the event it is anticipated that the Commission will be requested to approve the project for delivery through a public private partnership procurement consistent with the provisions of Senate Bill 4 (SBX2 4, Statutes of 2009), or for construction approval to allow for financing approval by the California Transportation Financing Authority as provided for in Assembly Bill 798 (AB 798, Statutes of 2009).

BACKGROUND:

The Department is the designated CEQA/NEPA Lead Agency responsible for the environmental review of the project. The High Desert Corridor Project would construct a new multi-modal freeway/expressway between State Route (SR) 14 in Los Angeles County to SR 18 in San Bernardino County. Two of the alternatives considered for this project include tolling. For additional project information and summaries of the build alternatives and environmental impacts identified in the DEIR/EIS, please see the Department's memorandum included as agenda item 2.2b

Memorandum

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: December 10, 2014

Reference No.: 2.2b.
Action Item

From: NORMA ORTEGA
Chief Financial Officer

Prepared by: Katrina C. Pierce, Chief
Division of
Environmental Analysis

Subject: **COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORTS**

RECOMMENDATION:

The California Department of Transportation (Department) recommends that the California Transportation Commission (Commission) review and comment at the December 2014 Commission meeting, on the following Draft Environmental Impact Reports (DEIRs):

ISSUE:

04-SM-82, PM 13.69

This project in San Mateo County will widen the intersection and install traffic signals on State Route 82 (SR 82) at Floribunda Avenue in the city of Burlingame and the town of Hillsborough. The project is programmed in the 2014 State Highway Operation and Protection Program. The total estimated cost is \$5,837,000 for capital and support. Construction is estimated to begin in Fiscal Year 2015-16. The scope, as described for the preferred alternative, is consistent with the project scope programmed by the Commission in the 2014 State Highway Operation and Protection Program.

Alternatives considered for the proposed project include:

- Build Alternative – This alternative proposes to widen SR 82 at the Floribund Avenue intersection in order to install left-turn pockets and left-turn signals in the northbound and southbound directions.
- No Build Alternative.

The decision to prepare an EIR was made due to a substantial amount of public controversy surrounding the project associated with the proposed removal of five historic trees. Impacts of the project include:

- Traffic and Circulation
- Pedestrian/Bicycle Facilities
- Historical Resources
- Community Impacts
- Visual/Aesthetics
- Paleontological Resources

The following measures would be incorporated to minimize impacts of the project:

- Landscaping will be incorporated into the project design.
- Five replacement trees of an approved variety will be planted in the Halston-Ralston Eucalyptus Tree Rows along SR 82.
- A Transportation Management Plan (TMP) and a Construction Zone Enhance Enforcement Program (COZEEP) will be prepared and implemented.
- A Paleontological Evaluation Report will be prepared and, if needed, a Paleontological Mitigation Plan will be prepared and implemented.

Attachment 1

ISSUE:

07-LA-14, PM 57.8/64.1, 08-SBd-18, PM 84.3

This project in Los Angeles and San Bernardino Counties will construct a new multimodal freeway/expressway, linking State Route 18 (SR 18) in San Bernardino County and State Route 14 (SR 14) in Los Angeles County. The project is not yet programmed nor funded. The cost of the highway facilities is currently estimated at approximately \$2.8 billion. The cost for the high-speed rail component is currently unknown.

Alternatives considered for the proposed project include:

- Freeway/Expressway Alternative (four physical variations) – This alternative would combine a controlled access freeway and an expressway. The alignment would generally follow Avenue P-8 in Los Angeles County and just south of El mirage Road in San Bernardino County, then extend east to Air Expressway Road near Interstate 15 (I-15), and finally curve south, ending at Bear Valley Road.

- Freeway/Tollway Alternative – This alternative would follow the same alignment as the Freeway/Expressway Alternative, but the section between 100th Street East and United States Route 395 (U.S. 395) would be operated as a tollway.
- Freeway/Expressway with High Speed Rail (HSR) Feeder/Connector Service Alternative – This alternative would be the same as the Freeway/Expressway Alternative, but with a HSR Feeder/Connector Service between the cities of Palmdale and Victorville.
- Freeway/Tollway with High Speed Rail (HSR) Feeder Connector Service Alternative – This alternative would be the same as the Freeway/Tollway Alternative, but with HSR Feeder/Connector Service between the cities of Palmdale and Victorville.
- No Build Alternative

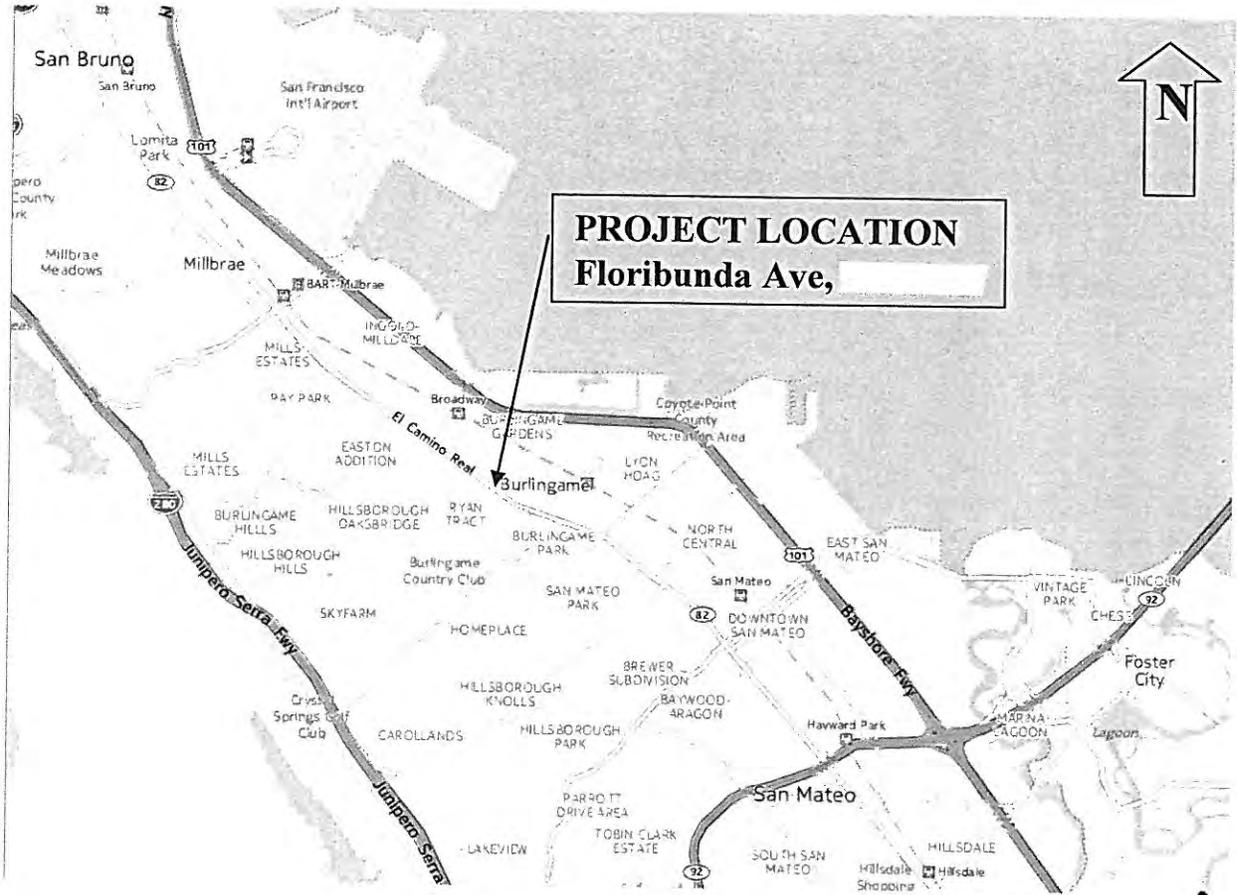
The decision to prepare an EIR was made due to the large scope of the project and the potential for significant environmental impacts. Impacts of the project include:

- Traffic and Circulation
- Pedestrian/Bicycle Facilities
- Cultural Resources
- Community Impacts
- Farmlands
- Air Quality
- Hazardous Waste
- Noise
- Biological Resources
- Growth
- Geology/Soils/Seismic
- Utilities
- Visual/Aesthetics
- Paleontological Resources
- Cumulative Impacts

The project will be designed to avoid and minimize impacts to environmental resources to the extent practicable. Standard conditions and mitigation measures have been identified to minimize impacts when avoidance is not possible. An Environmental Commitment Record will be prepared and approved as a condition to project approval.

Attachment 2

Vicinity Map



ATTACHMENT 1

SUMMARY

The proposed project is a joint project by the California Department of Transportation (Caltrans) 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). Caltrans is the lead agency under both NEPA and CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 United States Code (USC) 327.

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, quite 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. Caltrans 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 Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) 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.

This project proposes to improve the safety of the intersection of State Route (SR) 82 at Floribunda Avenue, most specifically, to reduce left-turn collisions. There is a need to construct safety improvements at this intersection to significantly reduce the occurrence of left-turn related accidents. The lack of dedicated left-turn lanes and left-turn signals contributes to the occurrence of intersection accidents. The estimated project cost would be approximately \$3.6 million, funded from State Highway Operation and Protection Program (SHOPP) funds. Construction is estimated to begin sometime in 2018.

After public circulation of this DEIR/EA, a Final Environmental Impact Report/Environmental Assessment (EIR/EA) would be prepared for this project. Caltrans may undertake 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.

Overview of Project Area

State Route (SR) 82 is a California State highway that begins at Interstate 880 (I-880) in San Jose and ends at Interstate 280 (I-280) in San Francisco, forming a central artery through several San Francisco peninsula communities including Palo Alto, San Carlos, San Mateo, Burlingame and Millbrae. Commonly referred to as "El Camino Real" (Spanish for The King's Highway) it was part of the 600-mile Mission Trail connecting the 21 Spanish Missions from San Diego to Sonoma. SR 82 runs south to north for approximately 42 miles, with 17 miles in Santa Clara County, 25 miles in San Mateo County, and terminates a short distance into San

List of Figures

| | |
|--|-----|
| Figure 1 - Project Vicinity | 16 |
| Figure 2 - Project Location | 16 |
| Figure 3 – Proposed Build Alternative | 20 |
| Figure 4 – Proposed Build Alternative Cross Sections (All facing south on SR 82) | 22 |
| Figure 5 - Northeast and Northwest corners of SR 82 and Floribunda Avenue..... | 35 |
| Figure 6 - Southwest corner of SR 82 and Floribunda Avenue | 36 |
| Figure 7 - Northeast corner of SR 82 and Floribunda Avenue..... | 36 |
| Figure 8 - Southeast corner of SR 82 and Floribunda Avenue | 37 |
| Figure 9 - Existing photos of east, west and south sides of SR 82 near Floribunda Avenue..... | 37 |
| Figure 10 - Median Income in Project Vicinity..... | 44 |
| Figure 11 - Racial Profile in Project Vicinity | 46 |
| Figure 12 – Visual Impacts: Before and After Project Build | 53 |
| Figure 13 - Geologic Fault Locations | 71 |
| Figure 14 - Liquefaction Susceptibility | 72 |
| Figure 15 - Noise Levels of Common Activities | 84 |
| Figure 16 - Locations of properties analyzed for noise abatement | 86 |
| Figure 17 - Temporary Construction Easement (TCE), Right-of-Way (R/W) and Permit to Enter (PCE) Areas..... | 102 |
| Figure 18 - Howard-Ralston Eucalyptus Tree Rows Boundary and APE | 104 |
| Figure 19 - California Greenhouse Gas Forecast | 115 |
| Figure 20 - The Mobility Pyramid | 117 |
| Figure 21 - Projected Sea Level Rise | 124 |

