SR-110 Safety Enhancement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 24.0/30.4)
2975U/0713000194
SCH #2016071077

Draft Environmental Impact Report/Environmental Assessment and Section 4(f) Evaluation

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 Caltrans under its assumption of responsibility pursuant to 23 USC 327.

March 2017
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Improve the operational and safety features on SR-110 from post miles 24.0 to 30.4 in Los Angeles County.

DRAFT
ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT
and Section 4(f) Evaluation

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C) and 49 USC 303

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission

March 30, 2017
Date of Approval

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

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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 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) or require an Environmental Impact Statement (EIS) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, State, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Caltrans is recommending different items of work (e.g., installing metal beam guardrails, concrete barriers, removing curb and gutters, adding maintenance vehicle pullouts, and applying graffiti resistant coating) at various locations throughout the project limits. All proposed work will be within State right-of-way; therefore, no right-of-way acquisitions or relocations will be required.
The purpose of the project is to improve safety for the traveling public and maintenance workers on State Route 110 (SR-110) between Post Miles 24.0 and 30.4 in Los Angeles County, California, between the Cities of Los Angeles and South Pasadena. The project is needed because there has been a higher than statewide average accident rate for similar facilities. Table S-1 summarizes the potential impacts from each project alternative. There are two alternatives evaluated in this document: a No Build Alternative (Alternative 1) and a Build Alternative (Alternative 2). Consultation with the State Historic Preservation Office (SHPO) is required and currently in progress for this proposed project.
### Table S.1 Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

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<td>Land Use</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
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<td>Growth</td>
<td>No Impact</td>
<td>No Impact</td>
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<td>Community Character and Cohesion</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
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<td>Environmental Justice</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
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<tr>
<td>Utilities/Emergency Services</td>
<td>No Impact</td>
<td>Potential impacts to police and fire response times during construction</td>
<td>Minimization EMER-1: During project construction, Caltrans will coordinate with local emergency service providers to keep them informed of the project construction schedule and any detour routes so as to avoid or minimize any impacts. Additionally, the project Traffic Management Plan will manage and minimize any circulation impacts during construction.</td>
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<tr>
<td>Traffic and Transportation/ Pedestrian and Bicycle Facilities</td>
<td>No Impact</td>
<td>Potential temporary impacts to traffic operations in the Parkway during construction. This would most likely be in the form of reduced travel speeds.</td>
<td>Minimization TRA-1: Construction-related impacts will be minimized to the fullest extent possible through the Traffic Management Plan and staged construction.</td>
</tr>
<tr>
<td>Visual/Aesthetics</td>
<td>No Impact</td>
<td>A minimal impact to the visual character of the Parkway. However, it will not reduce any visual access to the roadway’s view sheds.</td>
<td>Minimization VIA-1: All improvements to the roadway must be context sensitive in design and reflect the scenic and historical significance of the Arroyo Seco Parkway.</td>
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<td>Cultural Resources</td>
<td>No Impact</td>
<td>The Arroyo Seco Parkway is a historical resource that will be directly affected. The effect will be adverse because the impacts will alter the integrity of the historic property.</td>
<td>Minimization CUL-1: If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. Minimization CUL-2: If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area that is suspected to overlies remains, and that the County Coroner shall be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the...</td>
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Table S.1 Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

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<td>Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact Kelly Ewing-Toldeo, Senior Environmental Planner in the Cultural Resources Branch, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.</td>
<td>Mitigation CUL-3: The conceptual mitigation measure for effects to the Arroyo Seco Parkway would include development of a corridor management plan that details maintenance activities that meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations [CFR] 680) and applicable guidelines. These measures will be finalized in a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO). Mitigation CUL-4: Incorporate landscape enhancements between Figueroa Street Tunnel Nos. 1 and 2 on the north side of northbound State Route 110 (SR-110).</td>
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| Air Quality   | No Impact                               | During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other construction-related activities. | **Minimization AQ-1:** The construction contract shall comply with California Department of Transportation (Caltrans) Standards Specifications in Section 14 (2010).  
- Section 14-9.01 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including South Coast Air Quality Management District (SCAQMD) rules and regulations and local ordinances.  
- Section 14-9.02 is directed at controlling dust. If dust palliative materials other than water are to be used, evaluation of applicable ADL soil management during construction.  
**Minimization HW-2:** Removal and disposal of metal beam guardrails shall be managed under California Code of Regulations, Title 22, Division 4.5, Chapter 34, which specifies guidelines for storage, accumulation, shipment/transport, and disposal of treated wood waste at specific landfills.  
**Minimization HW-3:** Development of a project-specific Lead Compliance Plan (LCP) and training program that ensure proper health and safety measures are implemented and complied with prior to starting of the removal operation will be required. Per California Department of Transportation (Caltrans) Standard Special Provisions (SSPs), a project-specific LCP will be required prior to minor soil disturbance, major soil disturbance (requires an LCP and an Excavation and Transportation Plan (ETP), removal of existing Yellow/White Thermoplastic Traffic Stripe and pavement marking (requires LCP and Debris Removal, Containment, and Disposal Work Plan), and non-ADL soil disturbance (requires a Health and Safety Plan (HaSP) and a Hazardous Material/Waste Management Plan (HMP) at the project site. |
### Table S.1 Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

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Material specifications are contained in Section 18.

**Minimization AQ-2:** The proposed project is within the boundary of the SCAQMD; therefore, this project must comply with SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.

**Rule 403 – Fugitive Dust.** SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures (BACMs) in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. It also requires a dust control plan to be submitted and approved prior to construction. The dust control plan should describe all applicable dust control measures that will be implemented at the project, and should describe types of dust suppressant, surface treatments, and other measures to be utilized at the construction sites to comply with the Rule. The specifics of Rule 403 are as follows:

- No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the dust remains visible in the atmosphere beyond the property line of the emission source; or the dust emission exceeds 20 percent opacity, if the dust emission is the result of movement of a motorized vehicle.
- No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of Rule 403 to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
### Table S.1 Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

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<td>• No person shall cause or allow PM$<em>{10}$ (particulate matter less than 10 microns in size) levels to exceed 50 micrograms per cubic meter (µg/m$^3$) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other United States Environmental Protection Agency (EPA) approved equivalent method for PM$</em>{10}$ monitoring.</td>
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<td>• No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• No person shall conduct an active operation with a disturbed surface area of 5 acres or more or with a daily import or export of 100 cubic yards or more of bulk material without utilizing approved control measure/measures at each vehicle egress from the site to a paved public road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to Rule 403 shall implement the applicable conservation management practices specified in Table 4 of Rule 403.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Additional Requirements for Large Operations Under Rule 403:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement</td>
</tr>
</tbody>
</table>
Table S.1  Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Potential Impact by No Build Alternative</th>
<th>Potential Impact by Build Alternative</th>
<th>Avoidance, Minimization, and/or Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>The applicable actions specified in Table 3 of this Rule when the applicable performance standards cannot be met through use of Table 2 actions; and shall:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook prior to initiating any earthmoving activities;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Identify a dust control supervisor that: (a) is employed by or contracted with the property owner or developer; (b) is on the site or available on site within 30 minutes during work hours; (c) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements; (d) has completed the Air Quality Management District (AQMD) Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and (e) notifies the Executive Office in</td>
</tr>
</tbody>
</table>
### Table S.1  Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

<table>
<thead>
<tr>
<th>Resource Area</th>
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<th>Potential Impact by Build Alternative</th>
<th>Avoidance, Minimization, and/or Mitigation Measures</th>
</tr>
</thead>
</table>
| Noise         | No Impact                              | Potential construction noise impact from construction equipment | • Avoidance N-1: Equipment noise control will be applied to revising old equipment and designing new equipment to meet acceptable noise levels.  
Minimization N-2: Mufflers are very effective devices that reduce the noise emanating from the intake or exhaust of an engine, compressor, or pump. The fitting of effective... |
### Table S.1  Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mufflers on all new equipment and retrofitting of mufflers on existing equipment is necessary to yield an immediate noise reduction at all types of road construction sites.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Minimization N-3:</strong> The construction contract shall comply with California Department of Transportation (Caltrans) Standards Specifications in Section 14-8.02, Sound Control Requirements, which states that construction noise levels should not exceed 86 A-weighted decibels (dBA) at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m. Noise levels generated during construction shall comply with applicable local, State, and federal regulations.</td>
</tr>
<tr>
<td>Biological Environment</td>
<td></td>
<td></td>
<td><strong>Minimization BIO-1:</strong> Relocation of native sycamore or oak trees that require removal should be considered. If native sycamore or oaks are removed, they shall be replaced by at least two trees of that species (City of Los Angeles Ordinance 177404).</td>
</tr>
<tr>
<td>Energy</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
</tr>
<tr>
<td>Natural Communities</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
</tr>
<tr>
<td>Plant Species</td>
<td>No Impact</td>
<td>Vegetation trimming and/or removal will be required. Two trees will have to be removed if the Build Alternative is selected for implementation.</td>
<td><strong>Minimization BIO-2:</strong> The District Biologist, Michelle Barton, shall be invited to the pre-construction meeting with at least 1 week prior notice.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Minimization BIO-3:</strong> It is recommended that all vegetation removal occur outside of bird nesting season, which is from February 15 through September 1. Should vegetation need to be removed during this period, the District Biologist shall</td>
</tr>
</tbody>
</table>

**Minimization N-3:**
- Relocation of native sycamore or oak trees that require removal should be considered. If native sycamore or oaks are removed, they shall be replaced by at least two trees of that species (City of Los Angeles Ordinance 177404).
- The sycamore tree removal at Project Location No. 35 will have a replacement ratio (4:1 15-gallon sycamore). The locations of the replacements will be determined in the plans, specifications, and estimates phase of the project.

**Minimization BIO-2:**
- The District Biologist, Michelle Barton, shall be invited to the pre-construction meeting with at least 1 week prior notice.

**Minimization BIO-3:**
- It is recommended that all vegetation removal occur outside of bird nesting season, which is from February 15 through September 1. Should vegetation need to be removed during this period, the District Biologist shall
Table S.1 Summary of Potential Impacts and Avoidance, Minimization, and/or Mitigation Measures

<table>
<thead>
<tr>
<th>Resource Area</th>
<th>Potential Impact by No Build Alternative</th>
<th>Potential Impact by Build Alternative</th>
<th>Avoidance, Minimization, and/or Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Species</td>
<td>No Impact</td>
<td>Potential impacts to birds during bird nesting season</td>
<td>Implement Minimization BIO-2 and Minimization BIO-3.</td>
</tr>
<tr>
<td>Threatened and Endangered Species</td>
<td>No Impact</td>
<td>No Impact</td>
<td>None</td>
</tr>
<tr>
<td>Invasive Species</td>
<td>No Impact</td>
<td>No Impact</td>
<td>Avoidance INV-1: In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, the landscaping and erosion control included in the project will not use species that are listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.</td>
</tr>
<tr>
<td>Cumulative Impacts</td>
<td>No Impact</td>
<td>This project, being a stand-alone project, would not impact the Parkway’s integrity as a whole to the degree that it would no longer be a historic resource, but could contribute to a significant cumulative impact in combination with other impacting projects.</td>
<td>A combination of avoidance, minimization, and or mitigation measures would reduce the overall adverse effects of the SR-110 Safety Enhancement Project. In order to minimize the effects on cultural resources, all reasonable foreseeable Caltrans projects located on the Arroyo Seco Parkway will be developed using a context-sensitive design approach.</td>
</tr>
</tbody>
</table>
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Chapter 1  Proposed Project

The California Department of Transportation (Caltrans) is proposing operational and safety improvements on State Route 110 (SR-110) between West Sunset Boulevard to Grand Avenue in Los Angeles County. The proposed project would be subject to both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans would be the lead agency under both CEQA and NEPA, as assigned by the Federal Highway Administration (FHWA), in accordance with NEPA (42 United States Code [USC] 4321 et seq.); and the Council on Environmental Quality (CEQ) Regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508).

The SR-110 Safety Enhancement Project (proposed project) study area is located from the northern end of Downtown Los Angeles to the City of Pasadena. Figure 1-1 and Figure 1-2 show the regional location and project vicinity, respectively. The proposed project encompasses the first freeway in California, commonly known as the Arroyo Seco Parkway ([Parkway] also known as the Pasadena Freeway or SR-110). South of the project limits at the Interstate 5 (I-5) and Interstate 110 (I-110) interchange, the Parkway becomes the Harbor Freeway (I-110) and passes through or adjacent to the cities of Los Angeles, Gardena, and Carson, and the unincorporated communities of Willowbrook and West Compton, and is a north-south transportation corridor connecting the South Bay cities with the Los Angeles Central Business District. The majority of the I-110 goes through the Harbor Gateway, a north-south strip of land annexed by the City of Los Angeles that connects the city to the Port of Los Angeles, as well as to the communities of San Pedro and Wilmington.

The Parkway was dedicated on December 30, 1940, and built in three stages; the 8.2-mile (mi) Parkway was the first divided-lane, high-speed, limited-access road in the urban western United States and the first stretch of road for what would become the extensive Los Angeles freeway network. The Parkway was envisioned as both a scenic road and a vital traffic conduit linking the expanding cities of Pasadena and Los Angeles. Engineers and planners made an effort to blend landscaping and native plants into the overall design while incorporating modern elements for high-speed travel,1 at the time, a speed limit of 45 miles per hour (mph).

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FIGURE 1-1

SR-110 Safety Enhancement Project
Regional Location

MILES
0  4  8

SOURCE: Bing Maps, 2017

Project Area
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As stated above, the Parkway was originally designed to accommodate the need for an efficient automobile route between downtown Los Angeles and Pasadena. The historic Parkway was listed in the National Register of Historic Places in February 2011, designated a National Scenic Byway by the United States Secretary of Transportation in 2002, and designated a National Historic Civil Engineering Landmark in 1999 by the American Society of Engineers.¹

The Parkway continues to service drivers in the Los Angeles metropolitan region.² However, in the present day, the Parkway’s context is different than it was over 70 years ago. Today, automobiles have the capability of traveling at much faster speeds. As a result, travelers’ safety has become more challenging along the historic Parkway.³ Per today’s current highway standards, the route has narrow lanes, complex curvilinear alignment, and varying shoulder lengths. The proposed project will provide safe and protective access points and features, which often expose highway workers to unsafe conditions for extended periods of time during their daily maintenance tasks. Such improvements will allow the State to implement current functional and safety design standards, which would increase safety and overall operations in the project area. An effort will be made to ensure that the proposed project enhances the Parkway.

The proposed project is included in the Final 2015 Federal Transportation Improvement Program (FTIP) as Project ID: LALS01 and is programmed for funding under the State Highway Operation and Protection Program (SHOPP) 201.015—Safety Enhancements and 201.235—Roadside Safety Improvements; using State and federal funds.

1.1 Purpose and Need

1.1.1 Purpose of the Project

The purpose of the proposed project is to improve the operational and safety characteristics on SR-110 between post miles (PM) 24.0 and 30.4. The proposed

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project will upgrade the highway facility to meet current design standards. In order to protect highway workers from extended traffic exposure, this project will also provide safe access points and features to reduce repetitive maintenance activities.

1.1.2 Need for the Project
The project is needed because this segment of SR-110 experiences high accident rates, exceeding the State average for similar highway facilities. According to the Caltrans Traffic Accident Surveillance and Analysis System (TASAS) report (January 2011 through December 2013), over the approximately 8.2 miles, there were a total of 1,110 accidents including six fatal accidents with six fatalities within the southbound direction of SR-110. Furthermore, there were a total of 1,332 accidents including three fatal accidents with four fatalities within the northbound direction of SR-110.

Within the project limits, the northbound portion of the freeway on the right side has raised concrete curbs located in front of the concrete barriers. When the curbs are struck at high speeds, there is the potential for vehicles to flip and roll over the concrete barriers. Removing the curb is a safety mechanism that will reduce the severity of right-shoulder accidents on the roadway. Removal of the curb will also increase the shoulder width, thereby providing a larger area for motorists to safely pull over.

A summary of the actual accident rates along with the corresponding statewide averages for similar facilities is listed in Table 1.1. The higher-than-statewide average values are shown in bold. The types of accidents and the primary collision factors according to the TASAS reports are summarized in Table 1.2.

**Table 1.1 Summary of Accident Rates**

<table>
<thead>
<tr>
<th>Location Description SR-110</th>
<th>Actual Accident Rates (within project limits) (MVM)</th>
<th>Statewide Average Rates (MVM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal</td>
<td>Fatal + Injury</td>
</tr>
<tr>
<td>Southbound Direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 23.000-24.523</td>
<td>0.006</td>
<td>0.45</td>
</tr>
<tr>
<td>PM 24.525L-25.435L</td>
<td>0.000</td>
<td>0.58</td>
</tr>
<tr>
<td>PM 25.484-31.912</td>
<td>0.015</td>
<td>0.57</td>
</tr>
<tr>
<td>Northbound Direction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 23.000-24.523</td>
<td>0.011</td>
<td>1.09</td>
</tr>
<tr>
<td>PM 24.525R-25.483R</td>
<td>0.000</td>
<td>0.95</td>
</tr>
<tr>
<td>PM 25.485-31.912</td>
<td>0.003</td>
<td>0.35</td>
</tr>
</tbody>
</table>

1 [L]-Left independent alignment  
2 [R]-Right independent alignment  
MVM = million vehicle miles  
SR-110 = State Route 110  
PM = Post Mile
Table 1.2 Type of Collisions and Primary Collision Factors

<table>
<thead>
<tr>
<th>Type of Collision</th>
<th>Percent</th>
<th>Primary Collision Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>46.8%</td>
<td>Following too close, speeding</td>
</tr>
<tr>
<td>Hit Object</td>
<td>26%</td>
<td>Improper turn, run off, hit overturned objects on the shoulder, fence, guardrail, median barrier, object on the road, cut slope or embankment, post mile stick, sign post, curb</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>23.2%</td>
<td>Improper turn, failure to yield, speeding, pass other</td>
</tr>
<tr>
<td>Overturn</td>
<td>1.4%</td>
<td>Striking an object, speeding, improper turn</td>
</tr>
<tr>
<td>Broadside</td>
<td>1%</td>
<td>Improper turn, failure to yield</td>
</tr>
<tr>
<td>Not Stated</td>
<td>0.8%</td>
<td>Accident reports did not disclose</td>
</tr>
<tr>
<td>Other</td>
<td>0.5%</td>
<td>Accident reports did not disclose</td>
</tr>
<tr>
<td>Auto-Pedestrian</td>
<td>0.3%</td>
<td>Pedestrian struck</td>
</tr>
<tr>
<td>Head-on</td>
<td>0.2%</td>
<td>Cross into opposite lane, making U-turn, pass other vehicle</td>
</tr>
</tbody>
</table>

**Southbound Direction**

<table>
<thead>
<tr>
<th>Type of Collision</th>
<th>Percent</th>
<th>Primary Collision Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>61.9%</td>
<td>Following too close, speeding</td>
</tr>
<tr>
<td>Hit Object</td>
<td>17.7%</td>
<td>Improper turn, run off, hit overturned objects on the shoulder, fence, guardrail, median barrier, object on the road, cut slope or embankment, post mile stick, sign post, curb</td>
</tr>
<tr>
<td>Sideswipe</td>
<td>17.1%</td>
<td>Improper turn, failure to yield, speeding, pass other</td>
</tr>
<tr>
<td>Overturn</td>
<td>1%</td>
<td>Striking an object, speeding, improper turn</td>
</tr>
<tr>
<td>Broadside</td>
<td>1%</td>
<td>Improper turn, failure to yield</td>
</tr>
<tr>
<td>Not Stated</td>
<td>0.7%</td>
<td>Accident reports did not disclose</td>
</tr>
<tr>
<td>Head-on</td>
<td>0.5%</td>
<td>Cross into opposite lane, making U-turn, pass other vehicle</td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
<td>Accident reports did not disclose</td>
</tr>
<tr>
<td>Auto-Pedestrian</td>
<td>0.1%</td>
<td>Pedestrian struck</td>
</tr>
</tbody>
</table>

*Percent (%) of total number of accidents.

The high accident rates in the project area have increased the exposure level to highway workers doing repetitive and routine maintenance functions in the vicinity. As Table 1.2 illustrates, the traffic accidents often result in damage to metal beam guard rails, sign posts, and other State property. Graffiti removal is another maintenance function that requires repetitive activity in areas that expose highway maintenance workers to frequent traffic dangers. Once these cases occur, highway workers are dispatched to repair and clean-up the damage to reduce and/or prevent further incidents from occurring. However, in some cases, highway workers are called out to repair State facilities in the same locations multiple times per week.

The Parkway has narrow lanes, complex curvilinear alignment, and varying shoulder lengths that compromise highway safety. These are major concerns to maintenance operations/highway workers as these highway areas are difficult to access due to their close proximity to mainline traffic. These issues result in highway workers having to walk and carry their equipment, including wreckage debris, for extended distances, thus increasing the length of time they are exposed to traffic and unsafe conditions.
Accessibility is difficult for highway workers, within the project limits, since there is insufficient State right-of-way to access areas that require routine maintenance. In some locations, the freeway is directly adjacent to the Arroyo Seco Channel, the City of Los Angeles, and/or privately owned property, which prohibits access from outside Caltrans right-of-way. In addition, the existing conditions of the proposed project area make it difficult for highway workers to find locations to park their vehicles at safe distances from traffic in order to access areas that require routine maintenance. Without implementing full-lane closures, various landscaped and weed-infested median and gore\(^1\) areas within the project limits are not safely accessible to highway workers. The high level of traffic on the Parkway greatly reduces the opportunity to perform maintenance activities to the point that vegetation, at some locations, has overgrown to the edge of the traveled way.

### 1.1.3 Independent Utility and Logical Termini

Independent utility is a term used to describe a project that would be usable and a reasonable expenditure even if no additional transportation improvements in the area are made. Once built, the project could stand on its own and would require no other projects to be implemented. The proposed project would improve safety in the area without the implementation of any additional nearby project.

A logical terminus describes logical beginning and end points for an improvement project, including the beginning and end points of its impacts. In this case, a higher amount of accidents occurs at the locations of the proposed improvements. The project would improve the transportation facility at those specific locations, and the project would not require future construction to use the project’s design capabilities fully and meet the Purpose and Need. The proposed project has been designed to have (1) logical termini, (2) independent utility or independent significance, and (3) no restrictions to the consideration of alternatives for other reasonably foreseeable transportation improvements.

Therefore, based on the above and pursuant to 23 CFR 77.111(f), this project has independent utility and logical termini.

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\(^1\) Gore is the area immediately beyond the divergence of two roadbeds that is bounded by the edges of those roadbeds.
1.2 Project Description

The project is located within Los Angeles County on SR-110, from West Sunset Boulevard to Grand Avenue, a distance of approximately 8.2 miles. SR-110, within the project area, also known as the Arroyo Seco Parkway (Parkway), is a freeway with three general purpose-lanes in each direction. The lane widths vary from 10.5 feet (ft) to 11 ft. The median widths vary from 4.5 ft to 8 ft. There are occasional emergency pullout areas on the right side of the freeway in both directions; however, generally, there is minimal inside and outside shoulders on the freeway for motorists to safely pull over.

Caltrans proposes to improve safety on the roadway for the traveling public and for highway workers at 48 locations between PM 24.0 and PM 30.4. At some locations, more than one item of work is proposed; therefore, there will be a total of 61 individual items of work. All proposed work will remain in the prism of the roadway, additional right-of-way will not be required, and an effort will be made to ensure upgrades match the existing condition of the Parkway.

The work items with their respective locations are listed in Table 1.3. Some project activities are similar in nature and in multiple locations. For instance, in six locations (4, 5b, 5c, 38, 39, and 40), concrete barriers are proposed to be installed. According to the Federal Highway Administration (FHWA), concrete barriers are known for their relatively low life-cycle cost, effective safety performance, and their relatively maintenance-free characteristics. The concrete barrier systems have proven to be highly effective in locations with high traffic volumes and high speeds, and in areas where sufficient median widths to accommodate other barrier systems are not available.\(^1\) There are also seven locations (1, 5a, 9, 10, 23, 26, and 28) for which compression end treatments are recommended to be installed. End treatments is the term applied to devices specifically designed to ensure that the ends of barriers (e.g., concrete barriers or structures) provide safe conditions for occupants of vehicles that may impact this area of a barrier. In general, compression end treatments prevent serious injury by their relatively soft design, thus absorbing the energy of the

Table 1.3 List of Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25.476</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushions with new crash cushion (SCI-100GM) at the NB SR-110/I-5 connector.</td>
</tr>
<tr>
<td>2</td>
<td>26.08</td>
<td>SB</td>
<td>Replace the existing wood retaining wall with a 118 ft concrete retaining wall (Type 6A) and add 40 ft of concrete barrier (Type 736B Mod) to the south end of the retaining wall. Install approximately 40 ft of cable railing atop new concrete retaining wall and concrete barrier. Also relocate lamp post behind the new retaining wall.</td>
</tr>
<tr>
<td>3</td>
<td>I-5 (20.3)</td>
<td>NB</td>
<td>Construct an MVP to the left of the NB I-5/NB SR-110 connector.</td>
</tr>
<tr>
<td>4</td>
<td>25.82</td>
<td>SB</td>
<td>SB SR-110 to SB I-5 connector, replace temporary railing, K-rail, with approximately 230 linear feet of concrete barrier (Type 736B) and attach 75 ft of MGS on the southwestern end of the new barrier.</td>
</tr>
<tr>
<td>5a</td>
<td>25.757</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SCI-100GM) at Figueroa Street off-ramp.</td>
</tr>
<tr>
<td>5b</td>
<td>25.74</td>
<td>NB</td>
<td>Remove existing MBGR located at the right of the Figueroa Street off-ramp and replace with 45 ft of concrete barrier (Type 736B Mod).</td>
</tr>
<tr>
<td>5c</td>
<td>25.72</td>
<td>NB</td>
<td>Remove 150 ft of existing MBGR and replace with concrete barrier (Type 736B Mod).</td>
</tr>
<tr>
<td>6</td>
<td>25.93</td>
<td>Connector</td>
<td>SB SR-110 to NB/SB I-5 connector, North of Avenue 26, place 400 ft of vegetation management control along the existing MBGR located on the right side of the freeway/connector.</td>
</tr>
<tr>
<td>7</td>
<td>27.12</td>
<td>SB</td>
<td>SB SR-110, Avenue 43 on-ramp, place 40 ft of vegetation management control along the existing MBGR located on the right side of the freeway/connector.</td>
</tr>
<tr>
<td>8</td>
<td>29.19</td>
<td>SB</td>
<td>Replace existing sand-filled crash cushion with crash cushion (SCI-100GM) at Marmion Way on-ramp.</td>
</tr>
<tr>
<td>9</td>
<td>29.266</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with crash cushion (SCI-100GM) at Marmion Way off-ramp.</td>
</tr>
<tr>
<td>10a</td>
<td>27.17</td>
<td>SB</td>
<td>Reset seven sign posts in anchor sleeves.</td>
</tr>
<tr>
<td>10b</td>
<td>27.16</td>
<td>SB</td>
<td>Reset two sign posts in anchor sleeves.</td>
</tr>
<tr>
<td>10c</td>
<td>27.17</td>
<td>SB</td>
<td>Remove approximately 2,750 sq ft of rock blanket and replace with textured minor concrete &quot;rock pattern.&quot;</td>
</tr>
<tr>
<td>10d</td>
<td>27.19</td>
<td>SB</td>
<td>Place approximately 700 sq ft of minor concrete (in a brushed finish) between curb and retaining wall to the right of the off-ramp along the existing wall.</td>
</tr>
<tr>
<td>11a</td>
<td>24.9</td>
<td>NB</td>
<td>Figueroa Street Tunnel No.1 (53-0199R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11b</td>
<td>25.14</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 2 (53-200R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11c</td>
<td>25.28</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 3 (53-201R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11d</td>
<td>25.37</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 4 (53-0202R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>12</td>
<td>24.69</td>
<td>SB</td>
<td>Install a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located alongside Stadium Way.</td>
</tr>
</tbody>
</table>
# Table 1.3 List of Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>24.764</td>
<td>NB</td>
<td>Install 350 ft of chain-link fence to enclose area and install a 4 ft long chain-link access gate within existing right-of-way chain-link fence located to the right of the on-ramp.</td>
</tr>
<tr>
<td>14</td>
<td>24.7</td>
<td>SB</td>
<td>Install a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located near abutment 1 (south end of Stadium Way Undercrossing [Bridge No. 53-05406]).</td>
</tr>
<tr>
<td>15a</td>
<td>28.4</td>
<td>SB</td>
<td>Place a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located alongside Arroyo Drive.</td>
</tr>
<tr>
<td>15b</td>
<td>28.4</td>
<td>SB</td>
<td>Extend existing rock blanket 20 ft from edge.</td>
</tr>
<tr>
<td>16</td>
<td>25.051</td>
<td>SB</td>
<td>Place approximately 810 sq ft of textured minor concrete with a “rock pattern.”</td>
</tr>
<tr>
<td>17</td>
<td>28.07</td>
<td>SB</td>
<td>Place 550 sq ft of textured minor concrete in a fieldstone pattern for a length of 46 ft. Reset “Exit” sign with anchor sleeve.</td>
</tr>
<tr>
<td>18</td>
<td>27.99</td>
<td>SB</td>
<td>Place 510 sq ft of textured minor concrete in a fieldstone pattern for a length of 60 ft beyond the gore. Reset sign with anchor sleeve.</td>
</tr>
<tr>
<td>19</td>
<td>25.09</td>
<td>NB</td>
<td>Extend an existing MVP by 35 ft into the rock blanket area and reset one sign post in an anchor sleeve. A portion of the rock blanket area will be removed and paved with asphalt to match existing MVP.</td>
</tr>
<tr>
<td>20a</td>
<td>27.15</td>
<td>SB</td>
<td>Install 75 ft of MGS to protect utilities cabinet. Include vegetation management control beneath MGS.</td>
</tr>
<tr>
<td>20b</td>
<td>27.15</td>
<td>SB</td>
<td>Relocate underground lighting conduit and pull boxes back from the edge of traveled way so the boxes will be behind the utilities cabinet and new MGS (item 20a).</td>
</tr>
<tr>
<td>21</td>
<td>24.35</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SGI-100GM).</td>
</tr>
<tr>
<td>22</td>
<td>24.6</td>
<td>NB</td>
<td>Place a 70 ft MVP and driveway with a “southern blush” brushed-concrete finish.</td>
</tr>
<tr>
<td>23</td>
<td>24.307</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SGI-100GM).</td>
</tr>
<tr>
<td>24a</td>
<td>28.09</td>
<td>NB</td>
<td>Remove two existing sand-filled cushions.</td>
</tr>
<tr>
<td>24b</td>
<td>28.096</td>
<td>NB</td>
<td>Remove 130 ft of MBGR and replace with MGS and vegetation management control.</td>
</tr>
<tr>
<td>25</td>
<td>27.04</td>
<td>SB</td>
<td>Install a 4 ft chain-link access gate within the existing right-of-way chain-link fence.</td>
</tr>
<tr>
<td>26</td>
<td>25.770-27.785</td>
<td>NB</td>
<td>Remove approximately 10,639 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>27</td>
<td>28.102-28.282</td>
<td>NB</td>
<td>Remove approximately 950 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>28</td>
<td>28.755-28.926</td>
<td>NB</td>
<td>Remove approximately 902 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
</tbody>
</table>
Table 1.3 List of Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>28.878-29.153</td>
<td>SB</td>
<td>Remove approximately 1,452 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>30a</td>
<td>29.286-29.520</td>
<td>NB</td>
<td>Remove approximately 1,236 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>30b</td>
<td>29.286-29.520</td>
<td>NB</td>
<td>Install 65 ft of concrete barrier (Type 60D) to protect the support of the Arroyo Drive Overcrossing. Place 598 ft of concrete barrier (Type 736B) to the west of the bridge support.</td>
</tr>
<tr>
<td>31a</td>
<td>29.750-30.074</td>
<td>SB</td>
<td>Remove approximately 1,750 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>31b</td>
<td>29.750-30.074</td>
<td>SB</td>
<td>Install 65 ft of concrete barrier (Type 60D) to protect the support of the Arroyo Drive Overcrossing. Remove 75 ft of MBGR and replace with MGS on the east of the bridge support and install 482 ft of concrete barrier (Type 736B) west of the bridge support.</td>
</tr>
<tr>
<td>32</td>
<td>27.517</td>
<td>NB</td>
<td>Remove existing overhead sign and install a new overhead sign behind 312 ft of new concrete barrier (Type 736B).</td>
</tr>
<tr>
<td>33</td>
<td>25.9</td>
<td>NB</td>
<td>Install 60 ft of concrete barrier (Type 60D) along the right side of the bridge support to match existing pattern of Avenue 26 Overcrossing Bridge (Bridge No. 53-0372).</td>
</tr>
<tr>
<td>34</td>
<td>26.399</td>
<td>NB</td>
<td>Install 120 ft of concrete barrier (Type 60D) along the right side of two bridge supports to match existing pattern of Avenue 35 Overcrossing Bridge (Bridge No. 53-425) and Pasadena Avenue Overcrossing Bridge (Bridge No. 53-0426)</td>
</tr>
<tr>
<td>35</td>
<td>27.07</td>
<td>NB</td>
<td>Install 850 ft of concrete barrier (Type 60D) along the right side of the bridge support to match existing pattern of Avenue 43 Overcrossing Bridge (Bridge No. 53-427) and continuing along the existing side barrier under just after Avenue 45.</td>
</tr>
<tr>
<td>36</td>
<td>27.13</td>
<td>NB</td>
<td>Remove and replace three light posts with replica light posts within the new concrete barrier (Location No. 35).</td>
</tr>
<tr>
<td>37</td>
<td>29.24</td>
<td>NB</td>
<td>Install 57 ft of concrete barrier (Type 60D) at right side of bridge abutment wall below Avenue 64 Overcrossing Bridge to match existing pattern.</td>
</tr>
<tr>
<td>38</td>
<td>25.7</td>
<td>SB</td>
<td>Remove 75 ft of MBGR and replace with MGS. Install 599 ft of concrete barrier (Type 736B) and 531 ft of concrete barrier (Type 60D) along the left side of the Figueroa Street on-ramp and continuing onto the mainline.</td>
</tr>
<tr>
<td>39</td>
<td>24.16</td>
<td>NB</td>
<td>Remove 200 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>40</td>
<td>24.16</td>
<td>SB</td>
<td>Remove 200 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>41</td>
<td>24.37</td>
<td>NB</td>
<td>Remove 300 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>42</td>
<td>24.37</td>
<td>SB</td>
<td>Remove 238 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>43</td>
<td>24.76</td>
<td>NB</td>
<td>Remove 87.5 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>44</td>
<td>24.9</td>
<td>NB</td>
<td>Remove 225 ft of MBGR and replace with MGS at beginning of first tunnel.</td>
</tr>
<tr>
<td>45</td>
<td>25.14</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS at beginning of second tunnel.</td>
</tr>
</tbody>
</table>


Table 1.3 List of Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>25.23</td>
<td>NB</td>
<td>Remove 75 ft of MBGR and replace with MGS between second and third tunnel.</td>
</tr>
<tr>
<td>47</td>
<td>25.3</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS between third and fourth tunnel.</td>
</tr>
<tr>
<td>48</td>
<td>25.37</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS at fourth tunnel.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ft = foot/feet</th>
<th>NB = northbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-5 = Interstate 5</td>
<td>PM = Post Mile</td>
</tr>
<tr>
<td>MBGR = Metal Beam Guardrail</td>
<td>SB = southbound</td>
</tr>
<tr>
<td>MGS = Midwest Guardrail System</td>
<td>sq ft = square foot/feet</td>
</tr>
<tr>
<td>MVP = maintenance vehicle pull-out</td>
<td>SR-110 = State Route 110</td>
</tr>
</tbody>
</table>

impacting vehicle by deforming the rail.\(^1\) There are also five locations (11a, 11b, 17, 18b, and 19b) at which traffic signs are proposed for relocation and/or reassembly with an anchor sleeve.\(^2\) All anchor sleeves will be placed beneath the surface.