List of Tables

| | |
|--|-----|
| Table 1 - TASAS Accident Rate..... | 15 |
| Table 2 - TASAS Accident Type | 15 |
| Table 3 - Estimated Quantities of Soil Disturbance | 17 |
| Table 4 - Project Alternatives Comparison | 29 |
| Table 5 - Agency Permits and Approvals..... | 31 |
| Table 6 - Environmental Resources..... | 32 |
| Table 7 - No Adverse Impact Determination Summary | 33 |
| Table 8 - Consistency with State, Regional and Local Plans..... | 38 |
| Table 9 - Total Housing Units in Project Area..... | 40 |
| Table 10 - Median-Income: Project Area Census Tracts | 44 |
| Table 11 - Racial Population in Project Area | 45 |
| Table 12 - Existing and Forecasted AADT..... | 49 |
| Table 13 - Properties Evaluated Within the APE | 60 |
| Table 14 - Geologic Fault Data | 70 |
| Table 15 - Estimated Quantities of Disturbed Soil | 75 |
| Table 16 - Noise Abatement Criteria..... | 83 |
| Table 17 - Noise Analysis Locations..... | 85 |
| Table 18 - Climate Change/Carbon Reduction Strategies..... | 119 |
| Table 19 - Permits and Approvals..... | 128 |
| Table 20 - Public Scoping Meeting Comments Addressed in DEIR | 129 |
| Table 21 - Public Scoping Meeting Comments Response Record | 131 |

Francisco County at I-280. Throughout San Mateo County, SR 82 serves as a parallel arterial to I-280 and US 101. SR 82 is functionally classified by the Federal government, as a 'Principal Arterial-Urban.'

The proposed project is located at the intersection of SR 82 and Floribunda Avenue, within the jurisdiction of both the city of Burlingame and the town of Hillsborough in San Mateo County. SR 82 at Floribunda Avenue is a four-lane, undivided highway with two 11-ft. through lanes with uncontrolled left-turn movements in both directions at the signalized intersection with Floribunda Avenue. SR 82 at this location has two bus stops served by the San Mateo County Transit Agency (SamTrans). Floribunda Avenue is a designated bicycle route.

Related Plans and Projects

Regional Planning

In addition to the proposed project there are state, regional and local plans in the vicinity of SR 82 including on State Highway 101 and selected interchanges. At the regional level, the Metropolitan Transportation Commission (MTC) is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities. The MTC's 2040 Regional Transportation Plan (Plan Bay Area), adopted July 18, 2013, lists programmed and planned projects throughout the nine counties of the Bay Area. Plan Bay Area is the successor to Transportation 2035, the long-range plan adopted by MTC in 2009. Plan Bay Area will address new requirements flowing from California's 2008 Senate Bill 375 (Steinberg), which calls on each of the state's 18 metropolitan areas to reduce greenhouse gas (GHG) emissions from cars and light trucks. The transportation sector represents about 40 percent of the GHG pollution that scientists claim is causing climate change.¹

State Planning

In the summer of 2013 there was an existing Caltrans project completed to improve the drainage system along both sides of SR 82 in the vicinity of Floribunda Avenue to address flooding on the east side of SR 82 that occurs after heavy rainfall.

There is a Caltrans America Disability Act (ADA) Sidewalk Safety Project that is programmed for July, 2014 which will repair and improve existing sidewalk pedestrian infrastructure, specifically existing damaged sidewalks along SR82 (SR 82 Boulevard). Please see Section 2.23 Cumulative Impact Assessment, for a more detailed discussion about this project.

Local Planning

The federal The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) act, enacted in August 2005 as the reauthorization of The United States federal Transportation Equity Act for the 21st Century (TEA-21), provided the following expenditures on or near SR 82:

1. High Priority project #1942: SR 82 "Grand Boulevard" initiative in San Mateo County. \$3,000,000.

The Grand Boulevard Initiative is a collaboration of 19 cities, counties, local and regional agencies united to improve the performance, safety, and aesthetics of SR 82 Boulevard. This project has multi-modal streetscape improvement components at locations to the north and south of this safety project at the intersection of SR 82 and Floribunda Avenue.

¹ MTC Bay Area Plan. Retrieved on May 14, 2014 from http://www.mtc.ca.gov/planning/plan_bay_area/.

The San Mateo SMART Corridor project, begun in the summer of 2011, installed equipment on various State Routes and local arterials in San Mateo County to reduce congestion and improve traffic operations. The project included installation of camera and optical fiber cables and conduits along SR 82, including the intersection with Floribunda Avenue.

Purpose and Need

The purpose of the proposed project is to improve intersection safety of SR 82 at Floribunda Avenue to reduce the occurrence and potential for collisions involving left-turn movements.

According to state accident monitoring data, the intersection has a higher left-turn related collision rate than the statewide average. There were 22 reported collisions over a three year period, (according to most recent available data) with over 54.5% of those collisions identified as broadside accidents related to left-turns, followed by 13.6% rear end, 9.1% sideswipe, 9.1% head-on and 4.5% auto-pedestrian collisions.²

The proposed project is needed to address the following:

- vehicles not having enough time or gaps to turn left safely;
- inadequate sight distance to turn left due to opposing vehicles making left-turns and blocking the view of opposite oncoming through vehicle traffic;
- no protected green arrow for left-turns
- vehicles stopping in the SR 82 inner through lanes to make left-turns, creating traffic flow congestion cues during peak hours.

Proposed Action

Caltrans' environmental scoping process includes an analysis of reasonable build alternatives. A No Build Alternative is also considered and represents the existing condition. All build alternatives are compared to the No Build. A reasonable range of alternatives were compiled based upon input from Caltrans project development team (PDT), cities of Burlingame and Hillsborough and the public. After a thorough alternatives analysis, Caltrans identified a Build Alternative which is presented in this draft environmental document with the No Build Alternative. The other alternatives considered are summarized under Alternatives Considered and Withdrawn.

Alternatives were identified based on meeting the purpose and need for this project to increase traffic safety by reducing left-turn collisions. The No Build and Build Alternatives are described below.

1. Build Alternative: Widen both sides of SR 82 (majority within existing Caltrans right-of-way)

The proposed Build Alternative would widen SR 82 at the Floribunda Avenue intersection at Post Mile (PM) 13.69 between Oak Grove Avenue and Bellevue Avenue, to install left-turn pockets and left-turn signals in the northbound and southbound directions. The project is approximately 500 ft. long and 60 ft. wide and includes the north and south approaches to Floribunda Avenue on SR 82. Two existing, through lanes would be maintained in both the north and southbound directions on SR 82.

² California Department of Transportation. Traffic Accident Surveillance and Analysis Systems (TASAS), Data collected over three year period from 4/1/09 to 3/31/12.

The signalized intersection of SR 82/Floribunda Avenue would be widened on both sides of SR 82 to construct a 10 ft. wide left-turn channel along both northbound and southbound of SR 82. A 10-ft. wide, center left-turn lane, including approach tapers would be added, as well as 1.5-ft. shoulders in both directions of SR 82 for the majority of the 500 ft. by 60 ft. project limits. Currently, there is no roadway shoulder at the SR 82 and Floribunda Avenue intersection. The proposed roadway cross-section would consist of two 11 ft. wide travel through lanes in each direction, and 10-ft. wide left-turn pocket in both directions, with 1.5 ft. shoulder and maintain the existing 4 to 5 ft. wide sidewalks. The roadway within the project limits would be approximately 60 ft. wide and the left-turn pocket in the southbound direction would be 50 ft. long with a 50 ft. taper. The left-turn pocket in the northbound direction would be 75 ft. long with a 60 ft. taper. The construction limit length for this alternative would be approximately 500 ft. long by 60 ft. wide. The total Construction Site Area would be 0.87 acres. The total disturbed Soil Area would be 0.32 acres.

The majority of work would occur within the state right-of-way except for some minor work at specific points. Partial acquisition of right-of-way from two properties at northeast and southeast intersection quadrants would be required for construction of the curb ramps. Permits to Enter and Construct (PECs) would be required from the Town of Hillsborough and City of Burlingame local streets. This includes a small landscaped portion of Hillsborough's municipal site known as Centennial Park. Temporary Construction Easements (TCEs) would be required on 4 parcels for the grading and construction of driveways.

Under the Build Alternative 14 trees would be removed. Of the 14 trees, 9 are non-historic (sweet gum, blue gum, blackwood acacia, and young eucalyptus trees) and (5) five trees (four mature eucalyptus trees and one young elm tree) have been identified as contributors to the Howard-Ralston Eucalyptus Tree Rows, a National Register of Historic Places-listed property. Please see the Cultural Section 2.7.2.

A Pacific Gas and Electric (PG&E) overhead electrical line along the west side of SR 82 is in conflict with the roadway widening. Burying the PG&E electrical line within the State right of way is anticipated. In addition, the PG&E gas line, the AT&T underground line and the City of Burlingame water line on the east side of SR 82 are in conflict and relocating them within the State Right of Way are anticipated. Several existing utility boxes and manholes need to be relocated or adjusted to the finished grade. Potholing will be required to identify the underground utilities and detailed utility verification will be done during the PS&E phase.

The existing utilities will be determined during the Plans, Specifications and Estimates (PS&E) phase of the project. The PS&E phase follows the environmental review and final document public release for the project. The size of utility trenches will be determined by the utility companies. Usually, utility trenches are 2.5 to 3 ft. deep and 1.5 to 2 ft. wide. The need for lane closures and detours will be identified in a Transportation Management Plan (TMP), which will be prepared during the PS&E phase.

Figure 3, displays the draft plan for the Build Alternative including the five trees (four mature eucalyptus trees and one young elm tree) that are contributors to the Howard-Ralston Eucalyptus Tree Rows as well as the nine other non-historic trees that would require removal. Please see Visual/Aesthetic section for more information about trees.

2. No Build (No Action) Alternative

The existing facility is a four lane, undivided, conventional state highway, SR 82, approximately 40 ft. wide, consisting of approximately two 11-ft. wide through lanes with uncontrolled left-turn movements in the north and southbound directions. The posted speed limit on SR 82 is 35 miles per hour (mph). In the northbound direction, toward McKinley Elementary School, 1 block north of Floribunda Avenue, the speed limit is 25 mph when school children are present. While this alternative would not meet the purpose and need, it serves as the baseline to which the Build Alternative can be compared. As traffic volumes on SR 82 increase, it is expected that accidents would increase, including broadside collisions at the intersection with Floribunda Avenue. The No Build Alternative would not reduce the high broadside collision rate involving left-turn traffic movements nor reduce the congestion and traffic flow for left-turning vehicles on SR 82 at Floribunda Avenue.

Project Impacts

Project impacts that would require avoidance, minimization, and/or mitigation measures as a result of the proposed SR 82 (SR 82) at Floribunda Intersection Safety Improvement Project include impacts to Traffic and Transportation/Pedestrian and Bicycle Facilities, Cultural Resources, Visual/Aesthetics, Noise, Paleontological Resources, Geology/Soils/Seismicity/Topography, Hazardous Waste/Materials, and the Biological Environment. A summary of the avoidance, minimization and mitigation measures for the Build Alternative is included in Table S-1.