This project will provide safe and protective access points and features that will decrease highway workers exposure to unsafe traffic conditions. Such improvements will allow the State to implement current functional and safety design standards that would increase safety and overall operations. All project activities and locations are shown on Figure 1-4 (provided at the end of this chapter).

1.2.1 Alternatives

This section describes the proposed alternatives under consideration. Given that the project is funded through SHOPP, which includes projects designed to maintain the safety and operational integrity of the State highway system, no significant variation on the Build Alternative is proposed at this time. Furthermore, the majority of the SHOPP projects are for pavement rehabilitation, bridge rehabilitation, and traffic safety improvements; projects that add through lanes to increase capacity are not included.


\(^2\) Anchor sleeves hold the traffic signs in position and allow for a sign post to be replaced in a quick and safe manner.
1.2.1.1 Alternative 1 — No Build Alternative
The No Build Alternative proposes to maintain the existing conditions of the roadway without any improvements. No change in environmental conditions should occur under this alternative as the project would not take place. The No Build Alternative would not meet the Purpose and Need of the project as non-standard features would be allowed to continue on the roadway. The facility would continue to experience an increased accident rate, exceeding the State average for similar highway facilities. In addition, this alternative also does not meet the proposed project’s funding requirements and stipulations.

1.2.1.2 Alternative 2 — Build Alternative
The Build Alternative proposes to conduct all work activities listed in Table 1.3 under the Project Description. Project activities would include 61 work items of 18 different types at multiple locations. The core project activity will be to remove approximately 16,889 linear feet (approximately 3.2 miles) of original concrete curbs and gutter in six locations, four of those on the northbound side of the Parkway (Location Nos. 26-28 and 30a), and two on the southbound side (Location Nos. 29 and 31a). Refer to Figure 1-3 for an illustration of concrete curb and gutter.
The removal of the curbs will provide a larger shoulder on which disabled vehicles and Caltrans maintenance vehicles may safely pull over.

1.2.2 Alternatives Considered but Eliminated from Further Discussion
In addition to alternatives discussed in this document, one alternative was considered during the Project Initiation phase but was subsequently eliminated from further consideration.

1.2.2.1 Transportation System Management/Transportation Demand Management Element
A series of transportation improvements based upon technological advancements was proposed to address the needs of the study area. The improvements included adaptive ramp metering, which would be implemented for all the SR-110 on-ramps within the project limits, to better manage traffic flow both up and down the freeway corridor.

This alternative was rejected as stop signs are currently being used as a tool for ramp metering. However, the updated ramp metering utilized on the non-standard ramps needs to be further analyzed and studied.

1.3 Permits and Approvals Needed
The following permits, reviews, and approvals would be required for construction of the project activities identified in Table 1.3 and shown on Figure 1-4:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Permit/Approval</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Historic Preservation Officer (SHPO)</td>
<td>Concurrence with the Finding of Effect</td>
<td>SHPO concurrence received on February 2017</td>
</tr>
<tr>
<td>SHPO</td>
<td>Concurrence with Memorandum of Agreement</td>
<td>Expected prior to Final EIR/EA</td>
</tr>
</tbody>
</table>

EIR = Environmental Impact Report
EA = Environmental Assessment
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194
Project Activities
SR-110 Safety Enhancement Project
Project Activities
07-LA-110-PN 24/0/30.4
2975U/0713000194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound
*
Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194
Project Activities
SR-110 Safety Enhancement Project
Project Activities
07-LA-110 PM 24/02/06
2975U/0713000194

**Location Numbers**

**Legend**
- APE - Area of Potential Effects
- PAL - Project Area Limits
- ASPHO - Arroyo Seco Parkway Historic District
- MBGR - Metal Beam Guardrail
- Conc - Concrete
- MGS - Midwest Guardrail System
- SB - Southbound
- NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4

SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project
07-LA-110-FM 24/0/32.6
2975U/0713000194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

- Area of Potential Effects
- Project Area Limits
- Arroyo Seco Parkway Historic District
- Metal Beam Guardrail

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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**FIGURE 1-4**

**SOURCE** CALTRANS, 2016:

**07-LA-110-PM 24.0/30.4**

**2975U/0713000194**

**Project Activities**

SR-110 Safety Enhancement Project

**FEET**

**LEGEND**

APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

- APE/PAE - Area of Potential Effects
- PAL - Project Area Limits
- ASPHD - Arroyo Seco Parkway Historic District
- MBGR - Metal Beam Guardrail

**Conc** - Concrete
**MGS** - Midwest Guardrail System
**SB** - Southbound
**NB** - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

**Location Numbers**

---

**Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.**
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**FIGURE 1-4**

**SOURCE:** CALTRANS, 2016

**07-LA-110-PM 24.0/30.4**

**2975U/0713000194**

**Project Activities**

**SR-110 Safety Enhancement Project**

*Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713300194

Project Activities
SR-110 Safety Enhancement Project
07-LA-110-PM 24.0/30.4
2975U/0713300194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound
* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
AP - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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**FIGURE 1-4**

**SOURCE CALTRANS, 2016:**

- 07-LA-110-PM 24.0/30.4
- 2975U/0713000194

**Project Activities**

- **SR-110 Safety Enhancement Project**

**LEGEND**

- APE - Area of Potential Effects
- ASHPD - Arroyo Seco Parkway Historic District
- ASPHO - Arroyo Seco Parkway Historic Neighborhood
- APURPAL - Arroyo Seco Parkway Urban Renewal Projects
- PAL - Project Area Limit
- Conc - Concrete
- Conc Barrier Type 60D
- Conc Barrier Type 726B
- MGS - Midwest Guardrail System
- MBGR - Metal Beam Guardrail
- New Tree
- MGS - Arroyo Seco Parkway Historic District
- MGS - Southbound
- MGS - Northbound
- Remove Curb & Gutters
- Remove Crash Cushion
- Relocate Pullovers & Conduit
- Relocate Sign
- Relocate Sign (Exis)
- Sign Anchor Sleeves
- Vegetation Management Control
- Graffiti Resistant Paint
- Extend Rock Blanket
- Maintenance Vehicle Pullout
- Minor Concrete

*Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
Figure 1-4

Source: Caltrans, 2016: 07-LA-110-PM 24.0/30.4 2975/07/13000595

Legend:
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
FIGURE 1-4

SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHO - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

SB Arroyo Seco Parkway
NB Arroyo Seco Parkway

PROJECT ACTIVITIES

Location Numbers

Project Postmiles
APE/PAL
ASPHO Boundary
Chain Link Gate

- Remove Electrifier
- Install Electrifier
- Relocate Pulldowns & Conduit
- Relocate Sign

- Relocate Sign (Exits)
- Sign Anchor Straps
- Remove Sign
- New Tree

- Replace Crash Cushion
- Remove Curb & gutter
- Graffiti Resistant Paint
- Maintenance Vehicle Pullout
- Litter
- Minor Concrete
- Vegetation Management Control

SB Southbound
NB Northbound

Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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Project Activities

SR-110 Safety Enhancement Project

SOURCE: CALTRANS, 2016

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 1-4
(SR-110 Safety Enhancement Project
Project Activities
07-LA-110-PW 24/032.6
2975/07/13000584
(Page 11 of 28)
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project
07-LA-110-PM 24.0/30.4
2975U/0713000194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
**FIGURE 1-4**

**SOURCE CALTRANS, 2016:**

*Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
SR-110 Safety Enhancement Project
Project Activities
07-LA-110 FM 24/030.0
29750/07/000000SA

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHDO - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHDO - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194
Project Activities
SR-110 Safety Enhancement Project
Project Activities
07-La 110 PM 24/07/20
2975U/0713000194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
APE/PAL - Area of Potential Effects/Project Area Limits
ASPHD Boundary - Arroyo Seco Parkway Historic District Boundary
Chain Link Gate - Chain Link Gate
SR-110 Safety Enhancement Project

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project
FIGURE 1-4
Location Numbers

- Project Postmiles
- APE/PAL
- ASPHD Boundary
- Chain Link Gate
- Remove Elevator
- Install Elevator
- Relocate Pullboxes & Conduit
- Relocate Sign
- Relocate Sign (Exits)
- Sign Anchor (Steves)
- Remove Sign
- Remove Sign & MBGR
- Replace Crash Cushion
- Remove Crash Cushion
- Conc Barrier Type 60D
- Conc Barrier Type 736B
- New Tree
- Old Tree
- Chain Link Fence
- Billet Rail
- Maintenance Vehicle Pullout
- Graffiti Resistant Paint
- Vegetation Management Control
- minor Concrete
- Extend Rock Bladet
- Fence
- Marshalls
- Arroyo Seco Parkway Historic District
- Metal Beam Guardrail
- Midwest Guardrail System
- Conc - Concrete
- MGS - Midwest Guardrail System
- SB - Southbound
- NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4

SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project
Project Numbers
07-La-110-FM 24/30.4
2975U/0713000194

Legends
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

Location Numbers

Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

Note: Scale 1:5,300

FIGURE 1-4
(Page 18 of 28)
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LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4
SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194
Project Activities
SR-110 Safety Enhancement Project
07-LA-110 PM 24-0/320.4
2975U/0713000194
LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
AP - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

SB Arroyo Seco Parkway
NB Arroyo Seco Parkway

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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**LEGEND**

- **APE** - Area of Potential Effects
- **PAL** - Project Area Limits
- **ASPHD** - Arroyo Seco Parkway Historic District
- **MBGR** - Metal Beam Guardrail
- **Conc** - Concrete
- **MGS** - Midwest Guardrail System
- **SB** - Southbound
- **NB** - Northbound

*Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*

**FIGURE 1-4**

**SOURCE:** CALTRANS, 2016

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**Project Activities**

SR-110 Safety Enhancement Project

Project Activities

07-LA-110-PM 24.0/32.0

2975U03/30000348
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SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MGS - Midwest Guardrail System
MBGR - Metal Beam Guardrail
Conc - Concrete
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 1-4

SOURCE: CALTRANS, 2016
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FIGURE 1-4

SOURCE CALTRANS, 2016:
07-LA-110-PM 24.0/30.4
2975U/0713000194

Project Activities
SR-110 Safety Enhancement Project
Project Activities
07-LA-110-PM 24.0/30.4
2975U/0713000194

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 1-4
(Page 23 of 28)
**SR-110 Safety Enhancement Project**

*Project Activities*

07-LA-110 FM 24/03/06
2975/07/3000016

**FIGURE 1-4**

SOURCE: CALTRANS, 2016

LEGEND

- **APE** - Area of Potential Effects
- **APL** - Project Area Limits
- **ASPHD** - Arroyo Seco Parkway Historic District
- **MBGR** - Metal Beam Guardrail

**Legend:**

- **APE** - Area of Potential Effects
- **APL** - Project Area Limits
- **ASPHD** - Arroyo Seco Parkway Historic District
- **MBGR** - Metal Beam Guardrail

**Legend:**

- **MBGR** - Metal Beam Guardrail
- **SB** - Southbound
- **NB** - Northbound

*Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
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**LEGEND**

APE - Area of Potential Effects

PAL - Project Area Limits

ASPHD - Arroyo Seco Parkway Historic District

MBGR - Metal Beam Guardrail

APE/PAL - Area of Potential Effects

ASPHD Boundary - Arroyo Seco Parkway Historic District Boundary

Chain Link Gate

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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FIGURE 1-4

SOURCE CALTRANS, 2016:

Project Activities
SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 1-4

(Source: CALTRANS, 2016)

Project Activities
SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

SOURCE: CALTRANS, 2016

Project Activities
SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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SR-110 Safety Enhancement Project
Project Activities
07-LA-110 FM 24/03/20
2975/07/1300058

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MGS - Midwest Guardrail System
MBGR - Metal Beam Guardrail

- Concrete
- Midwest Guardrail System
- Southbound
- Northbound

* Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 1-4
Project Activities:
SR-110 Safety Enhancement Project
Edition 2-180501-4
7-18-18

SOURCE: CALTRANS, 2016

FIGURE 1-4
Project Activities:
SR-110 Safety Enhancement Project
Edition 2-180501-4
7-18-18

SOURCE: CALTRANS, 2016
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SR-110 Safety Enhancement Project
Project Activities
07-LA-110 FM 24/7/02.4
2075U/07100000M4

Refer to Table 1.3, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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Chapter 2  Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Chapter 2 describes the existing affected environment for the State Route 110 (SR-110) Safety Enhancement Project. The affected environment is the base condition on which environmental effects of the Alternatives are evaluated in this environmental document.

The sections in Chapter 2 include the regulatory setting applicable to the environmental topic, the methodology of impact analysis, a description of the affected environment, environmental effects resulting from the project, and measures to avoid, minimize, or mitigate adverse impacts of Alternative 2, the Build Alternative. Photographs, graphic exhibits, and data matrices are included throughout Chapter 2 where applicable to support the impact analysis.

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

- **Coastal Zone:** The project area does not lie within the Coastal Zone; therefore, consistency with the California Coastal Act is not applicable.
- **Wild and Scenic Rivers:** The project area does not cross or have proximity to any Wild and Scenic Rivers or any rivers under study for designation as a Wild and Scenic River.
- **Farmlands and Timberlands:** There are no timberlands or prime, unique, or soils of local significance for farmlands within the project area or vicinity.
- **Relocations and Real Property Acquisition:** The project does not involve any residential or commercial right-of-way acquisitions or relocations. All work will be within the State right-of-way.
- **Geology:** The project does not pose any significant effects to geological resources because the construction activities will not encounter any native soil.
- **Paleontology:** The project does not pose any significant effects to paleontological resources because the construction activities will not encounter any native soil.
- **Wetlands and Other Waters**: The project area does not contain or encroach upon any wetlands or other waters of the United States.
- **Hydrology and Floodplain**: The project will neither conduct any work within any floodplain nor will it generate additional non-porous flat surfaces.
HUMAN ENVIRONMENT

2.1 Land Use

The forthcoming discussion of the proposed project presents existing and future land use in the project study area, the proposed project’s consistency with State, regional, and local plans and programs, and the impact the proposed project may have on parks and recreation.

2.1.1 Existing and Future Land Use

2.1.1.1 Existing Land Use

Based on information gathered from Geographic Information Systems (GIS) data, aerial maps, and site surveys, existing land uses within the project area are comprised of various land uses along Arroyo Seco Parkway (Parkway). This is a densely populated area consisting of residential properties (both single- and multifamily units), commercial development, industrial uses, and parks and recreational facilities.

The study area is centrally located within the extended urbanized area of Southern California. The County of Los Angeles (County) is approximately 4,000 square miles (sq mi) in area and consists of 88 incorporated cities (including the Cities of Los Angeles and South Pasadena). The County stretches along 75 miles (mi) of the Pacific Coast and is bordered by Kern County to the north, Ventura County to the west, San Bernardino County to the east, and Orange County to the east and south.

The County of Los Angeles was established on February 18, 1850, as one of the 27 original counties in California. The name is derived from the area known as Los Angeles, which was already a large community at the time, and was designated as the “seat” of the County government. Soon after, the City of Los Angeles Police Department was formed, and the first public school system was established in the area. In 1852, a five-member Board of Supervisors was created, and the County continued to grow over the next few decades, establishing more schools (1852), the first library (1859), a Board of Health (1863), a Board of Education (1869), and the first publication of the Los Angeles Times (1881). In 1905, the County approved the Owens Valley water project that would build an aqueduct from Owens Valley to Los Angeles. By 1913, the aqueduct began delivering water to the County. Over the next century, the area continued to grow in population and became a major regional economic center. As a result, infrastructure needs grew (e.g., ports, highways, the Colorado River Aqueduct) and regulatory agencies were formed (e.g., Los Angeles County Flood Control District, Los Angeles Air Pollution Control Board).
Cities directly adjacent to the project area include the City of Los Angeles as well as the City of South Pasadena. The City of South Pasadena is bordered by the City of Pasadena to the north, the City of San Marino to the east, the Cities of Los Angeles and Alhambra to the south, and the City of Los Angeles to the west. The City of South Pasadena is approximately 3.4 sq mi in size and is located east of SR-110 and approximately 2 mi south of Interstate 210 (I-210). South Pasadena is now considered one of the best preserved cities in California, maintaining a small-town quality in the scale of its buildings, its residential streetscapes, and its historic commercial core. Regional access to the City of South Pasadena is provided by State Route 134 (SR-134), I-210, Interstate 710 (I-710), and the Parkway.

The majority of the project area is located within the City of Los Angeles and within one community plan area: the Northeast Los Angeles Community Plan (Community Plan). Communities surrounding the project area include Cypress Park, Lincoln Heights, Montecito Heights, and Highland Park. According to the City’s General Plan and community plans, designated land uses within this area are varied and include residential, commercial, industrial, open space, and public facilities. Refer to Figure 2-1 for a map of northeast Los Angeles land use.

The Community Plan is comprised largely of residential land uses, with 7,954 acres (ac) (50.7 percent) devoted to some form of housing. Of those 7,954 ac, nearly 38.9 percent of residential land is designated for single-family homes, and nearly 11.8 percent is designated for multifamily residential. Multifamily residential uses are primarily located along the Parkway.

Surrounding the residential areas are commercial land uses that are primarily located along the Community Plan’s major corridors. Existing commercial land uses in northeast Los Angeles total approximately 638 ac (4.1 percent). Northeast Los Angeles also contains a slightly larger portion of industrial land primarily consisting of commercial manufacturing and light and limited industrial uses. Industrial land uses comprise a total of 1,128 ac, which is almost 7.2 percent of the Community Plan.

Northeast Los Angeles comprises a total of 3,038 ac of open space/public facilities (19.4 percent). A variety of small- and large-scale parks with different amenities, including sports facilities, playgrounds and passive green spaces, provide recreational opportunities for Northeast Los Angeles residents.
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2.1.1.2 Future Land Use

Regionally, development trends in the greater Los Angeles area are shifting from the development of vacant lands to infill, redevelopment, and transit-oriented development. According to the City’s General Plan, current land use policy encourages future development to occur in neighborhood districts, within commercial and mixed-use centers, along boulevards, in industrial districts, and in proximity to transportation corridors and transit stations. The goal of these policies is to create a healthier, more equitable, and more livable city.

Land use policies for future development within unincorporated areas are geared toward the implementation of smart growth policies, environmental management, and provision of healthy and livable communities. These policies include transit-oriented development, infill development, Brownfield redevelopment, and appropriate densification of existing urban areas.

In addition to land use policy, transportation improvements within the greater Los Angeles area are focused on re-working the existing system and transitioning to a more transit-based system that will encourage transit-oriented development and improve area circulation and health for area residents. Along the Parkway, the proposed project is part of a larger partnership plan1 for the agencies and the community to enhance the residents’ quality of life. In addition to development projects, several transportation projects are planned within the study area (see Table 2.1).

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

The following are relevant State, regional, and local plans and programs:

- Federal Transportation Improvement Program (FTIP): The FTIP/FSTIP (Federal Statewide Transportation Improvement Program) contains all capital and non-capital transportation projects or identified phases of transportation projects in the State of California that are proposed for federal funding under the Federal Transit Act and Title 23 of the United States Code. In addition, all projects that

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Table 2.1 Planned Projects Within the Study Area

<table>
<thead>
<tr>
<th>Title</th>
<th>Jurisdiction</th>
<th>Project Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Friction Surface Treatment (HFST) EA: 32660 PM 28.65/29.35</td>
<td>Caltrans</td>
<td>Overlay the existing 0.7 mile of roadway surface with HFST.</td>
<td>Project on hold</td>
</tr>
<tr>
<td>Install Dynamic Flexible Lane EA:33150 PM 25.78/30.59</td>
<td>Caltrans</td>
<td>Convert the Parkway’s number three lane from a general-purpose lane to an auxiliary lane and/or shoulder.</td>
<td>Draft Environmental Document expected Fall 2019</td>
</tr>
<tr>
<td>Construct Bicycle/Pedestrian Trail EA 2844U PM 25.7/28.1</td>
<td>Caltrans</td>
<td>Construct a pedestrian trail and bikeway underneath the Route 5/110 connectors on the east side of the Arroyo Seco channel, and install new fencing at the top of the slope on property owned by the City of Los Angeles.</td>
<td>Project on hold due to funding</td>
</tr>
<tr>
<td>Install Safety Lighting EA 29770 PM 23.7/25.5</td>
<td>Caltrans</td>
<td>Install safety lighting to enhance motorists’ safety along the NB SR-110 mainline between SR-101 and NB I-5 interchanges and the underpass of the connector of the NB SR-110 mainline and I-5 interchange.</td>
<td>Construction expected to begin Spring 2017</td>
</tr>
</tbody>
</table>

Caltrans = California Department of Transportation  
EA = Expenditure Authorization  
I-5 = Interstate 5  
PM = Post Miles  
SR = State Route  
SR-101 = State Route 101  
SR-110 = State Route 110

are deemed regionally significant, regardless of the funding source, are included in the FSTIP. Federally funded transportation projects must conform to the FTIP/FSTIP prior to being approved.

- **State Transportation Improvement Program (STIP):** The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System (SHS), funded with revenues from the transportation investment fund and other funding sources. Projects receiving STIP funding must be programmed prior to moving forward with implementation.

- **State Highway Operation and Protection Program (SHOPP):** SHOPP is the State’s “fix-it-first” program that funds the repair and preservation of the SHS, safety improvements, and some highway operational improvements. By continuously repairing and modernizing the SHS, SHOPP protects the enormous investment that has been made over many decades to create and manage the approximately 50,000 lane-mile SHS. Revenues for SHOPP are generated by federal and State gas taxes and are fiscally constrained by the STIP Fund Estimate (Fund Estimate) that is produced by Caltrans, based on established criteria, and adopted by the California Transportation Commission (CTC).
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

- Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS): The SCAG 2012-2035 RTP/SCS presents the transportation vision for the Counties of Los Angeles, Orange, San Bernardino, Imperial, Riverside, and Ventura. The 2012-2035 RTP/SCS identifies priorities for transportation planning within the Southern California region, sets goals and policies, and identifies performance measures for transportation improvements to ensure that future projects are consistent with other planning goals for the area. Projects being constructed within the SCAG region must be listed in the 2012-2035 RTP/SCS.

- Historic Arroyo Seco Parkway Corridor Partnership Plan (CPP): The Historic Arroyo Seco Parkway CPP provides the framework to assist communities and responsible agencies in defining goals, strategies, roles for preserving and enhancing the unique intrinsic qualities of the Parkway. The CPP is intended to provide a better understanding of the history of the Parkway, along with the options and methods that should be considered for preservation, environmental stewardship, promoting tourism, and enhancing travel and safety management within the Parkway and its surrounding community. The CPP provides a comprehensive approach for managing and maintaining the Byway Corridor as an important historic, cultural, recreational, and natural resource that is visitor friendly. The Historic Arroyo Seco Parkway CPP will introduce the Parkway’s origins and history, relevant transportation and preservation policies, and emerging management strategies and smart technologies.

- Los Angeles County Draft General Plan: The County’s General Plan provides policy and guidance for future growth within unincorporated areas of the County. The plan also provides a foundation on which detailed plans, such as community plans or specific plans, may be based. The Mobility Element includes policies for the development of a multi-modal transportation system that will move people, goods, and services in an environmentally and socially responsible way. Projects proposed within unincorporated portions of Los Angeles County must be consistent with land uses identified in the General Plan.

- City of Los Angeles General Plan: The City’s General Plan contains goals and policies for future development within the City. The General Plan Framework Element provides overall policy and direction for the entire plan. The City’s 35 community plans collectively make up the land use policy for the City. The project study area lie within the Northeast Community Plan areas. The Transportation Element identifies goals, objectives, and policies to achieve long-term mobility and accessibility within Los Angeles. Projects proposed within the
City must be consistent with land uses identified in the General Plan Framework and associated community plans.

- **City of South Pasadena General Plan:** The South Pasadena General Plan is the principal policy document for guiding future development in the City, addressing an approximate 15-20 year time frame. The General Plan establishes linkages between land use and transportation, land use and infrastructure, and land uses and economic health, and provides a foundation for urban development in the City of South Pasadena, and what physical and social infrastructure are required to support that development.

2.1.2.1 Environmental Consequences

**Alternative 1 — No Build Alternative**

If the proposed project were not built, there would be no alterations or improvements to the existing facility, thereby posing no changes to the existing environment and requiring no alteration of existing lands. Therefore, this alternative would present no potential impacts on land usage. The No Build Alternative will not be consistent with all the State, Regional, and Local Plans and Programs listed in the previous section.

**Alternative 2—Build Alternative**

The proposed project is a roadway and safety improvement project that would enhance traffic operations in areas throughout the Parkway and complement planned improvements in the project study area. All proposed project components would occur within existing infrastructure and right-of-way and would not occur on lands that are currently adjacent to freeway facilities; therefore, no conversion of land use is required. The Build Alternative will be consistent with all the State, regional, and local plans and programs listed in the previous section.

2.1.2.2 Avoidance, Minimization, and/or Mitigation Measures

Since the proposed project would not result in any impacts to land uses, no avoidance, minimization, or mitigation measures are required.

2.1.3 Parks and Recreational Facilities

Table 2.2 lists the parks and recreational facilities located in the project area, their locations and jurisdictions, and a description of park amenities.

2.1.3.1 Regulatory Setting

This project will not affect facilities that are protected by the Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409). The Park Preservation Act prohibits local and State agencies from acquiring any property that
Table 2.2  Parks and Recreational Facilities within 0.5 Mile of Project Study Area

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Jurisdiction</th>
<th>Description/Amenities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elysian Park</td>
<td>929 Academy Road Los Angeles, CA 90012</td>
<td>City of Los Angeles</td>
<td>Bike path, hiking trail, horseshoe pits, jogging path</td>
</tr>
<tr>
<td>Los Angeles State Historic Park</td>
<td>1245 N. Spring Street Los Angeles, CA 90012</td>
<td>California Department of Parks and Recreation</td>
<td>Bike trails, hiking trails, horseback riding, picnic areas, nature &amp; wildlife viewing, historical/cultural site</td>
</tr>
<tr>
<td>Ed P. River Greenway</td>
<td>North Ave 19 &amp; Humboldt Street Los Angeles, CA 90031</td>
<td>City of Los Angeles</td>
<td>Pathway</td>
</tr>
<tr>
<td>Confluence Park Los Angeles River Center and Gardens</td>
<td>570 W Ave 26 Los Angeles, CA 90065</td>
<td>Mountains Recreation and Conservation Authority</td>
<td>Park amenities include a running water fountain, park benches, a picnic table, and lawn area</td>
</tr>
<tr>
<td>Heritage Square Museum (Park)</td>
<td>3800 Homer Street Los Angeles, CA 90031-1530</td>
<td>City of Los Angeles</td>
<td>Park and tours</td>
</tr>
<tr>
<td>Arroyo Seco Bike Path</td>
<td></td>
<td>City of Los Angeles</td>
<td>Bike trail</td>
</tr>
<tr>
<td>Ernest E. Debs Regional Park</td>
<td>4235 Monterey Road Los Angeles, CA 90032</td>
<td>City of Los Angeles</td>
<td>Barbecue pits, picnic tables, bike path, hiking trail, pond</td>
</tr>
<tr>
<td>Sycamore Grove Park</td>
<td>4702 N. Figueroa St Los Angeles, CA 90042</td>
<td>City of Los Angeles</td>
<td>Barbecue pits, children’s play area, picnic tables, tennis courts</td>
</tr>
<tr>
<td>Hermon Park (Arroyo Seco Park)</td>
<td>5566 Via Marisol Los Angeles, CA 90042</td>
<td>City of Los Angeles</td>
<td>Barbecue pits, children’s play area, picnic tables, tennis courts (lighted), and dog park</td>
</tr>
<tr>
<td>South Pasadena Nature Park/Arroyo Woodland and Wildlife Nature Park</td>
<td>100 Block Pasadena Ave (Pasadena Ave before York Blvd) Los Angeles, CA 91030</td>
<td>City of South Pasadena</td>
<td>Habitat nature area with walking path and horseback riding trails</td>
</tr>
<tr>
<td>Lower Arroyo Park</td>
<td>614 Stoney Dr South Pasadena, CA 91030</td>
<td>City of South Pasadena</td>
<td>Habitat nature area with walking paths and bike path</td>
</tr>
<tr>
<td>San Pasqual Park</td>
<td>5668 Via Marisol Los Angeles, CA 90042</td>
<td>City of Los Angeles</td>
<td>Barbecue pits, baseball diamond (unlighted), basketball courts (unlighted / outdoor), children’s play area, picnic tables</td>
</tr>
<tr>
<td>Garfield Park</td>
<td>Mission St. and Park Ave South Pasadena, CA 91030</td>
<td>City of South Pasadena</td>
<td>Play equipment, picnic tables, barbecues and restrooms, tennis courts, and large grassy area</td>
</tr>
<tr>
<td>Orange Grove Park</td>
<td>815 Mission Street South Pasadena, CA 91030</td>
<td>City of South Pasadena</td>
<td>Playground, picnic area, and restrooms, tennis courts, and softball/soccer field</td>
</tr>
<tr>
<td>Allendale Park</td>
<td>1130 S Marengo Avenue Pasadena, CA 91106</td>
<td>City of Pasadena</td>
<td>Playground, restrooms, tennis court, baseball field, athletic field and bleachers</td>
</tr>
</tbody>
</table>

is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.
2.1.3.2 Affected Environment
Table 2.2 lists the parks and recreational facilities located in the project area, their locations and jurisdictions, and a description of park amenities.

2.1.3.3 Environmental Consequences

Alternative 1 — No Build Alternative
The No Build Alternative would have no impacts on parks or other recreational facilities.

Alternative 2—Build Alternative
The proposed project is a roadway and safety improvement project that would enhance traffic operations in areas throughout the Parkway. All proposed project components would occur within existing infrastructure and right-of-way and would not occur on parks or recreational facilities that are currently adjacent to freeway facilities; therefore, no impacts on parks or other recreational facilities are anticipated.

2.1.3.4 Avoidance, Minimization, and/or Mitigation Measures
Since the project would not result in any impacts to parks or other recreational facilities, no avoidance, minimization, or mitigation measures are required.

2.2 Growth

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

The California Environmental Quality Act (CEQA) also requires the analysis of a project’s potential to induce growth. The CEQA Guidelines (Section 15126.2[d]), require that environmental documents “…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…”
Under NEPA and CEQA, growth inducement is not necessarily considered detrimental, beneficial, or environmentally significant. Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in excess of what is assumed in relevant master plans, land use plans, or in projections made by regional planning agencies. Significant growth impacts could be manifested through the provision of infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

2.2.2 Affected Environment

According to the SCAG RTP, the Southern California Region is running out of room for low-density developments, and geographical features such as the Pacific Ocean to the west and mountains to the east present natural boundaries for urban spread. In addition to spatial constraints, environmental concerns and transportation limitations are presenting ever-increasing challenges to the continued growth in the area. These, among other factors, are leading to changing growth policy throughout the Los Angeles County area where growth is being focused inward and toward a sustainable future.