Table S-1: Build Alternative Project Impacts

| Resource Area | Potential Impacts | Avoidance, Minimization and/or Mitigation Measures |
|--|--|---|
| Traffic and Transportation/ Pedestrian and Bicycle Facilities | Disruption to transportation, transit, pedestrian and bicycle facilities during construction. | <p>Traffic and Transportation: A Transportation Management Plan (TMP), Construction Zone Enhance Enforcement Program (COZEEP), Portable changeable message signs and notification of impacted groups (public transit, bicyclists, pedestrians).</p> <p>Construction Impacts: Construction activities would result in temporary traffic detours and possibly single lanes impacting traffic/transportation, pedestrian circulation and bicycles on the Floribunda Avenue bicycle route. These impacts would be minimized through coordination with the Town of Hillsborough, City of Burlingame and emergency providers. Efforts would be made to concentrate the majority of road closures and construction activity during off-peak hours to reduce traffic impacts. Traffic would be diverted to one side of SR 82 and traffic would be controlled by flaggers stationed at both ends of the closure.</p> |
| Cultural Resources | The proposed Build Alternative would remove (5) five contributor trees to the Howard-Ralston Eucalyptus Tree Rows, a National Register of Historic Places listed property, within the 500 ft. project boundary at the intersection of SR 82 and Floribunda Avenue. | <p>Caltrans will make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees where space is available within the Howard-Ralston Eucalyptus Tree Rows on SR 82.³ Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety.</p> <p>Caltrans may remove and replace the last Sweetgum (<i>Liquidamber styraciflua</i>), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species to help maintain the integrity of the landscape/visual character of the tree rows.</p> <p>The replacement trees would be Accolade © elm or similar species and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the elm</p> |

³ Contributing trees are tree species that are considered to be contributing elements of the historic resource and continue to strengthen the integrity of the Howard-Ralston Eucalyptus Tree Rows as they carry out McLaren's original design of a landscaped, shaded avenue. These contributing trees include the mature eucalyptus and mature elm trees planted originally between 1873 and 1876. Elms planted as replacements are also considered contributors. Non-contributing trees are trees that do not contribute to the Howard-Ralston Eucalyptus Tree Rows. There are 201 non-contributing trees within the resource which include orange gum (*E.bancrofti*), desert box gum (*E. microtheca*), flowering gum (*E.ficifolia*), Nichol's willow-leaf peppermint, swamp mahogany (*E. robusta*), swamp gum (*E. rudis*), silver dollar gum, pink iron bark (*E. sideroxylon* 'Rosea'), and acacia, as well as redwood, sycamore, horse chestnut and sweet gum trees.

| Resource Area | Potential Impacts | Avoidance, Minimization and/or Mitigation Measures |
|---------------------------|---|---|
| | | trees would grow to 40-60 ft. in height and have a 35-40 ft. wide crown. ⁴ |
| Visual/Aesthetics | The Build Alternative would remove 14 (5 historic and 9 non-historic) trees. The proposed project Build Alternative would have a moderate-low impact to the landscape/visual character of the tree rows. | <p>Caltrans would make every effort to minimize the impact of tree removal by planting (5) five new contributing Accolade © elm or similar approved trees where space is available within the Howard-Ralston Eucalyptus Tree Rows on SR 82. Non-contributing trees within the Howard-Ralston Eucalyptus Tree Rows may be removed to provide space for the replanting of contributing Accolade © elm or similar approved variety.</p> <p>Caltrans may remove and replace the last Sweetgum (<i>Liquidamber styraciflua</i>), located on the northeast quadrant of SR 82 near Oak Grove Avenue, with an Accolade © elm or similar species to help maintain the integrity of the landscape/visual character of the tree rows.</p> <p>The replacement trees would be Accolade ® elm or similar species and would be 24" box size (6-8 ft. tall and 1.5"-2" caliper trunk). At maturity, in 30 years, it is anticipated the elm trees would grow to 40-60 ft. in height and have a 35-40 ft. wide crown.⁵</p> |
| Noise | <p><i>NEPA conclusion:</i> The federal noise abatement criteria were met or exceeded at 556 and 707 El Camino Real property addresses and McKinley Elementary School Yard with existing noise.</p> <p><i>CEQA conclusion:</i> Noise levels are not expected to increase above the existing, or baseline, levels.</p> <p>Temporary construction noise.</p> | <p>There are no reasonable and feasible abatement measures for existing and future noise that could be implemented. No sound walls required.</p> <p>Construction noise abatement would be implemented as required by Caltrans' Standard Specification 14-8.02, "Noise Control".</p> |
| Paleontological Resources | Under the proposed Build Alternative, planned ground-disturbing activities within the project foot print could potentially impact paleontological resources. | <p>The following mitigation measures for paleontological resources are recommended and in accordance to Caltrans' Standard Environmental Reference Guidelines (Caltrans, 2007). It is recommended that Caltrans implement the following measures:</p> <ul style="list-style-type: none"> It is recommended that a Paleontological Evaluation Report (PER) be prepared prior to construction to define actual locations where monitoring will be necessary based upon the project design. For budgeting, the PER will provide enough information about the level of effort needed. |

⁴ The Morton Arboretum. Retrieved from <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/elm-cultivars>, on 6/23/14.

⁵ The Morton Arboretum. Retrieved from <http://www.mortonarb.org/trees-plants/tree-plant-descriptions/elm-cultivars>, on 6/23/14.

| Resource Area | Potential Impacts | Avoidance, Minimization and/or Mitigation Measures |
|------------------------------------|--|--|
| Paleontological Resources (cont'd) | | <ul style="list-style-type: none"> • Based on the findings from the PER, a Paleontological Mitigation Plan (PMP) may be recommended to define the specific mitigation measures and methods that will be implemented. • These recommendations may include: <ul style="list-style-type: none"> a. A qualified paleontologist be present to consult with grading and excavation contractors at pre-grading meetings. b. The Principal Paleontologist also have an environmental meeting to train grading and excavation contractors in the identification of fossils. c. When fossils are discovered, the paleontologist (or paleontological monitor) will be called to recover them. Construction work in these areas will be halted or diverted to allow recovery of fossil remains in a timely manner. d. Fossil remains collected during the monitoring and salvage portion of the mitigation program will be cleaned, stabilized, sorted, and cataloged. e. Prepared fossils, along with copies of all pertinent field notes, photos, and maps, will then be deposited in a scientific institution with paleontological collections. f. A final report will be completed that outlines the results of the mitigation program. g. |
| Geology/Soils/ Seismicity | <p>For the Build Alternative, excavation, trenching and possible deep foundation work for light signals would be required during construction.</p> <p>Environmental borings show mostly silts, clays and silty sands surrounding the site. A geotechnical investigation should be performed to determine</p> | <p><i>Exploration and Investigations:</i> Field and subsurface exploration, laboratory tests and analysis shall be performed to evaluate foundation designs, and if necessary slope ratios, and to determine soil strengths and mitigation.</p> <p>For each traffic signal location a geotechnical boring should be completed in advance to</p> |

| Resource Area | Potential Impacts | Avoidance, Minimization and/or Mitigation Measures |
|---|--|--|
| Geology/Soils/ Seismicity, continued | stability of excavations and if shoring will be needed. To our knowledge there is no hazardous waste within the project site. Soil properties will be evaluated during geotechnical investigation. | <p>determine groundwater levels, soil types and strengths, and structural conditions in rock if encountered. Several investigative methods may be used, including but not limited to: soil borings, rock coring, Cone Penetrometer Tests (CPTs), and geophysical studies. Laboratory testing may be required to determine soil strength, permeability, moisture content, and grain size.</p> <p><i>Groundwater:</i> Groundwater levels can be determined with borings as part of the Geotechnical Design Report investigation. Groundwater levels fluctuate seasonally and should be monitored through the winter to find the highest levels. CPTs may be used to determine groundwater depth, and subsurface soil types. It may also be useful in locating or characterizing thick, potentially expansive clays.</p> <p><i>Dewatering:</i> The exploratory drilling during the Geotechnical Design Report phase will discover any areas that will require dewatering.</p> <p><i>Corrosion:</i> Corrosivity tests shall be conducted where appropriate as part of the drilling program for the any proposed retaining walls.</p> |
| Hazardous Waste/Materials | <p>An environmental regulatory database search did not reveal any known hazardous waste sites that could negatively impact the project.</p> <p>Shallow soils to be excavated within the unpaved areas adjacent to the roadway likely contain elevated levels of aerially deposited lead (ADL) from historic vehicle emissions.</p> | A site investigation that ascertains the presence and concentrations of metals, particularly lead, in soils will be conducted during the project's PS&E phase. The findings of the site investigation will be used to prepare the appropriate standard special provisions that address the proper soil handling requirements and worker health and safety concerns. |
| Biological Environment | No impacts to listed species are anticipated. Potential impact to migratory bird species nesting. | Migratory Bird Treaty Act (MBTA) avoidance measures shall be implemented including surveys and avoiding nesting periods. (Please see Threatened and Endangered Species Section 2.20.4, Avoidance, Minimization and/or Mitigation, for details on surveys and nesting period avoidance measures.) |

Coordination with public and other agencies

Collaborative efforts have taken place throughout the planning process with the project development team from as early as 2011 when initial conceptual road widening alternatives at the intersection were developed and analyzed. These alternatives were further evaluated and refined to reduce environmental impacts until the recommended Build Alternative was proposed, which reduces environmental impacts including minimizing tree removal. Consultation has occurred with the Town of Hillsborough, City of Burlingame, the State Historic Preservation Officer, the Burlingame Historical Society and the Native American Heritage Commission on the proposed project to improve intersection safety. In addition, both Hillsborough and Burlingame

are members of the project development team and participated in several meetings and were consulted in the development of the proposed safety improvement project.

The Town of Hillsborough's General Plan Circulation Element has identified this intersection as needing safety improvements and the intersection of SR 82 and Floribunda Avenue was included in a study Hillsborough completed of the intersection, calling for safety improvements.

Under Section 106, consultation is required with the State Historic Preservation Officer (SHPO). A Water Pollution Control Plan is required from the U.S. EPA and would be completed before project construction. The following reviews and approvals would be required for project construction:

Agency Consultation

| Agency | Permit/Approval | Status |
|---|---|---|
| California State Historic Preservation Officer (SHPO) | Section 106 National Historic Preservation Act and PRC 5024.5 | SHPO concurrence on the National Register of Historic Places eligibility of historic properties within the Area of Potential Effects was received on April 21, 2014. SHPO consultation and concurrence regarding the Finding of Effect will be completed by the final environmental document. |
| Town of Hillsborough and City of Burlingame | Encroachment Permits to enter and construct in Floribunda Avenue. | During Plans, Specifications and Estimates (PS&E) Caltrans would request permit. |

Environmental Process

The Final EIR/EA evaluates the environmental effects of the proposed project and when warranted, identifies mitigation measures to reduce project effects.

After publishing and circulating the Draft EIR/EA for public review and comment, Caltrans followed typical CEQA/NEPA procedures and:

- Conducted a public scoping meeting (November 19, 2013) on the Notice of Preparation of the EIR/EA and potential project options that would be analyzed for the project. The public was invited to provide comments on the scope and content of the EIR/EA until December 21, 2013.
- Caltrans will conduct a public "open house" community meeting to present the Draft EIR/EA to the public in October, 2014. A 45 day public comment period will be provided where interested parties submitted written comments on this Draft EIR/EA
- Caltrans will Identify the preferred Project Alternative with the Project Development Team (PDT)
- Will prepare and distribute a Final EIR/EA with NOA. This Final EIR/EA will include responses to comments received on the Draft EIR/EA and identify the Preferred Alternative.

The next steps will include circulation of the Final EIR/EA and issuance of the CEQA Notice of Determination (NOD).

Alternatives Considered but Withdrawn from Further Discussion

The following five alternatives summarized below were analyzed but withdrawn from further discussion because they would not meet the purpose and need of the project, were not physically feasible or would have significant environmental and community impacts. Four additional options are discussed in *Chapter 1, Section 1.3.4 Alternatives Considered but Withdrawn from Further Consideration* including: Other Signal Timing Options, Speed Enforcement, Traffic Barriers (Calming) and Improve Lighting.

1. Signal Timing Adjustment Alternative

This alternative would not meet the purpose and need of the project. This alternative would not improve safety for left-turn movements from SR 82 to Floribunda Avenue and solely involves signal timing adjustments of the existing traffic signals. Signal timing adjustments have already been made in 2005, 2011 and most recently in January of 2013 at the intersections of SR 82 at Bellevue Avenue, Floribunda Avenue and Oak Grove Avenue. These signal timing adjustments included adding additional green time on SR 82 at Bellevue and Floribunda Avenues. At Oak Grove Avenue the through traffic signal time was shortened, stopping traffic southbound on SR 82 early, thus allowing a gap for the SR 82 northbound traffic to turn left when the green through phase begins. There was no significant improvement for left-turn accidents as a result of the timing adjustment.

Although creating a gap for SR 82 northbound left-turn at Floribunda Avenue helps, it is not a long term solution to reducing left-turn collisions at the intersection since it does not address southbound left-turn movements.

There would continue to be inadequate sight distance for left turn movements from SR 82 to Floribunda Avenue when vehicles from both directions on SR 82 are attempting to turn left simultaneously, blocking each other's view of approaching through traffic in the curbside lane.

Operationally, the signal modification option would function poorly causing vehicle congestion and pedestrian crossing delay. For example, if a dedicated left-turn signal is installed on SR 82 at Floribunda Avenue without a left-turn lane, the other three legs of the intersection would experience delays to accommodate the left-turn movements and pedestrian crossings. The Level of Service (LOS) and delays for the AM and PM would be C (33.1) seconds and D (48.6) seconds, respectively.

Finally, the operation of the intersection would preclude this intersection from being coordinated with other intersections on SR 82 in the middle of the Burlingame system and northbound, southbound signal progression would be negatively affected. Long back-ups or queues may increase the potential for rear-end types of accidents.

2. No Left-turn/Intersection Closure Alternative

Prohibiting the left-turn movement from SR 82 onto Floribunda Avenue was considered but was determined to be impractical from an operational and safety perspective as the two local agencies (Town Hall of Hillsborough and City of Burlingame's City Hall and their fire and police stations) are situated on both sides of the intersection. Fire trucks, police, safety, maintenance and related emergency response vehicles from both local agencies would need to make left-turn movements at the intersection. Prohibiting left-turn movements may delay emergency and public safety response and it is anticipated that there would be enforcement challenges on closure implementation. The prohibition

of left-turn movements at SR 82 and Floribunda Avenue would most likely shift the occurrence of left-turn traffic accidents to the intersections of Willow Avenue heading north and to Bellevue Avenue heading south of Floribunda Avenue.

3. *Widen West Side of SR 82 (Widened to Caltrans dimension standards)*

This alternative proposed to install left-turn channelization for both north and southbound direction on SR 82 with protected left-turn signal phase at Floribunda Avenue. Widening would only be on the west side of SR 82, and would require an additional 30 ft. of new right-of-way. SR 82 Right-of-Way (ROW) on the west side would widen by approximately 10 ft.-10 inches to 15 ft.-4 inches, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. There would be impacts to Centennial Park, the Hillsborough Police Departments' parking lot, the Adventist Church (northwest leg of the intersections) and 4(f) historic properties (located along the southwest leg of the intersection). Twenty trees (20), including (16) sixteen eucalyptus trees that are contributors to the Howard-Ralston Historic Tree Rows, a National Register of Historic Places listed property, would need to be removed. There would be no impacts to properties or contributors to the Howard-Ralston Historic Tree Rows located on the east side of SR 82. Retaining walls would be needed on the northwest and southwest sides of SR 82 due to the elevation difference between the roadway and sides. This alternative would require partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property.

4. *Widen Both Sides of SR 82 (Widened to Caltrans dimension standards)*

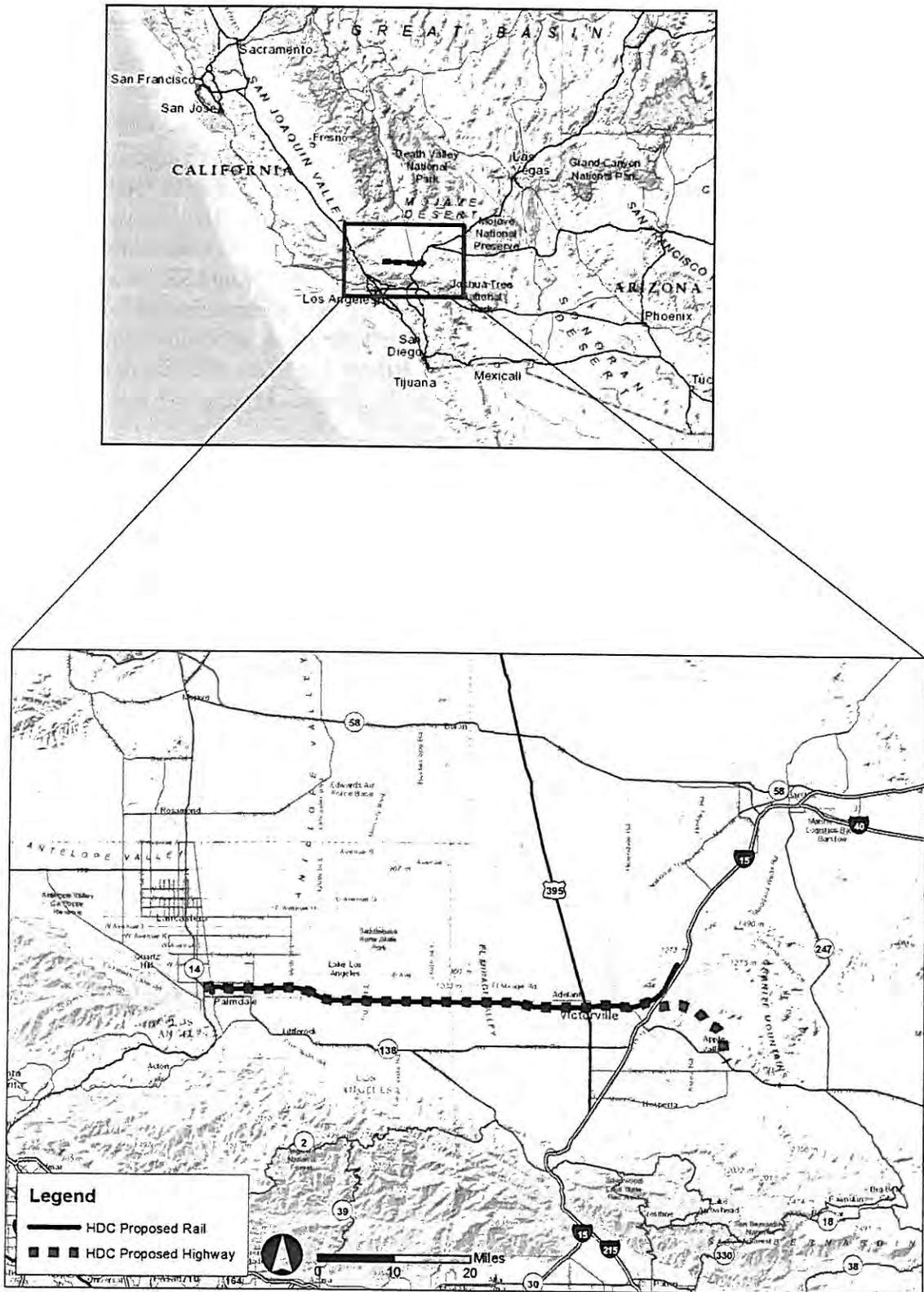
This alternative proposed to install left-turn channelization for both north and southbound direction on SR 82 with protected left-turn signal phase along SR 82 at Floribunda Avenue. There would be widening on both sides of SR 82 Boulevard. ROW on the east side of SR 82 would increase approximately 3 ft.-8 inches. ROW on the west side of SR 82 would widen approximately 10 ft.-9 inches to 11 ft.-1 inch, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. There would be no impacts to Centennial Park, the Hillsborough Police Departments' parking lot, the Adventist Church (northwest leg of the intersections) and historic properties (located along the southwest leg of the intersection). There would be impacts to thirty trees, including sixteen contributors to the Howard-Ralston Historic Tree Rows located on both sides of SR 82. Retaining walls would be needed on the northwest and southwest sides of SR 82 due to the elevation difference between the roadway and sides. This alternative would remove 16 trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows and would require partial right-of-way (ROW) acquisition from the 1615 Floribunda Avenue property and 50 Kammerer Court property.

5. *Widen East Side Only of SR 82 (Widened to Caltrans dimension standards)*

This alternative proposed to install left-turn channelization for both north and southbound direction with protected left-turn signal phase along SR 82 at Floribunda Avenue. Widening would only be on the east side of SR 82 Boulevard. ROW on the east side of SR 82 would widen approximately 30 ft. from the existing curb, including 5 ft. shoulder (Caltrans standard is 8 ft. shoulder, but with Caltrans design exception it would be 5 ft.). Project length would be approximately 1,024 ft. After initial analysis of the right-of-way required for this alternative, it was eliminated from further consideration because of its community impacts. To widen SR 82 on the east side only, right-of-way would need to be acquired and 4 large apartment complexes would have to be demolished. It would not be feasible to relocate the community residents of 74 units in 4 apartment complexes

located east of SR 82 for this alternative. There also would be impacts to trees. Twenty four trees would need to be removed, including (10) ten trees that are contributors to the Howard-Ralston Eucalyptus Tree Rows, A National register of Historic places listed property, located on the east side of SR 82.

Figure 1-1 Project Vicinity Map



Los Angeles and San Bernardino Counties, CA

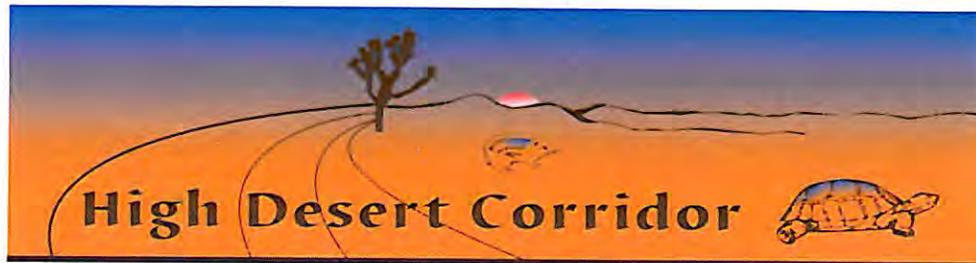
District 7 - LA - 14 - PM 57.8 to PM 64.1

District 8 - SBD – SR-18 PM 84.3

Project ID # 071200035 (EA: 2600U)

SCH #2010091084

**Draft Environmental Impact Report/
Environmental Impact Statement
and Section 4(f) (De Minimis Findings)**



Executive Summary

**Prepared by the
State of California Department of Transportation**

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by the California Department of Transportation under its assumption of responsibility pursuant to 23 USC 327.