Growth inducement is defined as the relationship between the proposed transportation project and growth within the project study area. Many factors influence land use and development in an area (refer to Figure 2-2 for factors influencing land use and development). For example, population and economic growth, desirability of certain locations, the costs and availability of developable land, physical and regulatory constraints, transportation, and the costs of sewer and water services all strongly influence where, when, and what type of development takes place. Many of these factors also influence the policies and decisions associated with land use and growth.

The Federal Highway Administration (FHWA), Caltrans, and the United States Environmental Protection Agency (EPA) developed the Guidance for Preparers for Growth-Related, Indirect Impact Analyses to assist Caltrans’ staff responsible for preparing environmental documents pursuant to NEPA and CEQA. According to the aforementioned guidance, there is a continuum of transportation projects that range
from those having little likelihood of growth-related impacts to those having a high likelihood. The guidance describes a “first cut” screening process to determine where a proposed project lies in the continuum.

The flow charts in Figures 2-3 and 2-4 provide an overview of the steps used to conduct the first-cut screening. Based on the flow charts, it would be appropriate to conclude that growth-related impacts are not reasonably foreseeable for this safety and operational project in a highly urbanized area. This project is on an existing facility that does not increase capacity or increase accessibility and does not warrant a further analysis of growth-related impacts.

Figure 2-2 Factors Influencing Land Use and Development

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

Figure 2-3 First Cut Screening
Chapter 2  Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

2.2.3  Environmental Consequences

2.2.3.1  Alternative 1 — No-Build Alternative

Under the No Build Alternative, existing conditions would remain, and no growth-related impacts would occur.

2.2.3.2  Alternative 2—Build Alternative

The proposed project is a roadway and safety improvement project that would enhance traffic operations in areas throughout the Parkway. All proposed project components would occur within existing infrastructure and right-of-way. No new areas of development would be opened, and no existing access patterns would be altered. Therefore, no growth-related impacts as a result of the project would occur.

2.2.4  Avoidance, Minimization, and/or Mitigation Measures

Since the project would not result in any growth-inducing impacts, no avoidance, minimization, or mitigation measures are required.

Figure 2-4  Is There a Potential for Project-Related Growth?
2.3 Community Impacts

2.3.1 Community Character and Cohesion

2.3.1.1 Regulatory Setting

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

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

2.3.1.2 Affected Environment

An FHWA Community Impact Assessment Checklist has been prepared (Figure 2-5). Based on the review of this documentation, it was determined that the project would likely have no significant impacts to the community. Therefore, the following analysis resulted in determining that no further community impacts analysis is warranted for this project.

2.3.1.3 Environmental Consequences

Alternative 1 – No Build Alternative

Under the No Build Alternative, existing conditions would remain, and no impacts would occur.

Alternative 2 – Build Alternative

This project proposes to do work on the existing roadway and is not anticipated to affect public access, divide neighborhoods, or separate residences from community facilities. There are no environmental consequences related to community cohesion.
# COMMUNITY IMPACT ASSESSMENT
## Scoping Checklist

### Land Use
- The project would affect, or be inconsistent with, relevant state, regional, or local plans.
- The project would result in a loss of prime farmland, unique farmland, or farmland of state or local importance, or lands covered under the Williamson Act.
- The project would result in a loss of timberland.
- The project would impact a park or other recreational facility (including trails, bikeways, etc).

### Growth
- The location of where growth occurs would shift (introduction of access to a new undeveloped area).
- Development opportunities would be influenced by the project.
- The population would increase as a result of the project.
- The housing supply, or employment or business activity, would increase as a result of the project.
- The capacity of other services, such as utilities or schools, would be pressured as a result of growth.
- Related projects (often not transportation projects), including those of a state or local project in nature, would bring cumulative growth effects.

### Community Character & Cohesion
- Health, safety, or crime would become worse.
- Public service delivery, such as fire, ambulance, police, or education would be disrupted.
- Community character (including aesthetics, lighting, and noise) would be noticeably changed.
- Property values and/or the quality of life would deteriorate.

### Economic Impacts
- Businesses would be removed.
- Parking would be impacted.
- Businesses would gain or lose opportunities because of changes in traffic patterns or visibility.
- The project would result in out of direction travel to businesses.
- Jobs or job opportunities would be changed.
- The tax base would be altered due to relocations and/or conversion of property to state use.
- Construction of the project would affect the local economy.

### Relocations & Environmental Justice
- People would be displaced from their homes.
- The availability of affordable housing would be reduced.
- Minority populations or low-income populations would be disproportionately affected.

### Traffic & Transportation / Bicycle and Pedestrian
- Through traffic in a neighborhood would increase.
- Pedestrian and/or bicycle connectivity would be diminished.

(last updated 3/5/12)

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**Figure 2-5  FHWA Community Impact Assessment Scoping Checklist**
2.3.1.4 Avoidance, Minimization, and/or Mitigation Measures

Because the proposed project would not pose any adverse effects related to community character or cohesion, no avoidance, minimization, and/or mitigation measures have been proposed to offset or compensate any changes. Coordination of the Traffic Management Plan with affected agencies will be conducted to minimize any temporary construction impacts that this project may have on the surrounding communities.

2.3.2 Environmental Justice

2.3.2.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2015, this was $24,250 for a family of four.

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

2.3.2.2 Affected Environment

This proposed project is all within the Parkway and State right-of-way. No relocations or acquisitions are required.

No minority or low-income populations that would be adversely affected by the proposed project have been identified as determined above. Therefore, this project is not subject to the provisions of EO 12898.

2.3.2.3 Environmental Consequences

The intent of the Build Alternative is to enhance safety and traffic operations in the Parkway. None of the proposed project components would require incursion into surrounding neighborhoods, would change existing community relationships, would interfere with the operation of existing public facilities, nor would require the displacement or relocation of any persons or businesses. Furthermore, the proposed
project will not cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

**Alternative 1 – No Build Alternative**
Under, the No Build Alternative, no physical changes to the community are expected. Therefore, this alternative would not result in permanent impacts to environmental justice populations.

**Alternative 2 – Build Alternative**
The Build Alternative would improve the operation of the Parkway by improving structural design. All proposed work will be within the State right-of-way and would not result in permanent impacts to environmental justice populations.

**2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures**

Based on the above discussion and analysis, neither of the alternatives would cause disproportionately high and adverse effects on any minority or low-income populations per EO 12898 regarding environmental justice.

**2.4 Utilities/Emergency Services**

This section analyzes the potential impacts of the proposed project on utilities and emergency services.

**2.4.1 Regulatory Setting**
California Code of Regulations Street and Highways Code Sections 700-711 discuss utility relocation policies and procedures. Public Resources Codes 21083, 21087 and CEQA Guidelines Section 15126.2(a) require lead agencies to assess the impact of a proposed project by examining alterations in the human use of the land, including public services. Public Utilities Commission General Order 131-D provides guidance for transportation projects that involve relocation of 50-kilovolt (kV) or higher transmission lines.

**2.4.2 Affected Environment**

**2.4.2.1 Utilities**
Domestic water services in the study area are provided by the Los Angeles Department of Water and Power. Wastewater collection and treatment services are provided by the Sanitation Districts of Los Angeles County. Natural gas services in the area are provided by the Southern California Gas Company, and electricity is provided by Southern California Edison.
2.4.2.2 Emergency Services
Fire protection within the study area is provided by the City of Los Angeles, the City of South Pasadena, and the County of Los Angeles.

2.4.3 Environmental Consequences
2.4.3.1 Alternative 1 – No Build Alternative
Under the No Build Alternative, existing conditions would remain and no impacts would occur.

2.4.3.2 Alternative 2 – Build Alternative
Impacts to public utilities/services are determined based on such factors as noise, air quality, safety, circulation, accessibility, and disruption of operation during both the construction and operation of the proposed project alternatives. Implementation of the proposed project would not result in temporary or long-term impacts to emergency services. Emergency responders will be allowed to use the Parkway when responding to calls.

2.4.4 Avoidance, Minimization, and/or Mitigation Measures
As with any freeway or highway construction project, it is a possibility that any lane or facility closures during construction could impact emergency service response time.

Minimization EMER-1
During project construction, Caltrans will coordinate with local emergency service providers to keep them informed of the project construction schedule and any detour routes so as to avoid or minimize any impacts. Additionally, the project Traffic Management Plan will manage and minimize any circulation impacts during construction.

2.5 Traffic and Transportation/Pedestrian and Bicycle Facilities
2.5.1 Regulatory Setting
Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic
presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

Caltrans is committed to carrying out the 1990 Americans with Disabilities Act (ADA) by building transportation facilities that provide equal access for all persons. The same degree of convenience, accessibility, and safety available to the general public will be provided to persons with disabilities.

### 2.5.2 Affected Environment

The existing Parkway serves as a key transportation linkage between Pasadena, South Pasadena, and downtown Los Angeles, which is a major employment center. The Parkway experiences high accident rates, exceeding the State average for similar highway facilities.

### 2.5.3 Environmental Consequences

#### 2.5.3.1 Alternative 1 – No Build Alternative

Under the No Build Alternative, existing conditions would remain, and no impacts would occur.

#### 2.5.3.2 Alternative 2 – Build Alternative

There will likely be temporary impacts to traffic operations in the Parkway during construction. This would most likely be in the form of reduced travel speeds.

### 2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The qualitative judgment is that the traffic and pedestrian impacts will not be significant.

**Minimization TRA-1**

Construction-related impacts will be minimized to the fullest extent possible through the Traffic Management Plan and staged construction.

### 2.6 Visual/Aesthetics

#### 2.6.1 Regulatory Setting

The National Environmental Policy Act (NEPA) of 1969 as amended establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best
overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

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

2.6.2 Affected Environment

A Visual Impact Assessment Memorandum was prepared (December 2016) to assess the proposed project’s potential to affect visual resources through activities such as vegetation removal, curb and gutter removal, and the installation of signage and lighting, amongst other project activities. The proposed project is located on the Parkway, which is designated as a “California Historic Parkway” within the SHS. Other designations that further indicate the Parkway’s scenic importance are its designation as a National Civil Engineering Landmark by the American Society of Civil Engineers and as a National Scenic Byway by the FHWA.

2.6.3 Environmental Consequences

2.6.3.1 Alternative 1 – No Build Alternative

Under the No Build Alternative, there would be no alterations or improvements to the existing highway facility, thereby posing no changes to existing visual resources and no requirement for any measures to minimize any effects. Therefore, the No Build Alternative would present no potential impacts to existing visual resources.

2.6.3.2 Alternative 2 – Build Alternative

The visual character of the proposed project will be designed to be compatible with the existing visual character of the Parkway. The installation of the concrete barriers will only be at locations that are frequently struck by vehicles and will conform to the aesthetic treatments that are currently found along the Parkway. The installation of safety lighting will replace the standard highway electrolier (street light) with a historic Parkway electrolier (street light) that is presently used on the Parkway. The application of graffiti resistant coating on the tunnel facades will protect the integrity of the art deco design of the parkway tunnels and will not alter the current color of the tunnels. The removal of the curbs and gutters will have minimal impact to the visual resources of the roadway; this change will be unnoticeable by drivers traveling at highway speeds. The replacement of the existing bright yellow barrel crash cushion with less noticeable SMART crash cushion devices will result in an improved visual
environment. As a result, the proposed Build Alternative will have a minimal impact to the visual character of the Parkway and will not reduce any visual access to the roadway’s viewsheds.

2.6.4  **Avoidance, Minimization, and/or Mitigation Measures**

The following minimization measure will be implemented if the Build Alternative is selected.

**Minimization VIA-1** All improvements to the roadway must be context sensitive in design and reflect the scenic and historical significance of the Arroyo Seco Parkway.

2.7  **Cultural Resources**

2.7.1  **Regulatory Setting**

The term “cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on such properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations [CFR] 800). On January 1, 2004, a Section 106 Programmatic Agreement (PA) between the Advisory Council, the Federal Highway Administration (FHWA), State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).
Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the “use” of land from historic properties. See Appendix B for specific information about Section 4(f).

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as CA Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet National Register of Historic Places listing criteria. It further specifically requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

2.7.2 Affected Environment

The following description of the Arroyo Seco Parkway Historic District has been excerpted from the December 2016 Finding of Effect (FOE) document for this project.

The Arroyo Seco Parkway Historic District encompasses a six-lane, 8.21 mi, limited-access roadway (SR-110) traveling in a southwesterly direction through the Cities of Pasadena, South Pasadena, and Los Angeles, from East Glenarm Street (Post Mile 31.86) in Pasadena to (and including) the Four Level Interchange (Post Mile 23.69) in Los Angeles. Today there exists a total of 60 components—grade separations, tunnels, bridges, overcrossings, pedestrian overpasses, pedestrian and equestrian undercrossings, the roadway itself, the Four Level Interchange, Arroyo Seco Channel, and two buildings at the Arroyo Seco Maintenance Station—45 of which are considered contributors to the Arroyo Seco Parkway Historic District. The first 6.2 mi section from East Glenarm Street to Avenue 22 in Los Angeles, which was constructed between 1938 and 1940, travels on a divided road through residential and commercial neighborhoods of Los Angeles, Pasadena, and South Pasadena, where it operates as a below-grade arterial. Fenced landscaping such as trees, shrubs, and ground cover grow on verges and slopes that border both sides of the roadway. Similar landscaping and the Arroyo Seco Channel mark the western edge.
The Southerly Extension, a 1.7 mi stretch built from 1940-1943, continues the roadway toward downtown Los Angeles from Avenue 22 to Adobe Street. Engineering on the Southerly Extension utilizes the Figueroa Street Viaduct and the Los Angeles River Bridge to separate northbound and southbound traffic, routing it on different elevations. Northbound traffic travels through the four Figueroa Street tunnels and across the Figueroa Street Viaduct onto the Parkway section. Southbound traffic crosses the Los Angeles River Bridge, and then is channeled onto a four-lane roadway traveling in open cuts west of the Figueroa Street tunnels through the hills of Elysian Park, under park roads and over residential neighborhoods, on eight bridges and pedestrian undercrossings. In this section, rubble walls and guardrails border the roadway. Descending gradually to grade, the opposing lanes join to become continuous again at Hill Street.

Five bridges constructed between 1948 and 1953 complete the freeway’s last 0.5 mi to its terminus at the Four Level Interchange at approximately 0.25 mi northwest of downtown Los Angeles. The 154-foot (ft) high steel and reinforced concrete interchange acts as a master route separator, guiding traffic from the Hollywood, Santa Ana, Pasadena, and Harbor Freeways through four stacked interwoven roadways. On this section, paving, light, and safety features are similar to those of the first 6 mi segment with a greater concentration of rubble retaining walls. Landscaping on the border slopes consists mainly of ground cover, ivy, and lantana. Roadway materials on the 8.2 mi arterial consist of concrete and asphaltic concrete, signage, glass, stone, construction rubble, and landscape elements consisting of plants, shrubs, and small trees (generally those native to the area), stone planters, and lighting fixtures. The Parkway has kept substantial integrity of design, workmanship, location, design, and setting. The only substantial alterations on the Parkway have occurred from the Yale Street Pedestrian Overcrossing (Post Mile 24.37) to the Stadium Way Overcrossing (Post Mile 24.53), resulting in about a 30 percent loss of integrity.

2.7.2.1 Finding of Effect (FOE)
Caltrans completed an FOE document in December 2016. The FOE addresses effects of the undertaking on one known historic property within the Area of Potential Effects (APE): the Arroyo Seco Parkway Historic District. Caltrans, in applying the Criteria of Adverse Effect, proposes that a finding of Adverse Effect on historic properties is appropriate for the undertaking as a whole and is seeking SHPO concurrence in the finding, pursuant to Section 106 PA Stipulation X.C and is consulting with SHPO regarding the resolution of adverse effects. This proposed project is located within a State-owned historical resource, and as such, the FOE is
consistent with the documentation standards set forth in PRC 5024 Memorandum of Understanding (5024 MOU) Stipulation XVIII.

2.7.2.2 Area of Potential Effects (APE)

The APE was established in consultation with Joshua Knudsen, Environmental Planner, Architectural Historian – Professionally Qualified Staff (PQS), Claudia Harbert, Associate Environmental Planner, Principal Architectural Historian - PQS, and Diaa Yassin, Project Manager in November 2016. The project APE map was signed by these individuals on November 28, 2016.

The project APE map was prepared to ensure identification of significant historical, architectural, and archaeological resources listed in or eligible for inclusion in the National Register of Historic Places (National Register) that may be directly or indirectly affected by the proposed project, in compliance with 36 CFR Part 800.16(d). In addition, the APE was delineated to include all areas that could potentially be directly or indirectly affected by the proposed project activities. No right-of-way acquisitions would be needed to accommodate the improvements. With the exception of two small areas of minor concrete work, all project activities are within the boundaries of the Arroyo Seco Parkway Historic District, which was listed in the National Register in 2011. The remaining areas of the APE are within the prism of the roadway, where the ground has previously been disturbed by construction of the Parkway. There will be no work performed in the Arroyo Seco Channel.

In 2006 and 2007, Alex Kirkish, Caltrans PQS, Principal Investigator, Co-PI Historic Archaeology, completed an Archaeological Survey Report (ASR) for both the SR-110 Concrete Barrier Project (Expenditure Authorization [EA] 25020) and the SR-110 Enhancement Project (EA 24630). Both of these project APEs include the current project APE. The records search for these projects covered 0.5 mi on either side of the project area and was conducted at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton. The records search indicated the study area has been partially surveyed and no cultural resources had been previously identified within the project area. The search also revealed four recorded historic era sites within the 0.5 mi of the project area. The Native American Heritage Commission (NAHC) indicated there were no sacred sites within the projects’ APEs.
An intensive examination of all unsurveyed areas of the APE was completed for EA 25020 and EA 24630 projects, and no historical or prehistoric archaeological resources were discovered during the surveys. The results of the records search and field investigations were also negative, and no cultural resources were located. In addition, research and field observations indicated the APEs have been highly disturbed by the construction and maintenance of the Parkway.

The current APE is within the project area for the two previous projects (EA 25020 and EA 24630), and construction activities are limited to the prism of the roadway in areas that have been disturbed by the Parkway construction and subsequent improvements. The vertical APE for areas that require excavation for barrier footings and sign posts is between 2 ft and 3.5 ft. One overhead sign (16 ft maximum depth) will be relocated to an area within the Parkway right-of-way that has been previously disturbed by the same type of activities. In addition, the current project activities are not expected to encounter native soils. Therefore, it is anticipated that construction within the APE for this project will not encounter any cultural resources. Based on the information above, Caltrans District staff determined that an updated ASR would not be required for this project.

2.7.2.3 Consultation and Interested Parties

Efforts to include the public in the Section 106 process have been made throughout the life of this project study. Multiple outreach efforts were made between April 2016 and November 2016. In April 2016, 13 stakeholders listed below were contacted by letter to inform them of the project and the adverse effect it would have on the Parkway, and to invite them to comment on the potential impacts or request consulting party status:

- National Trust for Historic Preservation
- California Preservation Foundation
- Los Angeles Conservancy
- Pasadena Heritage
- Highland Park Heritage Trust
- City of Pasadena
- City of Los Angeles
- City of South Pasadena
- Historic Highland Park Neighborhood Council
- Citizens Committee to Save Elysian Park
- California Route 66 Preservation Foundation
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- Arroyo Seco Neighborhood Council
- Greater Cypress Park Neighborhood Council

John Mayer from the South Pasadena Cultural Heritage Commission responded that while he had no comments, he would still like to be added as a consulting Party. No other responses were received.

In November 2016, follow-up letters were sent to the same 13 stakeholders along with copies of the APE map and a spreadsheet that listed all project activities. To date, no responses have been received.

As required by Section 106 of the National Historic Preservation Act and CEQA, specifically PRC 210803.1 and Chapter 532 Statutes of 2014 (i.e., Assembly Bill 52), seven Native American groups were formally notified of the proposed project on December 9, 2016, and asked if they had comments or wanted to request consulting party status. On December 16, 2016, Mr. Andrew Salas of the Gabrieleno Band of Mission Indians-Kizh Nation responded with a request that a Native American monitor be present on site.

Consultation with stakeholders is ongoing. Further details on outreach efforts by Caltrans can be found in Chapter 4 of this EIR/EA.

2.7.3  Environmental Consequences

2.7.3.1  Alternative 1 – No Build Alternative
The existing condition would remain; therefore, no impacts would occur.

2.7.3.2  Alternative 2 – Build Alternative

Construction Impacts
In accordance with the Criteria of Adverse Effect set forth at 36 CFR Part 800.5, the Arroyo Seco Parkway Historic District has been assessed by applying the following criteria developed by the Advisory Council on Historic Preservation (ACHP).

Criteria of Adverse Effect
An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.
Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

The property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative (36 CFR Part 800.5(a) (1)).

Adverse effects on historic properties (36 CFR §800.5(a) (2)) include, but are not limited to:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance;
- Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features;
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- Transfer, ease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance.

The Build Alternative will remove approximately 3.2 mi of curbs and gutters along the Parkway, thereby removing original character-defining features of the Parkway. The removal of curbs and gutters, and the additional paving and concrete barriers at the bases of the College Avenue, Avenue 26, Avenue 45, Avenue 43, Avenue 64, and Arroyo Drive Overcrossings will alter the feeling and setting of the Parkway and will not be consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR Part 68). An overall finding of adverse effect was made for this undertaking. The Arroyo Seco Parkway Historic District is a State-owned historic property for which the proposed project is expected to introduce elements that would be out of character and this would result in an adverse effect.

Caltrans is consulting to resolve adverse effects pursuant to First Amended Section 106 PA, Stipulation XI, 36 CFR 800.6(a) and 800.6 (b). The Finding of Adverse Effect (December 2016) served only to obtain the SHPO concurrence that the
undertaking is expected to cause adverse effects on the historic property. Caltrans will prepare a Memorandum of Agreement (MOA) following consultation, and preliminary mitigation measures are listed in the Section 2.7.4, Avoidance, Minimization, and/or Mitigation Measures to address effects.

The Parkway is covered under Section 4(f) of the United States Department of Transportation Act, which regulates the “use” of land from historic properties. See Appendix B for specific information about Section 4(f).

**Operational Impacts**

After construction, operation of the proposed project, under the Build Alternative, would not be expected to affect any historic or archaeological resources because the proposed project is a safety improvement project, and no additional excavation or building demolition would be necessary during operation.

### 2.7.4 Avoidance, Minimization, and/or Mitigation Measures

**Minimization CUL-1**

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

**Minimization CUL-2**

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area that is suspected to overlie remains, and that the County Coroner shall be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact Kelly Ewing-Toldedo, Senior Environmental Planner in the Cultural Resources Branch, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.
Mitigation CUL-3  The conceptual mitigation measure for effects to the Arroyo Seco Parkway would include development of a corridor management plan that details maintenance activities that meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations [CFR] 680) and applicable guidelines. These measures will be finalized in a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO).

Mitigation CUL-4  Incorporate landscape enhancements between Figueroa Street Tunnel Nos. 1 and 2 on the north side of northbound State Route 110 (SR-110).
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

PHYSICAL ENVIRONMENT

2.8 Water Quality and Storm Water Runoff

2.8.1 Regulatory Setting

2.8.1.1 Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source\(^1\) unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits.

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\(^1\) A point source is any discrete conveyance such as a pipe or a man-made ditch.
Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the USACE’s Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with United States Environmental Protection Agency’s (U.S. EPA) Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause “significant degradation” to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

**State Requirements: Porter-Cologne Water Quality Control Act**

California’s Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a “Report of Waste Discharge” for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of “waste” as defined and this

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1 The EPA defines “effluent” as “wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall.”
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

definition is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA, and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments, and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

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

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

- **National Pollutant Discharge Elimination System (NPDES) Program**
  
  **Municipal Separate Storm Sewer Systems (MS4)**

  Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a
state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water.” The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. The Caltrans MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Caltrans MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012 and became effective on July 1, 2013. The permit has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and
3. Caltrans storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices that Caltrans uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

**Construction General Permit**

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area.
(DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with Caltrans Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

**Section 401 Permitting**

Under Section 401 of the Clean Water Act (CWA), any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board (RWQCB), dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of
specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.8.2 Affected Environment
Information contained within this section has been adapted from the Storm Water Data Report (Long Form) completed in September 2016.

The proposed project is located within Hydrologic Sub Area 412.10 in the Los Angeles River Watershed in Los Angeles County and is under the jurisdiction of the Los Angeles Regional Water Quality Control Board (LARWQCB).

According to the 303(d) lists of impaired water bodies compiled by the California RWQCB, within the project limits, Arroyo Seco Reach 1 is listed as an impaired nearest receiving water body, Category 5. The pollutants listed are: benthic-macroinvertebrate bioassessments, coliform bacteria, and trash.

There are no drinking water reservoirs or recharge facilities within the project limits.

2.8.3 Environmental Consequences
2.8.3.1 Alternative 1 – No Build Alternative
The existing condition would remain; therefore, no impact would occur.

2.8.3.2 Alternative 2 – Build Alternative
The project is anticipated to result in a total DSA of 2 ac. A small amount of impervious area (0.14 ac) will be added as a result of the proposed work. The proposed work would not further impair the 303(d) listed water bodies.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures
Minimization WQ-1
The Storm Water Data Report prepared for the project recommends design Best Management Practices (BMPs) and temporary construction BMPs to prevent contaminated or sediment-containing runoff from entering storm drains. These BMPs may include biofiltration swales. The types and final locations of the proposed devices will be determined during final design.
2.9 Hazardous Waste/Materials

2.9.1 Regulatory Setting

Hazardous materials including hazardous substances and wastes are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean-up of
Chapter 2  Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

2.9.2  Affected Environment
Information regarding hazardous wastes/hazardous materials was obtained from a Hazardous Waste Assessment prepared in March 2016. The assessment generally consists of project evaluation, a departmental record review, regulatory agency records review, and a general field visit. Key elements of the project scope of work will involve environmental issues common to highway construction projects. Of particular concern were the potential occurrence of hazardous waste/materials as related to aerially deposited lead, and treated wood waste as presented in Table 2.3.

Table 2.3  General Hazardous Waste/Materials of Concern in the Project Study Area

<table>
<thead>
<tr>
<th>Hazardous Waste/Materials of Concern</th>
<th>Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerially Deposited Lead (ADL)</td>
<td>Soils within the project vicinity, particularly in areas that are unpaved, have the potential for ADL contamination related to previous and historical use of leaded gasoline additives. Particulate emissions in engine exhaust contained lead from leaded gasoline, which was deposited in unpaved areas adjacent to roadways and potentially from runoff to roadway embankments and adjacent right-of-way.</td>
</tr>
<tr>
<td>Contaminated Soils</td>
<td></td>
</tr>
<tr>
<td>Treated Wood Waste (TWW)</td>
<td>The removal and disposal of metal beam guardrails, thrie beam barriers, piles, and roadside signs present the potential for contamination because the associated wood products are typically treated with preservation chemicals that protect the wood against insect attack and fungal decay. These chemicals may be hazardous (carcinogenic) and include, but are not limited to, arsenic, chromium, copper, creosote, and pentachlorophenol.</td>
</tr>
</tbody>
</table>

2.9.3  Environmental Consequences
2.9.3.1  Alternative 1 – No Build Alternative
There would be no alterations or improvements to the existing facility, thereby posing no changes to the existing environment and requiring no disturbance of soils.
Therefore, the No Build Alternative would present no potential for exposure to hazardous waste and/or materials.

2.9.3.2 Alternative 2 – Build Alternative

There is a potential for exposure to general hazardous waste/material of concern during construction. Soil excavation and earth-moving activities associated with the Build Alternative could expose workers to contaminants associated with aerially deposited lead (ADL) and treated wood waste (TWW).

During construction, exposure to contaminants associated with treated wood waste can be avoided fully, or minimized as needed through adherence to protocols for the removal, handling, and disposal of such. An ADL investigation (within existing right-of-way) will be implemented during the final design phase to more accurately assess lead-impacted soils in the project study area.

2.9.4 Avoidance, Minimization, and/or Mitigation Measures

Avoidance HW-1 A comprehensive aerially deposited lead (ADL) site investigation will be performed in the Plans, Specifications and Estimates phase of the project in order to evaluate the extent of ADL contamination and to assist in evaluation of applicable ADL soil management during construction.

Minimization HW-2 Removal and disposal of metal beam guardrails shall be managed under California Code of Regulations, Title 22, Division 4.5, Chapter 34, which specifies guidelines for storage, accumulation, shipment/transport, and disposal of treated wood waste at specific landfills.

Minimization HW-3 Development of a project-specific Lead Compliance Plan (LCP) and training program that ensure proper health and safety measures are implemented and complied with prior to starting the removal operation will be required. Per California Department of Transportation (Caltrans) Standard Special Provisions (SSPs), a project-specific LCP will be required prior to minor soil disturbance, major soil disturbance (requires an LCP and an Excavation and Transportation Plan [ETP]), removal of existing Yellow/White
Thermoplastic Traffic Stripe and pavement marking
(requires LCP and Debris Removal, Containment, and
Disposal Work Plan), and non-ADL soil disturbance
(requires a Health and Safety Plan [HaSP] and a
Hazardous Material/Waste Management Plan [HMP])
at the project site.

2.10 Air Quality

2.10.1 Regulatory Setting
The Federal Clean Air Act (FCAA), as amended, is the primary federal law that
governs air quality while the California Clean Air Act is its companion state law.
These laws, and related regulations by the United States Environmental Protection
Agency (U.S. EPA) and the California Air Resources Board (ARB), set standards for
the concentration of pollutants in the air. At the federal level, these standards are
called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient
air quality standards have been established for six transportation-related criteria
pollutants that have been linked to potential health concerns: carbon monoxide (CO),
nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), which is broken down
for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and
particles of 2.5 micrometers and smaller (PM₂.₅), and sulfur dioxide (SO₂). In
addition, national and state standards exist for lead (Pb), and state standards exist for
visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. The
NAAQS and state standards are set at levels that protect public health with a margin
of safety, and are subject to periodic review and revision. Both state and federal
regulatory schemes also cover toxic air contaminants (air toxics); some criteria
pollutants are also air toxics or may include certain air toxics in their general
definition.

Federal air quality standards and regulations provide the basic scheme for project-
level air quality analysis under the National Environmental Policy Act (NEPA). In
addition to this environmental analysis, a parallel “Conformity” requirement under
the FCAA also applies.

2.10.1.1 Conformity
The conformity requirement is based on Federal Clean Air Act Section 176(c), which
prohibits the U.S. Department of Transportation (USDOT) and other federal agencies
from funding, authorizing, or approving plans, programs or projects that do not
conform to State Implementation Plan (SIP) for attaining the NAAQS.
“Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional—or, planning and programming level—and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations (CFR) 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for carbon monoxide (CO), nitrogen dioxide (NO\(_2\)), ozone (O\(_3\)), particulate matter (PM\(_{10}\) and PM\(_{2.5}\)), and in some areas (although not in California), sulfur dioxide (SO\(_2\)). California has attainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO\(_2\), and also has a nonattainment area for lead (Pb); however, lead is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans (RTPs) and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP), and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Clean Air Act and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), Federal Highway Administration (FHWA), and Federal Transit Administration (FTA), make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the Clean Air Act. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept, scope, and “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and the FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Conformity analysis at the project-level includes verification that the project is included in the regional conformity analysis and a “hot-spot” analysis if an area is “nonattainment” or “maintenance” for carbon monoxide (CO) and/or particulate matter (PM\(_{10}\) or PM\(_{2.5}\)). A region is “nonattainment” if one or more of the monitoring
stations in the region measures a violation of the relevant standard and the U.S. EPA officially designates the area nonattainment. Areas that were previously designated as nonattainment areas but subsequently meet the standard may be officially redesignated to attainment by U.S. EPA, and are then called “maintenance” areas. “Hot-spot” analysis is essentially the same, for technical purposes, as CO or particulate matter analysis performed for NEPA purposes. Conformity does include some specific procedural and documentation standards for projects that require a “hot-spot” analysis. In general, projects must not cause the “hot-spot” related standard to be violated, and must not cause any increase in the number and severity of violations in nonattainment areas. If a known CO or particulate matter violation is located in the project vicinity, the project must include measures to reduce or eliminate the existing violation(s) as well.

2.10.2 Affected Environment

Information regarding air quality was obtained from an Air Quality Review Memorandum prepared in July 2016.

The proposed project is located within the South Coast Air Basin (Basin), which is comprised of parts of Los Angeles, Riverside, and San Bernardino counties, and all of Orange County. The Basin is bounded on the west by the Pacific Ocean and surrounded on all other sides by mountains. To the north lie the San Gabriel Mountains, to the north and east the San Bernardino Mountains, to the southeast the San Jacinto Mountains, and to the southern the Santa Ana Mountains. The Basin forms a low plain and the mountains channel and confine airflow with tends to trap air pollutants.

The average wind speed for Los Angeles is the lowest of the nation’s 10 largest urban areas. In addition, the summertime daily maximum mixing heights (an index of how well pollutants can be dispersed vertically in the atmosphere) in Southern California is the lowest on average in the United States due to strong temperature inversions in the lower atmosphere that effectively trap pollutants near the surface. The Southern California area is also an area with abundant sunshine, which drives the photochemical reactions that form pollutants such as ozone and a significant portion of fine particulate matter (PM$_{2.5}$).

In the Basin, high concentrations of ozone are normally recorded during the late spring and summer months, when more intense sunlight drives enhanced photochemical reactions. In contrast, higher concentrations of CO are generally
recorded in late fall and winter, when nighttime radiation inversions trap the emissions at the surface. High inhalable particulate matter (PM$_{10}$ and PM$_{2.5}$) concentrations can occur throughout the year, but occur most frequently in fall and winter in the Basin.