September 2014

SCH Number: 201009084
07-LA/SB-New Route Alignment
PM: 07-LA-14 PM 57.8/64.1
08-SBd-SR-18 PM 84.3
EA: 2600U/071200035

**HIGH DESERT CORRIDOR PROJECT
FROM STATE ROUTE 14 TO STATE ROUTE 18
IN LOS ANGELES and SAN BERNARDINO COUNTY, CALIFORNIA**

**DRAFT ENVIRONMENTAL IMPACT REPORT/
ENVIRONMENTAL IMPACT STATEMENT
and Section 4(f) De Minimis Finding**

Submitted Pursuant to (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(c) and 49 USC 303 by the

THE STATE OF CALIFORNIA
Department of Transportation
and Los Angeles County Metropolitan Transportation Authority (Metro)

COOPERATING AGENCIES:

Federal Railroad Administration
Federal Aviation Administration, Western Pacific Region
U.S. Environmental Protection Agency, Region IX
U.S. Army Corps of Engineers
Advisory Council on Historic Preservation (ACHP)
Federal Bureau of Prisons

RESPONSIBLE AGENCIES:

California Transportation Commission
California Department of Fish and Wildlife
California Public Utilities Commission

Sept 30, 2014
Date of Approval

Ronald Kosinski
RONALD KOSINSKI

Deputy District Director
District 7 Division of Environmental Planning
California Department of Transportation
NEPA/CEQA Lead Agency

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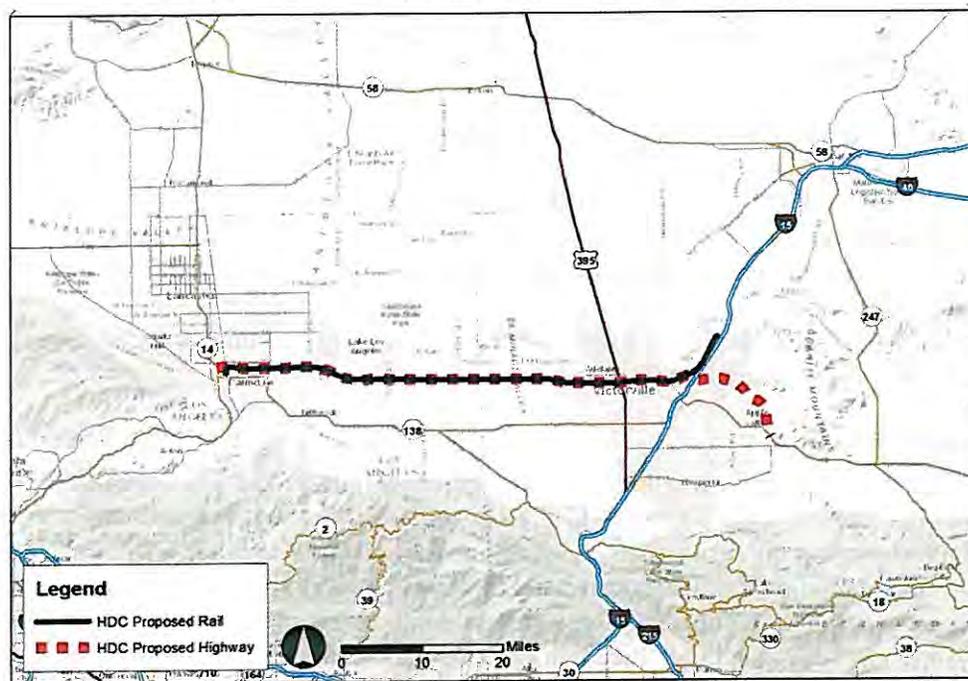
Abstract

This Draft EIR/EIS addresses impacts of alternatives proposed for the High Desert Corridor (HDC) Project. This new multimodal east-west link would connect State Route (SR) 14 in Palmdale (Los Angeles County) and SR-18 in the Town of Apple Valley (San Bernardino County). The purpose of the proposed project is to address existing and future east-west transportation demand, travel safety and reliability within High Desert region, regional goods movement network, connectivity to regional transportation facilities, and greenhouse gas reduction goals movement. Expected environmental effects include impacts to aesthetics, land use and community cohesion, biological resources, air quality, noise, utilities, and Section 4(f) properties. This project is envisioned to be a green energy transportation improvement.

Summary

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes construction of the High Desert Corridor (HDC) as a new transportation facility in the High Desert region of Los Angeles and San Bernardino counties. The proposed 63-mile-long west-east facility (Figure S-1) would provide route continuity and relieve traffic congestion between State Route (SR) 14 in Los Angeles County and SR-18 and Interstate 15 (I-15) in San Bernardino County. Caltrans is the lead agency for the project pursuant to both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

Figure S-1 Proposed High Desert Corridor



Overview of Project Area

The High Desert is typically defined as the arid region north of the San Gabriel and San Bernardino mountain ranges. Starting in the northwestern corner of Los Angeles County near SR-138 and Interstate 5 (I-5), the High Desert extends east into Kern and San Bernardino counties in the shape of a horizontal “V” (Figure S-1). This expansive region is home to the Mojave Desert, Antelope and Victor valleys, and many small and large communities. While the central portion of the project area is currently sparsely developed, the HDC would connect large urban areas on the west and east ends. The communities through which the proposed HDC would cross include Palmdale, Victorville, Adelanto, and Apple Valley.

Purpose and Need

The purpose of the proposed action is to improve east-west mobility through the High Desert region of southern California by addressing present and future travel demand and mobility needs within the Antelope and Victor valleys. The proposed action is intended to achieve the following objectives:

- Increase capacity of west-east transportation facilities to accommodate existing and future transportation demand
- Improve travel safety and reliability within the High Desert region
- Improve the regional goods movement network
- Provide improved access and connectivity to regional transportation facilities, including airports and existing and future passenger rail systems, which include the proposed California high-speed rail (HSR) system and the proposed XpressWest HSR system
- Contribute to state greenhouse gas (GHG) reduction goals through the use of green energy features

The specific needs to be addressed by the proposed action include:

- Recent and future planned population growth within the High Desert region
- Limited and unreliable west-east connectivity within the High Desert region
- Regional demands for goods movement to support the growth of the regional economy
- Future demands for the use of green energy, including sustainability and green energy provisions in State law and policy

Proposed Action

The HDC Project would entail construction of a new multimodal link between SR-18 in San Bernardino County and SR-14 in Los Angeles County. It would connect some of the fastest growing residential, commercial, and industrial areas in southern California, including Palmdale, Lancaster, Adelanto, Victorville, Hesperia, and Apple Valley. As currently planned, the project would be implemented in three segments: the Antelope Valley segment, the High Desert segment, and the Victor Valley segment.

The 10-mile-long Antelope Valley segment would start from a new freeway-to-freeway SR-14/HDC interchange and extend east parallel with and near Avenue P-8 to 100th Street East in Palmdale. The right-of-way (ROW) to be acquired for this segment would accommodate ultimate expansion to four lanes in each direction plus a high-speed passenger rail line.

The 26-mile-long High Desert segment would extend from Palmdale to Adelanto, running in a west-east direction parallel and south of Palmdale Boulevard. The freeway would be three lanes in each direction, with ROW acquired to support an ultimate facility of four lanes in each direction plus a high-speed passenger rail line.

Summary

The 27-mile-long Victor Valley segment would generally follow the alignment of Air Expressway Boulevard, between Caughlin Road in Adelanto and Dale Evans Parkway east of I-15 in Apple Valley, and continuing southeasterly as an expressway to join SR-18 just east of Joshua Street. The freeway portion of this segment between Caughlin Road and I-15 would be six lanes wide, continuing to Dale Evans Parkway as a four- or six-lane freeway. ROW would be acquired to support a future freeway of four lanes in each direction plus a high-speed passenger rail line.

Caltrans is also considering how to integrate the following proposed modes of transportation and additional project features to create a multipurpose corridor:

Highway/Expressway: Caltrans proposes a new freeway/expressway that will environmentally clear up to four lanes of travel in each direction. The number of lanes selected will be based on the traffic analysis. When fewer lanes are initially justified, the ROW will be preserved for a potential future build-out of a four-lane freeway/expressway. The number of lanes selected will be based on

other considerations required under CEQA, NEPA, and other relevant laws.

HSR Feeder Service: Two proposed HSR projects are being evaluated for the potential linkages with the HDC: the California HSR and XpressWest. Metro, Caltrans, and San Bernardino Associated Governments (SANBAG) have agreed to study an HSR feeder service as part of the HDC that would potentially link these two major rail systems in Palmdale and Victorville, respectively, and would also connect with Metrolink in Palmdale. This would create the potential to connect the San Francisco, Central Valley, Los Angeles, Las Vegas, and San Diego regions through an HSR system.

Bicycle Route: The HDC Project would include bicycle facilities, extending 36 miles along the corridor from US 395 in Adelanto to the Palmdale Transportation Center. Coordination has been initiated to identify local routes for bicycle connections to the



Source: *Parsons, 2013* (Existing roadway in project area).
The HDC would improve east-west mobility through the High Desert region of southern California.



Source: *Google Earth, 2013*.
The Palmdale Transportation Center could be a future hub for HSR.



Source: *www.trailink.com*.
Proposed HDC bike path would provide nonmotorized access from Adelanto to Lancaster via the Sierra Highway Bike Path (shown).

Summary

master-planned bike routes within Adelanto and Palmdale. This bike facility would be designed to complement the proposed freeway/expressway and HSR feeder service without impeding on operational performance or compromising safety.

Green Energy: This project seeks to establish a truly sustainable corridor that addresses the goals set forth in landmark California legislation such as Assembly Bill (AB) 32 and Senate Bill (SB) 375. To this end, green energy generation, the development of a new transmission corridor, and provision for infrastructure to enable electric charging and alternative fueling stations will be considered for potential integration into the HDC. Based on results of the *Green Energy Feasibility Study Report* (June 2014), technologies that appear to be feasible for the HDC are solar installations near the necessary electric utility infrastructure and alternative fuel charging stations at selected interchanges.



Based on the above consideration, several project alternatives have been studied. Four build alternatives and the No Build Alternative were selected for evaluation in the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS). The inclusion of green energy technologies (e.g., photovoltaic solar highways, non-fossil refueling stations, utility use of corridor ROW), bike paths along segments of the proposed project, vista points, and a multiuse pullout would be considered for all of the build alternatives. The alternatives are briefly described below.

- **The Freeway/Expressway Alternative** (four physical variations) would combine a controlled-access freeway and an expressway. The alignment will generally follow Avenue P-8 in Los Angeles County and just south of El Mirage Road in San Bernardino County, then extend east to Air Expressway Road near I-15, and finally curve south, ending at Bear Valley Road.

Variations to the general HDC alignment are proposed to minimize environmental impacts (Figure S-2).

Figure S-2 High Desert Corridor Alignment Variations

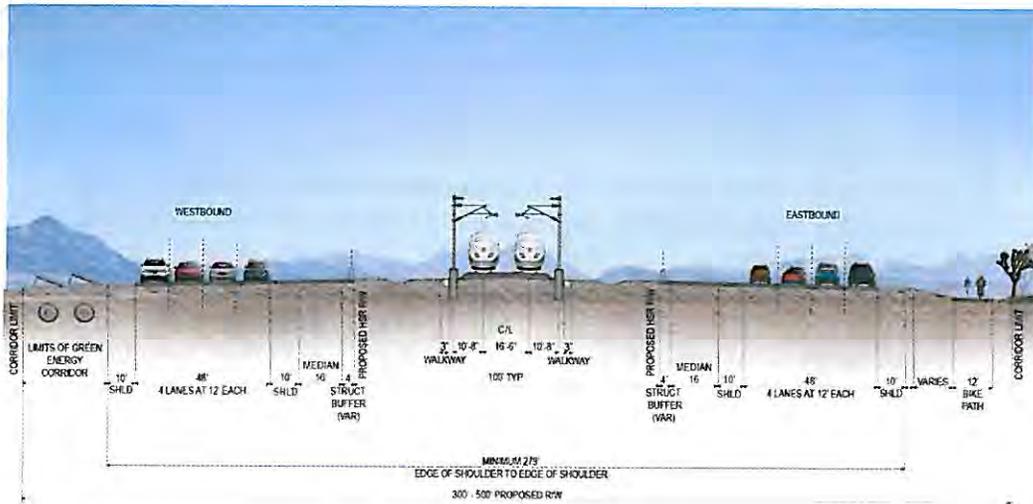


- Variation A – Near Palmdale, the freeway/expressway would dip slightly south of the main alignment, approximately between 15th Street East and Little Rock Wash.
- Variation B – East of the county line, the freeway/expressway would flare out slightly south of the main alignment between Oasis Road and Coughlin Road. Variation B1 would be at the same location, but it would flare out a little less and pass through Krey Field.
- Variation D – Near Lake Los Angeles, the freeway/expressway would dip south of the main alignment, just south of Avenue R approximately between 180th Street East and 230th Street East.
- Variation E – Near Adelanto and Victorville, the freeway/expressway would dip south of the federal prison.
- **The Freeway/Tollway Alternative** would follow the same alignment as the Freeway/Expressway Alternative, but the section between 100th Street East and US 395 would be operated as a tollway. The toll segment would likely be an all Electronic Toll Collection (ETC) System. The operation would be completely electronic with no toll booths or traffic gates. Collection of tolls would occur at the speed of flowing traffic, which means that motorists never have to slow down; therefore, traffic would remain free flowing. Variations A, B, D, and E as described under the Freeway/Expressway Alternative were also considered.
- **The Freeway/Expressway Alternative with HSR Feeder/Connector Service** (Figure S-3) would be the same as the Freeway/Expressway Alternative, but with an HSR Feeder/Connector Service between the cities of Palmdale and Victorville. The HSR Feeder/Connector Service would utilize proven steel wheel-on-steel track technology with design and operating speeds of 180 mph and 160 mph, respectively. Variations A, B, D, and E were considered, but Variation A was later determined to be not a viable variation for this alternative. Two rail options (Option 1 and 7) in Palmdale were analyzed and as the design proceeds, three variations under each option were studied to avoid and minimize environmental impacts.

Summary

- **The Freeway/Tollway Alternative with HSR Feeder/Connector Service** would be the same as the Freeway/Tollway Alternative, but it would include an HSR Feeder/Connector Service (as described above) between the cities of Palmdale and Victorville. Variations A, B, D, and E were considered, but Variation A was later determined to be not a viable variation for this alternative. Two rail options (Option 1 and 7) in Palmdale were analyzed and as the design proceeds, three variations under each option were studied to avoid and minimize environmental impacts. Refer to the Freeway/Tollway Alternative for a description of tollway operation.

Figure S-3 Freeway/HSR Conceptual Cross Section



- **The No Build Alternative** would not provide new transportation infrastructure within the High Desert area to connect Los Angeles and San Bernardino counties. Only existing SR-138 safety corridor improvements in Los Angeles County and SR-18 corridor improvements in San Bernardino County would be constructed.

Identification of a preferred alternative will occur after the public review and comment period.

Joint California Environmental Quality Act/National Environmental Policy Act Document

The project is subject to State and federal environmental review requirements because it involves the use of federal funds from the Federal Highway Administration (FHWA). Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. Caltrans and Metro are the project proponents, and Caltrans is the lead agency under CEQA and NEPA. FHWA's responsibility for environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to Section 6005 of the Safe, Accountable,

Summary

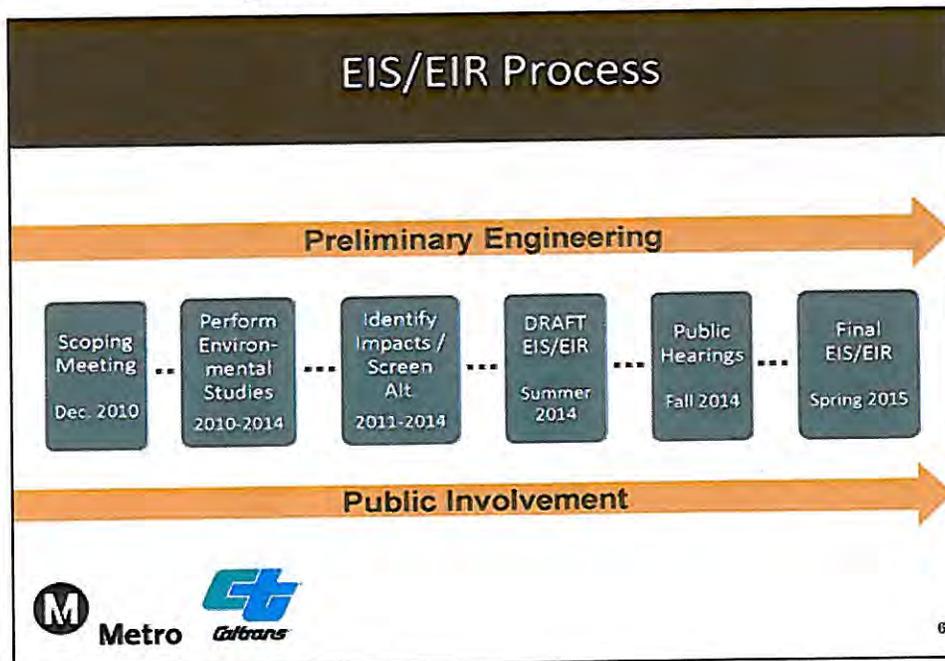
Flexible, Efficient Transportation Equity Act: a Legacy for Users (SAFETEA-LU), codified at 23 United States Code (U.S.C.) 327(a)(2)(a). With NEPA assignment, FHWA assigned, and Caltrans assumed, all U.S. Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 U.S.C. 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

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.

After receiving comments from the public and reviewing agencies, a Final EIR/EIS will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EIS will include responses to comments received on the Draft EIR/EIS and will identify the preferred alternative. After the Final EIR/EIS is circulated, if Caltrans decides to approve the project, a Notice of Determination will be published for compliance with CEQA, and a Record of Decision will be published for compliance with NEPA. If impacts cannot be mitigated below a level of significance, Caltrans will also prepare a Statement of Overriding Considerations.

The general HDC EIS/EIR process is depicted in Figure S-4.

Figure S-4 The HDC EIS/EIR Process



Project Impacts

No Build Alternative

The No Build Alternative may result in impacts to emergency services, traffic, and energy as listed below:

- Emergency Services – As future levels of service on local roads deteriorate, response times of emergency response vehicles may increase.
- Traffic and Transportation – In the year 2040, 23 and 45 of the 116 intersections in the project area will perform at Levels of Service E or F during the morning and afternoon peak hour, respectively.
- Energy – Fuel consumption by motor vehicles will increase due to idling in stop-and-go traffic and/or slow speeds through congested roadways.

Build Alternatives

The proposed project is listed in the 2012 financially constrained Regional Transportation Plan (RTP) Amendment No. 1, which was found to conform by Southern California Association of Governments (SCAG) on April 4, 2012, and FHWA and Federal Transit Administration (FTA) made a regional conformity determination finding on June 4, 2012. The project is also included in SCAG's financially constrained 2013 Federal Transportation Improvement Program (FTIP) No. 13-15, page 10 for Los Angeles County and page 8 for San Bernardino County. The SCAG 2013 FTIP was determined to conform by FHWA and FTA on December 18, 2013. The design concept and scope of the proposed project is consistent with the project description in the 2012 RTP, 2013 FTIP, and the "open to traffic" assumptions of SCAG's regional emissions analysis.

Table S-1 provides a brief comparison of the impacts associated with each of the build alternatives and their variations. In general, the impacts from the four build alternatives are the same or similar for most of the resources; however, impacts from the build alternatives with the HSR Feeder Service are slightly different from the build alternatives without the HSR Feeder Service for the following resources: land use, growth, farmland/grazing land, relocations, energy, Section 4(f), and cumulative impacts.