The proposed project is located in Los Angeles County, which is in a federal nonattainment area for PM$_{2.5}$ and attainment-maintenance for PM$_{10}$. Per 40 CFR 93.126 in the Federal Register (Figure 2-6), Table 2 – Exempt Projects allows certain projects to be exempt from all emissions analysis. Based on the project description, the proposed project is deemed listed in Table 2 under the Subtitle “Safety” and classifications under “Shoulder improvements;” “guardrails, median barriers, crash cushions;” “pavement resurfacing and/ or rehabilitation;” and “fencing.” The proposed project is also deemed listed under subtitle “other” and classifications “Plantings, landscaping, etc.” and “Directional and Informational signs.” Therefore pursuant to 40 CFR 93.126, this proposed project is deemed classified and is exempt from the requirement to determine conformity.

Due to the scope of work of this proposed project, it is not anticipated to result in any meaningful changes to traffic volumes, vehicle mix, location of the Parkway, or any other factors that would cause an increase in mobile source air toxic (MSAT) emissions impacts. Pursuant to the FHWA’s Interim Guidance Update on Mobile Air Toxic Analysis in NEPA Documents dated September 30, 2009, projects that are exempt under the Clean Air Act pursuant to 40 CFR 93.126m do not require an analysis or discussion of MSAT.

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

2.10.3 Environmental Consequences

2.10.3.1 Alternative 1 – No Build Alternative

Under the No Build Alternative, existing conditions would remain, and no air quality impacts would occur.

2.10.3.2 Alternative 2 – Build Alternative

During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and various other construction-related activities.
§ 93.126

(d) If the MPO or project sponsor believes the mitigation or control measure is no longer necessary for conformity, the project sponsor or operator may be relieved of its obligation to implement the mitigation or control measure if it can demonstrate that the applicable hot-spot requirements of §93.116, emission budget requirements of §93.118, and interim emissions requirements of §93.119 are satisfied without the mitigation or control measure, and so notifies the agencies involved in the interagency consultation process required under §93.105. The MPO and DOT must find that the transportation plan and TIP still satisfy the applicable requirements of §§93.118 and/or 93.119 and that the project still satisfies the requirements of §93.118, and therefore that the conformity determinations for the transportation plan, TIP, and project are still valid. This finding is subject to the applicable public consultation requirements in §93.105(e) for conformity determinations for projects.


§ 93.126 Exempt projects.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in Table 2 of this section are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in Table 2 of this section is not exempt if the MPO in consultation with other agencies (see §93.105(c)(1)(iii)) the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation. Table 2 follows:

TABLE 2—EXEMPT PROJECTS

<table>
<thead>
<tr>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad/highway crossing.</td>
</tr>
<tr>
<td>Hazard elimination program.</td>
</tr>
<tr>
<td>Safer non-Federal-aid system roads.</td>
</tr>
</tbody>
</table>

Increasing sight distance.
Safety improvement program.
Traffic control devices and operating assistance other than signalization projects.
Railroad/highway crossing warning devices.
Guardrails, median barriers, crash cushions.
Pavement resurfacing and/or rehabilitation.
Pavement marking demonstration.
Fencing.
Skid treatments.
Safety roadside rest areas.
Adding medians.
Truck climbing lanes outside the urbanized area.
Lighting improvements.
Widening narrow pavements or reconstructing bridges (no additional travel lanes).
Emergency truck pullovers.

Mass Transit
Operating assistance to transit agencies.
Purchase of support vehicles.
Rehabilitation of transit vehicles.
Purchase of office, shop, and operating equipment for existing facilities.
Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).
Construction or renovation of power, signal, and communications systems.
Construction of small passenger shelters and information kiosks.
Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way.
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.
Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771.

Air Quality
Continuation of ride-sharing and van-pooling promotion activities at current levels.
Bicycle and pedestrian facilities.

Other
Specific activities which do not involve or lead directly to construction, such as:
Planning and technical studies.
Grants for training and research programs.
Planning activities conducted pursuant to titles 23 and 49 U.S.C.
Federal-aid systems revisions.
Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.
Noise attenuation.


Figure 2-6 Federal Register Listing for 40 CFR 93.126
2.10.4 Avoidance, Minimization, and/or Mitigation Measures

Most of the construction impacts to air quality are short term in duration and therefore will not result in adverse or long-term conditions. Implementation of the following measures will reduce any air quality impacts resulting from construction activities:

**Avoidance AQ-1**

The construction contract shall comply with California Department of Transportation (Caltrans) Standards Specifications in Section 14 (2010).

- Section 14-9.01 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including South Coast Air Quality Management District (SCAQMD) rules and regulations and local ordinances.
- Section 14-9.02 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are contained in Section 18.

**Minimization AQ-2**

The proposed project is within the boundary of the SCAQMD; therefore, this project must comply with SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.

*Rule 403 – Fugitive Dust.* SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures (BACMs) in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. It also requires a dust control plan to be submitted and approved prior to construction. The dust control plan should describe all applicable dust control measures that will be implemented at the project, and should describe types of dust suppressant, surface treatments, and other measures to be utilized at the construction sites to comply
with the Rule. The specifics of Rule 403 are as follows:

- No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the dust remains visible in the atmosphere beyond the property line of the emission source; or the dust emission exceeds 20 percent opacity, if the dust emission is the result of movement of a motorized vehicle.

- No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of Rule 403 to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

- No person shall cause or allow \( \text{PM}_{10} \) (particulate matter less than 10 microns in size) levels to exceed 50 micrograms per cubic meter (\( \mu g/m^3 \)) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other United States Environmental Protection Agency (EPA) approved equivalent method for \( \text{PM}_{10} \) monitoring.

- No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

- No person shall conduct an active operation with a disturbed surface area of 5 acres or more or with a daily import or export of 100 cubic yards or more of bulk material without utilizing
approved control measure/measures at each vehicle egress from the site to a paved public road.

- Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to Rule 403 shall implement the applicable conservation management practices specified in Table 4 of Rule 403.

Additional Requirements for Large Operations Under Rule 403:

- Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards cannot be met through use of Table 2 actions; and shall:
  - Submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;
  - Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
  - Maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request;
  - Install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation
Handbook prior to initiating any earthmoving activities;

- Identify a dust control supervisor that: (a) is employed by or contracted with the property owner or developer; (b) is on the site or available on site within 30 minutes during work hours; (c) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements; (d) has completed the Air Quality Management District (AQMD) Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and (e) notifies the Executive Office in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

- Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of 1 year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities, must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no change (Form 403NC).
In summary, prior to construction, Rule 403 entails the implementation of best available fugitive dust control measures during active operations capable of generating dust.

2.10.5 Climate Change
Climate change is analyzed in Chapter 3. Neither the EPA nor the FHWA has issued explicit guidance or methods to conduct project-level greenhouse gas (GHG) analysis. As stated on FHWA’s climate change website (http://www.fhwa.dot.gov/hep/climate/index.htm), climate change considerations should be integrated throughout the transportation decision-making process—from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will aid decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can easily be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

Because there have been more requirements set forth in California legislation and Executive Orders on climate change, the issue is addressed in the CEQA chapter of this environmental document (Chapter 3) and may be used to inform the NEPA decision. The four strategies set forth by FHWA to lessen climate change impacts do correlate with efforts the State has undertaken and is undertaking to deal with transportation and climate change. The strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and reduction in the growth of vehicle hours traveled.

2.11 Noise

2.11.1 Regulatory Setting
NEPA and CEQA provide a broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

2.11.1.1 California Environmental Quality Act
CEQA requires a strictly baseline-versus-build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a
significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA 23 CFR 772 noise analysis. Please see Chapter 3 of this document for further information on noise analysis under CEQA.

2.11.1.2 National Environmental Policy Act and 23 CFR 772

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the Federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include Noise Abatement Criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.4 lists the NAC for use in the NEPA 23 CFR 772 analysis.

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>NAC, Hourly A-Weighted Noise Level, $L_{eq}(h)$</th>
<th>Description of Activity Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>57 (Exterior)</td>
<td>Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.</td>
</tr>
<tr>
<td>B</td>
<td>67 (Exterior)</td>
<td>Residential.</td>
</tr>
<tr>
<td>C</td>
<td>67 (Exterior)</td>
<td>Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.</td>
</tr>
<tr>
<td>D</td>
<td>52 (Interior)</td>
<td>Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.</td>
</tr>
<tr>
<td>E</td>
<td>72 (Exterior)</td>
<td>Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.</td>
</tr>
<tr>
<td>F</td>
<td>No NAC—reporting only</td>
<td>Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.</td>
</tr>
<tr>
<td>G</td>
<td>No NAC—reporting only</td>
<td>Undeveloped lands that are not permitted.</td>
</tr>
</tbody>
</table>

*Includes undeveloped lands permitted for this activity category.

$L_{eq}(h) = $ equivalent continuous sound level per hour

NAC = Noise Abatement Criteria
Figure 2-7 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

<table>
<thead>
<tr>
<th>Common Outdoor Activities</th>
<th>Noise Level (dBA)</th>
<th>Common Indoor Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet Fly-over at 300m (1000 ft)</td>
<td>110</td>
<td>Rock Band</td>
</tr>
<tr>
<td>Gas Lawn Mower at 1 m (3 ft)</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Diesel Truck at 15 m (50 ft), at 80 km (50 mph)</td>
<td>90</td>
<td>Food Blender at 1 m (3 ft)</td>
</tr>
<tr>
<td>Noisy Urban Area, Daytime</td>
<td>80</td>
<td>Garbage Disposal at 1 m (3 ft)</td>
</tr>
<tr>
<td>Gas Lawn Mower, 30 m (100 ft)</td>
<td>70</td>
<td>Vacuum Cleaner at 3 m (10 ft)</td>
</tr>
<tr>
<td>Commercial Area</td>
<td>60</td>
<td>Normal Speech at 1 m (3 ft)</td>
</tr>
<tr>
<td>Heavy Traffic at 90 m (300 ft)</td>
<td>50</td>
<td>Large Business Office</td>
</tr>
<tr>
<td>Quiet Urban Daytime</td>
<td>50</td>
<td>Dishwasher Next Room</td>
</tr>
<tr>
<td>Quiet Urban Nighttime</td>
<td>40</td>
<td>Theater, Large Conference Room (Background)</td>
</tr>
<tr>
<td>Quiet Suburban Nighttime</td>
<td>30</td>
<td>Library</td>
</tr>
<tr>
<td>Quiet Rural Nighttime</td>
<td>20</td>
<td>Bedroom at Night, Concert Hall (Background)</td>
</tr>
<tr>
<td>Lowest Threshold of Human Hearing</td>
<td>0</td>
<td>Broadcast/Recording Studio</td>
</tr>
</tbody>
</table>

**Figure 2-7 Noise Levels of Common Activities**

According to the Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects* (May 2011), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC. If it is determined that the project will have noise
impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Caltrans Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 7 dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include: residents’ acceptance and the cost per benefited residence.

2.11.2 Affected Environment

A Noise and Vibration Memorandum was prepared in April 2016 for the proposed project. The Parkway traverses a large area and therefore borders a multitude of land uses, including residential (both low- and high-density), commercial, industrial, and open space. There are sensitive noise receptors in proximity to the project limits. However, this is not a Type I project as defined in the 2011 Traffic Noise Analysis Protocol.

A Type I project as defined in 23 CFR 772 is a federal or Federal-Aid project for:

1. The construction of a highway on a new location; or
2. The physical alteration of an existing highway where there is either:
   a. Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or
   b. Substantial Vertical Alteration. A project that removes shielding thereby exposing the line-of-sight between the receptor and the traffic noise source. This is done by altering either the vertical alignment of the highway or the topography between the highway traffic noise source and the receptor; or
3. The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a high-occupancy vehicle (HOV) lane, high-occupancy toll (HOT) lane, bus lane, or truck climbing lane; or
4. The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or
5. The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or
6. Restriping existing pavement for the purpose of adding a through traffic lane or an auxiliary lane; or
7. The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot, or toll plaza.

2.11.3 Environmental Consequences

2.11.3.1 Alternative 1 – No Build Alternative
If the proposed project were not built, there would be no alterations or improvements to the existing facility, thereby posing no changes to the existing noise environment and requiring no minimization of noise effects. Therefore, the No Build Alternative would present no potential impacts to the existing noise environment.

2.11.3.2 Alternative 2 – Build Alternative
According to the Caltrans Traffic Noise Protocol, this project is not expected to result in traffic noise impacts. The project will not involve construction of a new highway on a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. Therefore, sensitive receptors in the area will not be impacted.

There is a potential for construction-related noise impacts, and noise levels generated during construction shall comply with all applicable local, State, and federal regulations. However, no adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Caltrans Standard Specifications and would be short term, intermittent, and dominated by local traffic noise.

2.11.4 Avoidance, Minimization, and/or Abatement Measures
Since the project is not expected to result in traffic noise impacts, noise abatement is not necessary. Construction-related noise impacts may occur in the immediate area of construction. These temporary construction noise impacts will be minimized by implementation of the following avoidance and minimization measures:

Avoidance N-1  
Equipment noise control will be applied to revising old equipment and designing new equipment to meet acceptable noise levels.
Chapter 2  Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

Minimization N-2  Mufflers are very effective devices that reduce the noise emanating from the intake or exhaust of an engine, compressor, or pump. The fitting of effective mufflers on all new equipment and retrofitting of mufflers on existing equipment is necessary to yield an immediate noise reduction at all types of road construction sites.

Minimization N-3  The construction contract shall comply with California Department of Transportation (Caltrans) Standard Specifications in Section 14-8.02, Sound Control Requirements, which states that construction noise levels should not exceed 86 A-weighted decibels (dBA) at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m. Noise levels generated during construction shall comply with applicable local, State, and federal regulations.

2.12 Energy

2.12.1 Regulatory Setting
The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

The California Environmental Quality Act (CEQA) Guidelines, Appendix F, Energy Conservation, state that Environmental Impact Reports (EIR) are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

2.12.2 Affected Environment
The production of electricity requires the consumption of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources. Most of these resources are used as heat sources for steam turbines that drive electric generators. The electricity generated is distributed via a network of transmission and distribution lines, commonly known as a power grid.

The California Public Utilities Commission (CPUC) regulates privately owned electric, telecommunications, natural gas, water, and transportation companies as well
as household goods movers. In addition, the CPUC regulates local natural gas
distribution facilities and services, natural gas procurement, intrastate pipelines, and
intrastate production and gathering. It works to provide opportunities for competition
when in the interest of consumers, takes the lead in environmental review of natural-
gas related projects, recognizes the growing interaction of electric and gas markets,
and monitors gas energy efficiency and other public-purpose programs. The CPUC’s
Energy Division works to set electric rates, protect consumers, and promote energy
efficiency, electric system reliability, and utility financial integrity.

2.12.3 Environmental Consequences
When balancing energy used during construction and operations against energy saved
by enhancing safety and other transportation efficiencies, the project would not have
substantial energy impacts.

2.12.3.1 Alternative 1 – No Build Alternative
No construction would occur under the No Build Alternative; therefore, no effect on
energy consumption would occur. Current levels of energy consumption would not be
expected to change under this scenario.

2.12.3.2 Alternative 2 – Build Alternative
Construction under the Build Alternative would result in short-term energy
consumption related to the manufacture of construction materials, the use of
construction equipment that requires petroleum fuels, and the use of construction
motor vehicles as they travel to and from the site. Construction activities are expected
to take less than approximately 12 months. Thus, construction-related energy
consumption anticipated under the Build Alternative would be finite and limited and
would have an incremental impact on area energy supplies.

2.12.4 Avoidance, Minimization and/or Mitigation Measures
The project would not have substantial energy impacts. Therefore, consideration of
avoidance, minimization, and/or mitigation measures is not necessary.
BIOLOGICAL ENVIRONMENT

2.13 Natural Communities

2.13.1 Regulatory Setting
This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in Section 2.16, Threatened and Endangered Species.

2.13.2 Affected Environment
A field investigation was performed to survey the existing biological environmental and how the proposed project alternatives and undertaking would affect that environment. The findings of this investigation are incorporated in the Natural Environment Study (Minimal Impacts) [NESMI] dated November 2016 for this proposed project. The NESMI is based on the aforementioned field investigations, reviews of relevant literature on the biological resources of the project study area and the surrounding vicinity (including biological databases), and a search for any applicable regional Habitat Conservation Plan (HCP) or Multiple Species Habitat Conservation Plan (MSHCP).

The Biological Study Area (BSA) consists of urban Parkway infrastructure within the Caltrans right-of-way, with adjacent areas that are primarily developed or disturbed habitat with minimal native biological resources.

2.13.3 Environmental Consequences

2.13.3.1 Alternative 1 – No Build Alternative
The existing condition would remain; therefore, no impact would occur.

2.13.3.2 Alternative 2 – Build Alternative
As the majority of the work will be done in the freeway median, there will be no impact to biological communities in the area. Existing habitat and/or wildlife corridors will not be affected.
2.13.4 Avoidance, Minimization, and/or Mitigation Measures
No avoidance, minimization, and/or mitigation measures are required because no impacts to biological communities are anticipated.

2.14 Plant Species

2.14.1 Regulatory Setting
The U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act (FESA) and/or the California Endangered Species Act (CESA). Please see Section 2.16, Threatened and Endangered Species, for detailed information about these species.

This section of the document discusses all the other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. The regulatory requirements for CESA can be found at California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at Fish and Game Code, Section 1900-1913, and the California Environmental Quality Act, CA Public Resources Code, Sections 2100-21177.

2.14.2 Affected Environment
The NESMI (November 2016) summarizes technical documents (e.g., focus species studies, wetland assessments, biological assessments) related to the effects on biological resources in the BSA for use in this environmental document. The ensuing discussion has been excerpted from the NESMI and is presented as follows.

The BSA consists of urban Parkway infrastructure within the Caltrans right-of-way with flat/sloping vegetated adjacent areas that are primarily developed or disturbed habitat with minimal native biological resources.
At the southern end of the proposed project area, the vegetation found directly adjacent to SR-110 tends to be ornamental, ruderal, or disturbance oriented. Vegetation includes, but is not limited to: eucalyptus, palm trees, pepper trees, and oleander. However, native species including sycamore and coast live oak trees have been identified within the project limits and farther north, along the Arroyo Seco Creek.

2.14.3 Environmental Consequences

2.14.3.1 Alternative 1 – No Build Alternative
The existing condition would remain; therefore, no impact would occur.

2.14.3.2 Alternative 2 – Build Alternative
Vegetation trimming and/or removal will be needed. Two trees will have to be removed if the Build Alternative is selected for implementation. The tree at Project Location No. 3 (Figure 2-8) will need to be removed to build the maintenance vehicle pullout (MVP). The tree at Project Location No. 35 (Figure 2-9) will have to be removed because the curb and gutters will be removed. This tree was not originally planted as part of the construction of the Parkway. Field survey photos and project location numbers are shown below for reference. The tree to be removed at Project Location No. 35 is a Sycamore. The tree to be removed at Project Location No. 3 is an unknown species.

Figure 2-8  Tree Removal, Project Location No. 3
Figure 2-9  Tree Removal, Project Location No. 35
While some clearing and grubbing of existing vegetation is required during construction, these activities are not anticipated to have an adverse effect on any sensitive plant species.

2.14.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of the following avoidance and minimization measures will reduce any plant species impacts resulting from construction activities:

**Minimization BIO-1**
Relocation of native sycamore or oak trees that require removal should be considered. If native sycamore or oaks are removed, they shall be replaced by at least two trees of that species (City of Los Angeles Ordinance 177404).

- The sycamore tree removal at Project Location No. 35 will have a replacement ratio (4:1 15-gallon sycamore). The locations of the replacements will be determined in the plans, specifications, and estimates phase of the project.

**Minimization BIO-2**
The District Biologist, Michelle Barton, shall be invited to the pre-construction meeting with at least 1 week prior notice.

**Minimization BIO-3**
It is recommended that all vegetation removal occur outside of bird nesting season, which is from February 15 through September 1. Should vegetation need to be removed during this period, the District Biologist shall be notified 2 weeks prior to the start of construction to determine if nesting birds are present. In the event that nesting birds are observed, the Resident Engineer (RE) should pause work until a qualified biologist has determined that fledglings have left the nest. If this cannot be done, then a biological survey will be required no more than 5 days in advance of grubbing for nesting birds. Further, if any bird nests are found, then a buffer of 150 feet for songbirds and 500 feet for raptors will be required until the nestlings have fledged.
This is per the federal Migratory Bird Treaty Act (MBTA).

2.15 Animal Species

2.15.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.16. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.15.2 Affected Environment

The potential effects of the proposed project on the existing biological environment, including the presence of sensitive animal species, were determined through investigations and field surveys, with the results documented in the NESMI. The methodology regarding sensitive species findings included a review of databases that catalog the locations of known observations of State and federally listed species and habitat (e.g., California Natural Diversity Database [CNDDB], which is maintained by the CDFW, and sensitive species data provided from the USFWS).
According to the CNDDB, Information, Planning, and Conservation System (IPaC), CNPS, and NOAA Fisheries Service, habitat is present for some special-status wildlife species in the project area. Namely, the American peregrine falcon (*Falco peregrinus anatum*), silver-haired bat (*Lasionycteris noctivagans*), hoary bat (*Lasiurus cinereus*), and coast horned lizard (*Phrynosoma blainvilli*).

### 2.15.3 Environmental Consequences

#### 2.15.3.1 Alternative 1 – No Build Alternative

The existing condition would remain; therefore, no impact would occur.

#### 2.15.3.2 Alternative 2 – Build Alternative

Almost all impacts are confined to the existing prism of the roadway. While the American peregrine falcon, silver-haired bat, hoary bat, and coast horned lizard were not observed during surveys, the project area contains habitat that would potentially be used by these species. Still, because the habitat in the BSA is marginal, these wildlife species are not expected to occur within the BSA.

Where there are impacts beyond the existing prism of the roadway, such as adding an MVP at Project Location No. 3, impacts to animal species are extremely minimal. At Project Location No. 3 and any other location where ornamental landscape might be impacted, there is the potential for impacts to nesting birds from construction noise or grubbing.

### 2.15.4 Avoidance, Minimization, and/or Mitigation Measures

Implementation of the following avoidance and minimization measures will reduce any animal species impacts resulting from construction activities:

#### Minimization BIO-2

The District Biologist, Michelle Barton, shall be invited to the pre-construction meeting with at least 1 week prior notice.

#### Minimization BIO-3

It is recommended that all vegetation removal occur outside of bird nesting season, which is from February 15 through September 1. Should vegetation need to be removed during this period, the District Biologist shall be notified 2 weeks prior to the start of construction to determine if nesting birds are present. In the event that nesting birds are observed, the Resident Engineer (RE) should pause work until a qualified biologist has
determined that fledglings have left the nest. If this cannot be done, then a biological survey will be required no more than 5 days in advance of grubbing for nesting birds. Further, if any bird nests are found, then a buffer of 150 feet for songbirds and 500 feet for raptors will be required until the nestlings have fledged. This is per the federal Migratory Bird Treaty Act (MBTA).

2.16 Threatened and Endangered Species

2.16.1 Regulatory Setting
The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the US Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt,
pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.16.2 Affected Environment
As previously mentioned, the existing biological environment, including the presence of threatened and endangered species, was studied through an investigation and field survey evaluating the potential effects of the proposed project on that environment and was summarized in the NESMI. The findings regarding threatened and endangered species in the project study area were derived from the NESMI and via a review of databases that catalog the locations of known observations of State and federally listed species and habitat (e.g., the CNDDB, which is maintained by the CDFW, and sensitive species data provided from the USFWS).

2.16.2.1 Plant Species
There are three known listed plant species that have the potential to occur within the project area:

- Braunton’s milk-vetch (*astagalus brauntonii*)
- Nevin’s barberry (*Berberis nevinii*)
- Slender-horned spineflower (*Dodecahema leptoceras*)

The habitat associated with these species does not occur within the immediate project study area and, as a result, the presence of these species are not anticipated to occur in the project area.
2.16.2.2 Wildlife Species

There are seven known listed wildlife species that have the potential to occur within the project area in the Los Angeles and Pasadena quadrangles:

- Southwestern willow flycatcher (*Empidonax traillii extimus*)
- Least Bell’s vireo (*Vireo bellii pusillus*)
- California condor (*Gymnogyps californianus*)
- Coastal California gnatcatcher (*Polioptila californica californica*)
- Southern mountain yellow-legged frog (*Rana muscosa*)
- Bank swallow (*Riparia riparia*)
- Southern California steelhead DPS (*Oncorhynchus mykiss irideus*)

While the general habitat for the aforementioned State and federally listed species is present within the larger Los Angeles and Pasadena quadrangles, none of the associated habitat were observed within the immediate project study area and, as a result, the presence of these species is not anticipated to occur in the project area.

2.16.3 Environmental Consequences

2.16.3.1 Alternative 1 – No Build Alternative

The existing condition would remain; therefore, no impact would occur.

2.16.3.2 Alternative 2 – Build Alternative

As previously discussed, the presence of three known listed plant species and seven known listed wildlife species have the potential to occur within the larger Los Angeles and Pasadena Quadrangles, but neither the species nor their associated habitat were observed within the immediate project study area. Therefore, no adverse effects to threatened or endangered species are anticipated as a result of the proposed project. There will be no effect to sensitive, threatened, or endangered species.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

Since no adverse effects to threatened or endangered species are anticipated, no measures for avoidance, minimization, or mitigation are required.

2.17 Invasive Species

2.17.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species,
including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.17.2 Affected Environment
The existing biological environment, including the presence of invasive species, was studied through an investigation and field survey that evaluated the potential effects of the proposed project on that environment, and was summarized in a NESMI. The findings regarding invasive species in the project study area were derived from the NESMI, and it was determined that the proposed project study area is dominated by nonnative species such as Eucalyptus ssp.

2.17.3 Environmental Consequences
2.17.3.1 Alternative 1 – No Build Alternative
The existing condition would remain; therefore, no impact would occur.

2.17.3.2 Alternative 2 – Build Alternative
None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping. All equipment and materials will be inspected for the presence of invasive species.

2.17.4 Avoidance, Minimization, and/or Mitigation Measures
Avoidance INV-1: In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, the landscaping and erosion control included in the project will not use species that are listed as invasive. In areas of particular sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.
Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

2.18 Cumulative Impacts

2.18.1 Regulatory Setting
Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

The California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts, under the National Environmental Policy Act (NEPA), can be found in 40 Code of Federal Regulations (CFR) Section 1508.7 of the CEQ Regulations.

2.18.2 Affected Resources
2.18.2.1 Methodology
Cumulative impacts were identified by comparing the impacts of the proposed project and other past, current, or proposed actions in the area to establish whether, in the aggregate, they could result in cumulative environmental impacts. Both direct and indirect impacts are assessed. The cumulative effects analysis focuses on those issues and resources that would be affected by the combination of stress factors on the environment and does not address in detail those topics that would not have additional environmental effects from the cumulative condition. The analysis provided in this section considered the effects of the other projects and the Build Alternative in assessing whether a particular environmental parameter would
experience cumulative adverse impacts. Specific geographic boundaries for cumulative effects are determined for each environmental topic analyzed and may vary accordingly.

The cumulative impact analysis builds on information derived from the direct and indirect impacts analyses. The first step in performing the cumulative impact analysis is to identify which resources to consider in the analysis. If a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on that resource. The cumulative impact analysis should focus only on: (1) those resources significantly impacted by the project; or (2) resources currently in poor or declining health or at risk even if project impacts are relatively small (less than significant). “The resources subject to a cumulative impact assessment should be determined on a case-by-case basis early in the NEPA process, generally as part of early coordination or scoping” (FHWA 2003 Guidance).

Please note that a quantification of cumulative impacts is not feasible for some impact topics and would be speculative. Therefore, much of the cumulative evaluation is a qualitative judgment regarding the combined effects of the relationship among the projects included in the Resource Study Area (RSA) for each resource. In some cases, application of the identified project mitigation and/or minimization program may reduce the cumulative impacts as well as the project impact. Table 2.5 lists potential projects on the Parkway that are considered in the cumulative impact analysis.

**Land Use**
The project area with regard to land use is contained within the existing Parkway. No acquisitions of property will occur; therefore, no conversion of existing land uses will occur. Accessibility will remain the same as existing conditions, and no land uses will be affected. Therefore, implementation of the Build Alternative would not contribute to cumulative impacts with regards to land use.

**Growth**
The project is located in a heavily urbanized area with little to no undeveloped lands. Implementation of the Build Alternative for the project would not connect previously unconnected areas or alter existing access patterns. The purpose of the project is to improve safety and operational design on an existing freeway. Because no growth impacts are expected to occur as a result of the project, cumulative impacts are not expected to occur.
Chapter 2  Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

### Table 2.5 List of Potential Projects Considered in the Cumulative Impact Analysis

<table>
<thead>
<tr>
<th>Name/Location</th>
<th>Jurisdiction</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not specified/ SR-110 PM 23.69-24.48</td>
<td>Caltrans</td>
<td>Upgrade and install safety street lighting</td>
<td>To be determined</td>
</tr>
<tr>
<td>High Friction Surface Treatment (HFST)/ SR-110 PM 28.65-29.35</td>
<td>Caltrans</td>
<td>Replace the two-toned pattern of Portland cement and asphalt to a single color.</td>
<td>Environmental Document to be prepared in winter 2017</td>
</tr>
<tr>
<td>Extinguishable Message Signs/SR-110 PM 24.75-25.5</td>
<td>Caltrans</td>
<td>Replace three existing extinguishable message signs with full-color changeable message signs of the same size.</td>
<td>Environmental Document to be prepared in winter 2017</td>
</tr>
<tr>
<td>LA-110 Install Dynamic Flexible Lane/SR-110 25.78/30.59</td>
<td>Caltrans</td>
<td>The conversions of the Parkway’s, number three lane from a general-purpose lane through lane to an auxiliary lane/or shoulder</td>
<td>Draft EIR/EA to be completed in Summer 2019</td>
</tr>
<tr>
<td>Fair Oaks Interchange Improvement Project/ SR-110 PM 31.1-31.9</td>
<td>Caltrans</td>
<td>Reconfigure southbound off-ramp at State Street and add new southbound on-ramp along State Street from Fair Oaks Avenue. Widen northbound Fair Oaks Avenue off-ramp from two to four lanes.</td>
<td>To be determined</td>
</tr>
<tr>
<td>No title/PM 25.7-28.1</td>
<td>Caltrans</td>
<td>Construct a 12-foot wide bike and pedestrian path along Caltrans right-of-way between Avenue 26 and the City of Los Angeles Sanitation Yard.</td>
<td>To be determined</td>
</tr>
</tbody>
</table>

Source: Cultural Resources Cumulative Impact Assessment, Arroyo Seco Parkway Historic District (December 2016).

Caltrans = California Department of Transportation
EIR/EA = Environmental Impact Report/Environmental Assessment
Parkway = Arroyo Seco Parkway
PM = Post Mile
SR-110 = State Route 110

**Community Impacts**

The project would not involve acquisition of residences or businesses or disrupt existing access/travel to the communities in the project area. The proposed scope of work would not contribute to any adverse cumulative community impacts.

**Utility and Emergency Services**

No utilities will be relocated as a result of implementation of the Build Alternative. No cumulative impacts to utility services are anticipated. Emergency responders will be permitted to use the lanes when responding to calls, and no access patterns will be altered as a result of the project.

It is a possibility there may be cumulative impacts to emergency services during construction of the project. Construction activities associated with this project along
with similar projects in construction at the same time have the potential to impede emergency service response time. This impact, however, will be minimized through the implementation of a Traffic Management Plan and pre-construction coordination with emergency service responders. It is anticipated that any related projects in the area would implement similar procedures.

Once operational, the project would have no impact to emergency service response times in the area.

**Traffic and Transportation, Bicycle and Pedestrian Facilities**

The intent of the project is to improve operational design and improve safety. No adverse impacts to traffic flow are expected to occur, and once operational, the project will not contribute to a cumulative adverse effect on traffic in the area.

During construction, the project may have a cumulative impact with similar projects in construction at the same time. Any adverse effects on traffic flow will be minimized to the fullest extent possible by implementation of a Traffic Management Plan. It is anticipated that any other projects in construction in the area at the same time would implement similar measures.

**Cultural Resources**

The cumulative resource study area for cultural resources is limited to the Parkway, all of which is within the State right-of-way.

Since the 2007 description of the Parkway on the National Register nomination form, the majority of the changes that have been made to the historic property have been additive in nature and compatible with its historic and associated features. They all appear to have complied with the Standards. Additive changes have not been numerous or obtrusive enough to create so much modern visual clutter as to detract from the Parkway’s significance. Thus, the alterations made to the Parkway since its listing in the National Register have not yielded a cumulative impact on the historic property. It retains its integrity and remains eligible for designation in its current state.

There are a number of proposed and reasonably foreseeable projects involving the Parkway, as indicated in Table 2.5. Many of these involve replacing or altering existing non-original elements. In general, as long as the selected replacement features are compatible with the Parkway and the alterations do not involve destroying, modifying, or obscuring original, character-defining features, these types
of projects would comply with the Standards. They would not result in impacts to the historic property, either individually or cumulatively.

Projects that involve adding new features by destroying or modifying original, character-defining features would result in impacts to the historic property. If a project involves destroying or modifying many or large segments of character-defining features at once, it would result in an immediate impact on its own rather than contributing to long-term cumulative impacts. If they involve destroying or modifying character-defining features in small, discrete locations, they may not result in impacts to the overall resource as individual projects; however, the potential for the accumulation of such projects to equal large-scale, incremental impacts to the resource is substantial.

As a stand-alone project, this project would not impact the Parkway’s integrity as a whole to the degree that it would no longer be eligible under each criterion, but could contribute to a significant cumulative impact in combination with other impacting projects listed in Table 2.5.

**Water Quality and Storm Water Runoff**
The cumulative resource study for water resources includes the immediate project area. The project does not cross any waterways, nor does it impact any waters of the U.S.

During construction, there is a possibility for cumulative impacts to storm water runoff if similar projects were in construction simultaneously. These impacts would be minimized through incorporation of storm water BMPs and an SWPPP, as required by law.

**Geology**
The cumulative impact study area for geology and soil resources is limited to the immediate project area. A small amount of soil disturbance will occur as a result of this proposed project. However, potential impacts to soils and geology would be minimized through incorporation of geotechnical recommendations, engineering standards, and applicable regulations and practices. It is anticipated that similar projects would adhere to similar standards and, as a result, no cumulative impacts would occur.
Chapter 2 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Hazardous Waste/Materials
Cumulatively, this project is not expected to result in any adverse hazardous material impacts. All similar construction in the project area would be individually cleared of hazardous waste and/or identify any existing parcels that may contain hazardous materials.

Air Quality
The proposed project would not serve as a traffic generator and would not increase capacity of the roadway. The project would not have any adverse cumulative impact on air quality.

Noise
The cumulative impact area for noise is the proposed project area and those areas immediately adjacent. This project is not classified as a Type 1 project, which means the project will not involve construction of a new highway on a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increase the number of through-traffic lanes. Therefore, this project will not contribute to a cumulative noise impact. There is the potential for a cumulative noise impact to occur during construction of the project if similar highway projects were in construction at the same time. However, these impacts would be minimized with the implementation of standard construction noise abatement procedures, which are assumed to be included in other similar projects.

Energy
The cumulative impact area for energy consumption is the Greater Los Angeles Area/Basin. Other than temporary construction impacts, this proposed project would not result in adverse cumulative impacts to energy resources.

Biological Environment
The proposed project would have no impacts on natural communities, plant species, or threatened and endangered species, and therefore could not contribute to cumulative effects on these resources.

2.18.3 Avoidance, Minimization and/or Mitigation Measures
A combination of avoidance, minimization, and/or mitigation measures would reduce the overall adverse effects of the SR-110 Safety Enhancement Project. In order to minimize the effects on cultural resources, all reasonable foreseeable Caltrans
projects located on the Parkway will be developed using a context-sensitive design approach.

Because each cumulative project would be required to comply with CEQA and/or NEPA, additional mitigation for the cumulative effects of the proposed SR-110 Safety Enhancement Project is not warranted.
Chapter 3  California Environmental Quality Act (CEQA) Evaluation

3.1 Determining Significance under CEQA

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). FHWA’s responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other 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. Caltrans is the lead agency under both CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS), or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) as a whole has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of
actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this project and CEQA significance.

3.2 Effects of the Proposed Project

A CEQA Checklist was prepared to evaluate any significant effect on individual resources in compliance with CEQA’s Mandatory Findings of Significance. It can be found in Appendix A.

3.2.1 No Effects and Less Than Significant Effects of the Proposed Project

Please refer to Chapter 2 for a more in-depth discussion of the no effects and of the less-than-significant effects of the proposed project list.

3.2.2 Significant Environmental Effects of the Proposed Project

3.2.2.1 Cultural Impacts

This project is thought to have a potentially significant cultural resources impact. The Build Alternative would result in a Finding of Adverse Effect under Section 106 of the National Historic Preservation Act (NHPA). Therefore, under CEQA, the impacts of the SR-110 Safety Enhancement Project to historic resources would be potentially significant.

3.2.3 Unavoidable Significant Environmental Effects

The Build Alternative, when combined with other cumulative projects, would contribute to cumulative impacts related to cultural resources. Since all proposed work will take place on the historic resource itself (the Arroyo Seco Parkway). The proposed Build Alternative would result in unavoidable significant impacts related to cultural resources. Based on the analysis of potential mitigation for these impacts, there is no feasible mitigation to avoid or reduce these impacts while still achieving the project goals and objectives.

3.2.4 Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and
World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO$_2$), methane (CH$_4$), nitrous oxide (N$_2$O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF$_6$), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO$_2$, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: “Greenhouse Gas Mitigation” and “Adaptation.” "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or “mitigate” the impacts of climate change. “Adaptation” refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

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

3.2.4.1 Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with GHG emissions and climate change.

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- **Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002**: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

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

- **Assembly Bill 32 (AB 32), Núñez and Pavley, The Global Warming Solutions Act of 2006**: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve “real, quantifiable, cost-effective reductions of greenhouse gases.”

- **Executive Order S-20-06 (October 18, 2006)**: This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (CalEPA) and state agencies with regard to climate change.

- **Executive Order S-01-07 (January 18, 2007)**: This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California’s transportation fuels is to be reduced by at least ten percent by the year 2020.

- **Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions**: required the Governor’s Office of Planning and Research (OPR) to develop recommended amendments to CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

- **Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection**: This bill requires the California Air Resources Board (ARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a “Sustainable Communities Strategy” (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

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

Although climate change and GHG reduction are a concern at the federal level; currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.\(^1\) FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process, from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the “National Clean Car Program” and EO 13514 - Federal Leadership in Environmental, Energy and Economic Performance.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA’s authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet

\(^1\) To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.
the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court’s ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court’s interpretation of the existing Act and EPA’s assessment of the scientific evidence that form the basis for EPA’s regulatory actions. U.S. EPA in conjunction with National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.

The U.S. EPA and the NHTSA are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi-trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama’s 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO₂ emissions by about 270 million metric tons and
save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

### 3.2.4.2 Project Analysis

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

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (Figure 3-1; [source](http://www.arb.ca.gov/cc/inventory/data/forecast.htm)).

![California Greenhouse Gas Emissions Forecast](http://www.arb.ca.gov/cc/inventory/data/forecast.htm)

**Figure 3-1 California Greenhouse Gas Forecast**

\(^1\) This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).
forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.¹ Figure 3-2 provides the possible effect of traffic operation strategies in reducing on-road CO₂ emissions.

![Figure 3-2 Possible Effect of Traffic Operation Strategies in Reducing On-Road CO₂ Emission²](image)

### 3.2.4.3 Quantitative Analysis

According to Caltrans Standard Environmental Reference, these types of projects most likely will have minimal or no increase in GHG emissions during operation:

---

¹ Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

• Pavement rehabilitation
• Shoulder widening
• Culvert/drainage/storm water work
• Landscaping
• CCTVs
• Maintenance vehicle pullouts
• Minor curve corrections

Since the proposed project type is a combination of the projects listed above, and not a capacity increasing project, the operation of the project has the low- to no-potential for an increase in GHG emissions. However, construction emissions will be unavoidable but that there will most likely be long-term GHG benefits by improved operation and smoother pavement surfaces, as applicable.

3.2.4.4 Construction Emissions
Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases. In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events.

To the extent that is applicable or feasible for the proposed project and through coordination with the project development team, minimization measures will also be included in the project to reduce GHG emissions and potential climate change.

3.2.4.5 Greenhouse Gas Reduction Strategies
Caltrans continues to be involved on the Governor’s Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger’s Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions,
while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 3-3.

![Figure 3-3 Mobility Pyramid](image_url)

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority.

Caltrans also assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

Caltrans is also working towards enhancing the State’s transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under SB 375 (Steinberg 2008), SB 391 (Liu 2009) requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines
performance-based goals, policies, and strategies to achieve our collective vision for California’s future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State’s transportation needs.

Table 3.1 summarizes both Caltrans and statewide efforts that Caltrans is implementing to reduce GHG emissions. More detailed information about each Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a Caltrans policy that will ensure coordinated efforts to incorporate climate change into Caltrans’ decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)\(^1\) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

### 3.2.4.6 Adaptation Strategies

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

### Table 3.1 Climate Change/CO₂ Reduction Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Program</th>
<th>Partnership</th>
<th>Method/Process</th>
<th>Estimated CO₂ Savings Million Metric Tons (MMT)</th>
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<td>Planning Grants</td>
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<td>Policy establishment, guidelines, technical assistance</td>
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<td>Office of Policy Analysis &amp; Research</td>
<td>Interdepartmental, CalEPA, ARB, CEC</td>
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<td>Fleet Greening &amp; Fuel Diversification</td>
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<td>Department of General Services</td>
<td>Fleet Replacement B20 B100</td>
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<td>Green Action Team</td>
<td>Energy Conservation Opportunities</td>
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<td>Cement and Construction Industries</td>
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<td>Total</td>
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<td>2.72</td>
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ARB = California Air Resources Board  
BT&H = Business, Transportation and Housing Agency  
CalEPA = California Environmental Protection Agency  
Caltrans = California Department of Transportation  
CEC = California Energy Commission  
CO₂ = carbon dioxide  
GHG = greenhouse gas  
MPO = Metropolitan Planning Organization
At the federal level, the Climate Change Adaptation Task Force, co-chaired by the Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011,\(^1\) outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08 which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state, and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009),\(^2\) which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous

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other state agencies were involved in the creation of the Adaptation Strategy document, including the CalEPA; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report\(^1\) to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

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All projects that have filed a Notice of Preparation (NOP) as of the date of the EO S-13-08, and/or are programmed for construction funding through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

EO S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.
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Chapter 4 Comments and Coordination

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

4.1 Scoping

Scoping is a process designed to examine a proposed project early in the Environmental Impact Report/Environmental Assessment (EIR/EA) analysis and review process. Scoping is intended to identify the range of issues raised by the proposed project and to outline feasible alternatives or mitigation measures to avoid potentially significant environmental effects. The scoping process inherently stresses early consultation with local agencies, responsible agencies, review agencies, trustee agencies, cooperating agencies, tribal governments, elected officials, interested/affected individuals, any additional stakeholders, and any federal agency whose approval or funding of the proposed project will be required for completion of the project.

Scoping is considered an effective way to bring together and resolve the concerns of other agencies and individuals who may potentially be affected by the proposed project, as well as other interested persons or groups, such as the general public, who might not be in accord with the action on environmental grounds.

At this time, the environmental document for the proposed project is an EIR/EA. The California Environmental Quality Act (CEQA) requires a formal scoping period for an EIR-level document. The goal was to ensure that the concerns of all stakeholders were known early in the process and incorporated into the environmental analyses and CEQA/National Environmental Policy Act (NEPA) document. During the scoping period, Caltrans solicited comments and input from all stakeholders and
attempted to ensure their early involvement in the project development and environmental process.

Scoping was conducted from July 26, 2016, to August 29, 2016. Public Scoping Notification letters were mailed (postmarked July 26, 2016) to each individual, official, business, and agency listed on the project mailing list. Enclosed with each letter was the Notice of Preparation (NOP) and its attachments. To view the project mailing list, please refer to the Appendices section of this document.

Caltrans also notified community members about the scoping comment period by placing notices in community newspapers. The notices were placed in the following newspapers in order to solicit comments from the community:

- *Pasadena Star News*


### 4.2 Consultation

In addition to scoping, a series of outreach efforts were made between April 2016 and November 2016. In April 2016, the 13 stakeholder groups listed below were contacted by letter to inform them of the proposed project and the adverse effect it would have on the Parkway, inviting them to comment on the potential impacts or to request Consulting Party status.

- Arroyo Seco Neighborhood Council
- California Preservation Foundation
- California Route 66 Preservation Foundation
- Citizens Committee to Save Elysian Park
- City of Los Angeles
- City of Pasadena
- City of South Pasadena
- Greater Cypress Park Neighborhood Council
- Highland Park Heritage Trust
- Historic Highland Park Neighborhood Council
- Los Angeles Conservancy
• National Trust for Historic Preservation
• Pasadena Heritage

John Mayer from the South Pasadena Cultural Heritage Commission responded that while he had no comments, he would like to be added as a Consulting Party. No other responses were received.

In November 2016, follow-up letters were sent to the same 13 stakeholder groups, along with copies of the Area of Potential Effects map and a spreadsheet listing all project activities. To date, no responses have been received.

Caltrans is working closely with the State Historic Preservation Officer (SHPO) and the stakeholder groups to ensure transparency throughout the project development process as well as the environmental process. Public outreach is a part of the environmental process, and Caltrans will continue to provide opportunities for the public to comment on this project to ensure public involvement.

4.2.1 Consultation Correspondence
This section includes consultation correspondence received to date for the proposed project. A letter from the SHPO that concurs with the Finding of Adverse Effect for the proposed project is included on the following pages.
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February 23, 2017

VIA EMAIL

In reply refer to: FHWA_2016_1229_004

Alex Bevk Neeb
Section 106 Coordinator
Caltrans Division of Environmental Analysis
1120 N Street, PO Box 942873, MS-27
Sacramento, CA 94273-0001

Subject: Finding of Adverse Effect for the Proposed Arroyo Seco Parkway Safety Enhancement Project, Los Angeles and South Pasadena, Los Angeles County, CA

Dear Ms. Bevk Neeb:

Thank you for consulting with me about the subject undertaking in accordance with the January 1, 2014 First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act, as it Pertains to the Administration of the Federal-Aid Highway Program in California (PA).

Caltrans proposes a safety and operation improvement project along 6.4 miles of State Route 110, also known as the Arroyo Seco Parkway, from the City of Los Angeles to the City of South Pasadena. Project activities would include the removal of raised concrete curbs and gutters in front of the side barriers, metal beam guardrail extension and replacement, installation of concrete in small areas, crash cushion replacement, extension and creation of motor vehicle pull-outs, and other improvements. A full project description can be found on pages 5 to 7 of the Finding of Adverse Effect.

The Arroyo Seco Parkway Historic District, a property listed on the National Register in February of 2011, is located within the area of potential effect of the project.

Caltrans has determined that the proposed project will have an adverse effect on the Arroyo Seco Parkway Historic District. The removal of approximately 3.2 miles of curbs and gutters along the Parkway will destroy an original, character defining feature of the resource. In addition concrete barriers proposed at the bases of the College Avenue OC, Avenue 26 OC, Avenue 35 OC, Avenue 43 OC, Avenue 64 OC, Arroyo Drive OC, (all character defining features) will be incompatible with the bridge designs and cause a visual impact to the resource. This action does not meet the Secretary of the Interior’s Standards for Rehabilitation.
Caltrans also commissioned a Cultural Resources Cumulative Impact Analysis for the Arroyo Seco Parkway Historic District, prepared by GPA Consulting to comprehensively document changes to the Parkway since its original construction. The conclusion is reached that while the Parkway still maintains enough integrity to convey its significance and remain listed in the National Register of Historic Places, the accumulation of effects from current and proposed projects could contribute to significant cumulative impacts that would jeopardize its listing.

Based on my review of the submitted documentation, the SHPO has no objection to this finding of adverse effect. Before moving forward with an agreement document for this project I recommend that Caltrans meet with SHPO staff to discuss the resource in question and the mitigation measures that are being proposed.

Thank you for considering historic properties during project planning. If you have any questions, please contact Natalie Lindquist of my staff at (916) 445-7014 with e-mail at natalie.lindquist@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer
Chapter 5  List of Preparers

5.1 Lead Agency

5.1.1 California Department of Transportation, District 7
- Ron Kosinski, Deputy District Director, Division of Environmental Planning
- Garrett Damrath, Chief Environmental Planner
- Jason Roach, Senior Environmental Planner
- Lourdes Ortega, Associate Environmental Planner
- Kelly Ewing-Toledo, Senior Environmental Planner, Cultural Resources Branch
- Claudia Harbert, Associate Environmental Planner, Principal Architectural Historian
- Joshua Knudson, Environmental Planner, Architectural Historian
- Paul Caron, Senior District Biologist
- Michelle Barton, Environmental Planner, Biologist
- Gustavo Ortega, Senior Engineering Geologist
- Andrew Yoon, P.E., Senior Transportation Engineer, Air Quality Branch and Hazardous Waste Branch
- Liberty San-Agustin, Associate Transportation Planner, Air Quality
- Saba Tesfayohannes, Transportation Engineer, Hazardous Waste
- Jin S. Lee, P.E., PMP, Branch Chief, Noise & Vibration Branch
- Patty Watanabe, Senior Landscape Architect, Visual Impact Assessment
- Kathleen Ledesma, Landscape Associate, Visual Impact Assessment
- Suzie Kearns, Materials Investigation/ Landscape Architect
- Refugio Dominguez, Senior Transportation Engineer, Design
- Aaron Fong, Transportation Engineer, Design
- Dia Yassin, Project Manager

5.2 Consultants to Lead Agency

5.2.1 LSA Associates, Inc.
- Deborah Pracilio, Principal, Environmental Task Manager
- King Thomas, Associate, SR-110 Safety Enhancement Project Manager
- Maryanne Cronin, Environmental Planner
- Matt Phillips, Graphic Designer
- Beverly Inloes, Associate, Senior Technical Editor
Chapter 5  List of Preparers

- Lauren Johnson, Technical Editor
- Chantik Virgil, Word Processor

5.2.2  GPA Consulting
- Laura O’Neill, Senior Architectural Historian
- Amanda Yoder Duance, Architectural Historian II
# Chapter 6  Distribution List

## 6.1 Federal Agencies

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contact</th>
<th>Address</th>
</tr>
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<tr>
<td>U.S. Army Corps of Engineers, Los Angeles District</td>
<td>Stephanie Hall</td>
<td>915 Wilshire Blvd., Ste. 930, Los Angeles, CA 90017</td>
</tr>
<tr>
<td>U.S. Fish and Wildlife Services</td>
<td>Rick Farris</td>
<td>2493 Portola Road, Ste. B, Ventura, CA 93003</td>
</tr>
<tr>
<td>Federal Transit Administration</td>
<td>Raymond Sukys</td>
<td>201 Mission St., Ste. 1650, San Francisco, CA 94105-1839</td>
</tr>
<tr>
<td>U.S. Department of the Interior</td>
<td>Patricia Port</td>
<td>333 Bush St., Ste. 515, San Francisco, CA 94104</td>
</tr>
<tr>
<td>U.S. National Park Service, Pacific West Region</td>
<td>Laura Joss</td>
<td>333 Bush St., Ste. 500, San Francisco, CA 94104</td>
</tr>
<tr>
<td>Federal Emergency Management Agency, Region IX</td>
<td>Alessandro Amaglio</td>
<td>1111 Broadway, Ste. 1200, Oakland, CA 94607-4052</td>
</tr>
<tr>
<td>Federal Highway Administration, California Division</td>
<td>Susan Sturges</td>
<td>75 Hawthorne St., San Francisco, CA 94105</td>
</tr>
<tr>
<td>U.S. Environmental Protection Agency, Region IX</td>
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<tr>
<td>California Deparment of Parks and Recreation</td>
<td>Lisa Magnat</td>
<td>1416 9th St., Sacramento, CA 95814</td>
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<tr>
<td>California Office of Historic Preservation</td>
<td>Milford Wayne Donaldson</td>
<td>1416 9th St., Room 1442-7, Sacramento, CA 95814</td>
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<td>California Department of Fish and Wildlife</td>
<td>Ed Pert</td>
<td>3883 Ruffin Road, San Diego, CA 92123</td>
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<tr>
<td>California Natural Resources Agency</td>
<td>Kirk Miller</td>
<td>1416 9th St., Ste. 1311, Sacramento, CA 95814</td>
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<td>California Highway Patrol</td>
<td>S.V Bernard</td>
<td>411 N. Central Ave., Ste. 410, Glendale, CA 91203</td>
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<td>State Water Resources Control Board--Los Angeles Region</td>
<td>Theresa Rogers</td>
<td>320 W. 4th St., Ste. 200, Los Angeles, CA 90013</td>
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<tr>
<td>California Native American Heritage Commission</td>
<td>Larry Myers</td>
<td>915 Capitol Mall, Ste. 364, Sacramento, CA 95814</td>
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<tr>
<td>State Office of Planning and Reasearch--State Clearinghouse</td>
<td>Terry Roberts</td>
<td>P.O. Box 3044, Sacramento, CA 95814</td>
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## 6.2 State Agencies

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<tr>
<td>Department of Toxic Substance Control</td>
<td>Barbara Lee</td>
<td>1001 I St, Sacramento, CA 95814</td>
</tr>
<tr>
<td>California State Transportation Agency</td>
<td>Brian P. Kelly</td>
<td>915 Capitol Mall, Ste. 350B, Sacramento, CA 95814</td>
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<tr>
<td>California Office of Historic Preservation</td>
<td>Julieanne Polanco</td>
<td>1725 23rd St., Ste. 100, Sacramento, CA 95816</td>
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6.3 Regional Agencies

| Los Angeles County Metropolitan Transportation Authority | Southern California Association of Governments | South Coast Air Quality Management District |
| Michelle Jackson | Rongsheng Luo | Michael O’Kelley |
| Board Secretary | 818 West 7th St., 12th Floor | Acting Executive Officer |
| 1 Gateway Plaza | Los Angeles, CA 90017 | 21865 East Copley Dr. |
| Los Angeles, CA 90012 | | Diamond Bar, CA 91765 |

| Metropolitan Water District | Southern California Edison | Southern California Edison |
| Rebecca De Leon | Third Party Environmental Reviews | Kathy Yhip |
| P.O. Box 54153 | 2244 Walnut Grove Ave., GO 1 Quad 4C | Environmental Policy and Affairs |
| Los Angeles, CA 90054 | Rosemead, CA 91770 | Rosemead, CA 91770 |

| Los Angeles County Registrar-Recorder/County Clerk | City of South Pasadena | Los Angeles Department of City Planning |
| Business Filings and Registration | John Mayer | Michael Lo Grande |
| P.O. Box 1208 | Senior Planner | Director |
| Norwalk, CA 90650-1208 | 1414 Mission St. | 200 N. Spring St. |
| | South Pasadena, CA 31030 | Los Angeles, CA 90012 |

| Los Angeles County Department of Public Works | Los Angeles Conservancy | National Trust for Historic Preservation, Los Angeles Office |
| John Todd | Adrian Scott Fine | Los Angeles Office |
| Deputy Chief | Director of Advocacy | Christina Morris |
| 1320 N. Eastern Ave. | 523 West Sixth St., Ste. 826 | Los Angeles Field Director |
| Los Angeles, CA 90063 | Los Angeles, CA 90014 | 700 South Flower St., Ste. 1100 |
| | | Los Angeles, CA 90017 |

| City of Pasadena-Planning Division | City of Los Angeles-Department of City Planning | City of South Pasadena-Cultural Heritage Commission |
| Leon White | Ken Bernstein | James McLane |
| Principal Planner | Manager | Chair |
| 100 N. Garfield Ave. | 200 N. Spring St., Ste. 667 | 1414 Mission St. |
| Pasadena, CA 91109 | Los Angeles, CA 90012 | South Pasadena, CA 91030 |

6.4 Elected Officials

| City of Los Angeles | City of South Pasadena | City of Pasadena |
| The Honorable Eric Garcetti | The Honorable Diane Mahmud | The Honorable Terry Tornek |
| Mayor | Mayor | Mayor |
| 200 N. Spring St. | 1414 Mission St. | 100 N. Garfield Ave., Rm. S-228 |
| Los Angeles, CA 90012 | South Pasadena, CA 91030 | Pasadena, CA 91101 |

| United States Senate | United States Senate | California State Assembly |
| The Honorable Diane Feinstein | The Honorable Barbara Boxer | The Honorable Jimmy Gomez |
| US Senator | US Senator | California Assemblymember, Dist. 51 |
| 11111 Santa Monica Blvd., Ste. 915 | 312 N. Spring St., Ste. 1748 | 1910 W. Sunset Blvd., Ste. 810 |
| Los Angeles, CA 90025 | Los Angeles, CA 90012 | Los Angeles, CA 90026 |
6.5 Other Interested and/or Potentially Affected Parties

Eastside Market
1013 Alpine St.
Los Angeles, CA 90012

Highland Park Heritage Trust
Antonio Castillo
President
P.O. Box 50894
Los Angeles, CA 90050-0894

Historic Highland Park Neighborhood Council
Monica Alcaraz
President
P.O. Box 50791
Los Angeles, CA 90050

Citizens Committee to Save Elysian Park
Scott Fajack
President
1403 Macbeth St.
Los Angeles, CA 90026

California Route 66 Preservation Foundation
P.O. Box 290066
Phelan, CA 92329-0066

Arroyo Seco Neighborhood Council
Valerie Harragin
President
P.O. Box 42254
Los Angeles, CA 90042

Greater Cypress Park Neighborhood Council
Alejandra Cortez
President
1150 Cypress Ave.
Los Angeles, CA 90065

Evans Community Adult School
717 N. Figueroa St
Los Angeles, CA 90012

LA Marathon
Corporate Office
871 Figueroa Terrace
Los Angeles, CA 90012

Pacific Alliance Medical Center
711 W. College St., Ste. 628
Los Angeles, CA 90012

St. Bridgets Chinese Catholic Church
510 Cottage Home St.
Los Angeles, CA 90012

Cathedral Highschool
John Montgomery
Principal
1253 Bishops Road
Los Angeles, CA 90012
<table>
<thead>
<tr>
<th>Solano Avenue Elementary School</th>
<th>ATS Northeast Tow</th>
<th>StorQuest Self Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>William Bertrand</td>
<td>2010 N. Figueroa St, Los Angeles, CA 90012</td>
<td>2222 N. Figueroa St, Los Angeles, CA 90012</td>
</tr>
<tr>
<td>Principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>615 Solano Ave., Los Angeles, CA 90012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solano Ave., Los Angeles, CA 90012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>McDonald's</th>
<th>North Central Animal Shelter</th>
<th>Footsies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2224 N. Figueroa St, Los Angeles, CA 90012</td>
<td>3201 Lacy St, Los Angeles, CA 90031</td>
<td>2640 N. Figueroa St, Los Angeles, CA 90065</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JSL Food Inc.</th>
<th>Pasadena Park Place Apartments Manager</th>
<th>Arroyo Seco Racquet &amp; Fitness</th>
</tr>
</thead>
<tbody>
<tr>
<td>3550 Pasadena Ave, Los Angeles, CA 90031</td>
<td>101 Bridewell St, Los Angeles, CA 90042</td>
<td>920 Lohman Ln, South Pasadena, CA 91030</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blair High School</th>
<th>Shakers</th>
<th>Bristol Farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>601 Fair Oaks Ave, South Pasadena, CA 91030</td>
<td>606 Fair Oaks Ave, South Pasadena, CA 91030</td>
</tr>
<tr>
<td>1201 S. Marengo Ave, Pasadena, CA 91106</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix A  CEQA Checklist

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapters 2 and 3 of this Environmental Impact Report/Environmental Assessment (EIR/EA). Documentation of “No Impact” determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapters 2 and 3.
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This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
</table>

I. AESTHETICS: Would the project:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

II. AGRICULTURE AND FOREST RESOURCES:
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:
<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Result in the loss of forest land or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>

III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Conflict with or obstruct implementation of the applicable air quality plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Expose sensitive receptors to substantial pollutant concentrations?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e) Create objectionable odors affecting a substantial number of people?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>
## IV. BIOLOGICAL RESOURCES

Would the project:

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
<tr>
<td>f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☐</td>
</tr>
</tbody>
</table>

## V. CULTURAL RESOURCES

Would the project:

<table>
<thead>
<tr>
<th>Impact Description</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>d) Disturb any human remains, including those interred outside of dedicated cemeteries?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>
### VI. GEOLOGY AND SOILS: Would the project:

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

### VII. GREENHOUSE GAS EMISSIONS: Would the project:

<table>
<thead>
<tr>
<th>Would the project:</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☳</td>
</tr>
<tr>
<td>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td>
<td>☑</td>
<td>☑</td>
<td>☑</td>
<td>☳</td>
</tr>
</tbody>
</table>

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project’s direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.
### VIII. HAZARDS AND HAZARDOUS MATERIALS:
Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

### IX. HYDROLOGY AND WATER QUALITY:
Would the project:

- a) Violate any water quality standards or waste discharge requirements?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact

- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?
  - Potentially Significant Impact
  - Less Than Significant with Mitigation
  - Less Than Significant Impact
  - No Impact
<table>
<thead>
<tr>
<th>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>f) Otherwise substantially degrade water quality?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>j) Inundation by seiche, tsunami, or mudflow</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
</tbody>
</table>

**X. LAND USE AND PLANNING:** Would the project:

| a) Physically divide an established community? | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan? | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |

**XI. MINERAL RESOURCES:** Would the project:

<p>| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |</p>
<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

**XII. NOISE**: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

**XIII. POPULATION AND HOUSING**: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?
### XIV. PUBLIC SERVICES:

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

<table>
<thead>
<tr>
<th>Fire protection?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Police protection?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
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<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schools?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parks?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other public facilities?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐</td>
<td>☐</td>
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</tr>
</tbody>
</table>

### XV. RECREATION:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? ☑

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? ☑

### XVI. TRANSPORTATION/TRAFFIC:

Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? ☑

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? ☑
<table>
<thead>
<tr>
<th>c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?</th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>e) Result in inadequate emergency access?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?</td>
<td>Potentially Significant Impact</td>
<td>Less Than Significant with Mitigation</td>
<td>Less Than Significant Impact</td>
<td>No Impact</td>
</tr>
</tbody>
</table>

**XVII. TRIBAL CULTURAL RESOURCES:** Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact |

**XVIII. UTILITIES AND SERVICE SYSTEMS:** Would the project:

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

**XIX. MANDATORY FINDINGS OF SIGNIFICANCE**

<table>
<thead>
<tr>
<th></th>
<th>Potentially Significant Impact</th>
<th>Less Than Significant with Mitigation</th>
<th>Less Than Significant Impact</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>b) Does the project have impacts that are individually limited, but cumulatively considerable? (<em>Cumulatively considerable</em> means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?</td>
<td>☒</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
</tbody>
</table>
Appendix B  Section 4(f) Evaluation
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SR-110 Safety Enhancement Project

LOS ANGELES COUNTY, CALIFORNIA
DISTRICT 7 – LA – 110 (PM 24.0/30.4)
2975U/0713000194
SCH #2016071077

Section 4(f) Evaluation

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 Caltrans under its assumption of responsibility pursuant to 23 USC 327.

March 2017
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# LIST OF ACRONYMS AND ABBREVIATIONS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Register</td>
<td>California Register of Historical Resources</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>DOI</td>
<td>United States Department of the Interior</td>
</tr>
<tr>
<td>EIR/EA</td>
<td>Environmental Impact Report/Environmental Assessment</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>FOE</td>
<td>Finding of Effect</td>
</tr>
<tr>
<td>MGS</td>
<td>Midwest Guardrail System</td>
</tr>
<tr>
<td>National Register</td>
<td>National Register of Historic Places</td>
</tr>
<tr>
<td>NESMI</td>
<td>Natural Environment Study (Minimal Impacts)</td>
</tr>
<tr>
<td>Parkway</td>
<td>Arroyo Seco Parkway</td>
</tr>
<tr>
<td>PM</td>
<td>Post Mile</td>
</tr>
<tr>
<td>proposed project</td>
<td>SR-110 Safety Enhancement Project</td>
</tr>
<tr>
<td>SCAQMD</td>
<td>South Coast Air Quality Management District</td>
</tr>
<tr>
<td>SHPO</td>
<td>State Historic Preservation Officer</td>
</tr>
<tr>
<td>SR-110</td>
<td>State Route 110</td>
</tr>
<tr>
<td>Standards</td>
<td>Secretary of the Department of the Interior’s Standards</td>
</tr>
<tr>
<td>TASAS</td>
<td>Traffic Accident Surveillance and Analysis System</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USDOT</td>
<td>United States Department of Transportation</td>
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Chapter 1 Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 United States Code (USC) 303, declares that “it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by the federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if:

- There is no prudent and feasible alternative to using that land; and
- The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the Department of the Interior (DOI) and, as appropriate, involved the offices of the Department of Agriculture and the Department of Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the State Historic Preservation Officer (SHPO) is also needed.
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Chapter 2  Description of Proposed Project

The California Department of Transportation (Caltrans) is proposing operational and safety improvements on State Route 110 (SR-110) between West Sunset Boulevard to Grand Avenue in Los Angeles County. The following sections summarize the Purpose and Need for the proposed project and briefly describe the alternatives. The full descriptions are contained in Chapter 1 of the Draft Environmental Assessment.

The SR-110 Safety Enhancement Project (proposed project) would include the construction of safety enhancements on SR-110 between post miles (PM) 24.0 and 30.4 at multiple locations within the project limits. All proposed work will remain in the State right-of-way and an effort will be made to ensure upgrades match the existing condition of the Arroyo Seco Parkway (Parkway). Features of the project include: construction of new or enlarged maintenance vehicle pullouts, replacement and installation of new crash-cushion devices, installation of new concrete barriers to replace the metal beam guard rail, installation of chain-link fencing, relocation of lighting conduits and pull boxes away from the traveled way, addition of vegetation management controls, treatment of structures with graffiti-resistant coating, removal of curb and gutters, and new signage. Figures 2-1 and 2-2 show the regional location and project vicinity, respectively. The work items with their respective locations are shown on Figure 2-3. Table 2.1 lists the proposed work descriptions and their respective locations.