Table S-1 Summary of Major Potential Impacts from Alternatives

| | | Potential Impacts | | | |
|------------------------|---|--|---|---|---|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Land Use | <ul style="list-style-type: none"> Approximately 3,216 acres would be converted from existing use to transportation-related use. Variations would result in slight changes to these numbers. Provide infrastructure for surrounding land uses, improve access, and linkages between various residential communities, businesses, and facilities. Impacts are beneficial. | Same as Freeway/ Expressway Alternative. Some constraint on construction impact timing possible. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative with additional right-of-way (ROW) acquired for construction of the HSR Victorville rail station. Variations and rail options would result in slight differences in area of impact. Provide infrastructure for surrounding land uses, improve access, and linkages between various residential communities, businesses, and facilities. Impacts are beneficial. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. Some constraint on construction impact timing possible. | No impacts. Slower changes to land use patterns may occur. |
| Parks and Recreation | <ul style="list-style-type: none"> Partial ROW acquisition of approximately 5 acres would be needed on the south side of the Westwinds Golf Course. Indirect impact to Rockview Nature Park by acquiring the parking lot in the Los Angeles Department of Power and Water's (LADPW) parcel. There would be no additional impacts resulting from any of the variations. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Same as Freeway/Expressway Alternative. Variations and rail options: no additional impacts. | Same as Freeway/ Expressway Alternative. | No impacts. |
| Growth | <ul style="list-style-type: none"> May shift future development toward the new interchanges in Palmdale and Victorville/Adelanto. Assist in achieving goals and policies of local general plans to attract investments to balance the current uneven supply of housing with more job-producing uses. Impacts would be the same for all variations. | Same as Freeway/ Expressway Alternative. Potentially slower changes to growth patterns. | <ul style="list-style-type: none"> May shift future development toward the new interchanges in Palmdale and Victorville/Adelanto. Assist in achieving goals and policies of local general plans to attract investments to balance the current uneven supply of housing with more job-producing uses. May foster higher-density and mixed-use developments near the proposed rail stations in Palmdale and Victorville. May facilitate connections into Palmdale for passengers on XpressWest, a privately proposed HSR project between Las Vegas and Victorville. Impacts would be the same for all variations and rail options. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. Potentially slower changes to growth patterns for tolled segments. | No impacts. Minimal growth potential between current urbanized areas. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| | | Potential Impacts | | | |
|------------------------|---|--|--|--|--|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Fairland/ Grazing Land | <ul style="list-style-type: none"> • Would convert approximately 252 acres of Important Farmland and 2,965 acres of Grazing Land to nonagricultural use. • Variations would result in slight changes to these numbers. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Would convert approximately 252 acres of Important Farmland and 2,965 acres of Grazing Land to nonagricultural use. • Would affect about 650 acres of sheep grazing land. • Variations would result in slight changes to these numbers. • The rail options would not result in any impacts. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Community Impacts | <ul style="list-style-type: none"> • Temporary construction impacts (i.e., traffic, noise, and air impacts during construction) would affect nearby communities. • Affected communities in developed areas would experience changes in access and circulation, growth, urbanization, and quality of life. • Residential, commercial/industrial, educational, and nonprofit properties would be acquired for the project ROW. • Variations A, B and B1 would result in similar impacts. • Variation D would result in less of an impact on the community of Lake Los Angeles. • Variation E would result in substantially more impacts to the community in Adelanto/Victorville. | Same as Freeway/ Expressway Alternative. Tolling may have potential impacts to environmental justice populations unless mitigation is considered and included. | <ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. • The rail connection options would result in additional community impacts near Palmdale Station area. • Variation E would result in substantially more impacts to the community in Adelanto/Victorville | <ul style="list-style-type: none"> • Same as Freeway/ Expressway Alternative with HSR Feeder Service. • Tolling may have potential impacts to environmental justice populations unless mitigation is considered and included | <ul style="list-style-type: none"> • Increased traffic congestion and impaired mobility, longer travel times on local roadways, and increased air pollution and noise. The economic benefits associated with implementation of the HDC would not be realized. |
| Relocations | <ul style="list-style-type: none"> • Affecting 51 to 95 residential units, depending on variation selected. • Affecting 35 to 68 nonresidential units, depending on variation selected. • Replacement land is available. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Affecting 39 to 49 residential units, depending on variation selected. • An additional 18 residential units would be affected if Option 7 is selected (no additional residential units for Option 1) depending on variation selected. • Affecting 38 to 53 nonresidential units, depending on variation selected. • An additional 17 or 14 nonresidential units would be affected under Rail Options 1 and 7, respectively. • Replacement property is available. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No community relocations required. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| | | Potential Impacts | | | |
|---|---|--|---|---|---|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Utilities/ Emergency Services | <ul style="list-style-type: none"> Utility facilities in the ROW subject to abandonment, removal, and/or relocation or replacement. May improve response times for emergency services. May need additional emergency personnel and equipment. May expose the Big Rock Wash area to potentially contaminated groundwater from the north and the northwest. May expose construction personnel to hydrocarbons, methane, and hydrogen sulfide during deep excavation or boring for bridge columns at two abandoned oil wells. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. Tolling may require additional law enforcement services. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional service impacts and requirements near the Palmdale and Victorville rail stations. | <ul style="list-style-type: none"> Same as Freeway/ Expressway Alternative with HSR Feeder Service. Tolling may require additional law enforcement services. | <ul style="list-style-type: none"> No impacts to utilities and emergency services. As future levels of service on local roads deteriorate, response times of emergency vehicles may increase. |
| Traffic and Transportation/ Pedestrian and Bicycle Facilities | <ul style="list-style-type: none"> Intersections performing at Level of Service (LOS) E or LOS F in year 2040: AM Peak – 2 of 159 PM Peak – 8 of 159 May sever several north-south running local roads that are planned for future development, requiring future grade separations, cul-de-sac turnarounds, and/or frontage roads. Portion of bus Route 32, Adelanto-Victorville North, would need to be rerouted if the HDC follows the Air Expressway alignment. Would require construction of new and revised interchange access points along I-15 and SR-14. Would increase demand for existing park-and-ride lots located in Palmdale. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. Potential for diversion to local streets adjacent to tolled segments. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional Palmdale rail station area impacts. | <ul style="list-style-type: none"> Same as Freeway/ Expressway Alternative with HSR Feeder Service. Potential for diversion to local streets adjacent to tolled segments. | <ul style="list-style-type: none"> Intersections performing at LOS E or LOS F in year 2040: AM Peak – 23 of 116 PM Peak – 45 of 116 Continued limitations on east-west mobility. |
| Visual/ Aesthetics | <ul style="list-style-type: none"> Increase in urban character from additional highway lanes, reduction of desert landscape, and construction of soundwalls and other structures that could block views. Moderate overall visual impact. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Additional visual impacts from HSR support facilities and Palmdale rail station. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| Environmental Resource | Potential Impacts | | | | No Build Alternative |
|-------------------------------------|--|--|--|--|----------------------|
| | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | |
| Cultural Resources | <ul style="list-style-type: none"> • Eighteen National Register of Historic Places (NRHP) properties in area of potential effects (APE): <ul style="list-style-type: none"> - An Adverse Effect finding for ten properties: prehistoric archaeological sites CA-SBR-158; -6312; -12336; and historic archaeological sites CA-LAN-4361H; -4367H; -4362; CA-SBR-16961H; -16918H; -16915H; and prehistoric/historic site CA-SBR-10392H. - No Adverse Effect finding with implementation of Caltrans Section 106 PA Standard Conditions for three historic properties: prehistoric archaeological sites CA-SBR-182 and -66 (part of Topipabit Archaeological District); and a linear historic era property: Southern California Edison (SCE) Company Boulder Dam - San Bernardino Transmission Line (BDSBL). - No Adverse Effect finding for four linear historic properties: National Old Trails Highway; ATSF Railroad; SCE Kramer-Victorville Power Lines and Towers; and the Mojave Trail/Mojave Road/Government Road. • Variations would result in no additional impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. Variations would result in no additional impacts. • Additional impact areas for the Victorville rail station connection. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Hydrology and Floodplain | <ul style="list-style-type: none"> • Nominal increase in runoff would be exhibited within the various watersheds traversed by the corridor due to an increase in impervious surface area. • Variations would result in slightly greater runoff. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. Impacts slightly higher due to additional surface area. • Variations and rail connection options would result in slightly greater runoff. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Water Quality and Stormwater Runoff | <ul style="list-style-type: none"> • The velocity and volume of downstream flow is expected to increase. • Potential pollutant sources would be associated with motor vehicle operations, highway maintenance activities, illegal dumping, accidental spills, and landscaping care. • Variations would result in slightly greater runoff. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Similar to Freeway/Expressway Alternative. Impacts slightly higher due to additional surface area. • Variations and rail connection options would result in slightly greater runoff. • Additional tunnel drainage necessary at Palmdale rail station and wye option areas. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| | | Potential Impacts | | | |
|------------------------------------|---|--|---|--|---|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Geology/Soils/ Seismic/ Topography | <ul style="list-style-type: none"> May facilitate the movement of economic mineral resources (i.e., aggregate base, sand, and gravel) from the area. May facilitate the development of more sand and gravel quarries. Variations would result in minimal additional grading. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Variations would result in minimal additional grading. Additional grading needed for all rail connection options. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Paleontology | <ul style="list-style-type: none"> Ground disturbance within the project limits and at construction staging areas could disturb native materials, potentially impacting paleontological resources. Variations would result in minimal additional ground disturbance. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Variations would result in minimal additional ground disturbance. Additional areas of disturbance in Palmdale and Victorville rail connection areas. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Hazardous Waste or Materials | <ul style="list-style-type: none"> May expose construction personnel to asbestos-containing materials (ACM) and lead-based paint (LBP) if not removed prior to construction. May expose workers and the general public to ADL during construction and operation of the HDC in San Bernardino County. May expose workers and the general public to unsafe levels of pesticides and/or herbicides. May expose construction personnel to hydrocarbons, methane, and hydrogen sulfide during deep excavation or boring for bridge columns at two abandoned oil wells. May expose workers or generate contaminated groundwater if dewatering is required. May expose construction personnel to potentially contaminated soil underlying several commercial/industrial properties impacted (to be acquired) by this project. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Lessened ability to adjust design for contamination avoidance under rail alternatives. Variations would result in similar impacts. Additional areas of disturbance in Palmdale and Victorville rail connection areas. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |
| Air Quality | <ul style="list-style-type: none"> May likely cause violations of the State 24-hour particulate matter less than 10 microns in diameter (PM₁₀) standard in both counties. Variations would result in similar impacts. | Similar to Freeway/ Expressway Alternative with minor differences related to toll avoidance. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. Minor additional improvements in emissions depending on auto diversions to rail trips. Variations and rail connection options would result in similar impacts. | Similar to Freeway/ Expressway Alternative with HSR Feeder Service with minor differences related to toll avoidance. | <ul style="list-style-type: none"> Potential conflict with local government goals and policies for reducing air emissions within its jurisdiction. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| Environmental Resource | Potential Impacts | | | |
|---------------------------|--|---|--|--|
| | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service |
| Noise | <ul style="list-style-type: none"> Some residential areas, a school, a park, and a church within the project limits would be impacted as a result of this project alternative. Abatement measures considered. Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Similar to Freeway/Expressway Alternative. No measurable impact anticipated from HSR operation. Variations would result in similar impacts. Palmdale rail connection options would result in a small number of additional affected properties. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. No impact anticipated from HSR operation. |
| Energy | <ul style="list-style-type: none"> Would result in energy consumption increase of 0.34 and 0.44 percent in 2020 and 2040, respectively. Variations would result in similar impacts. Increased energy consumption would be offset by the incorporation of sustainable energy facilities. | Same as Freeway/ Expressway Alternative. Additional energy required by tolling is negligible. | <ul style="list-style-type: none"> Energy consumption increase of 0.37 and 0.46 percent in 2020 and 2040, respectively. Variations and rail connection options would result in similar impacts. Increased energy consumption would be offset by the incorporation of sustainable energy facilities. | Same as Freeway/ Tollway Alternative with HSR Feeder Service. <ul style="list-style-type: none"> Inefficient energy consumption due to extra fuel used while idling in stop-and-go traffic or moving at slow speeds through congested roadways. |
| Natural Communities | <ul style="list-style-type: none"> Would affect up to approximately 3,784 acres of natural plant communities. Could potentially result in a barrier to wildlife movement. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Would affect up to approximately 4,651 acres of natural plant communities. Could potentially result in a barrier to wildlife movement. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. <ul style="list-style-type: none"> No impacts. |
| Wetlands and Other Waters | <ul style="list-style-type: none"> With the implementation of avoidance/ minimization measures, impacts to Waters of the U.S. range from 2.03 acres to 3.54 acres, depending on which combination of variations and Mojave River bridge options is selected. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> With the implementation of avoidance/ minimization measures, impacts to Waters of the U.S. range from 4.32 acres to 4.70 acres, depending on which combination of variations and Mojave River bridge options is selected. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. <ul style="list-style-type: none"> No impacts. |
| Plant Species | <ul style="list-style-type: none"> Could potentially affect alkali mariposa lily, white pygmy poppy, Booth's evening primrose, crowned muilla, and Mojave fish-hook cactus.. Would likely affect 16 other special-status plant species. Variations would have similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> Same as Freeway/Expressway Alternative. Variations would have similar impacts. All rail connection options would likely result in greater impacts due to the larger footprint. | Same as Freeway/ Expressway Alternative. <ul style="list-style-type: none"> No impacts. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| Potential Impacts | | | | | |
|-----------------------------------|---|--|---|--|--|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Animal Species | <ul style="list-style-type: none"> • Twenty (20) non-listed special-status wildlife species have the potential to occur within the project area. • Impacts to all non-listed special-status species would be low with implementation of avoidance, minimization, and mitigation measures, except the following: <ul style="list-style-type: none"> – Potentially substantial impact to raptor foraging habitat and burrowing owl. – Variations would have similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative • Variations would have similar impacts. • All rail connection options would likely result in greater impacts due to the larger footprint. | Same as Freeway/ Expressway Alternative. | No impacts. |
| Threatened and Endangered Species | <ul style="list-style-type: none"> • Would have the potential to impact the golden eagle, Swainson's hawk, and western yellow-billed cuckoo during construction. • Would impact desert tortoise and have the potential to impact Mohave ground squirrel. • Variations would have similar impacts, except: • Variation E would affect nesting habitat for the least Bell's vireo and occupied critical habitat for the southwestern willow flycatcher. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative. • Variations would have similar impacts, except the following: <ul style="list-style-type: none"> – Variation E for highway and rail would affect nesting habitat for the least Bell's vireo and occupied critical habitat for the southwestern willow flycatcher. | Same as Freeway/ Expressway Alternative. | No impacts. |
| Invasive Species | <ul style="list-style-type: none"> • Potential to spread invasive species to adjacent native habitats in the project area during construction. • Variations would have similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Same as Freeway/Expressway Alternative. • Variations and rail connection options would have similar impacts. | Same as Freeway/ Expressway Alternative. | No impacts. |
| Section 4(f) | <ul style="list-style-type: none"> • <i>De minimis</i> determination to four historic properties: National Trails Highway, ATSF Railroad, the BDSBL (only one tower would be relocated), and multicomponent resource consisting of the Mojave Trail, Mojave Road and Government Road (MR). • Some visual and air quality proximity impacts on the nearby parks during project construction and operation. • Variations would not result in a change in impacts, except that Variation E would avoid the <i>de minimis</i> impacts to the Westwinds Golf Course and Rockview Nature Park. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • <i>De minimis</i> determination to four historic properties: National Trails Highway, ATSF Railroad, BDSBL (7 towers would be relocated), and multicomponent resource consisting of the Mojave Trail, Mojave Road and Government Road (MR). • Some visual and air quality proximity impacts on the nearby parks during project construction and operation. • Noise and visual proximity impacts on St. Clair Parkway in Palmdale due to relocation of the rail tracks closer to the parkway. • Variations and rail connection options would not result in a change in impacts, except that Variation E (for highway and rail) would avoid the <i>de minimis</i> impacts to the Westwinds Golf Course and Rockview Nature Park. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | <ul style="list-style-type: none"> • No use and no impact to any Section 4(f) properties. |