2.1 Purpose of the Proposed Project

The purpose of this project is to improve the operational and safety characteristics on SR-110 between PM 24.0 and PM 30.4. The proposed project will upgrade the highway facility to meet current design standards. In order to protect highway workers from extended traffic exposure, this project will also provide safe access points and features to reduce repetitive maintenance activities.
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SR-110 Safety Enhancement Project
Project Vicinity

FIGURE 2-2

LEGEND

Project Area

SOURCE: Bing Maps, 2017

07-6A-110 PM 24.0/30.4
2975U/0713000194
Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
FIGURE 2-3

**SR-110 Safety Enhancement Project**

Project Activities
07-LA-110-PM 24/032-A
20150713100159

1 Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

SR-110 Safety Enhancement Project
Project Activities
07-LA-110 FM 24/0324
2075/07/13000058

FIGURE 2-3
(Page 3 of 28)
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**Project Activities**

**SR-110 Safety Enhancement Project**

*Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
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Chapter 2 Description of Proposed Project

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Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MGS - Midwest Guardrail System
MBGR - Metal Beam Guardrail
Conc - Concrete
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 2-3
SR-110 Safety Enhancement Project
Project Activities
07-LA-110 FM 24/7/30.4
29750/07/3000556
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Project Activities

SR-110 Safety Enhancement Project
07-LA-110-FM 24/0304
2975/0713000154

Location Numbers

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

- Concrete
- Midwest Guardrail System
- Southbound
- Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 2-3

(Page 9 of 28)
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SR-110 Safety Enhancement Project
Project Activities
07-LA-110-PM 24/03/0
3975/007300000

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

FIGURE 2-3
(Page 10 of 28)
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SR-110 Safety Enhancement Project
Project Activities
07-La110 FM 24/03/20
29/01/17/10/01/20

Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
**SR-110 Safety Enhancement Project**

**Project Activities**

*Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.*
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SR-110 Safety Enhancement Project
Project Activities
07-La 110 PM 24/03/20
2015/07/01/3156
FIGURE 2.3 (Page 16 of 28)

Location Numbers

Legend
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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SOURCE CALTRANS, 2016:

SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail

Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 2-3
SR-110 Safety Enhancement Project
Project Activities
07-LA-110 PM 24/07/06
2975U0713300154

Location Numbers

Figure 2-3 shows the Project Activities for the SR-110 Safety Enhancement Project. The map highlights various locations and the proposed work activities, including the removal of certain elements and the installation of new ones.

Project Postmiles: 23.0

Location Numbers:
18
24b

Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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Project Activities
SR-110 Safety Enhancement Project

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

**FIGURE 2-3**

(List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.)
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**LEGEND**

- **APE** - Area of Potential Effects
- **PAL** - Project Area Limits
- **ASPHD** - Arroyo Seco Parkway Historic District
- **MBGR** - Metal Beam Guardrail
- **Conc** - Concrete
- **MGS** - Midwest Guardrail System
- **SB** - Southbound
- **NB** - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

**SR-110 Safety Enhancement Project**

**Project Activities**

07-LA-110-PW 24/03/06
2875/07/L3005013A

**FIGURE 3**

(Page 20 of 28)
Project Activities

SR-110 Safety Enhancement Project

07-SA-110-PM 24/032.4
2975/0713000516

FIGURE 2-3

(SR-110 Safety Enhancement Project)

Legend:
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
This page intentionally left blank
LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
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MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MGS - Midwest Guardrail System
MBGR - Metal Beam Guardrail

Conc - Concrete
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
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SR-110 Safety Enhancement Project
Project Activities
07-La-110-PM 24/0/02.6
2977/OCT13000506

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

FIGURE 2-3
(Page 25 of 28)
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Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.

* Location Numbers
SR-110 Safety Enhancement Project

LEGEND
APE - Area of Potential Effects
PAL - Project Area Limits
ASPHD - Arroyo Seco Parkway Historic District
MBGR - Metal Beam Guardrail
Conc - Concrete
MGS - Midwest Guardrail System
SB - Southbound
NB - Northbound

* Refer to Table 2.1, List of Proposed Work, in the EIR/EA for a description of the work to be done at each location number.
This page intentionally left blank
Table 2.1 Build Alternative Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25.476</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushions with new crash cushion (SCI-100GM) at the NB SR-110/I-5 connector.</td>
</tr>
<tr>
<td>2</td>
<td>26.08</td>
<td>SB</td>
<td>Replace the existing wood retaining wall with a 118 ft concrete retaining wall (Type 6A) and add 40 ft of concrete barrier (Type 736B Mod) to the south end of the retaining wall. Install approximately 40 ft of cable railing atop new concrete retaining wall and concrete barrier. Also relocate lamp post behind the new retaining wall.</td>
</tr>
<tr>
<td>3</td>
<td>I-5 (20.3)</td>
<td>NB</td>
<td>Construct an MVP to the left of the NB I-5/NB SR-110 connector.</td>
</tr>
<tr>
<td>4</td>
<td>25.82</td>
<td>SB</td>
<td>SB SR-110 to SB I-5 connector, replace temporary railing, K-rail, with approximately 230 linear feet of concrete barrier (Type 736B) and attach 75 ft of MGS on the southwestern end of the new barrier.</td>
</tr>
<tr>
<td>5a</td>
<td>25.757</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SCI-100GM) at Figueroa Street off-ramp.</td>
</tr>
<tr>
<td>5b</td>
<td>25.74</td>
<td>NB</td>
<td>Remove existing MBGR located at the right of the Figueroa Street off-ramp and replace with 45 ft of concrete barrier (Type 736B Mod).</td>
</tr>
<tr>
<td>5c</td>
<td>25.72</td>
<td>NB</td>
<td>Remove 150 ft of existing MBGR and replace with concrete barrier (Type 736B Mod).</td>
</tr>
<tr>
<td>6</td>
<td>25.93</td>
<td>Connector</td>
<td>SB SR-110 to NB/SB I-5 connector, North of Avenue 26, place 400 ft of vegetation management control along the existing MBGR located on the right side of the freeway/connector.</td>
</tr>
<tr>
<td>7</td>
<td>27.12</td>
<td>SB</td>
<td>SB SR-110, Avenue 43 on-ramp, place 40 ft of vegetation management control along the existing MBGR located on the right side of the freeway/connector.</td>
</tr>
<tr>
<td>8</td>
<td>29.19</td>
<td>SB</td>
<td>Replace existing sand-filled crash cushion with crash cushion (SCI-100GM) at Marmion Way on-ramp.</td>
</tr>
<tr>
<td>9</td>
<td>29.266</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with crash cushion (SCI-100GM) at Marmion Way off-ramp.</td>
</tr>
<tr>
<td>10a</td>
<td>27.17</td>
<td>SB</td>
<td>Reset seven sign posts in anchor sleeves.</td>
</tr>
<tr>
<td>10b</td>
<td>27.16</td>
<td>SB</td>
<td>Reset two sign posts in anchor sleeves.</td>
</tr>
<tr>
<td>10c</td>
<td>27.17</td>
<td>SB</td>
<td>Remove approximately 2,750 sq ft of rock blanket and replace with textured minor concrete &quot;rock pattern.&quot;</td>
</tr>
<tr>
<td>10d</td>
<td>27.19</td>
<td>SB</td>
<td>Place approximately 700 sq ft of minor concrete (in a brushed finish) between curb and retaining wall to the right of the off-ramp along the existing wall.</td>
</tr>
<tr>
<td>11a</td>
<td>24.9</td>
<td>NB</td>
<td>Figueroa Street Tunnel No.1 (53-0199R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11b</td>
<td>25.14</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 2 (53-200R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11c</td>
<td>25.28</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 3 (53-201R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>11d</td>
<td>25.37</td>
<td>NB</td>
<td>Figueroa Street Tunnel No. 4 (53-0202R) – Treat face of tunnel, wing walls, and historical concrete barriers with graffiti-resistant coating.</td>
</tr>
<tr>
<td>12</td>
<td>24.69</td>
<td>SB</td>
<td>Install a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located alongside Stadium Way.</td>
</tr>
</tbody>
</table>
## Table 2.1 Build Alternative Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>24.764</td>
<td>NB</td>
<td>Install 350 ft of chain-link fence to enclose area and install a 4 ft long chain-link access gate within existing right-of-way chain-link fence located to the right of the on-ramp.</td>
</tr>
<tr>
<td>14</td>
<td>24.7</td>
<td>SB</td>
<td>Install a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located near abutment 1 (south end of Stadium Way Undercrossing [Bridge No. 53-05406]).</td>
</tr>
<tr>
<td>15a</td>
<td>28.4</td>
<td>SB</td>
<td>Place a 4 ft long chain-link access gate within the existing right-of-way chain-link fence located alongside Arroyo Drive.</td>
</tr>
<tr>
<td>15b</td>
<td>28.4</td>
<td>SB</td>
<td>Extend existing rock blanket 20 ft from edge.</td>
</tr>
<tr>
<td>16</td>
<td>25.051</td>
<td>SB</td>
<td>Place approximately 810 sq ft of textured minor concrete with a &quot;rock pattern.&quot;</td>
</tr>
<tr>
<td>17</td>
<td>28.07</td>
<td>SB</td>
<td>Place 550 sq ft of textured minor concrete in a fieldstone pattern for a length of 46 ft. Reset “Exit” sign with anchor sleeve.</td>
</tr>
<tr>
<td>18</td>
<td>27.99</td>
<td>SB</td>
<td>Place 510 sq ft of textured minor concrete in a fieldstone pattern for a length of 60 ft beyond the gore. Reset sign with anchor sleeve.</td>
</tr>
<tr>
<td>19</td>
<td>25.09</td>
<td>NB</td>
<td>Extend an existing MVP by 35 ft into the rock blanket area and reset one sign post in an anchor sleeve. A portion of the rock blanket area will be removed and paved with asphalt to match existing MVP.</td>
</tr>
<tr>
<td>20a</td>
<td>27.15</td>
<td>SB</td>
<td>Install 75 ft of MGS to protect utilities cabinet. Include vegetation management control beneath MGS.</td>
</tr>
<tr>
<td>20b</td>
<td>27.15</td>
<td>SB</td>
<td>Relocate underground lighting conduit and pull boxes back from the edge of traveled way so the boxes will be behind the utilities cabinet and new MGS (item 20a).</td>
</tr>
<tr>
<td>21</td>
<td>24.35</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SGI-100GM).</td>
</tr>
<tr>
<td>22</td>
<td>24.6</td>
<td>NB</td>
<td>Place a 70 ft MVP and driveway with a “southern blush” brushed-concrete finish.</td>
</tr>
<tr>
<td>23</td>
<td>24.307</td>
<td>NB</td>
<td>Replace existing sand-filled crash cushion with new crash cushion (SGI-100GM).</td>
</tr>
<tr>
<td>24a</td>
<td>28.09</td>
<td>NB</td>
<td>Remove two existing sand-filled cushions.</td>
</tr>
<tr>
<td>24b</td>
<td>28.096</td>
<td>NB</td>
<td>Remove 130 ft of MBGR and replace with MGS and vegetation management control.</td>
</tr>
<tr>
<td>25</td>
<td>27.04</td>
<td>SB</td>
<td>Install a 4 ft chain-link access gate within the existing right-of-way chain-link fence.</td>
</tr>
<tr>
<td>26</td>
<td>25.770-27.785</td>
<td>NB</td>
<td>Remove approximately 10,639 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>27</td>
<td>28.102-28.282</td>
<td>NB</td>
<td>Remove approximately 950 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>28</td>
<td>28.755-28.926</td>
<td>NB</td>
<td>Remove approximately 902 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
</tbody>
</table>
### Table 2.1 Build Alternative Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td>28.878-29.153</td>
<td>SB</td>
<td>Remove approximately 1,452 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>30a</td>
<td>29.286-29.520</td>
<td>NB</td>
<td>Remove approximately 1,236 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>30b</td>
<td>29.286-29.520</td>
<td>NB</td>
<td>Install 65 ft of concrete barrier (Type 60D) to protect the support of the Arroyo Drive Overcrossing. Place 598 ft of concrete barrier (Type 736B) to the west of the bridge support.</td>
</tr>
<tr>
<td>31a</td>
<td>29.750-30.074</td>
<td>SB</td>
<td>Remove approximately 1,750 ft of existing curbs and gutter and replace with concrete pavement to match existing pavement. The existing concrete barriers will be modified at the base to continue the existing slope of the barrier surface down to road surface.</td>
</tr>
<tr>
<td>31b</td>
<td>29.750-30.074</td>
<td>SB</td>
<td>Install 65 ft of concrete barrier (Type 60D) to protect the support of the Arroyo Drive Overcrossing. Remove 75 ft of MBGR and replace with MGS on the east of the bridge support and install 482 ft of concrete barrier (Type 736B) west of the bridge support.</td>
</tr>
<tr>
<td>32</td>
<td>27.517</td>
<td>NB</td>
<td>Remove existing overhead sign and install a new overhead sign behind 312 ft of new concrete barrier (Type 736B).</td>
</tr>
<tr>
<td>33</td>
<td>25.9</td>
<td>NB</td>
<td>Install 60 ft of concrete barrier (Type 60D) along the right side of the bridge support to match existing pattern of Avenue 26 Overcrossing Bridge (Bridge No. 53-0372).</td>
</tr>
<tr>
<td>34</td>
<td>26.399</td>
<td>NB</td>
<td>Install 120 ft of concrete barrier (Type 60D) along the right side of two bridge supports to match existing pattern of Avenue 35 Overcrossing Bridge (Bridge No. 53-425) and Pasadena Avenue Overcrossing Bridge (Bridge No. 53-0426)</td>
</tr>
<tr>
<td>35</td>
<td>27.07</td>
<td>NB</td>
<td>Install 850 ft of concrete barrier (Type 60D) along the right side of the bridge support to match existing pattern of Avenue 43 Overcrossing Bridge (Bridge No. 53-427) and continuing along the existing side barrier under just after Avenue 45.</td>
</tr>
<tr>
<td>36</td>
<td>27.13</td>
<td>NB</td>
<td>Remove and replace three light posts with replica light posts within the new concrete barrier (Location No. 35).</td>
</tr>
<tr>
<td>37</td>
<td>29.24</td>
<td>NB</td>
<td>Install 57 ft of concrete barrier (Type 60D) at right side of bridge abutment wall below Avenue 64 Overcrossing Bridge to match existing pattern.</td>
</tr>
<tr>
<td>38</td>
<td>25.7</td>
<td>SB</td>
<td>Remove 75 ft of MBGR and replace with MGS. Install 599 ft of concrete barrier (Type 736B) and 531 ft of concrete barrier (Type 60D) along the left side of the Figueroa Street on-ramp and continuing onto the mainline.</td>
</tr>
<tr>
<td>39</td>
<td>24.16</td>
<td>NB</td>
<td>Remove 200 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>40</td>
<td>24.16</td>
<td>SB</td>
<td>Remove 200 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>41</td>
<td>24.37</td>
<td>NB</td>
<td>Remove 300 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>42</td>
<td>24.37</td>
<td>SB</td>
<td>Remove 238 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>43</td>
<td>24.76</td>
<td>NB</td>
<td>Remove 87.5 ft of MBGR and replace with MGS.</td>
</tr>
<tr>
<td>44</td>
<td>24.9</td>
<td>NB</td>
<td>Remove 225 ft of MBGR and replace with MGS at beginning of first tunnel.</td>
</tr>
<tr>
<td>45</td>
<td>25.14</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS at beginning of second tunnel.</td>
</tr>
</tbody>
</table>
Table 2.1 Build Alternative Proposed Work

<table>
<thead>
<tr>
<th>Location Number</th>
<th>Post Mile (PM)</th>
<th>Direction of Travel</th>
<th>Work Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>25.23</td>
<td>NB</td>
<td>Remove 75 ft of MBGR and replace with MGS between second and third tunnel.</td>
</tr>
<tr>
<td>47</td>
<td>25.3</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS between third and fourth tunnel.</td>
</tr>
<tr>
<td>48</td>
<td>25.37</td>
<td>NB</td>
<td>Remove 150 ft of MBGR and replace with MGS at fourth tunnel.</td>
</tr>
</tbody>
</table>

ft = foot/feet  
I-5 = Interstate 5  
MBGR = Metal Beam Guardrail  
MGS = Midwest Guardrail System  
MVP = maintenance vehicle pullout  
PM = Post Mile  
SB = southbound  
sq ft = square foot/feet  
SR-110 = State Route 110  
NB = northbound

2.2 Need for Proposed Project

The project is needed because this segment of SR-110 experiences high accident rates, exceeding the State average for similar highway facilities. According to the Caltrans Traffic Accident Surveillance and Analysis System report (TASAS, January 2011 through December 2013), over the approximately 8.2 miles, there were a total of 1,110 accidents including six fatal accidents with six fatalities within the southbound direction of SR-110. Furthermore, there were a total of 1,332 accidents including three fatal accidents with four fatalities within the northbound direction of SR-110.

Within the project limits, the northbound portion of the freeway on the right side has raised concrete curbs located in front of the concrete barriers. When the curbs are struck at high speeds, there is the potential for vehicles to flip and roll over the concrete barriers. Removing the curb is a safety mechanism that will reduce the severity of right shoulder accidents on the roadway. Removal of the curb will also increase the shoulder width, thereby providing a larger area for motorists to safely pull over.

A summary of the actual accident rates along with the corresponding statewide averages for similar facilities is listed in Table 2.2. The higher-than-statewide average values are shown in bold. The types of accidents and the primary collision factors according to the TASAS reports are summarized in Table 2.3.
### Table 2.2 Summary of Accident Rates

<table>
<thead>
<tr>
<th>Location Description</th>
<th>Actual Accident Rates (within project limits) (MVM)</th>
<th>Statewide Average Rates (MVM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fatal</td>
<td>Fatal + Injury</td>
</tr>
<tr>
<td><strong>Southbound Direction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 23.000-24.523</td>
<td>0.006</td>
<td>0.45</td>
</tr>
<tr>
<td>PM 24.525L-25.435L†</td>
<td>0.000</td>
<td>0.58</td>
</tr>
<tr>
<td>PM 25.484-31.912</td>
<td>0.015</td>
<td>0.57</td>
</tr>
<tr>
<td><strong>Northbound Direction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM 23.000-24.523</td>
<td>0.011</td>
<td>1.09</td>
</tr>
<tr>
<td>PM 24.525R-25.483R‡</td>
<td>0.000</td>
<td>0.95</td>
</tr>
<tr>
<td>PM 25.485-31.912</td>
<td>0.003</td>
<td>0.35</td>
</tr>
</tbody>
</table>

Note: **Bold** type indicates a higher-than-statewide average.

1 (L) - Left independent alignment
2 (R) - Right independent alignment
MVM = million vehicle miles
PM = Post Mile
SR-110 = State Route 110

### Table 2.3 Type of Collisions and Primary Collision Factors

<table>
<thead>
<tr>
<th>Type of Collision</th>
<th>Percent¹</th>
<th>Primary Collision Factors</th>
<th>Southbound Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>46.8%</td>
<td>Following too close, speeding</td>
<td></td>
</tr>
<tr>
<td>Hit Object</td>
<td>26%</td>
<td>Improper turn, run off, hit overturned objects on the shoulder, fence, guardrail, median barrier, object on the road, cut slope or embankment, post mile stick, sign post, curb</td>
<td></td>
</tr>
<tr>
<td>Sideswipe</td>
<td>23.2%</td>
<td>Improper turn, failure to yield, speeding, pass other</td>
<td></td>
</tr>
<tr>
<td>Overturn</td>
<td>1.4%</td>
<td>Striking an object, speeding, improper turn</td>
<td></td>
</tr>
<tr>
<td>Broadside</td>
<td>1%</td>
<td>Improper turn, failure to yield</td>
<td></td>
</tr>
<tr>
<td>Not Stated</td>
<td>0.8%</td>
<td>Accident reports did not disclose</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.5%</td>
<td>Accident reports did not disclose</td>
<td></td>
</tr>
<tr>
<td>Auto-Pedestrian</td>
<td>0.3%</td>
<td>Pedestrian struck</td>
<td></td>
</tr>
<tr>
<td>Head-on</td>
<td>0.2%</td>
<td>Cross into opposite lane, making U-turn, pass other vehicle</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Collision</th>
<th>Percent¹</th>
<th>Primary Collision Factors</th>
<th>Northbound Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear End</td>
<td>61.9%</td>
<td>Following too close, speeding</td>
<td></td>
</tr>
<tr>
<td>Hit Object</td>
<td>17.7%</td>
<td>Improper turn, run off, hit overturned objects on the shoulder, fence, guardrail, median barrier, object on the road, cut slope or embankment, post mile stick, sign post, curb</td>
<td></td>
</tr>
<tr>
<td>Sideswipe</td>
<td>17.1%</td>
<td>Improper turn, failure to yield, speeding, pass other</td>
<td></td>
</tr>
<tr>
<td>Overturn</td>
<td>1%</td>
<td>Striking an object, speeding, improper turn</td>
<td></td>
</tr>
<tr>
<td>Broadside</td>
<td>1%</td>
<td>Improper turn, failure to yield</td>
<td></td>
</tr>
<tr>
<td>Not Stated</td>
<td>0.7%</td>
<td>Accident reports did not disclose</td>
<td></td>
</tr>
<tr>
<td>Head-on</td>
<td>0.5%</td>
<td>Cross into opposite lane, making U-turn, pass other vehicle</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.2%</td>
<td>Accident reports did not disclose</td>
<td></td>
</tr>
<tr>
<td>Auto-Pedestrian</td>
<td>0.1%</td>
<td>Pedestrian struck</td>
<td></td>
</tr>
</tbody>
</table>

¹ Percent (%) of total number of accidents.
The high accident rates in the project area have increased the exposure level to highway workers doing repetitive and routine maintenance functions in the vicinity. As Table 2.3 illustrates, the traffic accidents often result in damage to metal beam guard rails, sign posts, and other State property. Graffiti removal is also another maintenance function that requires repetitive activity in areas that expose highway maintenance workers to frequent traffic dangers. Once these cases occur, highway workers are dispatched to repair and clean-up the damage to reduce and/or prevent further incidents from occurring. However, in some cases, highway workers are called out to repair State facilities in the same locations multiple times per week.

The Parkway has narrow lanes, complex curvilinear alignment, and varying shoulder lengths that compromise highway safety. These are major concerns to maintenance operations/highway workers as these highway areas are difficult to access due to their close proximity to mainline traffic. These issues result in highway workers having to walk and carry their equipment, including wreckage debris, for extended distances, thus increasing the length of time they are exposed to traffic and unsafe conditions.

Accessibility is difficult for highway workers, within the project limits, since there is insufficient State right-of-way to access areas that require routine maintenance. In some locations, the freeway is directly adjacent to the Arroyo Seco Channel, the City of Los Angeles, and/or privately owned property, which prohibits access from outside Caltrans right-of-way. In addition, the existing conditions of the proposed project area make it difficult for highway workers to find locations to park their vehicles at safe distances from traffic in order to access areas that require routine maintenance. Without implementing full-lane closures, various landscaped and weed-infested median and gore areas within the project limits are not safely accessible to highway workers. The high level of traffic on the Parkway greatly reduces the window of opportunity to perform maintenance activities to the point that vegetation, at some locations, has overgrown to the edge of the traveled way.

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1 Gore is the area immediately beyond the divergence of two roadbeds that is bounded by the edges of those roadbeds.
Properties subject to the provisions of Section 4(f) are publicly owned parks and recreation areas, wildlife and waterfowl refuges of national, State, or local significance; and historic sites of national, State, or local significance. This section describes properties within the project area that are subject to the provisions of Section 4(f).

3.1 Arroyo Seco Parkway Historic District

The Arroyo Seco Parkway (Parkway) is located in Los Angeles County and crosses through portions of three cities: Los Angeles, South Pasadena, and Pasadena. The Parkway is owned and maintained by Caltrans. The Parkway is listed in the National Register of Historic Places (National Register) as the Arroyo Seco Parkway Historic District and is considered a historic property for the purposes of Section 106 of the National Historic Preservation Act. Properties listed in the National Register are automatically listed in the California Register of Historical Resources (California Register). The Arroyo Seco Parkway Historic District is, therefore, also considered a historical resource for the purposes of the California Environmental Quality Act (CEQA). In addition, the property is a State-owned historical resource pursuant to California State Public Resources Code Section 5024.

The Parkway was designated as a National Scenic Byway under the Federal Highway Administration’s (FHWA) National Scenic Byways Program in June 2002 and is among a select collection of scenic and historic roads across the United States recognized by the United States Department of Transportation (USDOT) for their outstanding intrinsic qualities. The Parkway offers an experience that differs from most other National Scenic Byways in America. In addition to being a rare, urban byway, the Parkway was originally designed as a new way to travel quickly and efficiently between Los Angeles and Pasadena. It was opened to the public in 1940. At the dedication ceremony, California Governor Culbert L. Olson declared the Parkway to be the, “first freeway in the West.” The Parkway was hailed both as a “modern” and “model” road by State highway engineers due to its safety features.

The Parkway was constructed in three phases between the years 1938 and 1953. The approximately 6-mile initial phase (1938–1940) went south from Glenarm Street in Pasadena to Avenue 22 in downtown Los Angeles.
The second phase (1940–1943) of the Arroyo Seco Parkway, referred to as the Southerly Extension, added over one mile and four lanes of traffic to the first phase. The additional lanes relieved a traffic bottleneck north of the Figueroa Street tunnels and ran along the Elysian Park Hills. The Figueroa Street tunnels were completed before construction had begun on the Parkway, but were planned in anticipation of an eventual high-speed roadway. The three tunnels were completed in 1931. Each tunnel is just over 46 feet wide and 28 feet high, accommodating four lanes of traffic, a 5-foot sidewalk, and a 18-inch guardrail. Each tunnel portal has identical Art Deco features including incised geometric detailing and a bas-relief of the Los Angeles City Seal at its apex.

The third phase (1948–1953) is the shortest, at just under a mile in length. This final phase included the construction of several bridges and an undercrossing in preparation for its eventual extension to the four-level interchange.

3.1.1 Section 4(f) Consideration for Historic Districts and Application to Arroyo Seco Parkway Historic District

The Section 4(f) Policy Paper issued by the USDOT FHWA’s Office of Planning, Environment, and Realty Project Development and Environmental Review on July 20, 2012, addresses how Section 4(f) applies to historic districts that are on or eligible for the National Register in the answer to Question 2B, “How does Section 4(f) apply in historic districts that are on or eligible for the NR?” which is given below:

“When within a National Register listed or eligible historic district, FHWA’s long-standing policy is that Section 4(f) applies to those properties that are considered contributing to the eligibility of the historic district, as well as any individually eligible property within the district. Elements within the boundaries of a historic district are assumed to contribute, unless they are determined by FHWA in consultation with the SHPO/THPO not to contribute.” (Section 4(f) Policy Paper, page 28)

As described above, Section 4(f) applies to those elements/properties that contribute to the eligibility of the site as a historic district or resources within a historic district that are individually eligible for listing on the National Register. Section 4(f) does not apply to property within the district that does not contribute to the eligibility of the historic district or that is not individually eligible.
Character-defining features of the Parkway are listed below and organized by phases. Phase I includes image Nos. 1–30, Phase II includes image Nos. 31–47, and Phase III includes image Nos. 48–53. Table 4.1 (which appears at the end of Chapter 4) lists all of the project features, which were identified during the Section 106 process, and identifies which are contributing elements and which are non-contributing elements to the Arroyo Seco Parkway Historic District and whether there is a Section 4(f) use or not.

Today, the Parkway is considered by many engineers, landscape architects, and transportation historians to be one of the most significant historic roads in the entire United States.

<table>
<thead>
<tr>
<th>Character-Defining Features – Phase I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Phase I Roadway – 1938–1940 (PM 31.89-25.78, Contributor)</td>
</tr>
<tr>
<td>Phase I was approximately 6 miles long. It was originally characterized by its winding route, landscaped medians, early safety features, and “two-tone” paving. The winding route, two-tone paving, and some early safety features remain.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>2.</strong> Arroyo Seco Flood Control Channel - 1935–1947 (PM 25.48-30.10, Contributor)</td>
</tr>
<tr>
<td>The Arroyo Seco Flood Control Channel is an approximately 10-mile long masonry-lined open channel that varies in width from 25 feet to 80 feet. Portions of the channel are rectangular and others are trapezoidal.¹</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>3.</strong> Fair Oaks OC – 1940 (Bridge No. 53-0440, PM 31.17, Contributor)</td>
</tr>
<tr>
<td>The Fair Oaks Overcrossing is of rigid frame construction with double 40-foot spans and a roadway length of 76 feet. It was constructed with wide sidewalks in order to accommodate telephone conduits and gas mains, and the roadway carried double tracks for the Pacific Electric Railway.</td>
</tr>
</tbody>
</table>

### Character-Defining Features – Phase I

<table>
<thead>
<tr>
<th></th>
<th>Property Description</th>
</tr>
</thead>
</table>
| 4. | **Fremont Avenue Railroad UP – 1940**  
(Bridge No. 53-0439, PM 31.03, Contributor)  
The Fremont Avenue Railroad Underpass is a double track through steel plate girder bridge with two 68-foot spans with three girders each on two 19-foot centers. |
| 5. | **Fremont Avenue OC – 1940**  
(Bridge No. 53-0438, PM 31.01, Contributor)  
The Fremont Avenue Overcrossing is a 36-foot wide continuous, rigid frame, at-grade bridge with two 40-foot spans. |
| 6. | **Meridian Avenue OC – 1940**  
(Bridge No. 53-0437, PM 30.78, Contributor)  
The Meridian Avenue Overcrossing is 86 feet in length with two 40-foot spans. The overcrossing has 5-foot sidewalks. |
| 7. | **Prospect Avenue OC – 1939**  
(Bridge No. 53-0436, PM 30.70, Contributor)  
The Prospect Avenue Overcrossing is 86 feet in length with two 40-foot spans. The overcrossing has 5-foot sidewalks. |
| 8. | **Orange Grove Avenue OC – 1939**  
(Bridge No. 53-0437, PM 30.78, Contributor)  
The Orange Grove Avenue Overcrossing is 87 feet in length with two 40-foot spans. The overcrossing has 5-foot sidewalks. |
### Character-Defining Features – Phase I

<table>
<thead>
<tr>
<th>No.</th>
<th>Property Description</th>
</tr>
</thead>
</table>
| 9.  | Grand Avenue OC – 1938 (Bridge No. 53-0434, PM 30.43, Contributor)  
The Grand Avenue Overcrossing is an 89-foot long rigid frame structure that is 43 feet wide. The overcrossing has two 41-foot spans and a vertical clearance of 17 feet. |
| 10. | Arroyo Drive OC – 1938 (Bridge No. 53-0433, PM 30.30, Contributor)  
The Arroyo Drive Overcrossing is a rigid frame structure that is 143 feet long and 48 feet wide. It has a clear span of 97 feet and two 23-foot cantilever approach spans. |
| 11. | Arroyo Seco Pedestrian and Equestrian UC – 1938 (Bridge No. 53-0432, PM 30.25, Contributor)  
The Arroyo Seco Pedestrian and Equestrian Undercrossing is a rigid frame structure that is 76 feet long and 21 feet wide. It has an automatic lighting system and connects the equestrian trails on either side of the Parkway. |
| 12. | Arroyo Seco Bridge – 1939 (Bridge No. 53-0276, PM 30.10, Contributor)  
The Arroyo Seco Bridge is a five-span structure that is a total of 432 feet in length and 70 feet in width. The structure is skewed at 42-degrees and carries SR-110 traffic over the Arroyo Seco while accommodating park roads and sidewalks below. |
| 13. | York Boulevard OC – 1912 (Bridge Nos. 53-0121 and 53C-1874, PM 29.50, Contributor)  
The York Boulevard Overcrossing is a six-span reinforced concrete spandrel arch bridge. It was originally constructed in 1912, and was an early and important permanent Arroyo Seco crossing. It was funded by South Pasadena voters through a municipal bond election. |
<table>
<thead>
<tr>
<th>Character-Defining Features – Phase I</th>
</tr>
</thead>
</table>
| **14.** Arroyo Seco Maintenance Station - 1931  
(6740 Marmion Way, PM 29.3, Contributor)  
The Arroyo Seco Maintenance Station is a 0.3-acre facility with a storage/equipment building and a gas house. The buildings are of concrete rubble masonry construction with side-gabled roofs covered in asphalt shingles. The roofs have exposed rafter tails and gable end attic vents. |
| **15.** Marmion Way OC – 1940  
(Bridge Nos. 53-0445 and 53C-1879, PM 29.28, Contributor)  
The Marmion Way Overcrossing is 252 feet long and 35 feet wide. It has five total spans. Three of the spans are reinforced concrete rigid-frame slabs and the other two spans are reinforced concrete girders. |
| **16.** Marmion Way Off-ramp – 1940  
(Bridge No. 53-0886S, PM 29.20, Contributor)  
The Marmion Way Off-ramp is a reinforced concrete through girder rigid frame service ramp with a clear span of 78 feet. The roadway of the off-ramp is 24 feet long and 8 feet wide with a skew of 20 feet. |
| **17.** Santa Fe Arroyo Seco Railroad Bridge – ca. 1900  
(Bridge No. 53-0431, PM 29.03, Contributor)  
The Santa Fe Arroyo Seco Railroad Bridge, also known as the Avenue 64 Underpass, was originally constructed around 1900 by the California Southern Railroad. It was widened in 1923. The single track steel structure is 750 long with webbed-steel support legs that are anchored with concrete bases. |
| **18.** Avenue 60 Ramp Pedestrian UC – 1940  
(Bridge No. 53-0988T, PM 28.86, Contributor)  
The Avenue 60 Ramp Pedestrian Undercrossing is a 10 feet wide by 10 feet tall reinforced concrete box that is 31 feet long on reinforced concrete abutments. |
### Character-Defining Features – Phase I