Table S-1 Summary of Major Potential Impacts from Alternatives

| Potential Impacts | | | | | |
|------------------------|--|--|---|--|----------------------|
| Environmental Resource | Freeway/ Expressway Alternative | Freeway/ Tollway Alternative | Freeway/ Expressway Alternative with HSR Feeder Service | Freeway/ Tollway Alternative with HSR Feeder Service | No Build Alternative |
| Cumulative Impacts | <ul style="list-style-type: none"> • Potential cumulative impacts to growth, farmland, emergency services, visual, and biological resources. • Variations would result in similar impacts. | Same as Freeway/ Expressway Alternative. | <ul style="list-style-type: none"> • Impact to same species listed under the Freeway/Expressway Alternative. • Variations and rail connection options would not result in a change in impacts, except that Variation E with HSR would result in additional substantial impacts on the State and federally listed southwestern willow flycatcher and the least Bell's vireo species. | Same as Freeway/ Expressway Alternative with HSR Feeder Service. | No impacts. |

Avoidance, Minimization, and Mitigation Measures

The project will be designed to avoid and minimize impacts to environmental resources to the extent practicable. Standard conditions and mitigation measures have been identified to minimize impacts when avoidance is not possible. An Environmental Commitment Record will be prepared and approved as a condition to project approval.



Source: www.wikipedia.com
The community character along historic Route 66 would be maintained.



Source: <http://www.wildherps.com>.
Desert tortoise.

Coordination with Public and Other Agencies

Caltrans, in cooperation with Metro, has coordinated with numerous public agencies throughout the environmental process. There have been extensive outreach efforts as outlined in Chapter 5. These efforts started with scoping in September 2010, followed by progress meetings in April 2011, January 2012, February 2012, December 2012, July 2013, and July 2014.



Cities and towns in the project area are supportive of the HDC Project.

As part of the Coordination Plan conducted by Caltrans, the following agencies either have accepted or are being considered as Cooperating Agencies for this project.

Summary

- Federal Railroad Administration
- U.S. Federal Aviation Administration, Western Pacific Region
- U.S. Environmental Protection Agency, Region IX
- Advisory Council on Historic Preservation (ACHP)
- Federal Bureau of Prisons
- U.S. Army Corps of Engineers

Permits Required for the Project

Permits and approvals by agency that may be required for construction of the project are listed in Table S-2.

Table S-2 Project Permits and Approvals

| Agency | Permit/Approval | Status |
|---|---|--|
| United States Fish and Wildlife Service (USFWS) | Biological Opinion | Threatened and Endangered Species Act Section 7 consultations are to be conducted following identification of a Preferred Alternative. |
| United States Army Corps of Engineers (USACE) | Clean Water Act Section 404 Permit for the discharge of dredge or fill materials into waters of the U.S. | Application to be submitted following identification of a Preferred Alternative. |
| Federal Emergency Management Agency (FEMA) | Conditional Letter of Map Revision and Letter of Map Revision | Coordination with FEMA during the design phase to ensure improvements are compatible with the floodplain. |
| Federal Highway Administration (FHWA) | Air Quality Conformity Determination | Before approval of the Final EIR/EIS, FHWA must make a finding that the project is consistent with requirements of the Clean Air Act (CAA). |
| Federal Aviation Administration (FAA) | FAA's Obstruction Evaluation/Airport Airspace Analysis process | Coordination with FAA during project design to ensure project features or mitigation measures would not obstruct airport/air space activities. |
| Department of Interior Bureau of Land Management | Paleontological Resource Use Permit | To be submitted for the potential to encounter paleontological resources on Bureau of Land Management property during construction. |
| California State Water Resources Control Board | Water Discharge Permit, approval of NOI to comply with General Construction Activity National Pollutant Discharge Elimination System (NPDES) Permit (Clean Water Act Section 402) | NOI to be submitted following identification of a Preferred Alternative and prior to construction. |
| California Department of Fish and Wildlife (CDFW) | Section 1602 Lake or Streambed Alteration Agreement | Section 1602 Notification is to be submitted and agreement obtained prior to the start of construction. |
| Region 6, Lahontan Regional Water Quality Control Board (RWQCB) | Water Quality Certification (Clean Water Act Section 401) | Application to be submitted following approval of a Preferred Alternative. |

Table S-2 Project Permits and Approvals

| Agency | Permit/Approval | Status |
|---|---|--|
| State Historic Preservation Officer (SHPO) | Approval of a Memorandum of Agreement (MOA) with FHWA | SHPO approval of the MOA will occur after a Preferred Alternative is identified prior to completion of the Final EIR/EIS. |
| Interested Native American Tribes | Section 106 of the National Historic Preservation Act (NHPA) to include, but not be limited to, determinations of eligibility, findings of effect, and future work that includes involvement with the MOA, Archaeological Monitoring Plan, and Data Recovery Plan | Native American Consultation for the HDC is ongoing. |
| Burlington Northern Santa Fe (BNSF) Railroad Company | Memorandum of Understanding (MOU) and a Construction and Maintenance Agreement between Caltrans and BNSF; approval of the proposed action, based on review of the Construction and Maintenance Agreement between Caltrans and BNSF | Prior to any construction within or above railroad ROW. |
| California Public Utilities Commission (CPUC) | General Order 131-D for relocation of electrical transmission lines between 50 and 20 kilowatts (kW); Certificate of Public Convenience and Necessity for relocations to electrical transmission lines and gas lines | Prior to any construction within or above railroad ROW; after certification of EIR/EIS and the filing of a Notice of Determination to complete the CEQA process. |
| Local Air Pollution Control Districts | Dust Control Permit and Approved Air Impact Assessment per Rule 9510, Indirect Source Review; Rule 8210, Limits to fugitive particulate matter emissions during construction activities | Permit to be acquired after project approval and prior to construction. |
| Utilities (e.g., power, water, gas, cable, communication) | Approvals to relocate, protect in place, or remove utility facilities | Prior to any construction activities that would affect utility facilities. |
| San Bernardino Flood Control District | Floodplain Encroachment Permit | During final design. |

Unresolved Issues

The following issues are undergoing and would need to be resolved before the final environmental document is certified:

- Completion of Section 7 Consultation
- Completion of Section 106 Consultation
- Decision on Preferred Alternative
- Variation Decision on Palmdale Station Location

The following issues would need to be resolved before project implementation:

- Project funding
- Project phasing
- Public-Private Partnership (PPP) arrangement

Other Major Actions in the Proposed Project General Area

The following is a list of proposed major actions in the proposed project general area. A complete related project list is provided in Section 3.7, Cumulative Impacts.

- California High Speed Train (HST) System – The California High-Speed Rail Authority proposes a train system capable of operating at speeds in excess of 200 miles per hour (mph) on a fully grade-separated track serving the major metropolitan centers of California, including segments from Bakersfield to Palmdale and from Palmdale to Los Angeles.
- Route 395 Expressway – Caltrans will reconstruct U.S. Highway 395 (US 395) into a four-lane expressway and provide at-grade intersections for existing street crossings. Phase 1 will widen US 395 from SR-18/Palmdale Road to Chamberlaine Way in Adelanto, Phase 2 will widen US 395 from Chamberlaine Way to Desert Flower Road, and Phase 3 will involve work from I-15 to SR-18.
- XpressWest (formerly DesertXpress) – The Federal Railroad Administration is the lead agency for construction, operation, and maintenance of a high-speed passenger train between Victorville and Las Vegas, including stations and maintenance facilities at both ends of the rail alignment.
- State Route 138 Safety Improvement Project – Caltrans proposes to widen the shoulders from 2 to 8 feet, provide 2-foot-wide rumble strips near the edge of traveling roadway in each direction and provide 4-foot-wide median buffer with rumble strips on SR-138 between SR-138/SR-18 Junction (PM 69.3) and the San Bernardino County Line (PM 75.0). The Mitigated Negative Declaration was issued in April 2013.
- Palmdale Hybrid Power Project – The City of Palmdale proposes a 570-megawatt (MW) electric generating facility that combines the ultra-high efficiency clean-burning natural gas technology with solar energy to be located near Palmdale Regional Airport.
- Solar Project – The City of Adelanto is the lead agency for a 27-MW photovoltaic facility proposed on 205 acres at the southeast corner of Rancho and Emerald roads.
- Victorville 2 Hybrid Power Project – The City of Victorville proposes a hybrid natural gas-fired and solar thermal plant on three areas totaling 388 acres north of the Southern California Logistics Airport (SCLA).
- High Desert Detention Center – The City of Adelanto proposes construction of a 2,200-bed correctional facility at the northeast corner of Rancho Road and Raccoon Avenue. Phase 1 is complete, while Phases 2 and 3 are anticipated to be constructed in 2017.
- Adelanto Gateway Logistics Center – The City of Adelanto proposes an industrial park on 400 acres across from the SCLA at Air Expressway and Adelanto Road.
- Global Access (SCLA Development) – The City of Victorville proposed this multi-phase industrial development at the SCLA consisting of 43.5 million square feet for SCLA, 65 million square feet for the Southern California Logistics Centre, and 60 million square feet for the Southern California Rail Complex

Summary

- Desert Gateway Specific Plan – The City of Victorville proposes a 10,203-acre community at the interchange of the HDC and I-15, consisting of 26,100 housing units and other land uses (i.e., commercial, mixed-use, industrial and open space).

Summary

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