<table>
<thead>
<tr>
<th>No.</th>
<th>Property Description</th>
</tr>
</thead>
</table>
| 19. | Avenue 60 Ramp – 1940  (Bridge No. 53-0986S, PM 28.86, Contributor)  
The Avenue 60 Ramp is a reinforced concrete boxed girder structure with closed, rigid frame abutments and four reinforced concrete column bents. It is 29 feet wide and nearly 128 feet long and carries two 11.5-foot traffic lanes and a 1-foot dividing strip between concrete curbs. |
| 20. | Avenue 60 OC – 1939  (Bridge Nos. 53-0430 and 53C-1878, PM 28.76, Contributor)  
The Avenue 60 Overcrossing is a reinforced concrete spandrel arch bridge with geometric Art Deco detailing. The original overcrossing had to be extended in order to accommodate the Parkway. An original 40-foot end span was removed and replaced with three 48-foot arched rib slab spans and a clear span of 109 feet to clear the Arroyo Seco channel. The detailing of the new portion matched the original. |
| 21. | Arroyo Seco Park Bridge – 1940  (Contributor)  
The Arroyo Seco Park Bridge was constructed to provide pedestrian access to parts of the Arroyo Seco Park that were cut off by the Parkway and the Arroyo Seco Flood Control Channel. It is 110 feet long, 8 feet wide, and was one of the earliest prestressed concrete bridges in California. |
| 22. | Via Marisol OC – 1939  (Bridge No. 53-0429, PM 28.38, Contributor)  
The existing Via Marisol Overcrossing replaced an older structure at this location. It has two 58-foot spans that clear the Parkway and a 72-foot span that clears the Arroyo Seco Channel. |
<table>
<thead>
<tr>
<th>Character-Defining Features – Phase I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>23. Avenue 52 OC – 1939</strong></td>
</tr>
<tr>
<td>(Bridge No. 53-0428, PM 28.05, Contributor)</td>
</tr>
<tr>
<td>The Avenue 52 Overcrossing is a rigid frame reinforced concrete structure that is 114 feet long, 34 feet wide, and has two 56-foot spans. The overcrossing has a 68-foot channel extension with a single 63-foot span.</td>
</tr>
<tr>
<td><img src="image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>24. Sycamore Grove Pedestrian OC – 1940</strong></td>
</tr>
<tr>
<td>(Bridge No. 53-0344, PM 27.64, Contributor)</td>
</tr>
<tr>
<td>The Sycamore Grove Pedestrian Overcrossing provides pedestrian access between a parking area and playground on opposite sides of the Parkway. It is a two-span box girder design with a semi-rigid frame. It is 220 feet in length and 8 feet wide and provides clearance of 35 feet.</td>
</tr>
<tr>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>25. Avenue 43 OC – 1939</strong></td>
</tr>
<tr>
<td>(Bridge Nos. 53-0427 and 53C-1877, PM 27.12, Contributor)</td>
</tr>
<tr>
<td>The Avenue 43 Overcrossing replaced an earlier 1925 bridge that was destroyed in a 1938 flood. It is a three-span, reinforced concrete girder structure that is 65 feet in length and 24 feet in width. The three clear spans are 51, 53, and 69 feet wide. The railing of the original bridge was recovered and reused for the Avenue 43 Overcrossing.</td>
</tr>
<tr>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>26. Avenue 43 Ramp – 1940</strong></td>
</tr>
<tr>
<td>(Bridge No. 53-0985S, PM 27.08, Contributor)</td>
</tr>
<tr>
<td>The Avenue 43 Ramp was constructed on abutments built in the Arroyo Seco Flood Control Channel walls by Works Progress Administration construction crews. The railing duplicates the railing of an earlier crossing at Avenue 43.</td>
</tr>
<tr>
<td><img src="image4.jpg" alt="Image" /></td>
</tr>
<tr>
<td><strong>27. Pasadena Avenue OC – 1940</strong></td>
</tr>
<tr>
<td>(Bridge Nos. 53-0426 and 53C-1876, PM 26.48, Contributor)</td>
</tr>
<tr>
<td>The Pasadena Avenue Overcrossing was designed by the Los Angeles Bureau of Engineering and replaced an earlier structure. It has two 51-foot spans over the Parkway and one 78-foot span over the channel. Its construction involved rerouting gas, water, sewer, and telephone lines.</td>
</tr>
<tr>
<td><img src="image5.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
### Character-Defining Features – Phase I

| 28. Avenue 35 Railroad UP – 1940  
(Bridge No. 53-0425, PM 26.40, Contributor) | ![Image](https://example.com/image1.png)  
The Avenue 35 Railroad Underpass is a double track railroad bridge that is 260 feet long. It has two roadway spans that are 75 and 68 feet long, and a channel span that is 113 feet long. It has a reinforced concrete substructure that was constructed by the Works Progress Administration. |
| 29. Avenue 26 OC – 1925, 1939  
(Bridge No. 53-0372 and 53C-1875, PM 25.91, Contributor) | ![Image](https://example.com/image2.png)  
The Avenue 26 Overcrossing was originally constructed in 1925 and designed by the Los Angeles Bureau of Engineering under the direction of Merrill Butler. The original structure consisted of a 100-foot reinforced concrete arch span with 43-foot concrete girder spans at either end. In 1939, the Bureau of Engineering team designed an extension that added another 43-foot reinforced concrete girder span to the north end. |
| 30. Figueroa Street Off-ramp UC – 1940  
(Bridge No. 53-0533L, PM 25.78, Contributor) | ![Image](https://example.com/image3.png)  
The Figueroa Street Off-ramp Undercrossing is a simple, 30-inch-thick reinforced concrete solid slab bridge. Its span is 44 feet long and 35 feet wide, with two sidewalks and a skew of 45 degrees. The abutments are supported by footings carried on cast-in-place piles. |

### Character-Defining Features – Phase II

| 31. Phase II Roadway – 1940–1943  
(PM 25.78–24.55, Contributor) | ![Image](https://example.com/image4.png)  
Phase II was approximately 1.5 miles long. It shared many of the same features as Phase I, including the safety features. |
<table>
<thead>
<tr>
<th>Character-Defining Features – Phase II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>32.</strong> Los Angeles River Bridge Eastbound – 1936</td>
</tr>
<tr>
<td>(Bridge No. 53-0042R, PM 25.48, Contributor)</td>
</tr>
<tr>
<td>The Los Angeles River Bridge is also known as the Figueroa Street Viaduct. It has five continuous reinforced concrete girder spans and three continuous steel plate girder spans that rest on square concrete abutments and piers. The bridge is elaborated by curved soffits, and subtle detailing such as scoring along the handrails.</td>
</tr>
</tbody>
</table>

| **33.** Los Angeles River Bridge Westbound – 1944  |
| (Bridge No. 53-0042L, PM 25.48, Contributor) |
| The features of the eastbound viaduct were duplicated for this structure, which was constructed to carry traffic in the opposite direction and relieve a bottleneck at the Figueroa Street tunnels. |

| **34.** Riverside Drive Off-ramp Viaduct – 1931  |
| (Bridge No. 53-2225G, PM 25.48, Non-Contributor) |
| The Riverside Drive Off-ramp Viaduct is 632 feet long and nearly 8 feet wide. It has 21 reinforced concrete continuous tee beam spans with reinforced concrete pier walls, spread footings, and heavy concrete baluster railings. It was constructed to carry pedestrian traffic alongside the Riverside Drive Off-ramp. (Image: Google Maps, July 2016) |

| **35.** Figueroa Street Tunnel 3 – 1931  |
| (Bridge No. 53-0202R, PM 25.37, Contributor) |
| The northernmost of the Figueroa Street tunnels was bored through and constructed starting at the middle and working towards either end. The tunnel, like each of its counterparts, has an ornamental portal on each side that features Art Deco detailing and a bas relief Los Angeles City Seal. |

<p>| <strong>36.</strong> Elysian Park Pedestrian UC – 1931 and 1942  |
| (Bridge Nos. 53-0477R and 53-0477L, PMs 25.33 and 25.36, Non-Contributor) |
| The Elysian Park Pedestrian Undercrossing is a rigid frame reinforced concrete box structure. It is 6 feet wide, 8.2 feet high, and 70.5 feet long. It was closed to the public in 1953 and filled in with shallow fill in 2006. <strong>Feature no longer extant.</strong> |</p>
<table>
<thead>
<tr>
<th>Table: Character-Defining Features – Phase II</th>
</tr>
</thead>
<tbody>
<tr>
<td>37. Figueroa Street Tunnel 2 – 1931</td>
</tr>
<tr>
<td>(Bridge No. 53-0201R, PM 25.28, Contributor)</td>
</tr>
<tr>
<td>The second most northerly of the Figueroa Street</td>
</tr>
<tr>
<td>tunnels was constructed using an open cut method.</td>
</tr>
<tr>
<td>The tunnel, like each of its counterparts, has an</td>
</tr>
<tr>
<td>ornamental portal on each side that features Art</td>
</tr>
<tr>
<td>Deco detailing and a bas relief Los Angeles City</td>
</tr>
<tr>
<td>Seal.</td>
</tr>
<tr>
<td><img src="image1.jpg" alt="Image" /></td>
</tr>
<tr>
<td>38. Park Row OC – 1942</td>
</tr>
<tr>
<td>(Bridge No. 53-0542L, PM 25.2, Contributor)</td>
</tr>
<tr>
<td>The Park Row Overcrossing is a reinforced concrete</td>
</tr>
<tr>
<td>open spandrel arch bridge. The structure is 192 feet</td>
</tr>
<tr>
<td>long. It has a beam and slab deck, and two arch ribs</td>
</tr>
<tr>
<td>buttressed against the adjacent slopes. The</td>
</tr>
<tr>
<td>impressive arch is 130 feet wide and 50 feet above</td>
</tr>
<tr>
<td>the roadway.</td>
</tr>
<tr>
<td><img src="image2.jpg" alt="Image" /></td>
</tr>
<tr>
<td>39. Figueroa Street Tunnel 1 – 1931</td>
</tr>
<tr>
<td>(Bridge No. 53-0200R, PM 25.14, Contributor)</td>
</tr>
<tr>
<td>The tunnel was completed in 1931. This tunnel was</td>
</tr>
<tr>
<td>bored through and constructed starting at the middle</td>
</tr>
<tr>
<td>and working towards either end. The tunnel, like</td>
</tr>
<tr>
<td>each of its counterparts, has an ornamental portal</td>
</tr>
<tr>
<td>on each side that features Art Deco detailing and a</td>
</tr>
<tr>
<td>bas relief Los Angeles City Seal.</td>
</tr>
<tr>
<td><img src="image3.jpg" alt="Image" /></td>
</tr>
<tr>
<td>40. Solano Avenue Pedestrian UC – 1931, 1942</td>
</tr>
<tr>
<td>(Bridge No. 53-0532R, PM 25.1, Contributor)</td>
</tr>
<tr>
<td>The Solano Avenue Pedestrian Undercrossing is 76</td>
</tr>
<tr>
<td>feet long and 8 feet wide. It runs between two</td>
</tr>
<tr>
<td>Figueroa Street tunnels, roughly adjacent to</td>
</tr>
<tr>
<td>Academy Road and Amador Street.</td>
</tr>
<tr>
<td><img src="image4.jpg" alt="Image" /></td>
</tr>
<tr>
<td>41. Solano Avenue UC – 1942</td>
</tr>
<tr>
<td>(Bridge No. 53-0541L, PM 25.09, Contributor)</td>
</tr>
<tr>
<td>The Solano Avenue Undercrossing is a 157-foot-</td>
</tr>
<tr>
<td>long continuous girder structure that has three</td>
</tr>
<tr>
<td>spans. It is 46 feet wide and carries Parkway</td>
</tr>
<tr>
<td>traffic over Solano Avenue.</td>
</tr>
<tr>
<td><img src="image5.jpg" alt="Image" /></td>
</tr>
</tbody>
</table>
### Character-Defining Features – Phase II

<table>
<thead>
<tr>
<th>No.</th>
<th>Property Description</th>
</tr>
</thead>
</table>
| 42. | Amador Street UC – 1946 (Bridge No. 53-0504L, PM 25.04, Contributor)  
The Amador Street Undercrossing is a reinforced concrete continuous girder structure that is 43 feet long and 46 feet wide. |
| 43. | Figueroa Street Tunnel 4 – 1936 (Bridge No. 53-0199R, PM 24.90, Contributor)  
The southernmost of all the Figueroa Street tunnels, this tunnel was last to be completed, in 1936. It has a length of 755 feet. The tunnel, like each of its counterparts, has an ornamental portal on each side that features Art Deco detailing and a bas relief Los Angeles City Seal. |
| 44. | Stadium Way OC – 1942 (Bridge No. 53-0540R, PM 24.76, Non-Contributor)  
Formerly known as the Bishops Road Overcrossing, this reinforced concrete continuous girder bridge is 103 feet long and 46 feet wide. |
| 45. | Stadium Way UC – 1942 (Bridge No. 53-0540L, PM 24.73, Non-Contributor)  
Formerly known as the Bishops Road Undercrossing, this rigid frame reinforced concrete bridge is 135 feet long and 24 feet wide with cantilevered approach spans. (Image: Google Maps, December 2015) |
| 46. | Hill Street Off-ramp OC – 1942 (Bridge No. 53-0539C, PM 24.55, Non-Contributor)  
The Hill Street Off-ramp Overcrossing is a steel girder span structure on steel columns. It is 189 feet long and 24 feet high with a 58-degree skew. The structure originally carried southbound traffic onto Figueroa Street. |
### Chapter 3  List and Description of Section 4(f) Properties

#### Character-Defining Features – Phase II

| 47. | Yale Street Pedestrian UC - 1940  
(Bridge No. 53-0586M, PM 24.4, Non-Contributor) | Feature no longer extant.  
The Yale Street Pedestrian Undercrossing was approximately 88 feet long and 8 feet wide. It was a concrete box girder structure; it was abandoned in 1962 following the construction of the Yale Street Pedestrian Overcrossing.¹ |

#### Character-Defining Features – Phase III

(PM 24.55-23.6, Contributor) | The shortest of the three segments, Phase III connected the Arroyo Seco Parkway to the Four Level Interchange. The segment is just under a mile long. |
| 49. | College Street OC – 1939  
(Bridge No. 53-0382, PM 24.16, Contributor) | The College Street OC was designed by the Los Angeles Bureau of Engineering and constructed using Public Works Administration (PWA) funds. It is a continuous concrete box girder structure that is approximately 190 feet long and 38 feet wide. It features decorative elements such as flange girders, face plates, and ornamental lamp posts. |
| 50. | Alpine Street OC – 1948  
(Bridge No. 53-0592, PM 23.96, Contributor) | The Alpine Street OC is a rigid-frame concrete structure that is 131 feet in length and 44 feet wide. It has plain rectangular columns, a plain soffit, and cantilevered sidewalks. |

### Character-Defining Features – Phase III

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
</table>
| 51. | Sunset Boulevard OC – 1948  
(Bridge No. 53-0246, PM 23.83, Contributor)  
The Sunset Boulevard OC is similar to the Alpine Street OC, but is 337 feet long and 72 feet wide. |
| 52. | Beaudry Avenue OC – 1949  
(Bridge No. 53-0621H, PM 23.75, Contributor)  
The Beaudry Avenue OC is a single-span reinforced concrete box girder structure that has closed end, rigid-frame abutments supported by steel piles. The structure is 68.9 feet long and 35.9 feet wide.  
(Image: Google Maps, December 2014) |
| 53. | Four Level Interchange – 1949  
(Bridge Nos. 53-0622, 53-0622F, 53-0622G, 53-0622L, 53-0622R, PM 23.69, Contributor)  
The Four Level Interchange is a structure of four stacked bridges that creates a junction between SR-110 and the US 101 freeway. The Parkway continues south to become the Harbor Freeway, and the US 101 freeway travels southeast as the Santa Ana Freeway and northwest as the Hollywood Freeway.  
The top level carries the Hollywood Freeway, and the second level carries SR-110. The first and third levels are interchange ramps between the two routes.  
The top level consists of two continuous box girder bridges supported by four column bents. The two decks are tied together by heavy reinforced concrete beams. The third level decks are of continuous box girder construction with single-column bents or skewed beams as support.  
The second level deck is of continuous slab construction supported by three column bents. The first level deck consists of paved approaches.  
The structure has 10 U-shaped abutments, 76 steel-jacketed columns on hexagonal footings, and steel bearing piles to provide overall support. |
Chapter 4  Impacts on Section 4(f) Resources by Alternative

This section describes how the SR-110 Safety Enhancement Project would require the permanent use of the Arroyo Seco Parkway. A detailed discussion of each topic and its potential impacts can be found in the Draft Environmental Assessment. Table 4.1 (which appears at the end of this chapter) summarizes how the proposed work will use the Parkway. Table 4.1 includes a list of the elements that were analyzed as part of the nomination of the Arroyo Seco Parkway Historic District for the National Register, as well as whether that element is a contributor to the historic district and lastly if and how it is “used” under the meaning of use for Section 4(f).

The No Build Alternative would not include any of the elements discussed in Section 1.2 and, therefore, would not result in the use of any land from Section 4(f) properties. Therefore, the No Build Alternative is not discussed in this section. It is discussed in Section 1.5, Avoidance Alternative.

4.1  Description of Section 4(f) Use

One form of Section 4(f) use occurs when land is permanently incorporated into a transportation facility. This occurs when land from a Section 4(f) property is either purchased outright as transportation right-of-way or when the applicant for federal-aid funds has acquired a property interest that allows permanent access onto the property such as a permanent easement for maintenance or other transportation-related purpose.

The Section 4(f) Policy Paper issued by the USDOT FHWA’s Office of Planning, Environment, and Realty Project Development and Environmental Review on July 20, 2012, addresses the issue of historic transportation facilities in Question and Answer 8A:

“The Section 4(f) statute imposes conditions on the use of land from historic sites for highway projects but makes no mention of bridges, highways, or other types of facilities such as railroad stations or terminal buildings, which may be historic and are already serving as transportation facilities. The FHWA's interpretation is that the Congress clearly did not intend to restrict the rehabilitation or repair, of historic transportation facilities. The FHWA therefore established a
regulatory provision that Section 4(f) approval is required only when a historic bridge, highway, railroad, or other transportation facility is adversely affected by the proposed project; e.g., the historic integrity (for which the facility was determined eligible for the NR) is adversely affected by the proposed project” (see 23 Code of Federal Regulations [CFR] 774.13(a)).

A Draft Finding of Adverse Effect (FOE) was prepared in December 2016 and submitted to SHPO for concurrence. Because a finding of adverse effect is the anticipated outcome of the Section 106 process for the proposed project, Section 4(f) approval is required. While not all of the proposed project’s work activities contribute to the finding of adverse effect, most of them do (see Table 4.1). In general, the following work activities have been found to adversely affect the contributing elements of the Arroyo Seco Parkway Historic District and are, therefore, categorized as Section 4(f) uses: removal of historic curbs and gutters; installation of concrete barriers, Midwest Guardrail System (MGS), minor paving, and fencing. Work activities related to the treatment of structures with graffiti-resistant coating and the removal of two trees (seven trees to be planted result in no net effect to the landscape) would not adversely affect the contributing elements of the Arroyo Seco Parkway Historic District.

4.1.1 Facilities, Functions, and/or Activities

With the proposed project, the Parkway would remain, and the facilities, functions, and activities on the transportation facility would not be permanently affected by the project, and the Arroyo Seco Parkway would continue to function as a historic road. However, some character-defining features of the Arroyo Seco Parkway Historic District would be removed. The alterations as a result of the proposed project would not be consistent with the Secretary of the DOI’s Standards (Standards) for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines.

Removing the curbs and gutters along approximately 3.2 miles of the Parkway will destroy original, character-defining features of the resource. The removal of the curbs and gutters will also cause a loss of historic fabric (historic construction materials) and does not meet the Standards. Adding additional paving and concrete barriers will alter the feeling and setting of the Parkway and likewise does not meet the Standards.

Nonetheless, the Parkway will continue to be used for its originally intended purpose, a divided-lane, high-speed, limited-access road.
4.1.2 Accessibility
Access to the Parkway is available through various on- and off-ramps through the cities of Los Angeles, Pasadena, and South Pasadena. Access to the Parkway may be temporarily affected at some access locations to accommodate construction vehicles and construction equipment; however, these impacts would be temporary, and regular access would be fully restored following construction. The Section 4(f) uses described above do not permanently change the level of access to the Arroyo Seco Parkway Historic District.

4.1.3 Visual
Overall, according to the Visual Impact Assessment Memorandum prepared by the Caltrans Landscape Architect on December 14, 2016, the project would not result in substantial impacts to the visual environment. The installation of the concrete barriers will only be at high hit-spot locations and will conform to the aesthetic treatments that are currently found along the Parkway. The proposed minor concrete paving and paving beyond the gore will utilize the same integral color and texture as the paving that currently exists along the Parkway. The installation of safety lighting will replace the standard highway electrolier with a historic-looking Parkway electrolier that is consistent with the lighting presently used on the Parkway. The application of graffiti-resistant coating on the tunnel facades will protect the picturesque integrity of the art deco design of the parkway tunnels. The removal of the six-inch curb will have minimal impact to the visual resources of the roadway; this change will be unnoticeable by drivers going at highway speed. The replacement of the existing bright yellow barrel crash cushion with the less noticeable SMART crash-cushion devices will result in these facilities blending in better with the visual environment. The scope of the project will have a minimal impact to the visual characteristic of the Parkway and will not reduce any visual access to the roadway's viewsheds.

The Draft FOE prepared for Section 106 compliance concludes that the removal of the historic curbs and gutters and the installation of additional non-historic elements will change the character of the Arroyo Seco Parkway Historic District and will diminish the visual integrity of the Parkway’s features.

4.1.4 Noise and Vibration
The work activities that would cause the Section 4(f) use are not the kinds of activities that lead to permanent increases in ambient noise and vibration levels. While there may be some short-term, temporary noise and vibration increases associated with the removal of historic curbs and gutters and the installation of
Chapter 4 Impacts on Section 4(f) Resources by Alternative

Concrete barriers, MGS, minor paving, and fencing, the proposed project would not move traffic closer to sensitive receptors and would not increase the number of vehicles on the roadway. Therefore, no permanent increases in noise and vibration are anticipated. None of the potential temporary impacts would affect the historic character of the Arroyo Seco Parkway Historic District. See the Noise Section in Chapter 2 of the Environmental Impact Report/Environmental Impact Statement for additional information.

4.1.5 Vegetation

A field investigation was conducted for the Natural Environment Study (Minimal Impacts) [NESMI] (November 2016) for this proposed project. The NESMI is based on the aforementioned field investigation, reviews of relevant literature on the biological resources of the project study area and the surrounding vicinity (including biological databases), and a search for any applicable regional Habitat Conservation Plan or Multiple Species Conservation Plan. At the southern end of the proposed project area, the vegetation found directly adjacent to SR-110 tend to be ornamental, ruderal, or disturbance-oriented. Vegetation includes but is not limited to eucalyptus, palm trees, pepper trees, and oleander. However, native species including sycamore and coast live oak trees have been identified within the project limits further north, along Arroyo Seco Creek.

The Draft FOE concludes that while the landscape of the Parkway is a character-defining feature, only two trees are to be removed and seven planted, and as such, there is no net effect to the landscape.

4.1.6 Wildlife

A field investigation was performed to survey the existing biological environmental and how the proposed project alternatives and undertaking would effect that environment. As the majority of the work will be done in the freeway median, there will be no impact to biological communities in the area. Existing habitat and/or wildlife corridors will not be affected. Almost all impacts are confined to the existing prism of the roadway. While the American peregrine falcon, silver-haired bat, hoary bat, and coast horned lizard were not observed during surveys, these wildlife species are not expected to occur within the Biological Study Area during project construction.

Where there are impacts beyond the existing prism of the roadway, such as adding a maintenance vehicle pullout, impacts to animal species are extremely minimal. At
these project locations, and any other location where ornamental landscape might be impacted, there is the potential for impacts to nesting birds from construction noise or grubbing. None of these potential impacts would affect the historic character of the Arroyo Seco Parkway Historic District.

4.1.7 Air Quality
During construction, short-term degradation of air quality may result from the release of particulate emissions generated by activities related to construction (i.e., minor excavation, grading, and hauling). While there may be some short-term, temporary air quality effects associated with the removal of historic curbs and gutters and the installation of concrete barriers, MGS, minor paving, and fencing, the proposed project would not move traffic closer to sensitive receptors and would not increase the number of vehicles on the roadway. The proposed project is within the boundary of the South Coast Air Quality Management District (SCAQMD) and therefore, this project must also comply with the SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate. Therefore, no permanent increases in air quality are anticipated. None of the potential temporary impacts would affect the historic character of the Arroyo Seco Parkway Historic District. See the Air Quality section in Chapter 2 of the Environmental Impact Report/Environmental Impact Statement for additional information.

4.1.8 Water Quality
Water Quality Best Management Practices would be implemented to treat stormwater runoff during construction and operation of the Build Alternative. Therefore, the proposed project is not anticipated to degrade the water quality of the receiving waters on either a temporary or permanent basis. Therefore, there would be no effect to the historic character of the Arroyo Seco Parkway Historic District related to water quality. See the Stormwater/Water Quality section in Chapter 2 of the Environmental Impact Report/Environmental Impact Statement for additional information.
Table 4.1 Contributing and Non-Contributing Resources and Section 4(f) Use

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<tr>
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<th>Bridge Number</th>
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<th>Work Description</th>
<th>Section 4(f) Use?</th>
<th>Project Location No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Roadway: Six-lane concrete and asphalt roadway, including concrete curbs and gutters, shoulders, on-and off-ramps</td>
<td>N/A</td>
<td>PM 23.69–31.86</td>
<td>C</td>
<td>This project will remove approximately 3.2 miles of curbs and gutters from the roadway.</td>
<td>Yes, FOE documents that removal will destroy original, character defining features.</td>
<td>Location Nos. 26–30a, and 31a.</td>
</tr>
<tr>
<td>2  The Four Level-Interchange (1949)</td>
<td>Br. No. 53-0622 Br. No. 53-0622F Br. No. 53-0622G Br. No. 53-0622L Br. No. 53-0622R</td>
<td>PM 23.69</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>3  Sunset Boulevard Overcrossing (1948, 1999)</td>
<td>Br. No. 53-0246</td>
<td>PM 23.83</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>4  Alpine Street Overcrossing (1948)</td>
<td>Br. No. 53-0592</td>
<td>PM 23.96</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>5  College Street Overcrossing (1939)</td>
<td>Br. No. 53-0382</td>
<td>PM 24.16</td>
<td>C</td>
<td>Place concrete barrier at base of overcrossing. Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6  Yale Street Pedestrian Overcrossing (1962, 1991)</td>
<td>Br. No. 53-1105</td>
<td>PM 24.37</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>7  Yale Street Pedestrian Undercrossing (1940, abandoned 1961)</td>
<td>Br. No. 53-0586M</td>
<td>PM 24.40</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>8  Stadium Way Overcrossing (1962, 1994)</td>
<td>Br. No. 53-1635S</td>
<td>PM 24.53</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>9  Hill Street Off-ramp Overcrossing (1942, 1962, 1985)</td>
<td>Br. No. 53-0539C</td>
<td>PM 24.55</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>10 Stadium Way Sidehill Viaduct (2001)</td>
<td>Br. No. 53-2859L</td>
<td>PM 24.73</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>11 Bishops Road Undercrossing (former name), currently known as Stadium Way Undercrossing (1942, 1962, 1998, 2001)</td>
<td>Br. No. 53-0540L</td>
<td>PM 24.73</td>
<td>NC</td>
<td>None</td>
<td>No</td>
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</tbody>
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### Table 4.1 Contributing and Non-Contributing Resources and Section 4(f) Use

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</thead>
<tbody>
<tr>
<td>12 Bishops Road Overcrossing, also known as Stadium Way (1942)</td>
<td>Br. No. 53-0540R</td>
<td>PM 24.76</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>13 Figueroa Street Tunnel No. 4 (1936)</td>
<td>Br. No. 53-0199R</td>
<td>PM 24.90</td>
<td>C</td>
<td>This project will use graffiti-resistant coating to treat the face of tunnel, wing walls, and concrete barriers.</td>
<td>No, FOE concludes coating will not alter color or appearance. Location No. 11a</td>
<td></td>
</tr>
<tr>
<td>14 Amador Street Undercrossing (1942, 2001)</td>
<td>Br. No. 53-0504L</td>
<td>PM 25.04</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>15 Solano Avenue Undercrossing (1942, 2001)</td>
<td>Br. No. 53-0541L</td>
<td>PM 25.09</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>16 Solano Avenue Pedestrian Undercrossing (1931, 1942)</td>
<td>Br. No. 53-0532R</td>
<td>PM 25.10</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>17 Figueroa Street Tunnel No. 1 (1931)</td>
<td>Br. No. 53-0200R</td>
<td>PM 25.14</td>
<td>C</td>
<td>This project will use graffiti-resistant coating to treat the face of tunnel, wing walls, and concrete barriers.</td>
<td>No, FOE concludes coating will not alter color or appearance. Location No. 11b</td>
<td></td>
</tr>
<tr>
<td>18 Park Row Overcrossing (1942, 1999)</td>
<td>Br. No. 53-0542L</td>
<td>PM 25.20</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>19 Figueroa Street Sidehill Viaduct (2001)</td>
<td>Br. No. 53-2857L</td>
<td>PM 25.27</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>20 Figueroa Street Tunnel No. 2 (1931)</td>
<td>Br. No. 53-0201R</td>
<td>PM 25.28</td>
<td>C</td>
<td>This project will use graffiti-resistant coating to treat the face of tunnel, wing walls, and concrete barriers.</td>
<td>No, FOE concludes coating will not alter color or appearance. Location No. 11c</td>
<td></td>
</tr>
<tr>
<td>21 Elysian Park Pedestrian Undercrossing (1931)</td>
<td>Br. No. 53-0477R</td>
<td>PM 25.33</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>22 Elysian Park Pedestrian Undercrossing (1942)</td>
<td>Br. No. 53-0477L</td>
<td>PM 25.36</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>23 Figueroa Street Tunnel No. 3 (1931)</td>
<td>Br. No. 53-0202R</td>
<td>PM 25.37</td>
<td>C</td>
<td>This project will use graffiti-resistant coating to treat the face of tunnel, wing walls, and concrete barriers.</td>
<td>No, FOE concludes coating will not alter color or appearance. Location No. 11d</td>
<td></td>
</tr>
</tbody>
</table>
### Table 4.1 Contributing and Non-Contributing Resources and Section 4(f) Use

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</tr>
</thead>
<tbody>
<tr>
<td>Arroyo Seco Channel</td>
<td>N/A</td>
<td>PM 25.48–30.10</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Riverside Drive Off-ramp Viaduct (1931)</td>
<td>Br. No. 53-2225G</td>
<td>PM 25.48</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Figueroa Street Viaduct, also known as Los Angeles River Bridge, Eastbound (1936)</td>
<td>Br. No. 53-0042R</td>
<td>PM 25.48</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Los Angeles River Bridge, Westbound (1944)</td>
<td>Br. No. 53-0042L</td>
<td>PM 25.48</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Elysian Viaduct (1962)</td>
<td>Br. No. 53-1424</td>
<td>PM 25.75</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Figueroa Street Off-ramp Undercrossing (1940)</td>
<td>Br. No. 53-0533L</td>
<td>PM 25.78</td>
<td>C</td>
<td>Remove the MBGR at the right of the off-ramp and replace with concrete barrier.</td>
<td>Yes, addition of additional non-historic elements will change character of property setting</td>
<td>Locations 5a–5c</td>
</tr>
<tr>
<td>Avenue 26 Overcrossing (1925, 1939)</td>
<td>Br. No. 53-0372</td>
<td>PM 25.91</td>
<td>C</td>
<td>Bridge support will be used along the right side by adding 60 ft of concrete barrier.</td>
<td>Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td>Location No. 33</td>
</tr>
<tr>
<td>Northbound SR-110 connector from I-5 Overcrossing-I-5 PM 20.33 (1962)</td>
<td>Br. No. 53-1456H</td>
<td>PM 26.07</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Westbound SR-110 to I-5 Connector Overcrossing (1962, 1994)</td>
<td>Br. No. 53-1457F</td>
<td>PM 26.12</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Cypress Avenue Pedestrian Overcrossing (1961, 1992)</td>
<td>Br. No. 53-0538</td>
<td>PM 29.19</td>
<td>NC</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Avenue 35 Railroad Underpass (aka Avenue 35 Overcrossing) (1940)</td>
<td>Br. No. 53-0425</td>
<td>PM 26.40</td>
<td>C</td>
<td>Bridge support will be used along the right side by installing 60 ft of concrete barrier.</td>
<td>Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td>Location No. 34</td>
</tr>
<tr>
<td>Pasadena Avenue Overcrossing (1940)</td>
<td>Br. No. 53-0426</td>
<td>PM 26.48</td>
<td>C</td>
<td>Bridge support will be used along the right side by installing 60 ft of concrete barrier.</td>
<td>Yes, addition of additional non-historic elements will change character of property setting</td>
<td>Location No. 34</td>
</tr>
<tr>
<td>Arroyo Seco Avenue 43 ramp (1940)</td>
<td>Br. No. 53-0985S</td>
<td>PM 27.08</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
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<tr>
<td>37 Avenue 43 Overcrossing (1939)</td>
<td>Br. No. 53-0427 Br. No. 53C-1877</td>
<td>PM 27.12</td>
<td>C</td>
<td>Bridge support will be used along the right side by installing 850 ft of concrete barrier. Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td>No</td>
<td>Location No. 35</td>
</tr>
<tr>
<td>38 Sycamore Grove Pedestrian Overcrossing (1940)</td>
<td>Br. No. 53-0344</td>
<td>PM 27.64</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>39 Avenue 52 Overcrossing (1940)</td>
<td>Br. No. 53-0428</td>
<td>PM 28.05</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>40 Via Marisol Overcrossing (1939)</td>
<td>Br. No. 53-0429</td>
<td>PM 28.38</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>41 Arroyo Seco Park Bridge (1951)</td>
<td>N/A</td>
<td>N/A</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>42 Avenue 60 Overcrossing (1939)</td>
<td>Br. No. 53-0430</td>
<td>PM 28.76</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>43 Arroyo Seco Avenue 60 Ramp (1940)</td>
<td>Br. No. 53-0986S</td>
<td>PM 28.86</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>44 Avenue 60 Ramp and Pedestrian Undercrossing (1940)</td>
<td>Br. No. 53-0988T</td>
<td>PM 28.86</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>45 Santa Fe Arroyo Seco Railroad Bridge, also known as Avenue 64 Underpass (1900, 1923, 1993)</td>
<td>Br. No. 53-0431</td>
<td>PM 29.03</td>
<td>C</td>
<td>Place 57 ft of concrete barrier Type 60D to protect the support of the Avenue 64 Overcrossing. Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>46 Arroyo Seco maintenance Station (2 buildings) 6749 Marmion Way, Los Angeles</td>
<td>N/A</td>
<td>PM 29.3</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>47 Arroyo Seco Marmion Way Off-ramp (1940)</td>
<td>Br. No. 53-0886S</td>
<td>PM 29.20</td>
<td>C</td>
<td>Install type SCI-100CM crash cushion. Yes, addition of additional non-historic elements will change character of property setting.</td>
<td>Location Nos. 8-9</td>
<td></td>
</tr>
<tr>
<td>48 Marmion Way Overcrossing (1940)</td>
<td>Br. No. 53-0445 Br. No. 53C-1879</td>
<td>PM 29.28</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>49 York Boulevard Overcrossing (1912)</td>
<td>Br. No. 53-0121 Br. No. 53C-1874</td>
<td>PM 29.50</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>50 Arroyo Seco Bridge (1939, 1993)</td>
<td>Br. No. 53-0276</td>
<td>PM 30.10</td>
<td>C</td>
<td>None</td>
<td>No</td>
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<tr>
<td>Arroyo Seco Pedestrian and Equestrian Undercrossing (1938)</td>
<td>Br. No. 53-0432</td>
<td>PM 30.25</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Arroyo Drive Overcrossing (1938)</td>
<td>Br. No. 53-0433</td>
<td>PM 30.30</td>
<td>C</td>
<td>Place concrete barrier at base of structure.</td>
<td>Yes, FOE concludes that barrier will be incompatible and will cause visual impact.</td>
<td></td>
</tr>
<tr>
<td>Grand Avenue Overcrossing (1938)</td>
<td>Br. No. 53-0434</td>
<td>PM 30.43</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Orange Grove Avenue Overcrossing (1939)</td>
<td>Br. No. 53-0435</td>
<td>PM 30.59</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
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<tr>
<td>Prospect Avenue Overcrossing (1939)</td>
<td>Br. No. 53-0436</td>
<td>PM 30.70</td>
<td>C</td>
<td>None</td>
<td>No</td>
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<tr>
<td>Meridian Avenue Overcrossing (1940)</td>
<td>Br. No. 53-0437</td>
<td>PM 30.78</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Fremont Avenue Overcrossing (1940)</td>
<td>Br. No. 53-0438</td>
<td>PM 31.01</td>
<td>C</td>
<td>None</td>
<td>No</td>
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</tr>
<tr>
<td>Fremont Avenue Railroad Underpass (1940, 1997)</td>
<td>Br. No. 53-0439</td>
<td>PM 31.03</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Fair Oaks Avenue Overcrossing (1940)</td>
<td>Br. No. 53-0440</td>
<td>PM 31.17</td>
<td>C</td>
<td>None</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

¹ This list follows the California highway mileage system for even-numbered State routes by first listing those with the lowest post miles to correspond with the route post miles. The lowest number is at the westernmost point and increases as one travels east. The Arroyo Seco Parkway began construction at the northeastern end and progressed to the southwest.

² C = Contributing element; N = Non-Contributing Element

FOE = Finding of Effect
ft = foot/feet
I-5 = Interstate 5
MBGR = Metal Beam Guardrail
N/A = not available
PM = Post Mile
SR-100 = State Route 110
Chapter 5 Avoidance Alternatives

Section 4(f) specifies that the Secretary of Transportation may approve a transportation program or project requiring the use of Section 4(f) property only if there is no prudent and feasible alternative to using that land. An avoidance alternative is not feasible if it cannot be built as a matter of sound engineering judgment. 23 CFR 774.17 sets forth six factors to consider when determining whether an alternative is prudent:

- Compromises the project so that it is unreasonable given the Purpose and Need;
- Results in unacceptable safety or operational problems;
- After reasonable mitigation, still causes:
  - Severe social, economic, or environmental impacts;
  - Severe disruption to established communities;
  - Severe environmental justice impacts; or
  - Severe impacts to other federally protected resources;
- Results in additional construction, maintenance, or operational costs of an extraordinary magnitude;
- Causes other unique problems or unusual factors; or
- Involves multiple factors listed above that, while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

This section discusses whether there are any feasible and prudent avoidance alternative to the use of the Arroyo Seco Parkway Historic District.

5.1 Alternative 1 – No Build Alternative

The No Build Alternative would avoid the use of the Arroyo Seco Parkway Historic District. However, this alternative would not improve safety within the project area and would result in unacceptable safety and operational problems. It would also fail to achieve the Purpose and Need of the project. It would not meet current design standards, improve overall operations, or protect workers from extended traffic exposure within the project area. Therefore, this alternative is not prudent. (See Section 1.2 for a detailed discussion of the Project Description.)
5.2 Alternative 2 – Build Alternative

Because the work activities are specifically related to improving worker and motorist safety on the historic Arroyo Seco Parkway itself, there are no build alternatives that would actually avoid the Arroyo Seco Parkway Historic District and still meet the Purpose and Need for the proposed project. Build alternatives that would be located off the historic facility were not pursued since such alternatives would not be prudent. As they would result in the creation of a new facility or new alignment, they would not only result in additional construction, maintenance, or operational costs of an extraordinary magnitude (given the need to acquire new right of way and construct a new facility) but they would also result in severe environmental effects related to the disruption of established communities (South Pasadena). Off-facility build alternatives would also be highly likely to involve the use of Section 4(f) properties located directly adjacent to SR-110 such as historic homes, Arroyo Park, South Pasadena Nature Park, and South Pawsadena Dog Park. Therefore, there are no prudent and feasible alternatives to the use of the Arroyo Seco Parkway Historic District. Chapter 6 that follows discusses design options and other measures that have been incorporated to minimize the harm.
Chapter 6  Measures to Minimize Harm to the Section 4(f) Property

The development of Alternatives for the SR-110 Safety Enhancement Project considered a range of engineering and environmental constraints, particularly Section 4(f) properties in the project area. Avoiding or minimizing the use of features of the Section 4(f) properties was a key criterion during the alternatives development and refinement processes. The following measures to minimize harm were developed as a result of the environmental evaluation and the Section 106 process:

**BIO-1**  Avoid impacts to large native trees, specifically sycamores and oaks. If native sycamores or oaks are removed, they shall be replaced by at least two trees of that species (City of Los Angeles Ordinance 177404). A mature sycamore tree near the Avenue 43 overcrossing is planned to be removed and will be replaced. The replacement ratio is 4:1 for a 15-gallon sycamore.

**CUL-1**  The conceptual mitigation measure for effects to the Arroyo Seco Parkway (Parkway) would include development of a corridor management plan that details maintenance activities that meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations 680) and applicable guidelines. These measures will be finalized in a Memorandum of Agreement with the State Historic Preservation Officer.

**CUL-2**  Landscape enhancements will be implemented between Figueroa Street Tunnel Nos. 1 and 2 on the north side of northbound State Route 100 (SR-110).

**VIA-1**  All improvement to the roadway must be context-sensitive in design and reflect the scenic and historical significance of the Parkway.
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Chapter 7  Coordination

A Section 4(f) evaluation requires documentation of the Section 106 process. Consultation with the SHPO is in progress; see the Cultural Resources section in Chapter 2 of the Environmental Assessment for additional details. Prior to making Section 4(f) approvals under 23 CFR 774.3(a), the Section 4(f) evaluation must be provided for coordination and comment to the official(s) with jurisdiction over the Section 4(f) resource and to the DOI. A Section 4(f) evaluation prepared under 23 CFR 774.3(a) must include sufficient supporting documentation to demonstrate why there is no feasible and prudent avoidance alternative, and it must summarize the results of all possible planning to minimize harm to the Section 4(f) property.

This Section 4(f) evaluation will be sent to the SHPO and the DOI for review and comments during the public review period.
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Chapter 8 Resources Evaluated Relative to the Requirements of Section 4(f)

This section discusses parks, recreational facilities, wildlife refuges, and historic sites found within or next to the project area that do not trigger Section 4(f) protection because either (1) they are not publicly owned, (2) they are not open to the public, (3) they are not National Register-eligible historic properties, (4) the project does not permanently use the property and does not hinder the preservation of the property, or (5) the proximity impacts do not result in a constructive use.

The resources listed in Table 8.1 were determined to not trigger protection under the requirements of Section 4(f) as a result of the Build Alternative. There is no permanent or constructive use of these resources by the Build Alternative. The resources within 0.5 mile of the proposed SR-110 Safety Enhancement Project were evaluated to assess whether project-related effects would result in proximity impacts after mitigation that would be so severe that the activities, features, and/or attributes of the property are substantially impaired resulting in the value of the resource in terms of its Section 4(f) significance being meaningfully reduced or lost.
### Table 8.1 Resources within 0.5 Mile of the SR-110 Safety Enhancement Project

<table>
<thead>
<tr>
<th>Resources in the SR-110 Safety Enhancement Study Area</th>
<th>Why Section 4(f) is not triggered?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources in the City of Los Angeles</strong></td>
<td></td>
</tr>
<tr>
<td>Castelar Elementary School</td>
<td>School is located several blocks away from the proposed project with several intervening developments; no permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Dodger Stadium</td>
<td>Not publicly owned.</td>
</tr>
<tr>
<td>Elysian Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Chavez Ridge Golf Course</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Radio Hill Gardens</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Solano Avenue Elementary School</td>
<td>Playground and athletic courts are separated from the proposed project by school buildings; no permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Los Angeles State Historic Park</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Ed P. Reyes River Greenway</td>
<td>Primary purpose is stormwater related; also no permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Confluence Park</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Los Angeles River Center and Gardens</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Florence Nightingale Middle School</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Loreto Street Elementary School</td>
<td>Playground and athletic courts are separated from the proposed project by school buildings; no permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Hillside Elementary School</td>
<td>Playground and athletic courts are separated from the proposed project by school buildings and other development; no permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Heritage Square Museum (Park)</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
</tbody>
</table>
### Table 8.1 Resources within 0.5 Mile of the SR-110 Safety Enhancement Project

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<tr>
<th>Resources in the SR-110 Safety Enhancement Study Area</th>
<th>Why Section 4(f) is not triggered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longfellow-Hastings House</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Hale House</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Mount Pleasant House</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Latona Avenue Elementary School</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Montecito Heights Community Center</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Arroyo Seco Bike Path</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Ernest E. Debs Regional Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Sycamore Grove Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Judson Studios</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Lummis House</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>La Casita Verde</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Historic Southwest Museum</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Herman Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Bushnell Way Elementary School</td>
<td>No permanent incorporation; no proximity impacts due to intervening topography.</td>
</tr>
</tbody>
</table>

Resources in the City of South Pasadena

| South Pasadena Nature Park                           | No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment. |
### Table 8.1 Resources within 0.5 Mile of the SR-110 Safety Enhancement Project

<table>
<thead>
<tr>
<th>Resources in the SR-110 Safety Enhancement Study Area</th>
<th>Why Section 4(f) is not triggered?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arroyo Seco Golf Course</td>
<td>Not publicly owned.</td>
</tr>
<tr>
<td>Arroyo Vista Elementary School</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Lower Arroyo Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>San Pascual Park</td>
<td>No permanent incorporation and given the minimal impacts of the proposed project with respect to noise, air quality, vegetation removal, etc., proximity impacts do not rise to the level of substantial impairment.</td>
</tr>
<tr>
<td>Garfield Park</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
<tr>
<td>Orange Grove Park</td>
<td>No permanent incorporation; no proximity impacts due to intervening development and topography.</td>
</tr>
</tbody>
</table>

**Resources in the City of Pasadena**

| Blair High School                                    | No permanent incorporation; no proximity impacts due to intervening development and topography. |
| Allendale Park                                        | No permanent incorporation; no proximity impacts due to intervening development and topography. |

SR-100 = State Route 110
The project would not convert land from any Section 4(f) properties or parkland that have been acquired or developed using money from the Land and Water Conservation Act. Therefore, provisions of Section 6(f) are not triggered.
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Chapter 10  References

23 Code of Federal Regulations [CFR] 774: Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites (Section 4(f)).


California Department of Transportation, SR-110 Safety Enhancement Project Natural Environmental Study (Minimal Impacts), November 2016.


California Department of Transportation, SR-110 Safety Enhancement Project Noise and Vibration Memorandum, April 2016.

California Department of Transportation, SR-110 Safety Enhancement Project Air Quality Review Memorandum, July 2016.


Appendix C  Title VI Policy Statement
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NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"
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Appendix D  Minimization and/or Mitigation Summary
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### Environmental Commitments Record for EA 07-29750 / ID 0713000194

#### Permits

<table>
<thead>
<tr>
<th>Permit</th>
<th>Agency</th>
<th>Date Submitted</th>
<th>Date Received</th>
<th>Expiration</th>
<th>Requirements Name</th>
<th>Completed Date</th>
<th>Comments</th>
</tr>
</thead>
</table>

#### Commitments

**PS&E/Before RTL**

**Visual Resources**

**Minimization VIA-1:** All improvements to the roadway must be context sensitive in design and reflect the scenic and historical significance of the Arroyo Seco Parkway.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Env Doc</td>
<td>SSP</td>
<td>Project Landscape Architect</td>
<td></td>
<td></td>
<td>Signature</td>
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<td></td>
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<td>Date</td>
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</tbody>
</table>

**Hazardous Waste**

**Avoidance HW-1:** A comprehensive aerially deposited lead (ADL) site investigation will be performed in the Plans, Specifications and Estimates phase of the project in order to evaluate the extent of ADL contamination and to assist in evaluation of applicable ADL soil management during construction.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ISA</td>
<td>SSP</td>
<td>Hazardous Waste Unit</td>
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<td>Signature</td>
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<td>Date</td>
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</table>

**Air Quality**

**Minimization AQ-1:** The construction contract shall comply with California Department of Transportation (Caltrans) Standards Specifications in Section 14 (2010).

- Section 14-9.01 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including South Coast Air Quality Management District (SCAQMD) rules and regulations and local

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Env Doc</td>
<td>SSP</td>
<td>Design/Resident Engineer</td>
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<td>Signature</td>
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<td>Date</td>
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</table>
## Appendix D  Minimization and/or Mitigation Summary

### Commitments

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/ Due Date</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Env Doc</td>
<td>SSP</td>
<td>Design/Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
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<tr>
<td><strong>Noise</strong></td>
<td></td>
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<tr>
<td><strong>Minimization N-3</strong>: The construction contract shall comply with California Department of</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Design/Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
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<tr>
<td>Transportation (Caltrans) Standard Specifications in Section 14-8.02, Sound Control</td>
<td></td>
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<tr>
<td>Requirements, which states that construction noise levels should not exceed 86 A-weighted</td>
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<td>decibels (dBA) at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m. Noise</td>
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<td>levels generated during construction shall comply with applicable local, State, and federal</td>
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<td>regulations.</td>
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<tr>
<td><strong>Pre-Construction</strong></td>
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<tr>
<td><strong>Utilities/Emergency Services</strong></td>
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<tr>
<td><strong>Minimization EMER-1</strong>: During project construction, Caltrans will coordinate with local</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Traffic/Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
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<tr>
<td>emergency service providers to keep them informed of the project construction schedule and</td>
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<td>any detour routes, if applicable, so as to avoid or minimize any impacts. Additionally,</td>
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<td>the project Traffic Management Plan (TMP) will manage and minimize any circulation impacts</td>
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<td>during construction.</td>
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<tr>
<td><strong>Hazardous Waste</strong></td>
<td>ISA</td>
<td>SSP</td>
<td>Contractor/ Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
<tr>
<td><strong>Minimization HW-3</strong>: Development of a project-specific Lead Compliance Plan (LCP) and</td>
<td>ISA</td>
<td>SSP</td>
<td>Contractor/ Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
<td></td>
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<tr>
<td>training program that ensure proper health and safety measures are implemented and complied</td>
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<td>with prior to starting the removal operation will be required. Per California Department</td>
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<tr>
<td>of Transportation (Caltrans) Standard Special Provisions (SSPs), a project-specific LCP</td>
<td></td>
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<tr>
<td>will be required prior to minor soil disturbance, major soil disturbance (requires an</td>
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</tr>
<tr>
<td>LCP and an Excavation and Transportation Plan [ETP]), removal of existing Yellow/White</td>
<td></td>
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<tr>
<td>Thermoplastic Traffic Stripe and pavement marking (requires LCP and Debris Removal,</td>
<td></td>
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<tr>
<td>Containment, and Disposal Work Plan), and non-ADL soil disturbance (requires a Health</td>
<td></td>
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<tr>
<td>and Safety Plan [HaSP] and a Hazardous Material/Waste Management Plan [HMP]) at the project</td>
<td></td>
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<tr>
<td>site.</td>
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</tbody>
</table>
## Commitments

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biological Environment</strong></td>
<td></td>
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</tr>
<tr>
<td>Minimization BIO-2: The District Biologist, Michelle Barton, shall be invited to the pre-construction meeting with at least 1 week prior notice.</td>
<td>NES</td>
<td>SSP</td>
<td>Resident Engineer/Biologist</td>
<td></td>
<td></td>
<td>Signature</td>
</tr>
<tr>
<td>Minimization BIO-3: It is recommended that all vegetation removal occur outside of bird nesting season, which is from February 15 through September 1. Should vegetation need to be removed during this period, the District Biologist shall be notified 2 weeks prior to the start of construction to determine if nesting birds are present. In the event that nesting birds are observed, the Resident Engineer (RE) should pause work until a qualified biologist has determined that fledglings have left the nest. If this cannot be done, then a biological survey will be required no more than 5 days in advance of grubbing for nesting birds. Further, if any bird nests are found, then a buffer of 150 feet for songbirds and 500 feet for raptors will be required until the nestlings have fledged. This is per the federal Migratory Bird Treaty Act (MBTA).</td>
<td>NES</td>
<td>SSP</td>
<td>Resident Engineer/Biologist</td>
<td></td>
<td></td>
<td>Signature</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
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</tr>
<tr>
<td>Minimization TRA-1: Construction-related impacts will be minimized to the fullest extent possible through the Traffic Management Plan and staged construction.</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Traffic/Resident Engineer</td>
<td></td>
<td></td>
<td>Signature</td>
</tr>
</tbody>
</table>

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SR-110 Safety Enhancement Project EIR/EA

D-5
### Cultural Resources

#### Minimization CUL-1:
If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimization CUL-1:</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Resident Engineer/Archaeologist</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

#### Minimization CUL-2:
If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area that is suspected to overlie remains, and that the County Coroner shall be contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendant (MLD). At this time, the person who discovered the remains will contact Kelly Ewing-Toledo, Senior Environmental Planner in the Cultural Resources Branch, so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimization CUL-2:</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Resident Engineer/Archaeologist</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

### Water Quality

#### Minimization WQ-1:
The Storm Water Data Report prepared for the project recommends design Best Management Practices (BMPs) and temporary construction BMPs to prevent contaminated or sediment-containing runoff from entering storm drains. These BMPs may include biofiltration swales. The types and final locations of the proposed devices will be determined during final design.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimization WQ-1:</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Contractor/Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

### Hazardous Waste

#### Minimization HW-2:
Removal and disposal of metal beam guardrails shall be managed under California Code of Regulations, Title 22, Division 4.5, Chapter 34, which specifies guidelines for storage, accumulation, shipment/transport, and disposal of treated wood waste at specific landfills.

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimization HW-2:</td>
<td>ISA</td>
<td>SSP</td>
<td>Contractor/Resident Engineer</td>
<td>Signature</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix D Minimization and/or Mitigation Summary

### Air Quality

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minimization AQ-2:</strong> The proposed project is within the boundary of the SCAQMD; therefore, this project must comply with SCAQMD Fugitive Dust Implementation Rule 403 to minimize temporary emissions during construction of the project as applicable and appropriate.</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Resident Engineer</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rule 403 – Fugitive Dust.</strong> SCAQMD Rule 403 requires that fugitive dust be controlled with the best available control measures (BACMs) in order to reduce dust so that it does not remain visible in the atmosphere beyond the property line of the proposed project. It also requires a dust control plan to be submitted and approved prior to construction. The dust control plan should describe all applicable dust control measures that will be implemented at the project, and should describe types of dust suppressant, surface treatments, and other measures to be utilized at the construction sites to comply with the Rule. The specifics of Rule 403 are as follows:</td>
<td></td>
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</tr>
<tr>
<td>• No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the dust remains visible in the atmosphere beyond the property line of the emission source; or the dust emission exceeds 20 percent opacity, if the dust emission is the result of movement of a motorized vehicle.</td>
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</tr>
<tr>
<td>• No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of Rule 403 to minimize fugitive dust emissions from each fugitive dust source type within the active operation.</td>
<td></td>
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</tr>
<tr>
<td>• No person shall cause or allow PM_{10} (particulate matter less than 10 microns in size) levels to exceed 50 micrograms per cubic meter (µg/m³) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume</td>
<td></td>
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</tbody>
</table>

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*SR-110 Safety Enhancement Project EIR/EA*
### Commitments

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/ Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate matter samplers or other United States Environmental Protection Agency (EPA) approved equivalent method for PM$_{10}$ monitoring.</td>
<td></td>
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<tr>
<td>No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.</td>
<td></td>
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<tr>
<td>No person shall conduct an active operation with a disturbed surface area of 5 acres or more or with a daily import or export of 100 cubic yards or more of bulk material without utilizing approved control measure/measures at each vehicle egress from the site to a paved public road.</td>
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</tr>
<tr>
<td>Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to Rule 403 shall implement the applicable conservation management practices specified in Table 4 of Rule 403.</td>
<td></td>
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<tr>
<td><strong>Additional Requirements for Large Operations Under Rule 403:</strong></td>
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<tr>
<td>Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards cannot be met through use of Table 2 actions; and shall:</td>
<td></td>
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<tr>
<td>Submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;</td>
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<tr>
<td>Include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the</td>
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</tbody>
</table>
### Commitments

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>SSP/ NSSP</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/ Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>location of the site;</td>
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<tr>
<td>• Maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than 3 years, and make such records available to the Executive Officer upon request;</td>
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<tr>
<td>• Install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook prior to initiating any earthmoving activities;</td>
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<tr>
<td>• Identify a dust control supervisor that: (a) is employed by or contracted with the property owner or developer; (b) is on the site or available on site within 30 minutes during work hours; (c) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements; (d) has completed the Air Quality Management District (AQMD) Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and (e) notifies the Executive Office in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).</td>
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<tr>
<td>• Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of 1 year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities, must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or</td>
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</tbody>
</table>
Appendix D  Minimization and/or Mitigation Summary

<table>
<thead>
<tr>
<th>Task and Brief Description</th>
<th>Source</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/ Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no change (Form 403NC).</td>
<td></td>
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<tr>
<td>• In summary, prior to construction, Rule 403 entails the implementation of best available fugitive dust control measures during active operations capable of generating dust.</td>
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</table>

**Noise**

**Avoidance N-1:** Equipment noise control will be applied to revising old equipment and designing new equipment to meet acceptable noise levels.

<table>
<thead>
<tr>
<th></th>
<th>Env Doc</th>
<th>SSP</th>
<th>Resident Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Minimization N-2: Mufflers are very effective devices that reduce the noise emanating from the intake or exhaust of an engine, compressor, or pump. The fitting of effective mufflers on all new equipment and retrofitting of mufflers on existing equipment is necessary to yield an immediate noise reduction at all types of road construction sites.</th>
<th>Env Doc</th>
<th>SSP</th>
<th>Resident Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
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</tbody>
</table>

**Biological Environment**

**Minimization BIO-1:** Relocation of native sycamore or oak trees that require removal should be considered. If native sycamore or oaks are removed, they shall be replaced by at least two trees of that species (City of Los Angeles Ordinance 177404).

• The sycamore tree removal at Project Location No. 35 will have a replacement ratio (4:1 15-gallon sycamore). The locations of the replacements will be determined in the plans, specifications, and estimates phase of the project.

<table>
<thead>
<tr>
<th></th>
<th>NES</th>
<th>SSP</th>
<th>Resident Engineer/ Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Avoidance INV-1: In compliance with the Executive Order on Invasive Species, EO 13112, and guidance from the FHWA, the landscaping and erosion control included in the project will not use species that are listed as invasive. In areas of particular sensitivity,</th>
<th></th>
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</tbody>
</table>
### Appendix D: Minimization and/or Mitigation Summary

#### Post-Construction

**Mitigation for Significant Impacts under CEQA**

<table>
<thead>
<tr>
<th>Cultural Resources</th>
<th>Task and Brief Description</th>
<th>Source</th>
<th>Responsible Staff</th>
<th>Action to Comply</th>
<th>Task Completed</th>
<th>Remarks/ Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mitigation CUL-3:</strong> The conceptual mitigation measure for effects to the Arroyo Seco Parkway would include development of a corridor management plan that details maintenance activities that meet the Secretary of the Interior’s Standards for the Treatment of Historic Properties (36 Code of Federal Regulations [CFR] 680) and applicable guidelines. These measures will be finalized in a Memorandum of Agreement (MOA) with the State Historic Preservation Officer (SHPO).</td>
<td>extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.</td>
<td>Env Doc</td>
<td>SSP</td>
<td>Caltrans Cultural Staff</td>
<td>Signature</td>
<td>Date</td>
</tr>
<tr>
<td><strong>Mitigation CUL-4:</strong> Incorporate landscape enhancements between Figueroa Street Tunnel Nos. 1 and 2 on the north side of northbound State Route 110 (SR-110).</td>
<td></td>
<td>Env Doc</td>
<td>SSP</td>
<td>Project Landscape Architect/ Cultural Staff</td>
<td>Signature</td>
<td>Date</td>
</tr>
</tbody>
</table>

#### Cumulative Impacts

A combination of avoidance, minimization, and or mitigation measures would reduce the overall adverse effects of the SR-110 Safety Enhancement Project. In order to minimize the effects on cultural resources, all reasonable foreseeable Caltrans projects located on the Arroyo Seco Parkway will be developed using a context sensitive design approach.

SSP = Standard Special Provision
NSSP = Non-Standard Special Provision
### Appendix E  List of Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>µg/m(^3)</td>
<td>micrograms per cubic meter</td>
</tr>
<tr>
<td>5024 MOU</td>
<td>PRC 5024 Memorandum of Understanding</td>
</tr>
<tr>
<td>AB</td>
<td>Assembly Bill</td>
</tr>
<tr>
<td>ac</td>
<td>acres</td>
</tr>
<tr>
<td>ACHP</td>
<td>Advisory Council on Historic Preservation</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act</td>
</tr>
<tr>
<td>ADL</td>
<td>aerially deposited lead</td>
</tr>
<tr>
<td>APE</td>
<td>Area of Potential Effects</td>
</tr>
<tr>
<td>AQMD</td>
<td>Air Quality Management District</td>
</tr>
<tr>
<td>ARB</td>
<td>California Air Resources Board</td>
</tr>
<tr>
<td>ASR</td>
<td>Archaeological Survey Report</td>
</tr>
<tr>
<td>BACMs</td>
<td>best available control measures</td>
</tr>
<tr>
<td>Basin</td>
<td>South Coast Air Basin</td>
</tr>
<tr>
<td>BMPs</td>
<td>Best Management Practices</td>
</tr>
<tr>
<td>BSA</td>
<td>Biological Study Area</td>
</tr>
<tr>
<td>CalEPA</td>
<td>California Environmental Protection Agency</td>
</tr>
<tr>
<td>Caltrans</td>
<td>California Department of Transportation</td>
</tr>
<tr>
<td>CDFW</td>
<td>California Department of Fish and Wildlife</td>
</tr>
<tr>
<td>CEQ</td>
<td>Council on Environmental Quality</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CERCLA</td>
<td>Comprehensive Environmental Response, Compensation and Liability Act of 1980</td>
</tr>
<tr>
<td>CERFA</td>
<td>Community Environmental Response Facilitation Act of 1992</td>
</tr>
<tr>
<td>CESA</td>
<td>California Endangered Species Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CH(_4)</td>
<td>methane</td>
</tr>
<tr>
<td>CNDDDB</td>
<td>California Natural Diversity Database</td>
</tr>
<tr>
<td>CNPS</td>
<td>California Native Plant Society</td>
</tr>
<tr>
<td>CO</td>
<td>carbon monoxide</td>
</tr>
<tr>
<td>CO(_2)</td>
<td>carbon dioxide</td>
</tr>
<tr>
<td>CO-CAT</td>
<td>Coastal Ocean Climate Action Team</td>
</tr>
<tr>
<td>Community Plan</td>
<td>Northeast Los Angeles Community Plan</td>
</tr>
<tr>
<td>County</td>
<td>Los Angeles County</td>
</tr>
<tr>
<td>CPP</td>
<td>Corridor Partnership Plan</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>----------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CTC</td>
<td>California Transportation Commission</td>
</tr>
<tr>
<td>CTP</td>
<td>California Transportation Plan</td>
</tr>
<tr>
<td>CWA</td>
<td>Clean Water Act</td>
</tr>
<tr>
<td>dBA</td>
<td>A-weighted decibels</td>
</tr>
<tr>
<td>DP</td>
<td>(Caltrans) Director’s Policy</td>
</tr>
<tr>
<td>DSA</td>
<td>Disturbed Soil Area</td>
</tr>
<tr>
<td>EA</td>
<td>Expenditure Authorization</td>
</tr>
<tr>
<td>EIA/EA</td>
<td>Environmental Impact Report/Environmental Assessment</td>
</tr>
<tr>
<td>EIR</td>
<td>Environmental Impact Report</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>EPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>ETP</td>
<td>Excavation and Transportation Plan</td>
</tr>
<tr>
<td>FCAA</td>
<td>Federal Clean Air Act</td>
</tr>
<tr>
<td>FESA</td>
<td>Federal Endangered Species Act</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>FIFRA</td>
<td>Federal Insecticide, Fungicide, and Rodenticide Act</td>
</tr>
<tr>
<td>FOE</td>
<td>Finding of Effect</td>
</tr>
<tr>
<td>FONSI</td>
<td>Finding of No Significant Effect</td>
</tr>
<tr>
<td>FSTIP</td>
<td>Federal Statewide Transportation Improvement Program</td>
</tr>
<tr>
<td>ft</td>
<td>foot/feet</td>
</tr>
<tr>
<td>FTA</td>
<td>Federal Transit Administration</td>
</tr>
<tr>
<td>FTIP</td>
<td>Federal Transportation Improvement Program</td>
</tr>
<tr>
<td>Fund Estimate</td>
<td>STIP Fund Estimate</td>
</tr>
<tr>
<td>GHG</td>
<td>greenhouse gas</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System</td>
</tr>
<tr>
<td>Guidelines</td>
<td>Section 404(b)(1) Guidelines</td>
</tr>
<tr>
<td>H₂S</td>
<td>hydrogen sulfide</td>
</tr>
<tr>
<td>HaSP</td>
<td>Health and Safety Plan</td>
</tr>
<tr>
<td>HCP</td>
<td>Habitat Conservation Plan</td>
</tr>
<tr>
<td>Historic Arroyo Seco Parkway CPP</td>
<td>Historic Arroyo Seco Parkway Corridor Partnership Plan</td>
</tr>
<tr>
<td>HMP</td>
<td>Hazardous Material/Waste Management Plan</td>
</tr>
<tr>
<td>HOT</td>
<td>high-occupancy toll</td>
</tr>
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<td>HOV</td>
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<td>Most Likely Descendant</td>
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<td>PM</td>
<td>Post Mile or particulate matter</td>
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<td>sulfur hexafluoride</td>
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Appendix F  List of Technical Studies

California Department of Transportation. *Air Quality Review Memorandum* (July 2016)

California Department of Transportation. *Community Impact Assessment Memorandum* (December 2016)

California Department of Transportation. *Finding of Effect* (December 2016)

California Department of Transportation. *Geology Memorandum* (January 2017)

California Department of Transportation. *Hazardous Waste Assessment* (March 2016)

California Department of Transportation. *Natural Environment Study (Minimal Impacts) [NESMI]* (November 2016)

California Department of Transportation. *Noise and Vibration Memorandum* (April 2016)

California Department of Transportation. *Storm Water Data Report* (September 2016)

California Department of Transportation. *Visual Impact Assessment Memorandum* (December 2016)

GPA Consulting. *Cultural Resources Cumulative Impact Assessment* (December 2016)
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